ALASKA LEGISLATURE COMMITTEE FILES, 1989-1990 8672 594
6190 HOUSE TRANSPORTATION

6-2096E
Utermohle
3/12/90

Original sponsor(s): REP. MENARD, Navarre, Brown, Ellis, Grussendorf, Finkelstein, Donley, Goll, Jacko

IN THE HOUSE

CS FOR HOUSE BILL NO. 484 ( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

SIXTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to destruction of moose by the Alaska Railroad."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 42.40 is amended by adding a new section to read:

Sec. 42.40.445. PROTECTION OF WILDLIFE. (a) The corporation shall adopt policies, procedures, and practices to limit the destruction of moose by operations of the railroad. The corporation shall cooperate with the Department of Fish and Game to mitigate the effects of the operations of the railroad on moose by granting access to railroad rights-of-way to the department and its contractors. The corporation shall, to the extent feasible and compatible with railroad operations, provide rail transportation and use of railroad facilities and equipment to the department and its contractors.

(b) The board shall establish a research program to investigate the use of devices, substances, or procedures to reduce the destruction of moose by operations of the railroad.

(c) The board shall establish a committee to advise the corporation on the development of the contingency plan required under (d) of this section and on policies, procedures, and practices necessary to mitigate the effects of the operations of the railroad on moose. The committee shall consist of one representative appointed by each of the following: the board, the Department of Fish and Game, Department of Natural Resources, and the Matanuska-Susitna Borough.

(d) The corporation shall prepare a contingency plan to prevent

the destruction of moose by operations of the railroad when snow conditions cause moose to use the railroad right-of-way. The contingency plan must provide for the use of pilot cars to precede trains, the scheduling of trains in a manner that reduces destruction of moose, removal of saplings, seedlings, and shrubs from the railroad right-of-way in areas identified by the Department of Fish and Game, removal or compaction of snow to create trails on both sides of and parallel to the tracks within the railroad right-of-way, and other measures found to be feasible under (b) of this section or recommended by the Department of Fish and Game or the committee established under (c) of this section. The corporation shall implement the contingency plan on portions of the railroad right-of-way where moose and 24 inches or more of snow are present.

(e) If more than four moose are killed within a week by operations of the railroad, the corporation shall schedule trains in a manner that reduces the destruction of moose and shall use pilot cars to precede trains through moose concentration areas identified by the Department of Fish and Game.

(f) The corporation shall provide for the salvage of moose killed by operations of the railroad. The corporation shall cooperate with the Department of Public Safety in distributing salvaged moose meat to persons identified by the Department of Public Safety as qualified to receive salvaged moose meat.

(g) A train engineer shall report immediately to the train dispatcher if a train operated by the engineer strikes a moose. The report must include the time and location, by railroad milepost, of the moose strike. It is a class A misdemeanor for a train engineer to intentionally fail to report to the train dispatcher within 24 hours after the collision that a train operated by the engineer has struck a

moose.

HOUSE COMMITTEE REPORT

(5)
Date Referred: February 7, 1990 FURTHER REFERRALS: FINANCE

Date of Committee Action: 3/18/90

The TRANSPORTATION Committee considered: HB 484

HOUSE BILL NO. 484 FEE FOR MOOSE KILLED BY ALASKA RAILROAD

"An Act relating to destruction of moose by the Alaska Railroad."

RECOMMENDATIONS:
[ ] be replaced with CS HB 484 (Transportation) [ ] the same title [ ] a new title
[ ] have attached amendment(s)
[✓] do pass
[ ] do not pass
[ ] no recommendation
[ ] individual recommendations
[ ] additional referral to the ________ Committee

ADOPTS: ________ letter of intent

ATTACHES NEW FISCAL NOTE(s): (Dept)
[ ] fiscal impact ________
[ ] zero fiscal note ________
[ ] zero with analysis ________

APPROVES PREVIOUS: (Date/Dept)
[ ] fiscal note(s) ________
[ ] zero fiscal note(s) ________
[ ] zero fn/analysis ________

SIGNING DO PASS:

Ben [illegible]
Eugene Kudenov
Richard Foster

SIGNING: (Check approp. column)

	Do Not Pass	No Rec	Amend
Bill Hudson		✓	
Loren A. Leman			X

Richard Foster
Chairman's Signature

STATE OF ALASKA

STEVE COWPER, GOVERNOR

DEPARTMENT OF FISH AND GAME

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0541

March 9, 1990

The Honorable Richard Foster
House of Representatives
Chairman of House Transportation
Room 409, Capitol
P. O. Box V
Juneau, Alaska 99811

Dear Representative Foster:

During your committee's hearing on HB484, you requested that I provide you with some suggestions regarding possible contingency measures which would be applied in the future to reduce winter moose kills associated with the Alaska Railroad (ARR) and highways. Last week I sent you copies of correspondence and other background information describing recommendations we have made to minimize moose losses this winter.

We strongly support the development of contingency plans for reducing moose mortalities on the ARR and state highways. In order to minimize normal winter kills and substantially reduce kills during severe winters, contingency plans must contain actions which will be accomplished on an annual basis and be funded as part of normal operating budgets. Development and implementation of these plans should be mandatory and the responsibility of the agency/organization which can make them work. The Alaska Department of Fish and Game (ADF&G) should be included as a cooperating party. Summarized below are some measures which we believe should be incorporated in contingency plans.

Alaska Railroad Contingency Measures

1. A goal should be established to reduce railroad-related moose kills below a set level; an acceptable biological level would be to reduce kills below 75 moose/year.

2. Plow or pack trails parallel to and along both sides of railroad tracks, between Willow and north of Chase (MP 175-260), beginning when snow depths reach 2 feet and with each 1 foot accumulation thereafter. Snow berms from plowed trails should be placed on the track side of trails. In winters with deep snow accumulation, additional trails should be created perpendicular to the tracks in areas

Highway Contingency Measures

1. Shoulders of roads/highways should be plowed free of snow as soon as possible after snowfall.

2. All snowplow berms should be cut down to not exceed 3 feet above ground level in moderate to high density moose areas.

3. In areas identified by ADF&G, escape lanes should be plowed perpendicular to the roadway when snow accumulations reach depths that restrict moose movement from plowed roadbeds.

4. Reduced speed limits should be established during winter periods in areas identified by ADF&G as having historical or potential high vehicle-moose collision rates.

5. In areas identified by ADF&G, all shrubs and trees should be removed from the road ROW to a distance of 100 ft. from the edge of the driveable road surface.

6. When highways are constructed/upgraded with Federal Highway funds, moose-proof fencing and/or lighting should be installed at the perimeter of the ROW in areas identified by ADF&G as having historical or potential high vehicle-moose collision rates.

7. Use of road salt (NaCl) should be discontinued in specific areas where salt use has contributed to high vehicle-moose collision rates.

I hope you find these suggestions helpful in your committee deliberations. If you or your aides have additional questions, please contact me (267-2231) or Greg Bos, our management coordinator in Anchorage (267-2200). Thank you for your concern and support for Alaska's wildlife.

Sincerely,

W. Lewis Pamplin, Jr.
Director
Division of Wildlife Conservation

cc: Representative Curt Menard
Norman Cohen, Deputy Commissioner, ADF&G
Molly McCammon, Special Assistant to the Commissioner, ADF&G
Wayne Regelin, Deputy Director, Division of Wildlife Conservation, ADF&G
Dan Timm, Southcentral Regional Supervisor, Division of Wildlife Conservation, ADF&G
Greg Bos, Southcentral Management Coordinator, Division of Wildlife Conservation, ADF&G
Bruce Dinneford, Acting Planning Chief, Division of Wildlife Conservation, ADF&G

ALASKA RAILROAD CORPORATION

P.O. Box 107500 • Anchorage, Alaska 99510-7500

February 14, 1990

Lewis Pamplin, Director
Division of Wildlife Conservation
333 Raspberry Road
Anchorage, Alaska 99518-1599

Dear Lew,

Thank you for your letter of February 9 which reviewed our recent meeting about reducing moose mortality. I echo your sentiments that we have had a good working relationship in the past and hope this will continue as we work to resolve this issue. We appreciate your offer of personnel to assist us on various projects and will make those contacts directly as the need arises.

For the most part I agree with your synopsis of what we heard and agreed to last week; however, there are several areas where I believe clarification is needed. And, also, at your request, I will respond to your "additional" recommendations. It's probably best if I take each point as listed in your letter.

Short-term solutions:

1. Pilot cars: We're continuing this program and have begun to see increasing success when coupled with other methods of rousing moose off the tracks, such as the rubber tires between the tracks and the use of sirens on the pilot car. Right now we are using a hi-rail car primarily on the Wasilla/Talkeetna corridor because it continues to be the area of highest moose concentration. It appears that our hi-rail vehicles are the best vehicles for this program and we're outfitting several with sirens and noise-making shotgun rounds.

2. Schedules: Whenever possible we are running trains in both directions in bunches. The biggest impediments to this type of scheduling are availability of manpower and equipment, plus the constraints placed on us by safe operating practices and severe cold weather.

3. Moose trails: We're cutting these parallel trails now. However, it must be noted that it is not always feasible to plow parallel to the tracks because of streams, rock cuts and other topography.

4. Perpendicular trails: This is one of those areas where we'll be calling on your department for further assistance in marking areas for perpendicular trails away from the plowed areas.

5. Engineer's authority: Technically, it is our train conductors who have control of our trains. They work in conjuntion with the engineers to determine when it is safe and proper to move a train. Together they have the authority to slow or stop for moose and have been doing so as evidenced by our on-time record this winter which has been severely reduced because crews are stopping for moose. There have been no orders prohibiting slowing or stopping for wildlife.

6. Sirens: As I mentioned under pilot cars, we will be using hi-rail vehicles for this operation and are equipping several with sirens. We welcome your staff's input on the effectiveness of sirens on moose.

7. Rubber tires: When we first installed the tires, the moose walked up to the tires, got off the track and walked around the tires, then returned to the track. We have modified this now and have a row of upright tires running at right angles to the tracks on either side of the tires to guide moose away from the track. We're also cutting a path at right angle to the track where we have the tires so they'll have easier walking. This method continues to hold some promise and we'll keep you posted on our success.

8. Wing plowing: Our maintenance department continues to wing plow up to 20 feet on either side of centerline during snow removal. It must be noted, however, that despite the plowing moose continue to use our track because there is firmer footing.

Long-term solutions:

1. We'll continue our program of seeking a solution to reducing moose mortality on our tracks.

2. Later this year we will begin brushing our right of way in selected areas to remove attractive moose browse. This program could mean considerable expense to the railroad if continued on an annual basis. Therefore, wherever possible we're hopeful we can allow the trees and shrubs to mature in forest.

3. We'll continue to research and evaluate methods and ideas submitted to us for reducing the moose kills. We'll also work with your department to seek state funding for such a program.

4. We have met with several organizations which are willing to work with your department to develop moose habitat away from the railroad right of way. We hope that an inter-agency program can be developed between your department and the Division of Forestry that would promote habitat enhancement. Wherever possible, the railroad would be willing to assist in such a project. With alternative food sources available, we believe there will be fewer moose stopping on our track.

5. Our mechanical engineer is reviewing methods to "soften" the impact of our locomotive coupling device upon moose in an effort to increase moose salvagability.

6. We welcome any input your staff may have on the effects of sonic devices on moose.

7. We support your idea for a test fence and will join forces with you to gain state funding for the project.

8. Any steps which can be taken to minimize moose kills on the highways is welcomed.

Solutions with no concensus or that are unlikely to work:

1. We'll defer to your department on the effectiveness of salt licks because that falls within your expertise.

2. Construction of a "food fence" is much like the loggers' proposal to develop or enhance moose habitat in the Susitna Valley. We continue to support proposals that will attract moose away from our right of way.

3. If it becomes obvious that a huge number of moose will die each year because there is no food for them, we support a special hunt to thin the herd rather than allowing them to starve or be killed by cars or trains as they search for food.

Additional recommendations:

1. Representatives from the three main departments within our operations division will be available to meet with your staff members to discuss recommendations and possible solutions to reduce moose mortality.

2. Our maintenance department will research the possibility of using a hydro-ax for brush clearing.

3. If moose kills north of Talkeetna are not reduced, we'll consider running our pilot car farther north.

I hope this lengthy letter shows our continued support for reducing the number of moose kills on the Alaska Railroad. We'll continue to work with you and your staff for solutions to this problem.

Sincerely,

F. G. Turpin
President and CEO

cc: Don Collinsworth, Commissioner, ADF&G
Arnold T. Polanchek, Vice President, Operations, ARRC

M/W-MOOSE

STATE OF ALASKA

STEVE COWPER, GOVERNOR

DEPARTMENT OF FISH AND GAME

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE (907) 344-0541

February 9, 1990

Frank Turpin
Executive Director
Alaska Railroad Corporation
P.O. Box 107500
Anchorage, Alaska 99510-7500

Dear Mr. Turpin: Frank

Thank you for meeting with us on February 6 to discuss options to reduce moose kills by Alaska Railroad (ARR) trains. Although our staffs have been working on this problem for several years, it is apparent with this winter's extraordinarily high kill that we must initiate more concerted actions to minimize this serious public resource problem.

Moose populations in the Matanuska/Susitna Valley traditionally use winter ranges near the railroad/highway corridor and many moose are struck by trains and vehicles every winter. This year, the problem has been intensified because record snowfall has resulted in higher densities of moose along this corridor. Many moose killed by trains and vehicles are prime reproductive animals that would otherwise survive the winter and help rebuild the population from losses due to natural causes such as winter starvation. Therefore, reducing mortality from trains and vehicles is important to maintaining stable moose populations at current levels.

We have agreed that both ARR and the Alaska Department of Fish and Game (ADF&G) must work together closely to significantly reduce the loss of moose. Summarized below are the potential solutions we discussed and agreed to.

Short-term solutions mutually agreed to by both parties:

1. Pilot cars (chase cars) will precede north and south bound trains. The pilot cars will operate principally between Wasilla and Talkeetna, but extending operations to other areas should be considered, if necessary, over the next two months.

2. When more than one train is heading north or south, train schedules will be arranged so that they run close together. Ideally, trains running in the same direction should depart within an hour of one another.

3. Trails will be plowed parallel to and on both sides of the tracks. Exit trails will be constructed in combination with the parallel trails to provide a means for moose to easily "escape" the railbed. Biologists and railroad staff will coordinate to prioritize which areas should be plowed first and identify locations for exit trails; Carl Grauvogel will be ADF&G's principal field contact and Jim Carr will be the principal contact for ARR.

4. In some areas, perpendicular trails will be plowed to encourage moose to move away from the ROW into areas where natural feed is available. Supplemental feeding may be used on a case-by-case basis in conjunction with this kind of trail system. Department biologists will make recommendations where perpendicular trails should be constructed and identify locations for possible supplemental feeding.

5. Train engineers have the authority to slow trains as conditions warrant, especially if trains encounter groups of moose on the tracks.

6. The railroad will mount sirens on all pilot cars and most (if not all) trains. The railroad will try to determine to what extent sirens are effective. If possible, the effectiveness of sirens should be tested scientifically.

7. The railroad will nail rubber tires to railroad ties, and will attempt to evaluate whether they discourage moose from running between the rails.

8. The railroad will continue to "wing plow" up to 18 ft. either side of the track centerline.

Long-term solutions mutually agreed to by both parties:

1. Actions implemented this winter that are effective in reducing the number of moose struck by trains will be continued in future winters.

2. Next summer or fall, the railroad will begin removing all trees and shrubs within selected sections of the railroad ROW, particularly between mileposts 170-270. Department biologists will recommend areas to be brushed as well as identify areas which could be allowed to "mature" and grow out-of-reach of moose.

3. A research and development (R&D) program is needed, and it may provide the best means to develop long-term solutions for reducing moose kills. The railroad will evaluate whether it can contribute money (perhaps $50-100,000.00) to initiate a bonafide R&D effort, but it will also assist in soliciting funds from the state legislature or private groups. An R&D program should be implemented immediately given the existing conditions.

4. The department will work with the Division of Forestry and other agencies to enhance moose habitat in areas away from the ROW. However, implementation of this option is a very long-term solution (10-20 years), and this will not totally solve the problem. If successful, habitat enhancement will increase the number of moose overall and redistribute moose densities to other areas (lower moose densities in the ROW), but it will not eliminate moose from the ROW. Because moose habitually migrate between the mountains and low valleys each year, moose will continue to use and cross the ROW on a continuing basis, even if there is little food available in the immediate vicinity of the railroad ROW.

5. Although the railroad takes a dim view of designing a device for the front of the train engine that will increase moose salvageability (because they see potential problems with meeting their operational criteria and federal railroad regulations), they will help investigate this option if money and/or personnel are available.

6. Sonic devices tested in the past have not been very effective in scaring moose; however, a more exhaustive scientific test should be conducted to determine whether such devices hold any promise.

7. If funding for a 5-mile electric fence can be obtained, the fence should be tested under "natural" conditions to determine its effectiveness.

8. The department will consult with DOT officials about the possibility of reducing highway speed limits along some state roads, and of implementing winter road maintenance procedures that minimize "entrapment" of moose by high snow berms.

Solutions with no concensus or that are unlikely to work:

1. Putting out large numbers of salt blocks.

2. Constructing a "feeding fence" away from the ROW.

3. Use of special hunts to reduce moose numbers in ROW.

Additional ADF&G recommendations:

1. The department and ARR need to immediately form a working group to consider all options that have been suggested by our respective staffs and the public to reduce moose kills. This working group should consist of 2 or 3 ADF&G biologists and an equal number of railroad employees who are intimately familiar with railroad operations and procedures. The group should be established and meet as soon as possible to identify options that are feasible and appear to hold promise for reducing moose kills. Recommendations from this group could be the basis for initiation of an R&D program. As recommendations are formulated by the group, they should be sent to you and me for review, approval, and implementation.

2. The railroad should look into the feasibility of brushing during the summer and fall using a hydro-ax; it may prove to be less expensive and more of the railroad ROW could be cleared.

3. If moose kills continue north of Talkeetna, the pilot car should be used as far north as milepost 270.

Again, thanks for your willingness to meet with us to discuss this difficult problem. I am confident that by continuing to work together we can develop cost effective means to reduce the number of moose killed this year and during future winters.

We should get together again in the next couple of weeks to discuss progress in addressing this problem and funding options. Please advise me of your thoughts on our "additional" recommendations. Thank you.

Sincerely,

Lew Pamplin
Director
Division of Wildlife Conservation

cc: Don Collinsworth, Commissioner, ADF&G
Norm Cohen, Deputy Commissioner, ADF&G
Warren Wiley, Assistant Commissioner, ADF&G
Wayne Regelin, Deputy Director, DWC
Bruce Dinneford, Acting Planning Chief, DWC
Dan Timm, Southcentral Regional Supervisor, DWC
Greg Bos, Southcentral Management Coordinator, DWC
Carl Grauvogel, Palmer Area Wildlife Biologist, DWC

MEMORANDUM

STATE OF ALASKA
DEPARTMENT OF FISH AND GAME

TO. Molly McCammon
Special Assistant
Commissioner's Office
Juneau

DATE: 20 February 1990

TELEPHONE NO: 745-5015

FROM: Carl A. Grauvogel CAG
Wildlife Biologist
Division of Wildlife Conservation
Palmer

SUBJECT: Priority Expenditures, HB 485

You requested how funding would be spent if HB 485 passes. Collinsworth's memo of 5 February to Governor Cowper outlines the Department's recommendations to reduce the kill of moose by trains and highway vehicles; however, implementation of all these recommendations would cost more than $250,000.00. Greg Bos and I have discussed which recommendations should be implemented first. If the legislature authorizes $250,000.00, following is our prioritization on expenditures.

1. Recommendation: Plow trails parallel to and on both sides of the railroad track in the high kill zone (milepost 175-260).

Discussion: The Alaska Railroad has started this task, but they have only completed 2 miles of trail in 10 days and still have at least 58 miles to go. Alascom is currently trying to raise money from the private sector to help with this effort. If Alascom's effort is successful, we would match private contributions; if not the state would hire equipment to help complete the trails.

Estimated cost: 20.0 - 40.

2. Recommendation: Plow perpendicular trails where wintering moose density is high and use supplemental feed to attract and hold moose away from the tracks.

Discussion: Supplemental feeding will be used to enhance the effectiveness of the trail systems in some areas and to help moose that need food along the railroad/highway corridor survive the winter. The Department may feed up to 500 moose.

Estimated cost: 100.0 - 120.0

3. Recommendation: High snow berms along highways and Mat-Su Borough back roads should be cut down and perpendicular exit trails should be cut at regular intervals so that moose "trapped" in the road corridor will be able to easily leave the highway.

Discussion: Snow in the Susitna Valley averages 5-7 feet on the level and berms from snow plowing are usually higher. High berms are a "barrier" to moose when they access the highway. Local road-service districts have exhausted their winter maintenance funds and have no money for "extra" snow-plowing work. The department would hire equipment to do these jobs. Estimated cost: 20.0 -40.0.

4. Recommendation: Clear all the trees and shrubs in the railroad right-of-way (ROW), particularly between mileposts 170-270.

Discussion: Recommendations listed above are all "short-term" solutions. Long-term permanent solutions need to be addressed. Removing brush and young trees in the ROW will eliminate the food source that, in part, attracts moose to the railroad tracks. This work can be best accomplished in the summer and early fall.
Estimated cost: $150.0 to 195.0

5. Recommendation: Conduct research to develop devices, substances, and procedures to reduce the kill of moose on the railroad tracks.

Discussion: This recommendation is really the key to reducing the railroad moose kill. The Department, the railroad, and the public, have suggested many ways to reduce the kill, but these ideas need to be developed and tested in the railroad environment. An established research and development program is needed to accomplish this goal, and any money left over from the appropriation will be devoted to this cause.
Estimated annual cost: 50.0 to 100.0

cc Greg Bos

Steve Cowper
Governor

February 6, 1990

M/W-MO-RR

465-4100

Briefing Memorandum:
Alaska Railroad
Moose Kills

Don W. Collinsworth W3 for H
Commissioner
Department of Fish and Game

Issue

Excessive moose kills by the Alaska Railroad (ARR) and public concern about starving moose.

Problem

Extremely deep snow accumulation in the Matanuska/Susitna Valley area has resulted in extraordinary moose mortality on the ARR and on highways and secondary roads. Media coverage has intensified public attention on this loss as well as on the plight of starving moose. The public is demanding action by the railroad and the state to reduce the kill of moose by trains and highway vehicles and to feed starving moose.

Background

Cause and Level of Mortality

Lowland areas adjacent to the railroad right-of-way (ROW) in the lower Matanuska-Susitna River Valleys are particularly attractive to moose in winter because moose prefer the plant species found on abandoned homesteads for winter browse. The close proximity of moose concentrations to the railroad and local highways results in vehicular collisions with moose. Mortality is greatest when snow is deep, because moose seek out plowed or packed snow areas for travel and are attracted to forage regrowth along roads.

Since 1985, the average annual kill has been 237 by trains and 153 by highway vehicles on Matanuska/Susitna Valley roads. So far this winter at least 375 to 400 moose have been killed by trains, and with at least two more months of expected heavy mortality remaining, the kill will far exceed

the record of 382 in winter 1984/85. More than 150 moose have died on area roads.

Moose have been stressed this winter by extreme snow depths (in some areas greater than 8 feet) and some starvation has been reported. It is likely that many moose, particularly calves, will starve before spring. Moose are seeking out roads and trails where snow is plowed or packed down. Consequently, many are on local roads, dog mushing/ski trails, and in residential areas where their weakened condition is more visible to the general public.

Past and Current Actions

* Historical railroad moose kill records were compiled and analyzed by our department to identify sections of track where remedial actions would be most effective and to determine if train schedules or other operating procedures could be modified.

* A number of devices (e.g., lights, horns and other sonic devices, a cushion bumper, and a water cannon) have been considered or tested without success.

* Wing plowing has not been effective.

* A test in which trains were slowed to the lowest economical speed (25 mph) did not reduce the number of moose struck.

* Clearing brush from the railroad ROW was initiated by the ARR, but an insufficient area was cleared to determine its effectiveness.

* The feasibility of a moose-proof electrical fence has been investigated. Such a fence may have the highest potential for significantly reducing mortality, but construction costs would be high.

* A pilot car is being used ahead of some trains to move moose off the tracks; the results have been encouraging.

* The ARR has begun plowing an alternate trail parallel to the tracks to reduce numbers of moose on the tracks.

* Salvage procedures by the ARR and distribution of meat to qualifying families have been improved. Options have been proposed to modify the front of locomotives, since about 40 percent of struck moose are unsalvageable. The railroad has not pursued this.

* Through the cooperation of the Department of Public Safety, a computerized database on road-killed moose has been developed to identify road sections with high kill rates. Problem road areas can be evaluated in terms of remedial actions such as fencing, brush clearing, traffic speed control, and eliminating the use of salt in road sanding.

* In the past, the department has discouraged supplemental winter feeding of moose because it is generally cost-prohibitive and ineffective.

Recommended short-term solutions

The following "short-term" solutions should be implemented immediately to help moose survive this winter.

1. Alaska Railroad

   a. The ARR should have a pilot car (chase car) precede every train through the high kill zone. Once chased off the tracks, moose would likely stay off for some time, especially in areas with plowed trails adjacent to the tracks.
   Estimated cost: $42.0

   b. Trails should be plowed parallel to and on both sides of the track in the high kill zone (milepost 175-260). Moose moving to the railroad ROW would encounter plowed trails first and would likely use them instead of the railroad tracks.
   Estimated cost: $41.0

   c. Trails should also be plowed perpendicular to the tracks in areas where wintering moose density is

high. Preferably, such trails should access feeding areas to encourage moose to move away from the railroad ROW.

Estimated cost: $6.0

d. Supplemental feed could be used to attract and hold moose away from tracks, as well as to enhance the effectiveness of trail systems in certain areas. However, since it is expensive, the department should test its effectiveness before full implementation.

Estimated cost to feed 500 moose: $120.0

e. The ARR should authorize engineers to slow trains below economical speeds, if necessary, especially where they encounter groups of moose on the tracks.

Estimated cost: Unknown

2. Highways

High snow berms should be cut down and perpendicular exit trails cut at regular intervals so that moose "trapped" in the highway corridor will be able to easily leave the highway. Where roads have been plowed only wide enough to allow "one way" traffic, escape trails should be plowed from the road and/or frequent pull-offs constructed to provide temporary resting places for moose. This work could be done by DOT/PF with existing equipment and personnel.

Estimated cost: Unknown

3. Other Locations

a. Where wintering moose density is high, create a network of plowed or packed trails to assist moose in reaching natural feeding areas.

Estimated cost: $20.0
(Also possible with volunteers)

b. Identify state, borough, and private lands where "near-term" timber harvests have been planned. Organize volunteers or hire people to periodically

cut trees for moose browse. Cutting should be carefully controlled and confined to areas where numbers of moose are wintering in the vicinity.
Estimated cost: Volunteers

The department does not recommend supplemental feeding at specific locations since doing it on an "affordable" scale will have insignificant effects on moose survival.

Recommended Long-term Solutions:

4. Alaska Railroad Operations

a. If any short-term solutions prove successful, incorporate them into long-term operating plans.

b. The ARR should clear all trees and shrubs in its ROW, particularly between mileposts 170-270. Clearing should be repeated every four to seven years to prevent regrowth of attractive winter food. Estimated cost: $195.0

c. The ARR should design a device for the front of the locomotive that will increase salvage of struck moose and reduce the kill-rate of those "clipped" by the train plow.
Estimated cost: Unknown

d. The ARR should have a full-time staff person, preferably a design engineer with a working background in railroad operations, to research devices, substances, and procedures to reduce the kill of moose.
Estimated annual cost: $100.0

e. The department and the ARR should construct and test a five mile moose-proof electrical fence from mileposts 197 to 202. Estimated cost: $436.4

f. Alternate winter browsing habitat should be created to attract moose away from the ROW. When forests are cut, winter browse could be most

quickly created by immediately scarifying the area and planting nursery-grown seedlings.

Estimated cost for habitat enhancement for 1,000 moose for 15 years: $4.8 ($320/moose/year)

5. Highway Operations

a. Highway ROWs should be cleared of brush in areas with high kill rates. Warning signs, improved lighting, and other means to help identify moose from a distance at night should be erected. Fences should be used in areas where other methods are ineffective.

Estimated cost: Unknown

b. Gravel "turnouts" should be constructed every mile or so in high kill areas to provide winter escape routes. Estimated cost: Unknown

c. DOT/PF should stop using salt in road sand on sections that pass through areas of moderate to high densities of wintering moose. Moose have been regularly observed kneeling and licking the salted roadbed.

Estimated cost: Unknown

6. Other Locations

a. The state is developing a Susitna Forest Plan for managing timber harvests in the Matanuska-Susitna Valley. Habitat retention and enhancement are identified as key components. Specific plans on how reforestation is to occur have not been developed. The department should be consulted to identify areas where habitat enhancement for moose would be most beneficial. Such areas should have special treatment methods (tree planting, scarification, fertilization, etc.) to provide moose browse and timber reproduction in as short a time frame as possible, in order to attract wintering moose and reduce densities along railroad and highway corridors.

Estimated cost: Unknown

Funding

The department has no funds to implement any of the suggested solutions. Immediate actions identified under short-term solutions will require a supplemental appropriation, or the ARR could direct its own resources toward these solutions. Long-term solutions can be funded through increased funds to the Division of Wildlife Conservation, capital improvement appropriations, or both. Legislation also could require the ARR to fund such procedures, equipment, and facilities as may be necessary to significantly reduce the number of moose killed and improve the salvage of struck moose.

White

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

STEVE COWPER, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0[illegible] 41

February 16, 1990

Karl E. Rye, President
Denali Resources Limited
P.O. Box 873287
Wasilla, Alaska 99687

Dear Mr. Rye:

Representative Menard provided us with a copy of your proposal to obtain a Cooperative Resource Development Agreement under AS 38.05.027 to enhance moose habitat through timber harvest programs as a means of reducing the loss of moose in the Susitna Valley highway/railroad corridor. We are also very concerned about the loss of moose and have been working with the Alaska Railroad, the Department of Natural Resources, and the Department of Transportation on both short and long-term solutions to this problem. I have enclosed a copy of a recent letter to Frank Turpin which may be of interest to you.

Creating alternative winter browse habitat to attract/hold moose away from the corridor is one option the department has considered in seeking long-term solutions to the moose kill problem. We believe this approach has merit in some areas if done properly. Timber harvesting with appropriate regeneration treatments may be the most cost-effective enhancement method available on suitable sites in the lower Susitna and Matanuska Valley, given the land ownership patterns and development that has already occurred there, the timber resources present, and interest by the industry in developing those resources. At the same time, we recognize other resource values and public interests in those areas and the potential for timber development to adversely affect some of those values/interests. The department has participated in Susitna Regional Forest Planning and the Matanuska/Susitna Borough Forest Planning efforts and has provided comments and recommendations on forest management practices that would apply to areas considered for timber harvest and habitat enhancement as a means of reducing highway and railroad-caused moose mortality.

Department staff have begun to review past and current timber sales sites in the Valley to evaluate hardwood regeneration and the production of moose forage in these areas, and we have discussed preliminary findings with Division of Forestry personnel. From these investigations, it is clear that in many

instances past practices have not resulted in adequate regeneration to support winter use by moose or even to fully replace harvested timber within a reasonable rotation period. We and Forestry staff agree that carefully prescribed scarification and/or other regeneration treatments will be necessary to ensure adequate regeneration for productive forests. The department will not support timber harvest programs that do not maintain optimum sustained yields of forest resources, including fish and wildlife. As you know, application of forest regeneration methods can increase costs of timber harvest.

Department staff are presently working with the Department of Natural Resources to develop a plan that will guide timber harvest in the Susitna Valley. The plan is scheduled to be presented for public review this spring. The department does not support the use of forest management agreements as a vehicle to enhance moose habitat.

We are presently working with other state and borough agencies to identify suitable timber harvest areas where enhancement efforts to reduce highway/railroad moose mortality can begin. Timber harvest areas cannot be expected to regenerate significant amounts of available moose forage until at least 5 years after treatment and maximum browse production would likely occur during 10-15 years after treatment. We view such an enhancement program as a long-term effort within the context of a broader Susitna Valley moose habitat enhancement program integrated into the Susitna Regional Forest Plan.

We suggest that you contact the Division of Forestry and the Matanuska Susitna Borough regarding timber harvest opportunities on both existing and upcoming state and borough timber sales. We will continue to work with the Division of Forestry on short-term solutions to help moose this winter as well as timber harvesting plans and practices which will benefit moose habitat over the long-term. We appreciate your interest in the Susitna Valley moose population and your desire to offer positive contributions.

Sincerely,

W. Lewis Pamplin, Jr.
Director
Division of Wildlife Conservation

Enclosure

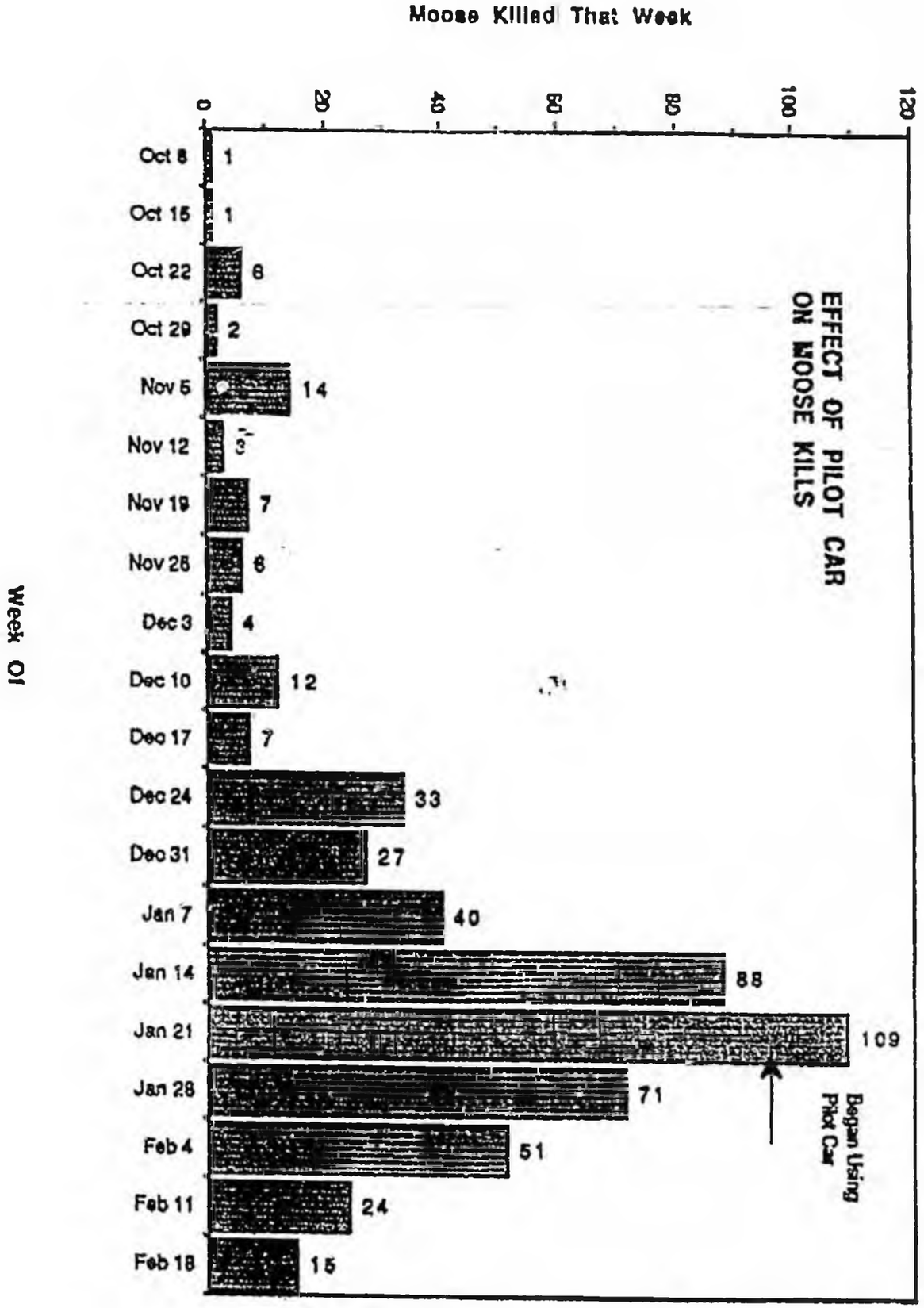
cc: Representative Curt Menard
Representative Ramona Barnes
Norman Cohen, Deputy Commissioner, ADF&G
Bob Dick, Director, Division of Forestry
Wayne Regelin, Deputy Director, Division of Wildlife Conservation

Frank Rue, Director, Division of Habitat
Dan Timm, Southcentral Regional Supervisor, Division of Wildlife Conservation
Lance Trasky, Regional Supervisior, Division of Habitat

Alaska Railroad Corporation
Moose Mortality Report

Railroad Moose Mortality Since State Ownership
(for the period October 1 through April 30)

1989-1990	536 (as of Feb. 26)
1988-1989	242
1987-1988	329
1986-1987	126
1985-1986	21
1984-1985	316


Moose Killed That Week
0
20
40
60
80
100
120
Week Of
Oct 8
Oct 15
Oct 22
Oct 29
Nov 5
Nov 12
Nov 19
Nov 26
Dec 3
Dec 10
Dec 17
Dec 24
Dec 31
Jan 7
Jan 14
Jan 21
Jan 28
Feb 4
Feb 11
Feb 18
1
1
6
2
14
7
6
4
12
7
33
27
40
88
109
71
51
24
15
EFFECT OF PILOT CAR ON MOOSE KILLS
Began Using Pilot Car

FACTSHEET: ALASKA RAILROAD PILOT CAR PROGRAM

*The Alaska Railroad pilot car's first trip was Jan. 23. Since that time, moose kills have dropped nearly 90 percent. In fact, from 5 a.m. Feb. 26 until 5 a.m. Feb. 27, no moose were killed anywhere along the Alaska Railroad's route, and the Willow to Talkeetna area has gone several consecutive nights without killing a moose.

*The car travels at an average of 35 miles per hour, staying between two and three miles ahead of the train. The moose leave the tracks and move to the adjacent paths plowed by various volunteer and military organizations using fuel supplied by the Alaska Railroad.

*The Moose Patrol is made up of railroad employees. The pilot car is equipped with shotguns to fire explosive "kracker" shotgun shells to scare the moose. The pilot car also uses powerful spotlights to spot the animals and sirens to scare them off the tracks.

*The pilot car itself is a one-ton Ford pickup equipped with special rail gear, allowing it to travel either on the tracks or on highways. Once on the tracks, the vehicle doesn't need steering, leaving both the driver and the passenger free to spot moose on each side of the tracks.

*On an average night, Moose Patrol members spot more than 50 moose. Generally the moose leave the tracks, although occasionally a moose gets stuck on bridges or refuses to move without being nudged by the pilot car.

*The snow depth in the Willow to Talkeetna area is seven to ten feet. Trails packed by tracked vehicles and snowmachines are giving the moose an alternate path to travel but these have been covered by recent snowfalls.

*The largest concentration of moose seems to be in the area of Willow north to Talkeetna, although plenty of moose are also spotted between Eklutna and Wasilla.

*The pilot car generally makes two to four trips each night between Eklutna and Talkeetna, averaging three hours each way.

# # #

1059R

Update: March 6, 1990

Measures by the Alaska Railroad To Reduce Moose Mortality

Pilot car: This vehicle has been operating since Jan. 23 and has been very effective as a moose deterrent. The vehicle is a 1-ton crew cab Ford pickup; two 2-member crews are rotated out on the vehicle each night. Recently white-out conditions forced the crew to stay off the tracks and, as evidence of the car's success, 13 moose were killed during the night. The success probably lies in the use of noise-making Kracker shells.

Moose paths: The Alaska Railroad's D8 and D7 are working at Kashwitna this week. By last week, about 6 miles of trail had been plowed through the snow parallel to the tracks to make a "moose sidewalk." These trails have been very effective but the work is slow because of the terrain and because nearly 3 feet of fresh snow fell late last week, covering whatever work had been done beforehand as well as any browse uncovered in the process. In some areas snow is measuring up to 10 feet deep and overnight temperatures are still dipping as much as 30 degrees below zero.

The Mat Su Motor Mushers--volunteers on snowmobiles--cut about 100 miles of trail parallel and perpendicular to the track from near Nancy Lake to north of Montana Creek. These, too, were being used by the moose until the heavy snowfall covered the trails; the group re-did them three times. Some fuel and lodging was provided the group by the railroad for their assistance.

Two sets of all-terrain, tracked vehicles were being used to cut trails. Nodwells from Denali Drilling (hired by the Save the Moose Committee and provided fuel and lodging by the Alaska Railroad) and the U.S. Army's Small Unit Support Vehicles (SUSVs) cut about 7 miles of trail from south of Sunshine to the Fish Lake area. Their work also has been covered by the heavy snowfall last week. Both groups have pulled out their equipment and

(more)

Add One--Moose Measures

the Save the Moose Committee has replaced the Nodwells with a Bombardier, a wide-tracked all-terrain vehicle used for snow clearing. It is a far better machine for the task and is expected to surpass the efforts of the Nodwells and SUSVs.

The U.S. Air Force last week had two long-track snowmachines working in the area between Willow and Talkeetna. Although the equipment was very efficient, the trails are covered now.

Rubber tire obstacles: Although the tires were effective, the heavy snow covered them up. The railroad sent out a crew with an air compressor to blow the snow off the tires but heavy snow immediately recovered the tires.

Ice on the ties: This has been the least effective method tried. When the ice froze it was porous and did not appear to affect the movement of the moose.

####

For additional information:

Vivian Hamilton
Corporate Communications Manager
265-2675

STATE OF ALASKA
1990 LEGISLATIVE SESSION

BILL VERSION: HB 484
PUBLISH DATE: _____

FISCAL NOTE

REQUEST:

Revision Date: 2-7-90
Title: Destruction of moose by the Alaska Railroad
Sponsor: Menard
Requestor: _____

Agency Affected: Fish and Game
BRU: Wildlife Conservation
Components: Wildlife Conservation

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL						
REVENUE	300.0	300.0	300.0	300.0	300.0	300.0

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

LYSIS: (Attach a separate page if necessary)

FY 90 Impact.

Prepared by: Bruce Dinneford
Phone: 465-4190
Division: Wildlife Conservation
Date: 2-26-90

Approved by Commissioner: [signature]
Date: 2-26-90
Agency: _____

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

POSITION PAPER
HB 484
Department of Fish and Game

The destruction of moose by the Alaska Railroad

This bill requires the Alaska Railroad (ARR) to limit moose kills that occur due to railroad operations. Access to railway right-of-way would be granted to the Department of Fish and Game. A "moose conservation incentive fee" would be established, equaling the average number of moose killed during the previous three years multiplied by $1,000. Train engineers would be required to report all moose strikes. Fees collected may be appropriated to ADF&G for railroad-moose mitigation. Examples of mitigation measures are suggested. If made into law, an average of $300,000 per year could be made available for work on reducing train related moose kills. The Alaska Department of Fish and Game (ADF&G) is neutral on this legislation.

Funds need to be available for the Division of Wildlife Conservation to deal with this problem. ADF&G would prefer either (1) a multi-year CIP or direct charge to ARR on a reinbursable service agreement, or (2) an increase in appropriation to the Division of Wildlife Conservation operating budget. The purpose of this legislation is to provide an incentive to eliminate the killing of moose on the railway. Providing ARR revenues directly to Wildlife Conservation for work on this problem would provide that incentive.

STATE OF ALASKA
1990 LEGISLATIVE SESSION

BILL VERSION : HB-484
PUBLISH DATE : _____

FISCAL NOTE

REQUEST:

Revision Date: _____
Title : An Act Relating to destruction of Moose By The Alaska Railroad
Sponsor : Menard
Requestor : _____

Agency Affected : _____
BRU : _____
Components : _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING						
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

SEE ATTACHED ANALYSIS

Prepared by : James B. Blasingame, Director, Administration Phone : 265-2680
Division : Alaska Railroad Corporation Date : Feb. 26, 1990

Approved by Commissioner : _____ Date : _____
Agency : _____

Distribution (by preparer) :
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

Attachment to Fiscal Note (HB-484)

The first sentence of HB-484 requires the Alaska Railroad Corporation (ARRC) to adopt practices which limit the destruction of moose. Most of these practices have already been established and annual costs are included in this estimate. If the proposed law is also intended to require ARRC to install and maintain costly fencing and other measures, additional expenses will be incurred. They also have been estimated. The annual fiscal impact (predicted at $ 5.3 million for the first year and an average of $500,000 for following years) must be subsidized by the state government. ARRC lacks sufficient financial resources to incur these moose mitigation costs without jeopardizing, postponing, and even eliminating necessary capital improvement and maintenance rail operations.

The Alaska Railroad Transfer Act ("ARTA") (45 USC 1207, Sec. 608, (a)(5), states that "Revenues generated by the State-owned railroad shall be retained and managed by the State-owned railroad for railroad and related purposes". The provision included in HB-484 which mandates ARRC to establish moose mitigation practices and procedures calls for appropriation of significant railroad revenues and violates this important federal law, the terms of which were accepted by Alaska before the railroad was purchased by it. Not only is there an issue as to whether moose mitigation measures beyond those necessary to provide for safe and efficient railroad operations, HB-484 clearly calls for management of railroad revenues by an authority other than the state-owned railroad.

To the extent that the "moose conservation incentive fee" constitutes a levy which supports a government program and is not assessed against the railroad's trucking competitors, we are also concerned that the assessment may be a discriminatory tax prohibited by federal law (49 USC, 11503(b)(4).

MOOSE COSTS

		NOVEMBER	DECEMBER	JANUARY	FEBRUARY
SNOW FLEETS	T&E	9,167.00	45,670.00	22,900.00	7,660.80
MOOSE PATROLS	T&E				4,588.78
TRANS	SUPERVISORS			1,035.22	1,055.12
ENGR	SUPERVISORS				5,395.00
	SECURITY				6,959.21
	HE SHOP-MF&E				5,475.00
	ENGINEERING	4,658.22	6,542.45	22,007.67	56,207.78
CLERICAL				1,243.97	1,413.60
FUEL				9,179.17	13,470.00
MATERIALS					4,730.00
DELAYS RECORDED				1,915.20	1,003.20
ESTIMATED DELAYS				15,048.00	11,970.00
MEALS/LODGING				1,406.00	3,556.00
		13,825.22	52,212.45	74,735.22	123,484.49

WINTER TO DATE	264,257.38
1990 YEAR TO DATE	198,219.71

ALASKA RAILROAD CORPORATION

P.O. Box 107500• Anchorage, Alaska 99510-7500

Measures By The Alaska Railroad To Reduce Moose Mortality

Pilot car: A pilot car--a Ford Bronco equipped with rail gear which allows it to run on the rails--is being operated in front of freight trains. This has produced excellent results in driving moose away from the track. Raw data shows as many as 90 percent of the moose are frightened away. Moose contacts have been reduced substantially since this was initiated.

Creating moose paths: Wherever possible along either side of the right of way between Willow and Talkeetna, Alaska Railroad maintenance crews are cutting 13-foot wide paths parallel to both sides of the track. The snow removed while creating the paths is used to build a berm between the paths and the railroad track to serve as barricades to prevent moose from getting to the track.We have dedicated two Caterpillar tractors to the operation. The moose are using the trails that have been cut but continue to favor the railroad tracks. The Mat-Su Motor Mushers, a group of volunteers on snowmachines, also have cut about 8 miles of snowmachine trails through the marshy areas where the Cats are unable to work.

Rubber tire obstacles: At four locations between Willow and Talkeetna, a series of rubber tires have been installed between the rails, nailed to the ties. The tires create an obstacle which cause moose to leave the track. To further guide the moose, tires have been positioned up-right and at right angles to the track in these locations and funnel the moose away from the track. This method was suggested to us by a member of the public and appears to be very successful.

Ice on the ties: This also was suggested by a member of the public. Water was applied to the tracks in several locations to create a layer of ice between the rails. It was believed that the moose would avoid the icy surface and move away from the track, however this did not prove to be true. Creating the ice was extremely difficult because a heated tank car full of water had to be used to keep the water from freezing before it was applied to the ties. Soon after the ice formed a foot of snow fell in the area, covering the ice. However, before the ice was covered moose were seen walking over the icy spots, indicating the measure would not be a deterent.

Plowing: Routine snow removal along the track includes plowing a 40-foot-wide path in the area where most moose mortality occurs. This appears to have no affect on the moose who prefer the hard-packed surface of the track rather than the plowed area, which despite the plowing remains as deep as 6 feet in some areas because of the slope of the track shoulder.

Brushing: Railroad crews cleared three locations for a total of more than seven miles of right of way last summer, removing the brush which moose find so tempting as a food source. Alaska Department of Fish and Game biologists had suggested this might remove the attraction for moose; however, in the areas where the brushing was done, moose mortality on the track actually doubled this season. We'll continue experimenting with this idea, though, and will clear additional areas this summer or fall.

Noisemakers: The railroad has installed on several types of vehicles small high-frequency sound devices used to deter deer and other large game animals. None appears to have been effective. The railroad also hired the University of Alaska to test the affects of various sounds on moose. The $15,000 experiment did not produce a sound which would repel the moose. We also have attempted to scare moose with more conventional sounds such as sirens and horns; the pilot car is equipped with a siren and it appears to have some effect.

ALASKA RAILROAD CORPORATION

P.O. Box 107500• Anchorage, Alaska 99510-7500

News Release

No. 99
February 26, 1990
For Immediate Release

Contact: Vivian Hamilton 265-2675
Frank Singleton 258-1300

SALVAGE OPERATION FEEDS NEEDY

ANCHORAGE, AK -- To salvage the moose kills on the railroad tracks, the Alaska Railroad has two salvage crews working seven days a week from Willow to Talkeetna, the area of highest concentration of moose. The remaining portion of track is maintained by section crews who are responsible for salvaging moose kills. Almost 70 percent of all moose killed on the tracks are salvaged.

Salvaged moose are delivered to a central pick-up point by the railroad. The moose meat helps put food on the table of families with no or little income at this time of year. "A lot of people who work during the summer are unemployed during the winter and are very willing to pick up the moose," says Vivian Hamilton, railroad spokesperson.

- more -

The demand for moose meat has been so high that Fish and Wildlife had to limit the number of applications to 700 -- one month ago. "The requests have been numerous this year and the railroad is doing a tremendous job of getting the meat down to a location where it can be utilized," says Rod Mills, Fish and Wildlife detachment commander in Palmer. Other recipients have been Beans Cafe, an Anchorage operation that feeds the city's needy; Nugen's Ranch, a facility for recovering alcoholics; and other local charities.

Disposition of both highway and railroad moose kills are coordinated by the Fish and Wildlife Division of the Alaska Department of Public Safety. Where moose carcasses are too badly damaged for human consumption, Alaska Department of Fish and Game officials have arranged for the meat to be collected and used in an experiment in the Tok area to save young moose calves from being consumed by hungry bears. Mills, who has been involved in the salvage of moose for over 15 years, saw the success of a similar program several years ago on the Kenai Peninsula. Bears who happened upon calving cows, ate the calves and then returned to do the same year after year, teaching their cubs to feed on the calves as well. Tok is now experiencing a similar problem. "This is a way that the moose kills can help preserve the herds," says Mills.

- more -

The heavy snows have taken their toll on moose in many other ways: there are animals that can't make it to the roads or railroad tracks because of the deep snow and are dying or dead. Hungry moose are aggressive nuisances for people living in the Willow - Talkeetna area and residents have been forced to shoot moose that have killed their animals or threatened their property and lives, Mills noted.

# # #

1051R

ALASKA RAILROAD CORPORATION

P.O. Box 107500 • Anchorage, Alaska 99510-7500

News Release

No. 98
February 26, 1990
For Immediate Release

Contact: Vivian Hamilton 265-2675
Frank Singleton 258-1300

ALASKA RAILROAD WORKS TO FORGE SOLUTION FOR MOOSE, ENLISTS HELP OF CITIZENS, WILDLIFE, MILITARY GROUPS

ANCHORAGE, AK -- The Alaska Railroad Corporation is formalizing a working relationship with wildlife agencies, citizen groups and military representatives in an effort to solve the problem of starving moose along the rail belt.

Over the past few weeks, the Alaska Railroad has resorted to a number of experimental solutions to the problem of moose dying on the railroad tracks. Although numbers of moose killed along the railway are down, railroad officials believe more can be accomplished by merging its efforts with the efforts of other interested groups. To date, the Alaska Railroad has spent some $265,000 on alleviating the problem, which is compounded by heavy snows and resulting starvation within the moose herd between Willow and Talkeetna.

- more -

The railroad has used a variety of innovative techniques to solve the problem of moose on the tracks; deploying pilot cars ahead of the train, using explosive noisemakers normally used to scare bears, mounting rubber tires along the tracks, spraying water on the tracks to create slippery footing for the moose, plowing snow berms to block access to the track and plowing paths parallel to the track to give the moose an alternate route.

Although some of the efforts have met with limited success, railroad and fish and game officials are impressed by the success of the pilot cars and rubber tires on the moose-kill ratio -- since the inception of these two strategies, moose kills have dropped from an average of 10 per day to four per day in the area between Willow and Talkeetna.

Railroad officials, fish and game representatives, military officers and other groups -- including the citizen's "Save the Moose" committee -- met today during a mobile press conference and working group on board an Alaska Railroad railcar, to discuss solutions to the problem and determine the type of support each agency can offer.

Railroad officials stressed the fact that while the railroad has no moose-feeding expert on staff, they could offer logistical, fuel, lodging and other support to the agencies responsible for game management. The railroad has named a representative from the Alaska Railroad

Corporation to work with the Save the Moose committee. Jim Carr, general roadmaster for the railroad and head of track maintenance, will act as a liaison between concerned citizens and the railroad to facilitate support from the corporation.

Media representives and others on board for the press conference viewed the problem area first-hand Monday. The railroad is trying different solutions in segments along the track to try to determine which effort is most effective. In addition to berms, path plowing and pilot cars, the railroad has enlisted the help of the Mat-Su Motor-mushers, a snowmobile club headquartered in Wasilla, to pack down paths alongside the tracks and shoo moose away from passing trains.

Military officials have indicated an interest in combining moose-saving efforts with arctic training for their own troops -- rail deployment is part of an actual operational plan for Army units in the state, according to Fort Richardson spokesman Chuck Canterbury, so combining the two would be a logical solution to both problems.

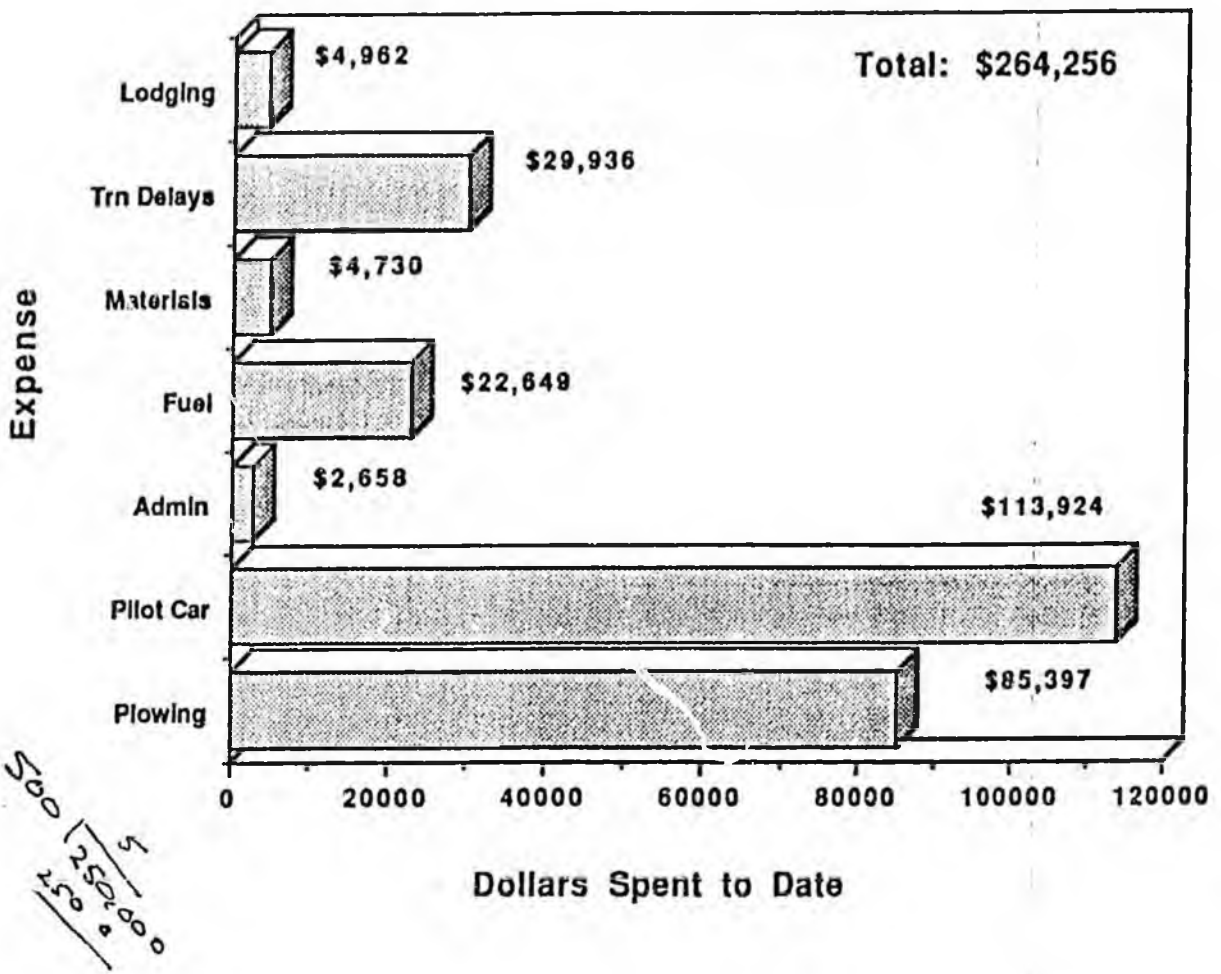
Also on board was legislator Curt Menard, representatives from legislators Ron Larson and Ramona Barnes' offices, Alaska Railroad president and CEO Frank Turpin and representives of the Alaska Department of Fish and Game and the Alaska Department of Public Safety's Division of Fish and Wildlife.

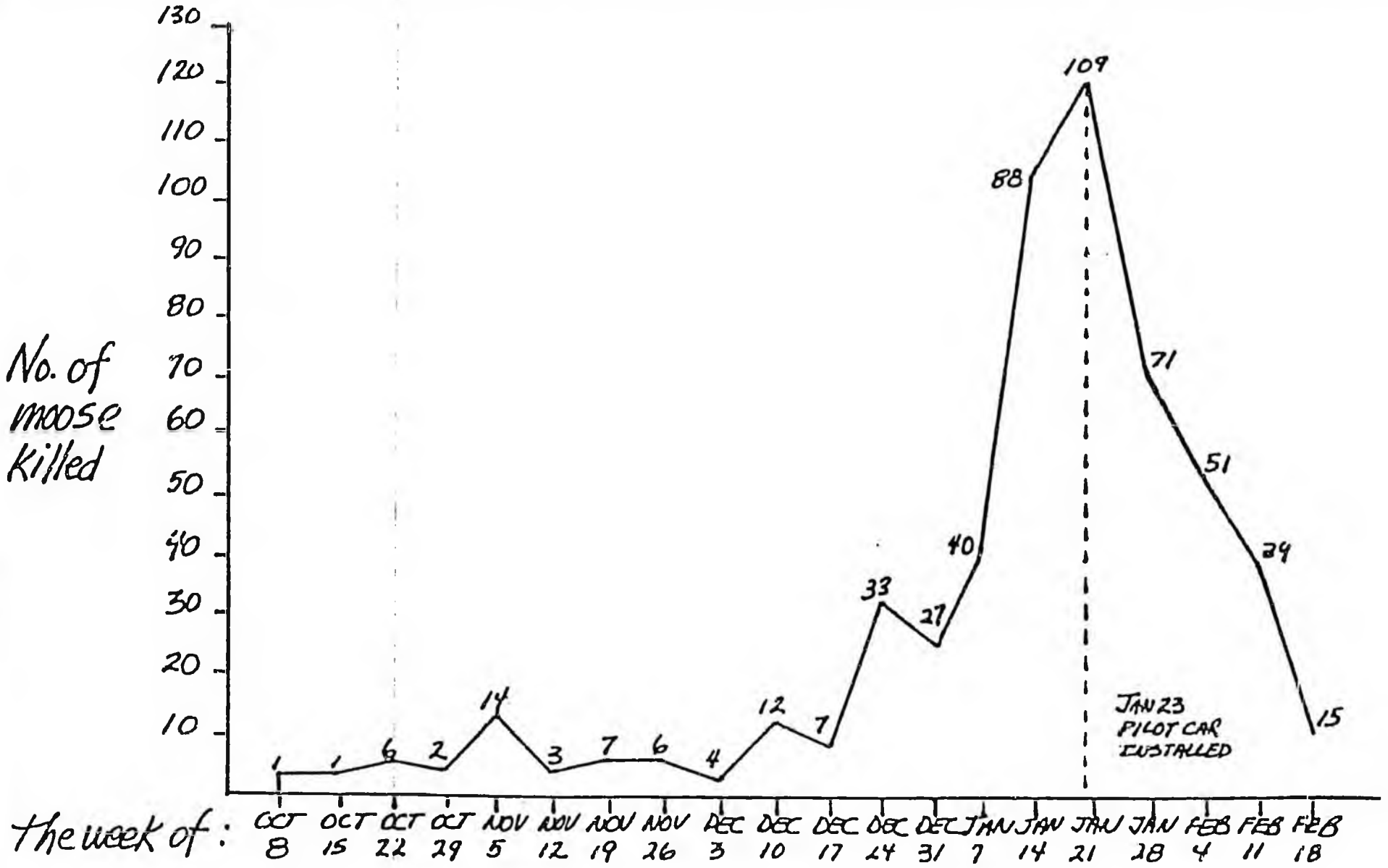
# # # # #

1053R

RAILROAD COST FOR MOOSE PROTECTION

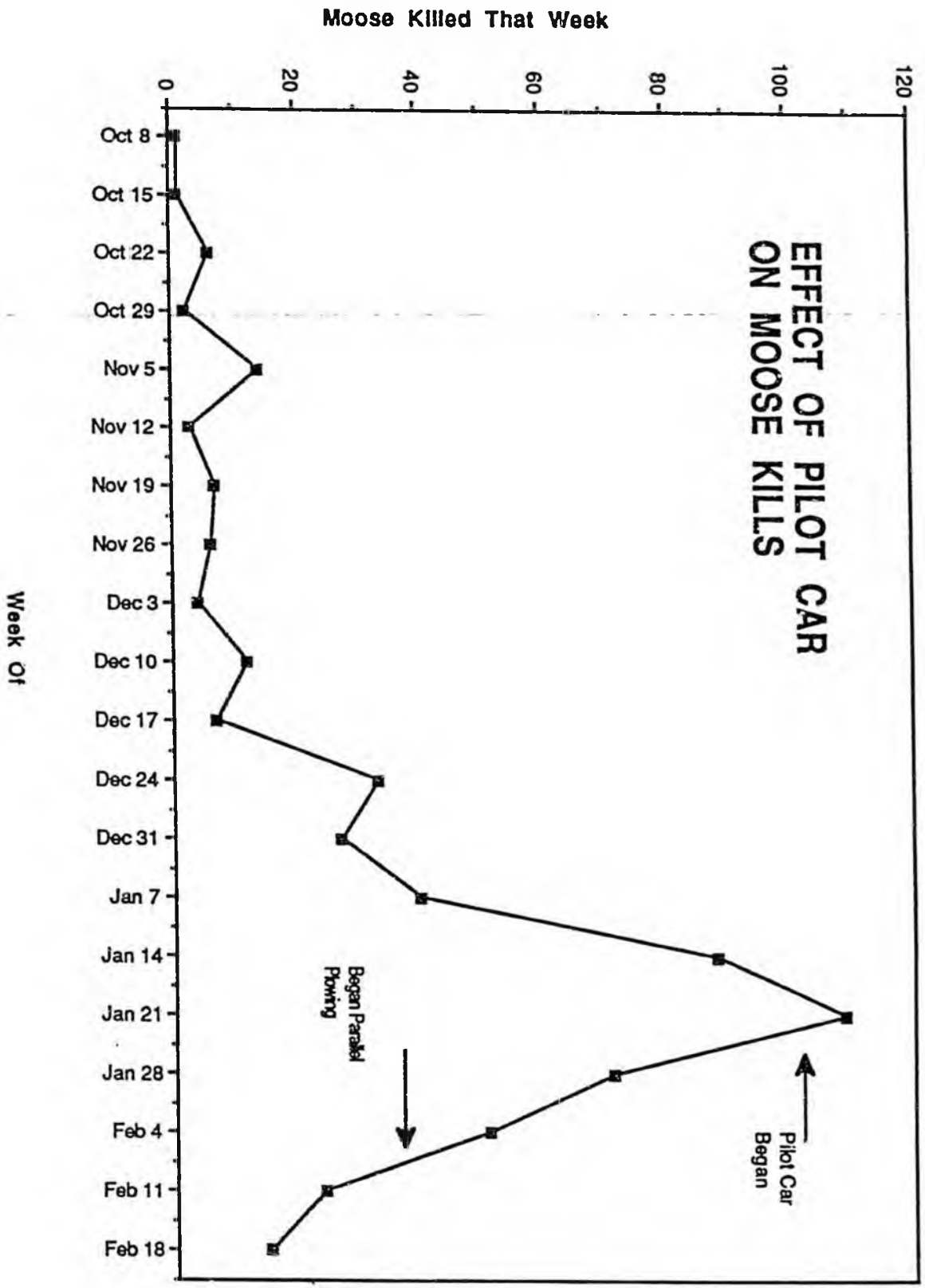
Fish and Game
D.N.R.

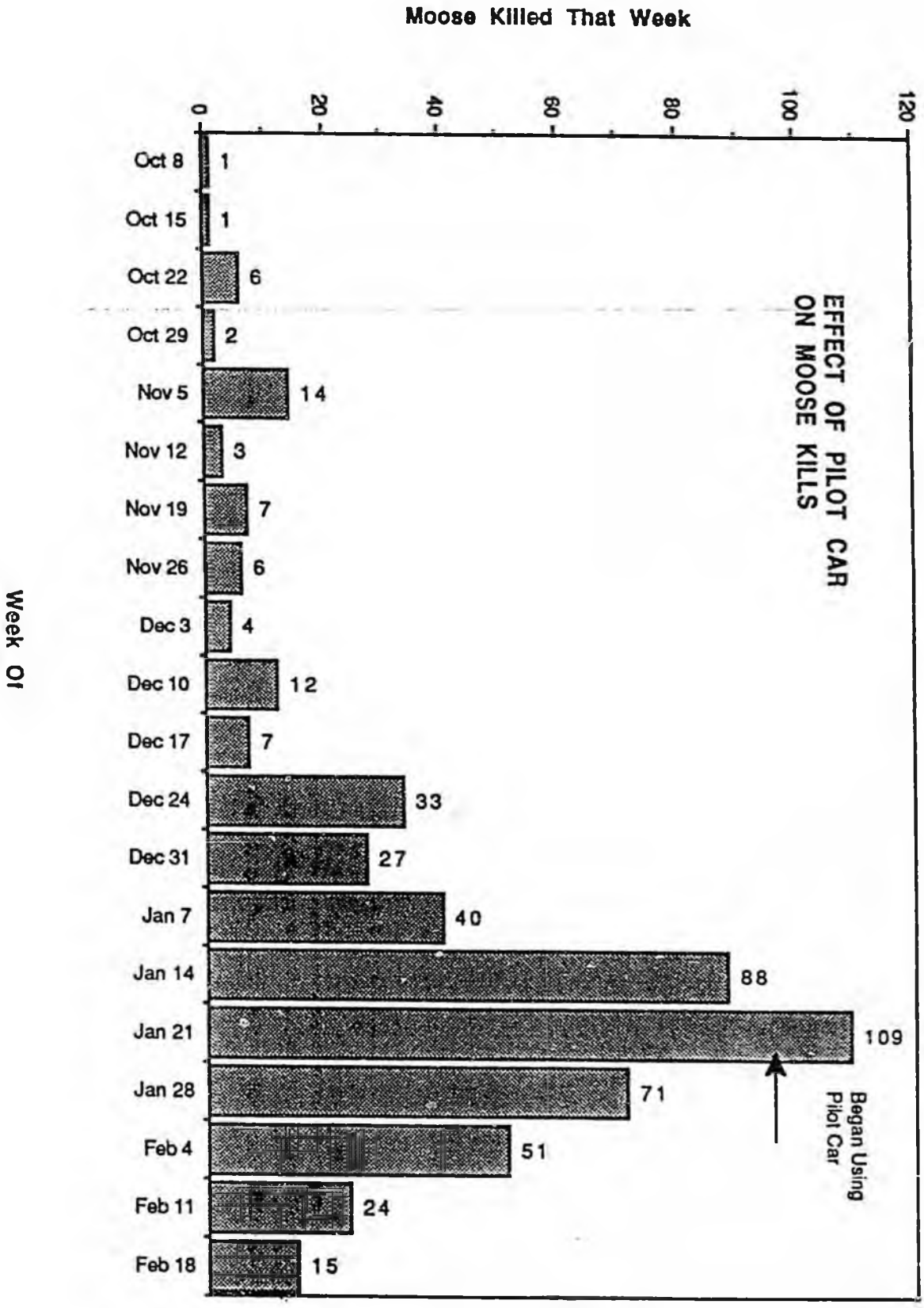




Total: 536

(includes unconfirmed moose kills; actual number may be lower)


EFFECT OF PILOT CAR
ON MOOSE KILLS
Moose Killed That Week
0
20
40
60
80
100
120
Week Of
Oct 8
Oct 15
Oct 22
Oct 29
Nov 5
Nov 12
Nov 19
Nov 26
Dec 3
Dec 10
Dec 17
Dec 24
Dec 31
Jan 7
Jan 14
Jan 21
Jan 28
Feb 4
Feb 11
Feb 18
Began Parallel Plowing
Pilot Car Began


Moose Killed That Week
0
20
40
60
80
100
120
Oct 8
1
Oct 15
1
Oct 22
6
Oct 29
2
Nov 5
14
Nov 12
3
Nov 19
7
Nov 26
6
Dec 3
4
Dec 10
12
Dec 17
7
Dec 24
33
Dec 31
27
Jan 7
40
Jan 14
88
Jan 21
109
Jan 28
71
Feb 4
51
Feb 11
24
Feb 18
15
EFFECT OF PILOT CAR
ON MOOSE KILLS
Began Using
Pilot Car
Week Of

Giants star gets $15 million deal

Sports, B-1

ge Daily News

ORAGE, ALASKA, TUESDAY, JANUARY 23, 1990 PRICE 25 CENTS

Moose dying at record rate along railway

By CRAIG MEDRED
Daily News reporter

The trains of the Alaska Railroad in the last month have been killing an average of almost 10 moose per day on the stretch of tracks between Palmer and Denali National Park and Preserve, according to officials of the railroad and the Alaska Department of Fish and Game.

Almost 50 of the animals died over the weekend, the railroad reported Monday. The total death toll for January has reached 204.

State wildlife biologist Carl Grauvogel said that is a record for the month. November and December kills bring the total death toll to almost 300 moose so far this winter.

It appears certain the railroad will set a new winter record for moose kills. The existing record is 360 dead, and records show that most moose die in the spring as snows deepen along the rails and winter-weary animals search for easy walking.

Deep snow is already being blamed for this year's carnage. Moose that stray onto tracks banked with 5-foot or higher snow berms are unwilling to jump back into the snow to get out of the way of oncoming trains, Grauvogel said.

"There are solutions to the problem, but they're going to cost money," he said. "There are not solutions that are cost effective from the railroad's standpoint."

"I don't know the answer to it," said railroad spokeswoman Vivian Hamilton. "I really don't."

Some Alaskans are saying the answer might rest in making the state-run railroad pay.

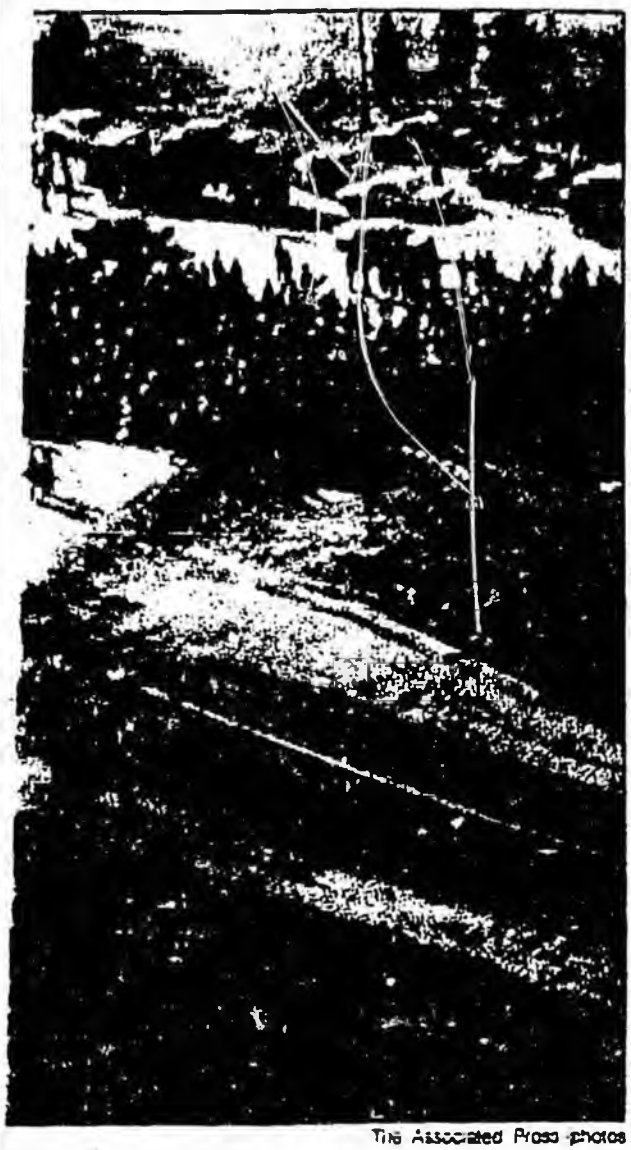
"Public pressure made Exxon spend billions of dollars," said Jean Lee, who has a cabin along the tracks north of Anchorage. "The public has got to do some-

Please see Back Page, MOOSE

MOOSE KILLS

- SUNDAY: 30
- JANUARY: 204
- WINTER: Almost 300
- RECORD: 360

Sources: Alaska Railroad and state Department of Fish and Game



The Associated Press photos

Soviet army tanks.

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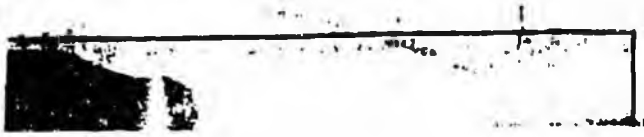

towns and cities in Azerbaijan, which has a population of more than 7 million. It has set suspending the state of emergency imposed on Baku Friday by Gorbachev.

gency, b
Armenia
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MOOSE: Trains killing at record pace

Continued from Page A-1

thing about this. The public has to be aware.

"We were up there over the weekend ... and my husband had a scanner, and we were listening to the railroad. Even the train men were getting upset (about the number of dead moose)."

Thirty of the big animals were run down on Sunday, Hamilton said.

"Our crews are not happy about it," she said. "It's not a pleasant thing for them to do."

The railroad has tried tactics to minimize the kill, Hamilton added. Efforts have been made to plow wider than the tracks to give the moose a shallow-snow area toward which to flee, and trains have been slowing down, even stopping at times, to give moose an opportunity to get off the tracks.

"Other than stopping trains altogether, I don't know what else we could do," Hamilton said, and the trains can't be stopped.

"We have a lot of customers," she said. "A lot of customers would be without freight."

She also questioned why the railroad should be charged for the moose it kills.

"Are they going to do the same thing for motorists?" Hamilton asked. Motor vehicles collide with an kill an estimated 800 moose in Alaska in deep-snow winters.

"We don't have the funds to pay that," Hamilton added. "It would increase the cost of doing business."

And it isn't like the railroad is intentionally killing moose, she said.

But some are concerned that the willows that grow in the railroad right of way create an attractive nuisance that lures moose near the tracks.

Grauvogel was reluctant to talk about this issue because of fears he could damage what he considers a good working relationship with the railroad; but he noted that moose kills have declined in areas where the railroad has cleared large areas on either side of the tracks.

"The areas they brushed out last year, they did an excellent job," Grauvogel said. "They took the food back to the tree line," and most of the moose stayed back there, too.

Brushing more areas won't save all the moose, Grauvogel added, but it could help save some. The big problem, he said, is that brushing should have been done over the summer.

"You can't do much in the winter," Grauvogel said.

Snow in the Talkeetna area is now about 6 feet deep, and it just keeps coming. Train crews have had a tough time keeping the tracks clear of snow. Moose are a secondary priority. Lee said that has to change.

"All anyone says is, 'There's nothing we can do,' " Lee said. "That's what everybody says: 'There's nothing we can do.' I just get angrier and angrier."

Train crews are trying, Hamilton said. Some have slowed so much in the effort to avoid killing moose that they have been unable to make the Anchorage to Fairbanks run in under 12 hours, Hamilton said, forcing the railroad to make emergency crew changes to comply with federal laws on train operations.

Section crews have also been working hard to retrieve all the moose carcasses. Edible portions are donated to charity. Inedible portions are saved for a state project to feed wolves in the Tok area this spring.

Still it is not enough, Lee said. A 50-year-old, who has been visiting the family cabin along the tracks 190 miles north of Anchorage for 36 years, she has never witnessed anything like the carnage this year.

"My husband works for the labor union, and he's not an environmentalist," she said. "But he agrees something's got to be done."

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Some help for the moose

This is in regard to the slaughter of moose by the Alaska Railroad.

Something must be done to slow or stop this wasteful slaughter. Following are some suggestions:

- Fine the railroad $500 or more per animal.
- Make the railroad slow down in known high-impact areas.
- Plow a larger area along tracks for moose to get off to one side.
- Plow areas away from the tracks so that the moose have a snowless area and are not tempted to go on the track.
- Increase moose kill for cows, calves and bulls during hunting season in railroad corridor.
- Install a laser light that would warn engineer of impending collision.
- Wolf or bear howl on tape instead of a horn. These predator sounds should scare them off.
- Spray a strong repellant on tracks.
- Fence or tunnel high impact areas.
- Have a man ride shotgun with rubber bullets; scare them off.
- The vast majority of moose are killed at night in the winter. Make the railroad use daylight hours as much as possible.
- Report kills and give salvageable meat to charitable organizations.

There is no one way to stop this "wanton waste," "poaching," or whatever the Department of Fish and Game might call it. The railroad killed over 300 moose last year. With a $500 fine per animal, the railroad would soon have new ideas.

What happened to Yankee ingenuity? Is it that no one cares?

The railroad made a lot of money last year. Let's see some of it go to a good cause. Help stop the slaughter.

— *Bill Samuelson*
William Hyter

OUTDOORS

Record moose suffering deadly winter

By DELIA DORRAN
Frontiersman staff

An average of 10 moose nightly are being hit by trains due to deep snow and no escape pathways, according to game biologists and Alaska Railroad officials.

"Railroad kills are going to set a record," said state game biologist Carl Grauvogal. As of 5 a.m. Wednesday, approximately 360 moose had fallen victim to trains. Of those collisions, 250 occurred since Jan. 1.

Vehicle collisions with moose don't number as high, with around 150 reported so far this year.

The trains are a reluctant weapon of a villainous winter with deep snow and unforgiving pathways. Grauvogal related several officials receiving reports of starving calves and moose lingering near homes. Area residents want to do something about the situation and Grauvogal hopes to provide opportunities soon.

"Usually we don't get a rash of those calls until March or late March," explained Grauveogal.

A growing number of starving calves have officials and the public alarmed and working on possible action. We're definitely working on the department (Fish and Game) coming out with options for involvement," he said.

"We might only save a few hundred, but that's very important," added Grauvogal.

Along the Parks Highway through Willow, a moose calf has wandered near mile 68 for over a week and is being fed hay by concerned residents.

Gene Newman, owner of Newman's Hilltop Service, notes the severity of the moose/snow problem. "It's a concern shared by everyone. "They've definitely been a problem," said Newman.

Grauvogal expects the calf survival rate to be below 50 percent in areas north of Willow, and, "only so-so in the Palmer-Wasilla area."

Two containers full of dead moose sit by the railroad tracks in Willow. The moose were hit by trains but were unsalvageable for human consumption, according to Vivian Hamilton of the Alaska Railroad Corp.

Hamilton explained the moose will be stockpiled until spring when they will be used for predator research by the Dept. of Fish and Game. Game researchers are trying to develop a solution, using the dead moose, to increase calf survival rates.

Rep. Curt Menard has called an emergency meeting of the House Resources Committee to address the record number of train-killed moose. Scheduled for Jan. 30 at 7 p.m. the meeting will be teleconferenced and public testimoney will be taken at the Legislative Information Office in Wasilla.

Frontiersman

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Sean Hanlon
Managing Editor
Susan Morgan Howk
Associate Editor

The Valley's killing fields

The daily carnage taking place on Southcentral's roads and railways has reached devastating proportions. The combination of heavy snowfall and heavy machinery is decimating our area's moose herd this winter, and everyone with the least bit of compassion for struggling symbols of Alaska is feeling the pain.

The wintertime tragedy is taking place in three zones. Certainly the Alaska Railroad right-of-way is the bloodiest, where locomotives are mowing down dozens of animals each day as moose seek a snow-free path. Additional destruction is taking place on the roadways where moose seeking easy walking are endangering themselves and motorists alike. Finally, some of the worst, but least-visible, death is taking place in the woods where deep snow is exhausting the moose who must struggle through it for their food. Yearling calves are especially susceptible, expending more energy to move through shoulder-deep snow than they can take in by browsing.

It's easy, if unpleasant, to chalk up the carnage to Mother Nature, who periodically decides that a certain species of plant or animal needs thinning. But man has an equal role in this tragedy and an equal responsibility to do something about it. Unfortunately, man's options are limited.

Stopping car and train traffic in the moose belt is an unlikely measure, as is clearing alternative pathways through the drifts. Food drops to starving moose are doomed to go unsponsored. But we must try something, anything.

Even if the only thing we do is schedule an emergency subsistence hunt along the railroad's right-of-way, at least the animals won't suffer the pain of maiming and death at the hands of a multi-ton locomotive and half of their meat won't be wasted.

We feel extremely powerless in this situation, and we can only imagine how the railroad engineers must feel. Alaskans everywhere are grieving over this slaughter. Valley residents have been especially

Method sought to reduce kills

By BILL KELDER
Times Valley Bureau

WASILLA — Over the past five years, the Alaska Railroad Corp. has tried everything from guns with blanks to ultrasonic whistles to get moose off the railroad's tracks before an oncoming train hits and kills them.

"We do not like being printed up every winter as moose killers, and have been working with the state Department of Fish and Game and the University of Alaska to develop a technique that will keep moose off the railroad tracks before they get hit by an oncoming train," said Vivian Hamilton, the railroad's director of communciations.

"Unfortunately, nothing we have tried thus far has worked," she said. "We are open to suggestions, but we recommend that people with ideas they think will work first run them by the Department of Fish and Game. We cannot use any method the department has not first approved," Hamilton said.

Among the methods tried:

- The railroad invested $15,000 through the University of Alaska Fairbanks to develop ultrasonic, or high pitched, whistles to try to get moose off the tracks. The effort was fruitless as the moose never responded to the ultrasonic whistles.
- Sirens, like those on fire trucks, were used on trains to try to scare the moose off the tracks. The moose were scared alright, but ran down the tracks instead of getting off them.
- Guns with blanks were fired from trains approaching moose on the tracks. The results were the same as in the siren tests.
- The Fish and Game Department, using a locomotive loaned by the railroad, tried using slower speeds as a way to avoid moose kills. When the engine's normal 50 mph speed was cut in half, there was no appreciable difference in kills.

"I think there were 19 'paper' kills at 50 mph and 18 kills at 25 mph, or maybe it was vice versa," said Fish and Game wildlife biologist Carl Grauvogel.

Grauvogel said department personnel have been meeting regularly with railroad officials for the past five years to try to find a workable solution to the moose problem.

Hamilton said some suggestions received by the railroad just are not practical.

"One group of school children in Fairbanks suggested running a helicopter in front of every train to scare the moose off the tracks," she said. "But the cost of contracting for helicopters makes that proposal unfeasible."

Other suggestions included running the trains only in daylight hours.

"First, in the winter it takes longer to run a train from Anchorage to Fairbanks than there is daylight. Second, moose get killed in the daylight and in the summer just as in the winter, though they are more prone to get off the tracks in the summer months, so the number of incidents are fewer," Hamilton said.

A suggestion to mount a water cannon on the locomotive to squirt at moose to get them to move proved technically and financially unfeasible, she said.

Another idea is to use rubber bullets to scare the moose off the track, but there is no guarantee that a moose scared by a rubber bullet in the winter will do anything other than run down the center of the tracks as it does when blanks are

ing works

ed.

DF&G's Grauvogel said one idea is to run an electrified wire mesh down the center of the tracks between the rails. The wire would be low amperage but high voltage to possibly train the moose to avoid the tracks altogether.

"The problems would be breakage of the wires, causing a break in the current, and keeping the wires uncovered during the winter so the moose would feel the shock," he said.

"Other countries with similar winter problems, such as Canada and Sweden, have tried a number of techniques that also failed," Grauvogel said. "They finally concluded that the only effective method that would work is to put up a fence along each side of the railroad right-of-way in areas of heavy moose population. That is probably the best solution, but it, too, has drawbacks," he said.

Grauvogel said his department estimated the cost of building an electric fence along the 60-mile stretch from Willow to Chase was $3.5 million, including an $863 per mile maintenance cost for the first three years of operation.

He said such a fence would not be continuous for 60 straight miles, and would have guided openings through which moose would be "ushered" out if they wandered into a fenced area by following the railroad tracks.

One problem with the electric fence idea is people — snowmobilers, cross-country skiers, trappers and others who come across a barrier are not going to be pleased, Hamilton said.

She said other problems with the fence idea are jurisdictional.

"Who pays for the fence, its maintenance and the power needed for the electricity," she asked. "There is also a big question of liability. Who is responsible if a person or their pet gets shocked by the fence? How high could the cost of damages go in the case of a lawsuit?"

Grauvogel said one long-term solution might be to develop moose habitat areas away from the railroad's right-of-way, gradually training the moose to winter in the habitat areas. That might be done in conjunction with planned timber harvests, he said.

"It is important to point out that no economically feasible method or technique to keep moose off the railroad tracks is going to be 100 percent effective," Gravaugel said. "Some moose, winter or summer, are simply going to be walking down the tracks when a train comes and get hit and killed."

1-28-90 Anc Times

Railroad takes toll on moose

By BILL KELDER
Times Valley Bureau

WASILLA — More than 360 moose have been hit by Alaska Railroad trains this winter. Heavy snowfall between Willow and Hurricane Gulch could lead to record moose kills along the Railbelt, according to railroad, state and legislative officials.

Snowfall of five to eight feet in the 60-mile stretch along the rail line from Willow to Hurricane is causing more and more moose to seek lower ground and easier walking and feeding, according to Carl Grauvogel, wildlife biologist with the state Fish and Game Department's Matanuska-Susitna office.

"As of 5 a.m. (Friday), railroad officials have reported 257 to 277 moose struck by trains for the month of January," Grauvogel said. "Another 104 hits were recorded in November and December of this winter."

Grauvogel said railroad officials report moose hits to his department regularly during the winter months, and then send personnel out to confirm whether a moose was actually killed.

"I would say approximately 95 percent of the hits are confirmed," Grauvogel said, adding the 361 reported kills thus far this winter should mean a record number of moose will be killed by trains this year.

Rep. Curt Menard, co-chairman of the House Resources Committee, has called an emergency committee meeting to discuss possible solutions to the problem of moose being killed by trains. The meeting is set for 7 p.m. Tuesday in Juneau, but will be teleconferenced to communities along the Railbelt, which stretches from Seward to Fairbanks along the Parks Highway.

Menard, D-Wasilla, said Fish and Game and railroad officials will brief legislators on the situation. Public testimony also will be taken.

"A valuable wildlife resource is being destroyed at an astounding rate," Menard said in a statement issued by his office this week. He said he hopes the meeting will lay the groundwork for solutions.

Though Grauvogel feels this winter's kills will set a new record, he said the department has only been keeping accurate records of moose killed by trains since the early 1960s. Since that time, the record was set in 1984-85 when 382 moose were killed by trains.

"There were probably some heavier moose fatalities in earlier years, but no one was keeping accurate records at the time," Grauvogel said.

Railroad officials have been working with the state for five years to come up with a viable solution, according to ARR spokeswoman Vivian Hamilton.

"We do not like this situation any more than anyone else in the state. And we have tried a number of solutions over the years but, to date, none of them have worked," Hamilton said Wednesday afternoon.

She said 242 moose were killed last winter, a number already exceeded in this month's first 24 days.

Grauvogel said heavy snowfall drives the moose down from higher to lower ground in search of food and to avoid the deep snow. But this year's record

rate of kills

ase," Grauvogel said. "In some areas the snov five feet deep and up the moose's belly or shou der. Where the snow is eight feet deep, it is up the noses," he said.

Moose that wander onto the railroad tracks which are kept relatively clear by the daily passag of freight trains between Anchorage, Healy an Fairbanks, tend to stay on the tracks for the easie traveling.

"The moose probably do not really see the train as trains," Grauvogel said. "To them, this is large predator roaring down the tracks at them shaking the ground and whistling as it comes."

He said 2 million years of moose evolution have taught the animals to run to avoid predators.

"In the summer, the moose will more often than not, get off the tracks and run into the woods," Grauvogel said. "But in the winter, particularly after they have just walked through snow up to their bellies, they will prefer to run down the track rather than get back into the deep snow where be havior and experience have taught them they wil have less chance of surviving."

The problem is that moose run 12 to 15 mph, and trains at half-speed move at about 25 mph.

"So no matter how far the moose runs, the train evenutally catches up to it and hits it," Grauvoge said.

He said there are several thousand moose in the Parks Highway corridor that includes the rail line according to the latest DF&G counts.

"Not all of these moose will use the Susitna River basin or wander onto the railroad tracks, bu some of them will and that is when the problems begin," Grauvogel said.

Hamilton said railroad engineers try to slow down when they see a moose in the hope the moose will get off the track before the train reaches it But the plan does not always work.

"Five locomotives pulling 45 rail cars take about [redacted] mile to a [redacted] stretch of track," Hamilton said. "Frequently a train will come around a bend and, suddenly there is the moose with no time to slow down, let alone stop."

Hamilton said one railroad employee in a hi-rail car — a pick-up truck fitted to run on railroad tracks — once followed a moose for 40 miles before the moose finally made up its mind to get off the tracks.

1-27-90 one time

Moose grow weary, hungry as heavy snow buries foo

By JOSEPH DITS
Times Writer

Moose in Cantwell and Trapper Creek are giving up. Many of them are kneeling down on the roads and dying from starvation.

Heavy snowfalls a week and a half ago buried most of the edible foliage, forcing moose into some of the biggest herds seen in years along the roadways and railroad tracks, say Alaska State Troopers.

Radio dispatchers for the area say they have been fielding twice as many moose calls as last winter.

And troopers issued warnings about the fatigued wildlife and icy snow-packed roads last week to drivers on roads north of Trapper Creek. They suggest traveling 45 mph or slower.

"Citizens have been up here 21 years and say they've never seen it like this," said Trooper Roger Ellis of Cantwell, who said he was counting 15 to 20 moose per mile last week.

But Roberta Winfield, a clerk with Fish and Wildlife Protection, said the office has had no chance to tally the casualties.

"I'm spending my entire day going from one moose kill to the other, and I haven't had time to count them up," she said.

Several groups are working on possible solutions to the moose herds, said state wildlife biologist Carl Grauvogel. Thursday, road crews began to plow openings so wildlife may have "escape routes" through the high snow berms along the roads.

State and Matanuska-Susitna Borough officials are meeting with railroad officials on more extensive plans that Grauvogel said would be announced within two weeks.

A guide and pilot counted about 80 moose and 40 caribou last week on an eight-mile stretch of the George Parks Highway centered at Cantwell. Ray Atkins, a 25-year Alaskan, said he saw about 200 moose within a couple of hundred feet of the road when he drove from Cantwell to Willow last week.

Ellis said from his Cantwell office he could see as many as 100 caribou on a nearby hill.

Palmer police Chief Ron Otte said moose-related calls hit a "frustrating" level for his dispatchers, who handle Matanuska-Susitna Borough calls north of Willow.

Palmer dispatcher Jackie Smith said the department was answering about 20 to 30 calls a day, twice as many as last winter.

In the Talkeetna area, troopers reported 20 moose shot in four days while people were defending lives and property. Compare that with the usual two or three a month.

Dispatcher Brad Ault in Talkeetna said the moose have lost their patience with humans trying to shoo them away. "They flat lay their ears down and charge you," Ault said.

The moose have become so tired, many have given up their search for new ground.

Many calves have exhausted more calories clamoring through the high snow and seeking food than they've been able to eat. Ault said three-fourths of the calls lately have regarded moose calves.

"It's breaking my heart," "I'll frankly be surprised if a of them survives."

About 25 moose were starved in one week, he said.

Reports of large numbers began pouring in Jan. 16, whe conditions blew in several fee Ault said. Similar conditions during the winters of 1970-71 an he said.

No significant snowfall wa for this week but sub-zero tem were, the National Weather said. It got to a low of minus-3 twell Friday.

Both Ellis and Ault are un the moose will survive the free

Ellis said the moose maint body heat by eating more. ". the cold eats up all their energy

Moose leath toll ops 500

roup hopes to cut ımber of train kills

CRAIG MEDRED
/ News reporter

'he death toll of moose crushed by the e-owned locomotives of the Alaska lroad has now surpassed 500, the most r, and a grassroots organization has ned to halt the carnage.

ı group called Save the Moose plans to in a rescue on Friday, said Charles Wareham, a volunteer coordinator the vice president for operations at scom. The first priority will be to ıte moose trails in the snow-clogged itna Valley to lure moose away from railroad tracks.

Vareham said the railroad can't do rything on its own.

They're not equipped to gear up and ɔond to this problem quickly enough," said. "Already there's been 500 moose ed by the railroad, and they're still ing them."

Railroad officials have reduced the !y moose kill from approximately 12½ day to about four per day, but that is l a lot of moose, said Carl Grauvogel, tate wildlife biologist.

At the present rate, the railroad could another 300 moose by April. That ıld bring the total winter kill to ɔroximately 800 animals — nearly ce the old record of 460.

Heavy snows are largely to blame. ɔw has driven the moose down out of mountains and concentrated them in Susitna River lowlands, through ich run the railroad and the George ks Highway.

Nature itself is doing a lot of killing

Please see Back Page, **MOOSE**

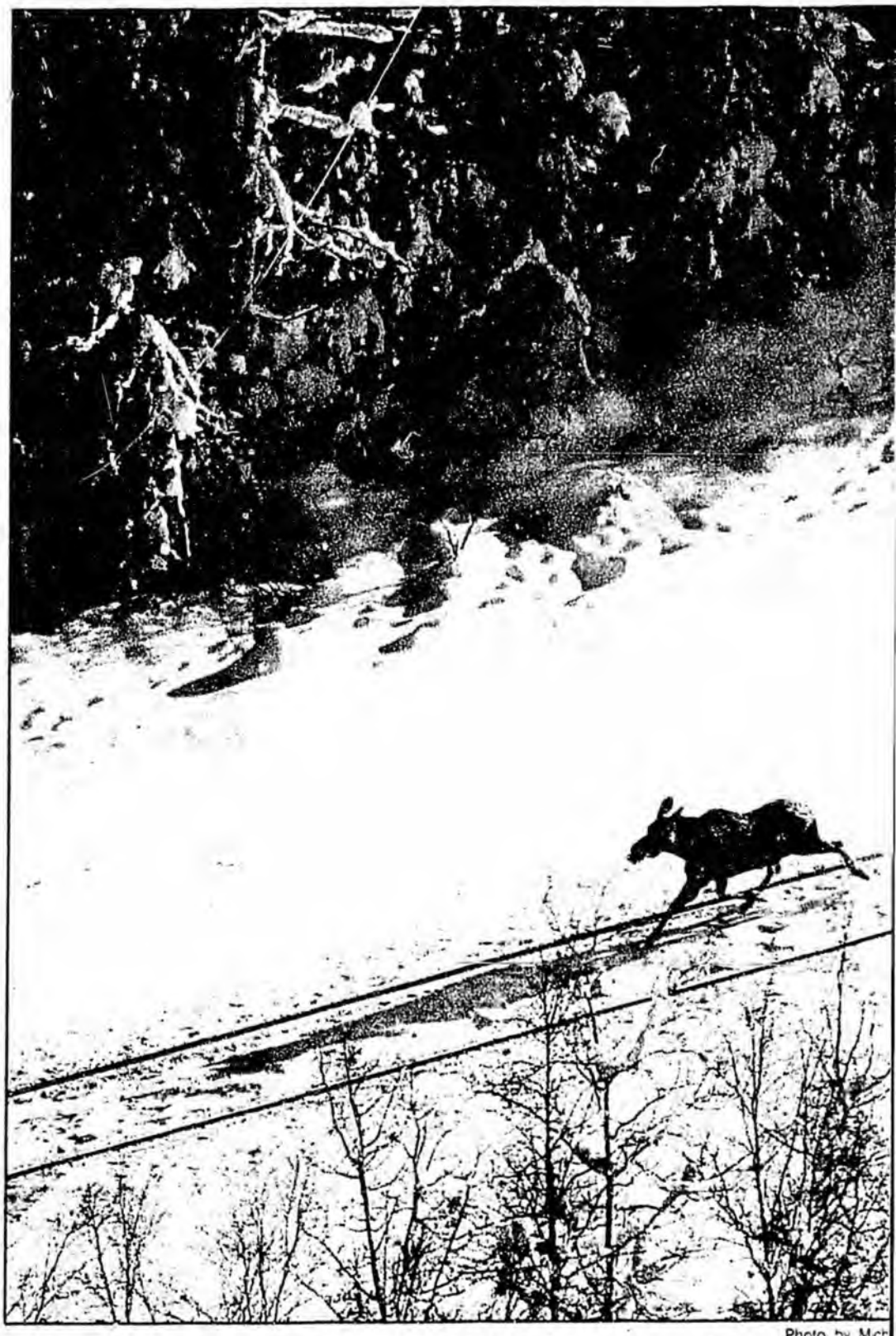

Photo by Mich

A moose runs down the tracks to try to get away from an oncoming train near Tal

MOOSE: Grassroots group has three-part plan to keep animals alive

Continued from Page A-1

there. Moose are starving to death or dying from exhaustion in snow that reaches to their shoulders. The railroad deaths simply add to a bad situation, Grauvogel said.

"It is pretty grim," Wareham said. "We're gonna have a massive winter kill this year no matter what we do. Up north there, there's areas where there are over 100 inches of snowpack. You're talking about 9 feet of snow.

"In those deep snow areas where the moose walk, they leave a big, U-shaped furrow in the snow."

"I've tried walking out there just to see what it's like," Grauvogel said. "You spend about 5 minutes in that snow and you're just exhausted."

Moose face the same situation, and after nearly exhausting themselves in snow, those that stumble onto the plowed railroad tracks aren't eager to leave. Grauvogel said state biologists and railroad officials have tried everything they can think of to scare the animals off the tracks before the trains catch and crush them. Nothing works well.

About the only real solution is to plow or pack alternative trails for moose parallel to the tracks. Grauvogel said the railroad has started doing that with some success. Moose that encounter those trails follow them, instead of going onto the tracks.

Wareham said Save the Moose is going to expand the trail-building effort. Two tracked vehicles will start making trail on Friday, he said, and the Army has been asked to help out with additional teams of tracked vehicles.

"That's piece number one (of the moose-saving plan)," Wareham said. "Piece number two is we'll take that same equipment and run spurs off of that walkway. Wherever we can get permission, we'll run those walkways into areas of natural browse."

Where private landowners are agreeable, or where the state says it's OK, Valley loggers will go into the browse areas and chop down birch and aspen trees.

"They're going to go in and knock over some trees so the moose can eat some of the tree tops," he said. "Finally, as a third piece, in the built-up area here in the Valley where people have moose in their backyards and around their cabins and everything, up to about 500 moose could conceivably be fed with a supplemental feeding program."

Save the Moose, a coalition of hunters, outdoorsman and others interested in assisting the moose, is working on a plan to purchase moose food in bulk and supply it to volunteers who would do the actual feeding.

"It's gonna cost probably $250,000 for this feeding program and for this trail program," Wareham said. The state House Resources Committee has approved legislation appropriating that much money for a moose rescue, but no one should count on that, Wareham said.

Even if the legislature approves the money, "It's not going to get here in time to solve this problem," he said, so the group is soliciting contributions.

Both the Alaska Department of Fish and Game and the railroad have backed the efforts of Save the Moose.

Biologists especially hope these efforts can save pregnant cow moose. The survival of these animals may be vital to rebuilding the moose population over the next few years.

Grauvogel said the deep snows have already killed most of the calves born last spring, and bulls that used a lot of energy fighting over cows during the fall rut are in trouble.

"I've made a couple flights, and we see a quite a few dead moose," Grauvogel said. "The snow measures 5 to 7 feet on the level out there. Moose aren't moving around as much as they were. They're really keying on trails."

Once the trails along the train tracks are done, he said, he'd like to see people begin putting in trails from the tracks to old homesteads where regrowth forest provides good moose browse.

People might be able to save some moose by doing that, Grauvogel said, but trails won't alter the brutal realities of nature. Moose die from snow and cold every winter. The unusual conditions this year are likely to kill thousands.

And the winter is far from over.

Anc/Times 2/22/90

ALASKA RAILROAD CORPORATION

.O. Box 107500 • Anchorage, Alaska 99510-7500

Measures By The Alaska Railroad To Reduce Moose Mortality

Pilot car: A pilot car is being operated in front of freight trains. This appears to have produced some results in driving moose away from the track. Raw data shows as many as 60 percent of the moose are frightened away. It is difficult to determine, however, if the moose returns later.

Creating moose paths: Wherever possible along either side of the right of way between Willow and Talkeetna, Alaska Railroad maintenance crews are cutting 13-foot wide paths parallel to both sides of the track. The snow removed while creating the paths will be used to build a berm between the paths and the railroad track and will serve as barricades to prevent moose from getting to the track. The moose already are using the trails that have been cut, so we have enlisted the assistance of two volunteers who, for the price of their fuel, are assisting us in cutting the trails with their equipment. We have dedicated two Caterpillar tractors to the operation.

Rubber tire obstacles: At four locations between Willow and Talkeetna, a series of rubber tires have been installed between the rails, nailed to the ties. The tires create an obstacle which cause moose to leave the track. To further guide the moose, tires have been positioned up-right and at right angles to the track in these locations and funnel the moose away from the track. This method was suggested to us by a member of the public and appears to be very successful.

Plowing: Routine snow removal along the track includes plowing a 40-foot-wide path in the area where most moose mortality occurs. This appears to have no affect on the moose who prefer the hard-packed surface of the track rather than the plowed area, which despite the plowing remains as deep as 6 feet in some areas because of the slope of the track shoulder.

Brushing: Railroad crews cleared three locations for a total of more than seven miles of right of way last summer, removing the brush which moose find so tempting as a food source. Alaska Department of Fish and Game biologists had suggested this might remove the attraction for moose; however, in the areas where the brushing was done, moose mortality on the track actually doubled this season. We'll continue experimenting with this idea, though, and will clear additional areas this summer or fall.

Noisemakers: The railroad has installed on several types of vehicles small high-frequency sound devices used to deter deer and other large game animals. None appears to have been effective. The railroad also hired the University of Alaska to test the affects of various sounds on moose. The $15,000 experiment did not produce a sound which would repel the moose. We also have attempted to scare moose with more conventional sounds such as sirens and horns; the pilot car is equipped with a siren and it appears to have some effect.

Slow trains: ADF&G long advocated that if the Alaska Railroad slowed its trains we could reduce moose mortality. In 1988 the Alaska Railroad and ADF&G conducted a week-long test during which we operated a locomotive at 25 mph and at 49 mph between Willow and Talkeetna. During the test an equal number of moose "paper kills" were recorded at either speed, indicating train speed doesn't seem to have an impact on the number of moose incidents. It takes at least one and one-half miles for a 45-car train to stop once the crew spots a moose. Poor visibility because of darkness, blowing snow and curves in the track often make it difficult to stop, though. Whenever possible, our train crews do slow or stop for moose.

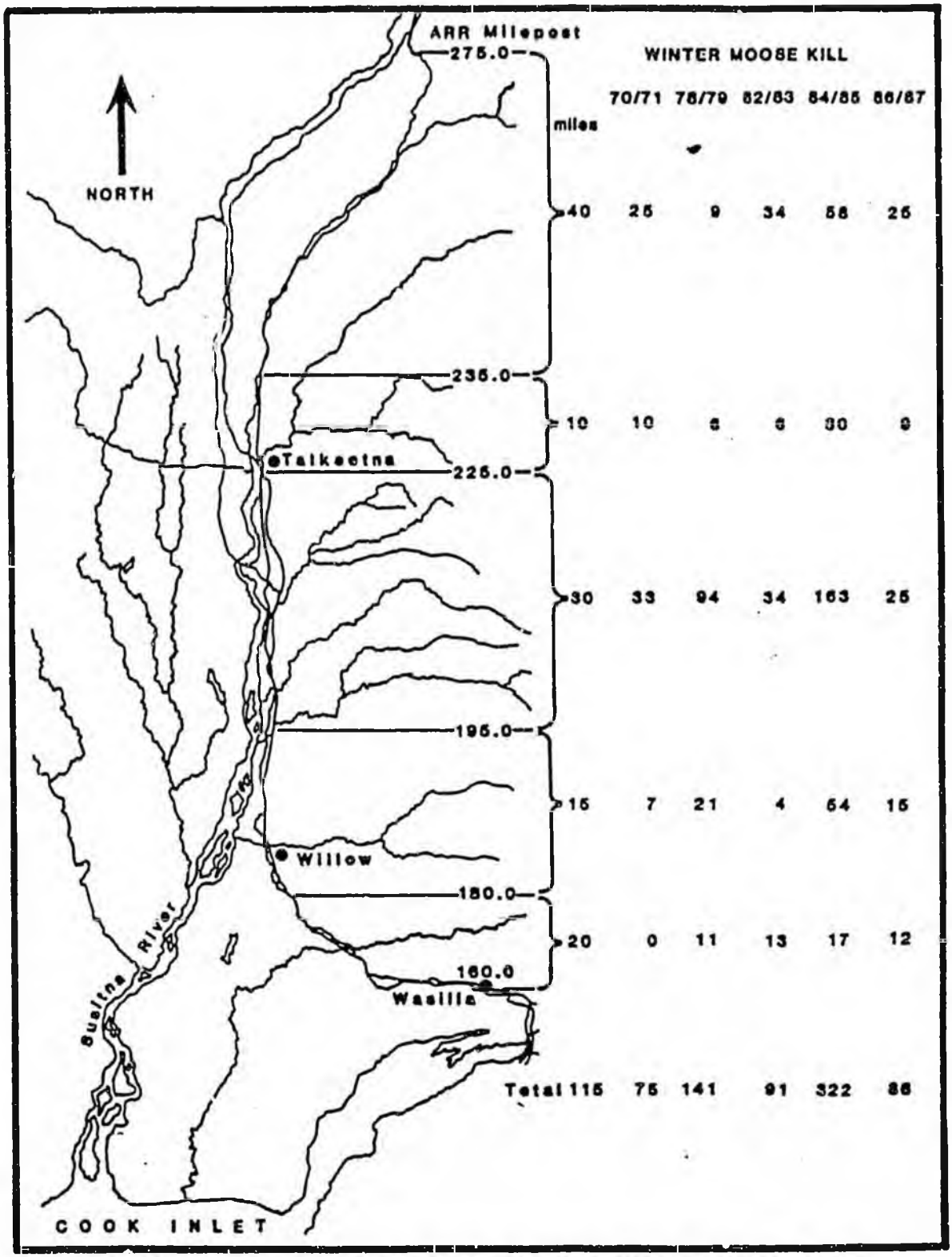

Fig. 1. Distribution and number of moose reported killed by trains in the Alaska Railroad (ARR) right-of-way between milepost 160.0 (near Wasilla) and 275.0 (near Chulitna Pass) during winter (November - April) 1970-71, 1978-79, 1982-83, 1984-85 and 1986-87.

Table 1. Number and percent of moose reported killed by collisions with trains in the Alaska Railroad right-of-way from Seward to Fairbanks by month in summer (May-October) and in winter (November-April) 1963-90.

Year	Month												Season		Total	% Total
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Summer	Winter		
1963-64	-	-	-	1	3	0	2	4	3	15	16	5	4	45	49	2
1964-65	3	0	1	1	2	1	3	6	8	10	8	1	8	36	44	2
1965-66	1	1	0	1	1	1	1	6	10	9	5	2	5	33	38	2
1966-67	1	0	0	2	2	0	2	5	7	5	28	2	5	49	54	2
1967-68	1	1	0	0	0	0	3	3	7	13	4	0	2	30	32	1
1968-69	0	1	0	0	1	1	0	0	1	4	1	2	3	8	11	.5
1969-70	0	2	0	0	0	0	0	1	1	2	3	0	2	7	9	.5
1970-71	0	0	0	0	3	2	0	14	59	55	19	0	5	147	152	6
1971-72	1	0	0	1	0	1	2	4	17	36	17	10	3	86	89	4
1972-73	2	0	0	0	2	0	0	2	4	7	7	2	4	22	26	1
1973-74	0	0	1	0	1	1	0	3	2	4	6	0	3	15	18	1
1974-75	0	1	0	0	0	0	3	11	13	12	24	6	1	69	70	3
1975-76	6	0	0	0	1	1	1	2	4	7	12	3	8	29	37	2
1976-77	1	0	2	1	0	1	1	1	3	8	7	2	5	22	27	1
1977-78	4	3	0	1	1	1	1	2	5	3	1	1	10	13	23	1
1978-79	0	1	0	1	0	0	1	59	37	42	14	9	2	162	164	7
1979-80	0	0	0	1	0	0	3	6	15	11	14	3	1	52	53	2
1980-81	1	0	0	3	0	3	0	2	1	8	1	1	7	13	20	1
1981-82	1	4	2	2	2	2	3	4	15	6	3	4	13	35	48	2
1982-83	4	3	5	3	3	3	22	22	34	32	14	3	21	127	148	6
1983-84	0	3	3	1	1	2	4	10	7	23	6	4	10	54	64	3
1984-85	1	1	0	3	2	0	1	4	40	104	201	25	7	375	382	16
1985-86	3	3	4	3	7	2	1	3	3	9	5	0	22	21	43	2
1986-87	0	1	3	4	7	3	4	23	56	29	15	8	18	136	154	7
1987-88	----------12----------					1	13	81	60	98	64	13	12	330	342	14
1988-89	----------11----------					3	11	29	65	82	60	3	11	253	264	11
1989-90	----------12----------					11	28	65	270?							
Total	30	25	21	29	39	40	110	372	747	634	555	109	192	2169	2361	103
% Total	2	1	1	2	2	2	5	16	32	27	24	5	8	92	100	

MOOSE-TRAIN CONTACT REPORT

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/ac
1988								
11-3	10:05 pm	MP 421.0	5	8"	Fbks.Sec.Wk.Ldr.	Yes	Fairbanks Yard	Cow-2 yrs.
11-4	11:00 pm	MP 397.0	2	12"	Dist.4RM/Trk.Ins	No	Unsalvageable	Cow
11-4	11:00 pm	MP 397.0	2	12"	Dist.4RM/Trk.Ins	No	Unsalvageable	Calf
11-9	7:31 am	MP 401.5	5	10"	Dist.4 Trk.Insp./ Fbks.Sec.-J.G.	Yes	ARRC Xing 412	Cow-4 yrs.
11-9	7:31 am	MP 401.5	5	10"	Fbks.Sec.-J.G.	Yes	ARRC Xing 412	Bull-1 yr.
11-14	10:25 pm	MP 430.4	4	10"	Fbks. Yd. Fmn.	No	Unsalvageable	Cow
11-16	12:38 am	MP 336.6	5	12"	Cantwell Sec.	Yes	Cantwell	Cow-2 yrs.
11-20	6:32 am	MP 416.0	1 (RDC) 6	8"	Dist.4 Trk.Insp./ Nenana Sec.	Yes	ARRC Xing 416.1	Cow
11-21	6:30 pm	MP 408.2	5	12"	Nenana Sec.	No	Unsalvageable	Bull
11-22	7:25 pm	MP 134.1	3	10"	Trk.Insp.-P.P.	M	Could not locate	Ran off
11-26	3:15 am	MP 346.5	1 (RDC) 4	20"	Den.Pk. official	Park	N/A	w/i National Park
11-28	12:13 am	MP 196.9	5	8"	Trk.Insp.-P.P.	No	Unsalvageable	Cow
11-30	5:25 am	MP 384.0	7	20"	N/A	M	Crew saw it run off	Train crew reporte

Total Contacts w/i Den. Nat. Pk. Mo. of Nov.: (1)
Total Missing (M) Mo. of November: 2
Total KILLED Mo. of November: 10
Total SALVAGED Mo. of November: 5
Total UNSALVAGEABLE Mo. of November: 5

Grand Total M/T contacts w/i Park Winter '88-'89:
(w/i Denali National Pk. not incl. in counts)

Total M/T Contacts November 1988: 12
GRAND TOTAL Moose Killed Winter '88-'89: 10

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than fre train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthes

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, show with a "B" in parenthesis in Milepost col.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/a
1988								
12-2	4:10 am	MP 398.8	5	15"	Following train	M	Crew did not see it	—
12-2	6:02 am	MP 459.2	5	13"	Fbks. Yd. Fmn.	Yes	(Murphy Dome Rd. Xing) ARRC Xing 459.6	Cow-4 yrs.
12-2	7:28 am	MP 129.4	4	10"	Distr. 2 RM/ Ditcher Crew #2	Yes	(Birchwood Arpt. Xing) ARRC Xing 136.3	Cow-2 yrs.
12-2	7:39 am	MP 338.5	4	15"	Cantwell Sec.	M	Could not locate	Ran off
12-2	9:37 pm	MP F-7.7	1 (P)	24"	Portage Sec.	M	Could not locate	—
12-4	2:47 am	MP 057.5	1	36"	Tunnel Sec.	Yes	@ Portage	Cow-preg.
12-4	2:47 am	MP 057.5	1	36"	Tunnel Sec.	Yes	@ Portage	Bull-calf
12-6	3:00 am	MP 058.0	1	36"	Tunnel Sec.	Yes	(Ptg. Glacier Rd. Xing) ARRC Xing 62.9	Found @ 56 Cow
12-6	3:00 am	MP 058.0	1	36"	Tunnel Sec.	Yes	ARRC Xing 62.9	Found @ 56 Calf
12-6	4:02 am	MP 377.5	5	18"	Healy Sec.	Yes	@ Healy	Cow-2 yrs.
12-7	12:02 am	MP 324.0	4	15"	Cantwell Sec.	Yes	@ Cantwell	Found @ 322.9 Cow-3 yrs.
12-7	12:02 am	MP 324.0	4	15"	Cantwell Sec.	Yes	@ Cantwell	Found @ 322.9 Cow-calf
12-11	9:14 pm	MP 341.0	1 (RDC) 5	18"	Cantwell Sec.	Park	N/A	w/i National Park
12-12	2:05 am	MP 232.5	4	21"	Talkeetna Sec.	No	Unsalvageable	Cow
12-12	4:43 am	MP 127.6	4	18"	Distr.2 RM	M	Could not locate	Calf
12-12	4:43 am	MP 127.6	4	18"	Distr.2 RM	Yes	(Artillery Rd. Xing) ARRC Xing 128	Military hndld./s Cow
12-13	3:40 am	MP 125.4	3	18"	Distr.2 RM	M	Could not locate	Bleeding severely trailed tracks,
12-13	4:21 am	MP 060.5	3	30"	Ptg/Tunnel Secs.	No	Unsalvageable	Fell in creek @ S Cow
12-14	10:18 pm	MP 212.5	5	18"	Ditcher Crew #2	No	Unsalvageable	Bull-calf
12-16	12:35 am	MP 059.6	3	30"	Tunnel Sec.	No	Unsalvageable	Cow
12-17	8:25 am	MP 455.8	1 (RDC) 3	18"	Distr.4 RM/ Fairbanks Sec.	M	Could not locate	Ran off
12-19	3:29 am	MP 181.9	4	12"	Wasilla Sec.	Yes	(White's Xing) ARRC Xing 182.7	Cow-2 yrs.
12-20	3:00 am	MP 232.0	3	24"	Ditcher Crew #2	No	Unsalvageable	Found @ 231.7 Cow-calf
12-20	5:34 am	MP 135.0	3	22"	Anch. Sec./BR-12	No	Unsalvageable	Found @ 134.2 Cow
12-20	6:45 pm	MP 123.6	3	22"	Anchorage Sec.	No	Unsalvageable	Bull

Total Contacts w/i Den. Nat. Pk. Mo. of Dec.: (1)
Total Missing (M) Mo. of December: 6
Total KILLED Mo. of December: 18
Total SALVAGED Mo. of December: 11
Total UNSALVAGEABLE Mo. of December: 7

Grand Total M/T contacts w/i Park Winter '88-'89: (w/i Denali National Pk. not incl. in counts)

Total M/T Contacts December 1988: 24
GRAND TOTAL Moose Killed Winter '88-'89: 28

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than fre train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthes

SNOW DEPTH: Off Rail--Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost [illegible]

MOOSE-TRAIN CONTACT REPORT

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex
1988								
12-21	8:58 am	MP 322.5	5	18"	Cantwell Sec.	Yes	@ Cantwell	Found @ 322.2 Cow-preg.
12-22	5:35 am	MP 241.8	3	23"	Talkeetna Sec.	Yes	(Talkeetna Spur Rd.Xing) ARRC Xing 225.7	Bull-3 yrs.
12-26	11:50 pm	MP 173.6	2	16"	Dist.2 Trk.Insp.	No	Unsalvageable	Found @ 173.9 Cow-calf
12-27	11:11 pm	MP 325.6	4	20"	Cantwell Sec.	Park	N/A	w/i National Pa Bull-3 yrs.
12-28	12:23 am	MP 194.0	4	24"	Ditcher Crew #2	Yes	(Old Willow Rd. Xing) ARRC Xing 185.5	Bull
12-29	2:33 am	MP 197.8	3	24"	Ditcher Crew #2	Yes	ARRC Xing 185.5	Found @ 197.5 Bull
12-29	7:50 pm	MP 434.1	4	18"	Fairbanks Sec.	No	Unsalvageable	Cow
12-29	11:58 pm	MP 325.1	3	20"	Dist.3 Trk.Insp.	Park	N/A	w/i National Pa Cow
12-29	11:58 pm	MP 325.1	3	20"	Dist.3 Trk.Insp.	Park	N/A	w/i National Pa Calf
12-30	5:30 am	MP 127.5	3	20"	Dist.2 RM	Yes	(Artillery Rd. Xing) ARRC Xing 128	Military hndld. Bull- 2 yrs.
12-30	5:38 pm	MP 265.0	3	30"	Dist.3 Trk.Insp./ Gold Cr. Sec.	Yes	@ Gold Creek	Cow-preg.

Total Contacts w/i Den. Nat. Pk. Mo. of Dec.: (4)
Total Missing (M) Mo. of December: 6
Total KILLED Mo. of December: 26
Total SALVAGED Mo. of December: 17
Total UNSALVAGEABLE Mo. of December: 9

Grand Total M/T contacts w/i Park Winter '88-'89:
(w/i Denali National Pk. not incl. in cc
Total M/T Contacts December 1988: 32
GRAND TOTAL Moose Killed Winter '88-'89:

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than fr
train(s), a "P" or "ROC" for passenger train(s) and no. operating will be shown in parenth

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, show

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/a
1989			1 (RDC)					Found @ 317.5
1-1	12:33 am	MP 317.8	2	25"	Cantwell Sec.	No	Unsalvageable	Cow-yearling calf
			1 (RDC)				(Hatcher Pass Rd. Xing)	
1-1	10:40 pm	MP 186.9	2	16"	Wasilla Sec.	Yes	ARRC Xing 186.9	Cow-preg.
			1 (RDC)					
1-1	11:53 pm	MP 237.9	2	30"	Talkeetna Sec.	No	Unsalvageable	Cow
			1 (RDC)				(Talkeetna Spur Rd., 13.5)	
1-1	11:53 pm	MP 238.0	2	30"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-calf
							(Birchwood Arpt.Rd. Xing)	
1-2	7:32 am	MP 138.6	2	13"	Wasilla Sec.	Yes	ARRC Xing 136.3	Cow-preg.
							(Sunshine/Parks Hwy. Xing, 100.5)	
1-2	9:25 pm	MP 215.6	2	22"	Talkeetna Sec.	Yes	ARRC Xing 214.3	Bull
1-3	4:08 am	MP 248.4	4	32"	Talkeetna Sec.	No	Unsalvageable	Bull
					Dist.2 Trk.Insp./			
1-3	5:25 am	MP 195.5	5	24"	Ditcher Crew #2	No	Unsalvageable	Bull-calf
							(Bible Camp Rd. Xing)	
1-3	7:46 am	MP 131.1	5	10"	Wasilla Sec.	Yes	ARRC Xing 133.2	Bull-1 yr.
							(Old Willow Rd. Xing)	
1-4	4:54 am	MP 187.3	6	24"	Ditcher Crew #2	Yes	ARRC Xing 185.5	Cow
1-4	11:20 pm	MP 380.9	5	25"	Fairbanks Sec.	No	Unsalvageable	Cow
			2 (RDC)					
1-5	7:46 am	MP 318.7	4	25"	Cantwell Sec.	No	Unsalvageable	Cow-yearling calf
1-6	8:51 am	MP 264.7	6	36"	Gold Cr. Sec.	Yes	@ Gold Creek	Bull
			1 (RDC)					
1-7	5:55 am	MP 239.8	3	30"	D. Crew #2	Yes	ARRC Xing 225.7	Bull
1-11	4:45 am	MP 194.0	6	28"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg.
1-12	8:18 am	MP 220.7	2	28"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg.
1-12	8:18 am	MP 220.7	2	28"	D. Crew #2	M	Ran off-couldn't locate	—
1-12	8:45 am	MP 196.0	2	28"	D. Crew #2	Yes	ARRC Xing 185.5	Bull-calf
1-13	2:49 am	MP 244.0	3	48"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-preg.
1-13	2:49 am	MP 244.0	3	48"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-calf
1-13	7:25 pm	MP 233.9	3	30"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-calf
1-13	7:25 pm	MP 233.9	3	30"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
1-13	11:30 pm	MP 335.4	3	30"	Cantwell Sec.	M	Could not locate	—
					Whtr.Sec.Tunnel	Drmn./	Ptg.couldn't get gas car to site, high dr	
1-14	3:52 am	MP F-07.5	2	10"	Portage Sec.	No	Unsalvageable	Cow
					Whtr.Sec.Tunnel	Drmn./	Ptg.couldn't get gas car to site, high dr	
1-14	3:52 am	MP F-07.5	2	10"	Portage Sec.	No	Unsalvageable	Bull-calf

Total Contacts w/i Den. Nat. Pk. Mo. of Jan.: (0)
Total Missing (M) Mo. of January: 2
Total KILLED Mo. of January: 23
Total SALVAGED Mo. of January: 15
Total UNSALVAGEABLE Mo. of January: 8

Grand Total M/T contacts w/i Park Winter '88-'89:
(w/i Denali National Pk. not incl. in counts)

Total M/T Contacts January 1989: 25
GRAND TOTAL Moose Killed Winter '88-'89:

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than fre train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesi

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/ac
1989			1 (RDC)		Talkeetna Sec./			
1-14	9:15 pm	MP 212.0	3	35"	D. Crew #2	Yes	ARRC Xing 185.5	Bull-36" horns
			1 (RDC)					
1-14	10:10 pm	MP 250.7	4	46"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull
1-16	7:20 am	MP 239.5	5	36"	Talkeetna Sec.	No	Unsalvageable	Cow-calf
					(P.P.)			
1-16	8:47 pm	MP 188.4	5	35"	Dist.2 Trk.Insp.	Yes	ARRC Xing 186.9	Cow-calf
					Dist.2 RM/			Found by RM
1-17	unk.	MP 199.9	4	35"	Dist.2 Trk.Insp.	No	Unsalvageable	Cow
1-17	8:05 pm	MP 385.4	6	"	Healy Sec.	No	Unsalvageable	—
1-17	9:45 pm	MP 243.0	4	38"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
1-17	10:10 pm	MP 253.1	4	42"	Gold Cr. Sec.	No	Unsalvageable	Bull
1-18	2:01 am	MP 293.7	4	72"	Hurricane Sec.	No	Unsalvageable	Bull-calf
								Found @ 253.4
1-18	2:20 am	MP 254.0	4	42"	Gold Cr. Sec.	No	Unsalvageable	Bull
1-18	3:02 am	MP 227.5	4	26"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull
1-18	9:45 am	MP F-08.4	8 (P)	24"	Portage Sec.	Yes	@Portage T&T Shed, 64.3	Cow-calf
								w/i National Park
1-18	11:14 pm	MP 325.5	4	28"	Cantwell Sec.	Park	N/A	Cow-3 yrs.
					Nenana Sec./			
1-19	2:33 am	MP 419.5	6	30"	Dist.4 Trk.Insp.	No	Unsalvageable	Cow-2 yrs.
1-20	3:05 am	MP 383.6	4	23"	Healy Sec.	No	Unsalvageable	—
1-20	3:10 am	MP 385.5	4	23"	Healy Sec.	No	Unsalvageable	—
							(Hidden Hills Access Rd.)	
1-20	9:33 pm	MP 200.5	2	24"	Talkeetna Sec.	Yes	ARRC Xing 202.9	Bull-calf
			1 (RDC)					
1-21	4:51 am	MP 275.5	4	72"	Hurricane Sec.	M	Alive-Sec. observed-ok	Bull
			4 (RDC)					
1-21	10:00 pm	MP F-07.5	3	07"	Whr. Sec. (A.B.)	M	Could not locate	—
			4 (RDC)					
1-21	10:00 pm	MP F-07.5	3	07"	Whr. Sec. (A.B.)	M	Could not locate	—
			1 (RDC)					
1-22	6:01 am	MP 178.1	3	24"	D. Crew #2	M	Could not locate	—
1-23	12:55 am	MP 222.0	5	28"	Talkeetna Sec.	No	Unsalvageable	Found @ 222.4
					Dist.3 Trk.Insp./			
1-23	4:16 am	MP 322.5	5	28"	Cantwell Sec.	No	Unsalvageable	—
1-23	9:35 pm	MP 199.0	5	24"	Talkeetna Sec.	No	Unsalvageable	—
1-24	1:06 am	MP 212.6	5	28"	Talkeetna Sec.	Yes	ARRC Xing 214.3	Cow-calf

Total Contacts w/i Den. Nat. Pk. Mo. of January: (1)
Total Missing (M) Mo. of January: 6
Total KILLED Mo. of January: 43
Total SALVAGED Mo. of January: 23
Total UNSALVAGEABLE Mo. of January: 20

Grand Total M/T contacts w/i Park Winter '88-'89: (
(w/i Denali National Pk. not incl. in counts)

Total M/T Contacts January 1989: 49
GRAND TOTAL Moose Killed Winter '88-'89:

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than frei train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

MOOSE-TRAIN CONTACT REPORT

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/a
1989					Dist.2 Trk.Insp./			
1-24	12:10 pm	MP 180.0	5	24"	D. Crew #2	No	Unsalvageable	Cow
1-25	12:10 am	MP 207.2	4	35"	D. Crew #2	No	Unsalvageable	Bull-calf
1-26	12:12 am	MP 219.5	4	35"	D. Crew #2	No	Unsalvageable	Cow-calf
1-26	2:21 am	MP 191.0	4	30"	D. Crew #2	No	Unsalvageable	Cow-calf
1-26	6:59 pm	MP [illegible].0	7	30"	Dist.4 Trk.Insp.	Yes	@ Nenana	Nenana P.O. hand! Cow
1-26	10:05 pm	MP 434.6	7	30"	Dist.4 Trk.Insp.	No	Unsalvageable	Bull-2 yrs.
1-26	11:30 pm	MP 236.8	4	30"	D.Crew #2/Tka.S.	Yes	ARRC Xing 225.7	Cow-preg.
1-26	11:30 pm	MP 236.8	4	30"	D.Crew #2/Tka.S.	Yes	ARRC Xing 225.7	Bull-calf
1-27	1:38 am	MP 161.9	4	10"	Wasilla Sec.	Yes	(Hiealea Xing) ARRC Xing 161.2	Cow-preg.
1-27	9:25 am	MP 131.3	4	18"	Anch.Term.Supt./ Dist.2 RM	No	Unsalvageable	F&W informed ARR Cow /couldn't "
1-27	7:29 pm	MP 239.5	4	35"	D. Crew #2	Yes	@ Talkeetna Depot	Cow-calf
1-28	5:16 am	MP 427.8	1 (P) 6	24"	Fairbanks Sec.	No	Unsalvageable	Cow
1-28	7:05 am	MP 209.3	1 (P) 5	35"	D. Crew #2	No	Unsalvageable	Cow
1-28	7:03 pm	MP 420.5	1 (P) 6	30"	Dist.4 Trk.Insp.	No	Unsalvageable	Cow
1-28	7:03 pm	MP 420.5	1 (P) 6	30"	Dist.4 Trk.Insp.	Yes	(Two Mile Lake Ag. #2) ARRC Xing 422.7	Cow-2 yrs.
1-28	11:25 pm	MP 336.4	1 (P) 5	30"	Cantwell Sec./ Dist.3RM/TrkInsp	Park	N/A	w/i National Park Cow-3 yrs.
1-29	3:51 am	MP 193.3	1 (P) 3	35"	D. Crew #2	No	Unsalvageable	Cow
1-29	3:55 am	MP 325.0	1 (P) 3	26"	Dist.3RM/TrkInsp	Park	N/A (walked away)	w/i National Park
1-29	7:40 am	MP 199.8	1 (P) 3	35"	D. Crew #2	No	Unsalvageable	Cow-calf
1-30	3:43 am	MP 325.5	3	20"	Dist.3RM/TrkInsp	Park	N/A (couldn't locate)	w/i National Park
1-30	7:30 pm	MP 264.9	3	40"	Hurricane Sec.	M	Ran off	—
1-31	5:21 am	MP 210.5	3	24"	Talkeetna Sec.	Yes	(Parks Hwy Xing 90.5) ARRC Xing 206.3	Bull-calf
1-31	5:23 am	MP 334.4	3	30"	Cantwell Sec.	Park	N/A	w/i National Park Cow
1-31	5:45 am	MP 345.0	3	24"	Cantwell Sec./ Dist.3RM/TrkInsp	Park	N/A (alive-cow guard)	w/i National Park Calf-yearling
1-31	9:15 pm	MP 212.4	3	24"	Talkeetna Sec.	No	Unsalvageable	—

Total Contacts w/i Den. Nat. Pk. Mo. of Jan.: (6)
Total Missing (M) Mo. of January: 7
Total KILLED Mo. of January: 62
Total SALVAGED Mo. of January: 30
Total UNSALVAGEABLE Mo. of January: 32

Grand Total M/T contacts w/i Park Winter '88-'89:
(w/i Denali National Pk. not incl. in counts)

Total M/T Contacts January 1989: 69
GRAND TOTAL Moose Killed Winter '88-'89:

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact: if train(s) other than fre train(s), a "P" or "ROC" for passenger train(s) and no. operating will be shown in parenthes

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/ac
1989								Found by Sec. Fore
1-31	unk.	MP 317.5	3	30"	Cantwell Sec.	No	Unsalvageable	Cow

Total Contacts w/i Den. Nat. Pk. Mo. of Jan.: (6)
Total Missing (M) Mo. of January: 1
Total KILLED Mo. of January: 63
Total SALVAGED Mo. of January: 30
Total UNSALVAGEABLE Mo. of January: 33

Grand Total M/T contacts w/i Park Winter '88-'89:
(w/i Denali National Pk. not incl. in counts)

Total M/T Contacts January 1989: 70
GRAND TOTAL Moose Killed Winter '88-'89:

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than fre train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parentheses

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/age
1989			2 (P)					
2-2	12:25 am	MP 205.7	5	24"	Talkeetna Sec.	No	Unsalvageable	—
2-2	11:40 pm	MP 264.5	2 (P) 5	42"	Dist.3 RM/ Gold Cr. Sec.	No	Unsalvageable	Found @ 264.7 Bull
2-3	6:32 am	MP 231.2	5	24"	Talkeetna Sec.	Yes	(Talkeetna Spur Rd. Xing) ARRC Xing 225.7	Cow-calf
2-4	12:50 am	MP 242.2	1 (RDC) 4	32"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-preg.
2-4	12:50 am	MP 242.2	1 (RDC) 4	32"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
2-5	11:48 pm	MP 204.1	1 (RDC) 5	20"	Talkeetna Sec.	No	Unsalvageable	Found @ 204.5 Cow-preg.
2-7	5:06 am	MP 130.8	3	24"	Dist.2 RM	Yes	(Bible Camp Rd. Xing) ARRC Xing 133.1	Bull-2 yrs.
2-8	5:44 pm	MP 328.7	4	30"	Hurr./Cantwell S	Yes	@ Cantwell	Park Svc. notified Bull-1 yr.
2-9	4:20 am	MP 327.0	6	30"	Cantwell Sec.	Yes	@ Cantwell	Reptd. by train cre Cow-3 yrs.-preg.
2-9	8:15 pm	MP 174.5	6	18"	Wasilla Sec.	Yes	(Parks Hwy/Houston Xing) ARRC Xing 173	Found @ 174.1 Cow-1 yr.
2-9	8:49 pm	(B) MP 200.9	6	37"	Ditcher Crew #2	No	Unsalvageable	Cow-calf
2-9	9:18 pm	MP 220.2	6	37"	D. Crew #2	No	Unsalvageable	Cow-calf
2-9	9:32 pm	MP 231.5	6	32"	D.Crew#2/Tka. S.	No	Unsalvageable	Bull-calf
2-9	11:59 pm	MP 232.0	6	32"	D.Crew#2/Tka. S.	No	Unsalvageable	Bull-calf
2-11	12:20 am	MP 211.0	1 (RDC) 3	37"	D. Crew #2	Yes	(Parks Hwy., mile 92) ARRC Xing 206.3	Cow-preg.
2-11	9:58 pm	MP 200.0	1 (RDC) 3	37"	D.Crew#2	No	Unsalvageable	Found @ 201.0 Bull
2-11	10:35 pm	MP 218.0	1 (RDC) 3	37"	D. Crew #2	Yes	(Sunshine Xing) ARRC Xing 214.3	Found @ 217.8 Cow
2-11	10:55 pm	MP 229.5	1 (RDC) 3	37"	D. Crew #2	Yes	(salv. 1/2—wolf 1/2) ARRC Xing 225.7	Found @ 230.0 Cow-calf
2-12	2:30 am	MP 220.2	1 (RDC) 5	37"	D. Crew #2	Yes	ARRC Xing 214.3	Bull-calf
2-12	2:45 am	MP 205.3	1 (RDC) 5	37"	D. Crew #2	No	Unsalvageable	Cow
2-12	3:08 am	MP 194.3	1 (RDC) 5	35"	Talkeetna Sec.	Yes	(Caswell Lake Rd. Xing) ARRC Xing 202.9	Cow-preg.
2-13	1:16 am	MP 211.5	5	32"	Dist.2 Trk.Insp./ Talkeetna Sec.	Yes	ARRC Xing 214.3	Cow-calf
2-13	3:25 am	MP 211.1	5	32"	Dist.2 Trk.Insp./ Talkeetna Sec.	Yes	ARRC Xing 214.3	Found @ 211.5 Bull-calf
2-13	6:21 am	MP 348.9	5	12"	Dist.3 RM/ Dist.4 Trk.Insp.	Park	N/A (w/i National Pk)	Found @ 350—left p Park Svc. (notifiec
2-13	4:06 pm	MP 235.1	5	36"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf

Total Contacts w/i Den. Nat."Park" Mo. to date: (1)
Total Missing (M) Mo. to date: 0
Total KILLED Mo. to date: 24
Total SALVAGED Mo. to date: 15
Total UNSALVAGEABLE Mo. to date: 9

Grand Total M/T contacts w/i "Park" Winter '88-'89: (
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts Mo. to date: 24
GRAND TOTAL Moose Killed Winter '88-'89: 123

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freic train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/a
1989								
2-13	10:31 pm	MP 267.5	5	50"	Hurricane Sec.	M	Walked off	—
2-14	12:20 am	MP 176.2	5	19"	Wasilla Sec.	Yes	ARRC Xing 173	Found @ 174.2 Cow-preg.
2-14	1:48 am	MP 216.0	5	32"	Talkeetna Sec.	Yes	ARRC Xing 214.3	Cow-preg.
2-14	1:48 am	MP 216.0	5	32"	Talkeetna Sec.	No	Unsalvageable	Cow-calf
2-14	9:43 pm	MP 221.5	5	37"	Tka.S./D.Crew#2	Yes	(FAA Road Xing) ARRC Xing 226.4	Cow-preg. w/twins
2-14	10:40 pm	MP 326.0	5	32"	Dist.3 RM/ Cantwell Sec.	Yes	(Cantwell Xing) ARRC Xing 319.6	Cow-preg.
2-14	10:44 pm	MP 324.0	5	32"	Dist.3 RM/ Cantwell Sec.	M	Walked off-lost tracks	—
2-15	12:05 am	MP 177.0	4	19"	Wasilla Sec.	No	Unsalvageable	Found at 177.2 Cow-calf
2-15	12:05 am	MP 177.4	4	22"	Wasilla Sec.	Yes	ARRC Xing 173	Bull-calf
2-15	1:09 am	MP 213.7	4	37"	D. Crew #2	Yes	ARRC Xing 226.4	Bull-calf
2-15	10:04 pm	MP 199.5	4	37"	D. Crew #2	Yes	(Old Willow Rd. Xing) ARRC Xing 185.5	Cow-preg.
2-15	11:03 pm	MP 244.5	4	42"	Talkeetna Sec.	M	Ran off-followed trks.	Lost tracks at riv
2-16	9:45 pm	MP 221.3	3	30"	Talkeetna Sec.	No	Unsalvageable	Found @ 222.3 Bull-calf
2-16	9:54 pm	MP 223.1	3	30"	Talkeetna Sec.	No	Unsalvageable	Cow-calf
2-17	12:58 am	MP 208.1	3	32"	Talkeetna Sec.	Yes	ARRC Xing 206.3	Found @ 207.8 Bull-calf
2-17	4:55 am	MP 200.1	3	30"	Talkeetna Sec.	No	Unsalvageable	Cow-calf
2-17	9:00 pm	MP 241.1	3	41"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-preg.
2-17	9:00 pm	MP 241.1	3	41"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-preg.
2-18	5:05 am	MP 432.6	1 (RDC) 2	28"	Fairbanks Sec.	Yes	(Runyan Dog Xing) ARRC Xing 422.9	Cow-3 yrs.
2-18	10:15 pm	MP 202.5	1 (RDC) 3	30"	D. Crew #2	No	Unsalvageable	Calf
2-19	6:45 am	MP 238.0	1 (RDC) 4	40"	Hurricane Sec.	Yes	ARRC Xing 225.7	Cow-yearling
2-19	9:14 pm	MP 211.5	1 (RDC) 4	30"	Wasilla Sec.	No	Unsalvageable	—
2-19	11:45 pm	MP 292.1	1 (RDC) 4	76"	Hurricane Sec.	Yes	(Hurricane Xing) ARRC Xing 279.7	Bull-calf
2-19	11:45 pm	MP 292.1	1 (RDC) 4	76"	Hurricane Sec.	Yes	ARRC Xing 279.7	Cow-preg.
2-20	4:45 am	MP 444.0	3	28"	Fairbanks Sec.	Yes	(Goldstream Xing) ARRC Xing 461.4	Cow-yearling

Total Contacts w/i Den. Nat."Park" Mo. to date: (1)
Total Missing (M) Mo. to date: 3
Total KILLED Mo. to date: 46
Total SALVAGED Mo. to date: 30
Total UNSALVAGEABLE Mo. to date: 16

Grand Total M/T contacts w/i "Park" Winter '88-'89: (
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts Mo. to date: 49
GRAND TOTAL Moose Killed Winter '88-'89: 145

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than frei train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesi

SNOW DEPTH: Off Rail--Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/age)
1989								
2-20	7:22 pm	MP 417.1	3	16"	Nenana Sec.	No	Unsalvageable	Calf
2-20	7:22 pm	MP 417.1	3	16"	Nenana Sec.	M	Could not locate	—
2-20	8:32 pm	MP 164.2	3	12"	Wasilla Sec.	Yes	(Pittman/Parks Hwy) ARRC Xing 164.2	Found @ 164.5 Cow
2-20	10:32 pm	MP 250.7	3	52"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull
2-20	10:59 pm	MP 266.5	3	50"	None	M	Ran off	Train crew observed
2-20	11:32 pm	MP 278.4	3	76"	Hurricane Sec.	Yes	ARRC Xing 279.7	Bull
2-21	unk.	MP 372.1	5	24"	Dist.4 Trk.Insp.	No	Unsalvageable	Found on trk. inspec Cow-3 yrs.
2-21	8:49 pm	MP 432.5	5	20"	Nenana Sec.	Yes	ARRC Xing 422.9	Cow-2 yrs.
2-21	9:39 pm	MP 229.4	4	38"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull
2-22	3:47 pm	MP 239.3	4	44"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
2-22	9:39 pm	MP 221.2	4	36"	D.Crew #2/Tka. S	No	Unsalvageable	Found @ 222.5
2-22	10:43 pm	MP 253.0	4	48"	Gold Cr. Sec.	No	Unsalvageable	Bull
2-23	1:35 am	MP 328.7	3	30"	Cantwell Sec.	Yes	ARRC Xing 319.6	Found @ 329.0 Cow-2 yrs.
2-23	2:32 am	MP 224.5	3	36"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow-calf
2-23	5:09 am	MP 230.0	3	36"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Cow
2-23	9:33 pm	MP 209.3	3	37"	D. Crew #2	No	Unsalvageable	Bull
2-23	11:48 pm	MP 190.9	3	37"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-calf
2-24	3:14 am	MP 219.9	3	37"	D. Crew #2	No	Unsalvageable	Bull-calf
2-24	4:16 am	MP 174.0	3	24"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg. w/twins
2-24	4:48 am	MP 299.0	3	70"	None	M	Ran off into woods	Train crew observed
2-24	6:23 am	MP 456.5	4	30"	Dist.4 Trk.Insp./ Fairbanks Sec.	Yes	ARRC Xing 461.4	Cow-4 yrs.
2-24	9:33 pm	MP 212.8	3	37"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-calf
2-25	12:44 am	MP 175.3	1 (RDC) 3	24"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg.
2-25	3:10 am	MP 218.5	1 (RDC) 3	37"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg.
2-25	8:15 pm	MP 039.2	2	24"	Moose Pass Sec.	Yes	(Moose Pass Ramp) ARRC Xing 29.3	Cow-preg.

Total Contacts w/i Den. Nat."Park" Mo. to date: (1)
Total Missing (M) Mo. to date: 6
Total KILLED Mo. to date: 68
Total SALVAGED Mo. to date: 46
Total UNSALVAGEABLE Mo. to date: 22

Grand Total M/T contacts w/i "Park" Winter '88-'89: (
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts Mo. to date: 74
GRAND TOTAL Moose Killed Winter '88-'89: 167

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freig train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/age
1989			4 (RDC)		Whtr. Tunnel Drmn./			
2-25	9:25 pm	MP F-8.3	3	24"	Portage Sec.	Yes	@Portage T&T Shed. 64.3	Cow
			1 (RDC)					
2-25	11:21 pm	MP 268.0	3	60"	Hurricane Sec.	M	Walked away	Train crew observed
			1 (RDC)					
2-26	4:07 am	MP 250.4	5	52"	Hurricane Sec.	M	Walked away	—
			1 (RDC)					Found @ 224.0
2-26	4:41 am	MP 224.9	5	35"	D. Crew #2	Yes	ARRC Xing 226.4	Cow-calf
			1 (RDC)					
2-26	4:51 am	MP 216.4	5	35"	D. Crew #2	No	Unsalvageable	Cow-calf
			1 (RDC)				(Cherri Lake Rd. Xing)	
2-26	8:18 pm	MP 169.7	5	24"	D. Crew #2	Yes	ARRC Xing 171.3	Cow-preg. w/twins
					Dist.2 Trk.Insp./			
2-27	1:10 am	MP 198.5	4	37"	D. Crew #2	No	Unsalvageable	Cow
2-27	2:10 am	MP 242.1	4	42"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
							(Pittman Rd. Xing)	
2-27	8:41 am	MP 165.5	4	12"	Wasilla Sec.	Yes	ARRC Xing 166.3	Cow-3 yrs.-preg.
2-27	1:50 pm	MP 081.3	3	18"	Whittier Sec.	No	Unsalvageable	Cow
2-27	9:20 pm	MP 197.5	4	36"	Talkeetna Sec.	Yes	ARRC Xing 206.3	Bull
2-27	9:30 pm	MP 207.5	4	37"	Talkeetna Sec.	Yes	ARRC Xing 206.3	Cow-preg.
2-27	unk.	(B) MP 221.0	4	30"	Talkeetna Sec.	No	Unsalvageable	Cow
2-28	1:38 am	MP 270.8	3	80"	Hurricane Sec.	M	Walked off into woods	Sec. observed-ok
2-28	3:13 am	MP 210.8	3	30"	Talkeetna Sec.	No	Unsalvageable	Cow-preg.
2-28	10:05 pm	MP 218.5	3	37"	D. Crew #2	No	Eagles got to it first Unsalvageable	Found @ 218.0 Cow-calf

Total Contacts w/i Den. Nat."Park" Mo. of Feb.: (1)
Total Missing (M) Mo. of February: 9
Total KILLED Mo. of February: 81
Total SALVAGED Mo. of February: 53
Total UNSALVAGEABLE Mo. of February: 28

Grand Total M/T contacts w/i "Park" Winter '88-'89:
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts February 1989: 90
GRAND TOTAL Moose Killed Winter '88-'89: 1.

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than f train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenth

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., x'ing at)	COMMENTS (if known, sex/ag
1989								
3-1	2:30 am	MP 208.0	5	37"	Ditcher Crew #2	No	Unsalvageable	Found @ 207.1 Bull
3-1	7:00 pm	MP 217.9	5	32"	Talkeetna Sec.	Yes	(Sunshine X'ing/Parks Hwy.100.5) ARRC X'ing 214.3	Cow-preg.
3-1	7:02 pm	MP 217.5	5	32"	Talkeetna Sec.	Yes	ARRC X'ing 214.3	Cow-calf
3-1	7:10 pm	MP 215.6	5	32"	Talkeetna Sec.	Yes	ARRC X'ing 214.3	Bull-calf
3-2	12:19 am	MP 276.2	2 (RDC) 3	75"	None	M	Crew observ.running off	Cow
3-2	12:19 am	MP 276.2	2 (RDC) 3	75"	None	M	Crew observ.running off	Calf
3-2	9:24 am	MP 191.8	2 (RDC) 3	37"	D. Crew #2	No	Unsalvageable	Found @ 192.0 Bull
3-2	9:40 pm	MP 213.0	2 (RDC) 3	37"	D. Crew #2	No	Unsalvageable	Cow
3-2	9:40 pm	MP 213.0	2 (RDC) 3	37"	D. Crew #2	No	Unsalvageable	Cow-calf
3-3	3:55 am	MP 246.1	3	48"	Talkeetna Sec.	Yes	(Talkeetna Spur Rd. X'ing) ARRC X'ing 225.7	Cow-preg.
3-3	5:14 am	MP 431.8	4	36"	Dist.4 RM/Fbks.S	Yes	(Runyan Dog X'ing) ARRC X'ing 422.9	Cow-2 yrs.
3-3	5:30 am	MP 444.9	4	36"	Fairbanks Sec.	Yes	ARRC X'ing 459.9	Found @ 444.5 Cow-3 yrs.
3-4	3:25 am	MP 074.5	2 (RDC) 2	24"	None	M	Crew reptd. it ran off	—
3-4	3:25 am	MP 074.5	2 (RDC) 2	24"	None	M	Crew reptd. it ran off	—
3-4	7:55 pm	MP 321.3	1 (P) 3	34"	Dist.3 Trk.Insp./ Cantwell Sec.	No	Unsalvageable	Found @ 321.8 Calf-yearling
3-5	10:20 pm	MP 175.1	1 (P) 5	20"	Wasilla Sec.	No	Unsalvageable	Cow-preg.
3-6	4:00 am	MP 162.9	5	20"	Wasilla Sec.	Yes	@ MP 162.9 off ROW	Bull
3-6	9:02 am	MP 432.8	6	24"	Dist.4RM/NenanaS	Yes	ARRC X'ing 422.9	Cow-preg. w/twins
3-6	8:08 pm	MP 165.7	5	20"	Wasilla Sec.	Yes	(Pittman Rd. X'ing) ARRC X'ing 166.3	Bull-2 yrs.
3-6	11:00 pm	MP 333.0	5	34"	Cantwell Sec.	No	Unsalvageable	Bull-2 yrs.
3-6	11:25 pm	MP 322.0	5	34"	Cantwell Sec.	No	Unsalvageable	Cow-3 yrs.
3-7	12:27 am	MP 203.5	5	32"	Talkeetna Sec.	Yes	(Caswell Lake X'ing) ARRC X'ing 202.9	Cow-preg.
3-7	12:39 am	MP 320.5	5	34"	Cantwell Sec.	M	Walked off per Sec.	—
3-7	1:28 am	MP 272.9	5	75"	Hurricane Sec.	Yes	(Hurricane X'ing) ARRC X'ing 279.7	Bull
3-7	10:54 am	MP 424.5	6	36"	Fairbanks Sec.	Yes	ARRC X'ing 422.9	Bull-yearling

Total Contacts w/i Den. Nat."Park" Mo. to date: (0)
Total Missing (M) Mo. to date: 5
Total KILLED Mo. to date: 20
Total SALVAGED Mo. to date: 12
Total UNSALVAGEABLE Mo. to date: 8

Grand Total M/T contacts w/i "Park" Winter '88-'89: (1
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts Mo. to date: 25
GRAND TOTAL Moose Killed Winter '88-'89: 200

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freig train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/ag
1989								
3-8	1:14 am	MP 199.5	4	36"	D. Crew #2	M	Could not locate	---
3-8	3:09 am	MP 296.0	4	70"	Hurricane Sec.	Yes	(Broad Pass Xing) ARRC Xing 305.5	Found @ 298.5 Cow-yearling
3-8	4:01 am	MP 170.2	4	24"	D. Crew #2	Yes	(Old Willow Rd. Xing) ARRC Xing 185.5	Cow-preg.
3-8	10:32 am	MP 432.1	3	36"	Dist.4 Trk.Insp.	No	Unsalvageable	Cow-4 yrs.-preg.
3-9	2:35 am	MP 219.9	3	36"	D. Crew #2	Yes	@ Willow	Found @ 220.5 Cow
3-9	9:03 pm	MP 144.0	3	18"	D. Crew #2	Yes	(Eklutna Village Xing) ARRC Xing 143.0	Cow
3-11	12:08 am	(B) MP 329.6	1 (RDC) 3	34"	Cantwell Sec.	No	Unsalvageable	Bull-2 yrs.
3-12	2:35 am	MP 442.5	1 (RDC) 4	36"	Dist.4RM/Fbks. S	Yes	ARRC Xing 422.9	Bull-calf
3-12	3:27 am	MP 212.1	1 (RDC) 5	36"	Tka.S./D.Crew #2	Yes	ARRC Xing 185.5	Bull
3-12	4:04 am	MP 205.8	1 (RDC) 5	36"	D. Crew #2	Yes	ARRC Xing 185.5	Bull-calf
3-13	5:20 pm	MP 437.3	5	30"	Fbks./Nenana Sec	Yes	ARRC Xing 422.9	Cow-calf
3-14	3:48 am	MP 430.1	5	24"	Nenana Sec.	No	Unsalvageable	---
3-14	8:00 am	MP 020.5	2	18"	Moose Pass Sec.	Yes	@ Moose Pass	Bull-1 yr.
3-15	unk.	MP 429.0	1 (RDC) 3	36"	Fairbanks Sec.	Yes	ARRC Xing 422.9	Cow-5 yrs.-preg.
3-15	unk.	MP 429.0	1 (RDC) 3	36"	Fairbanks Sec.	Yes	ARRC Xing 422.9	Bull-2 yrs.
3-16	4:35 am	MP 296.0	3	42"	Cantwell Sec.	No	Unsalvageable	Calf-yearling
3-17	3:21 am	MP 209.3	3	34"	D. Crew #2	No	Unsalvageable	Bull
3-17	3:21 am	MP 209.3	3	34"	D. Crew #2	No	Unsalvageable	Cow
3-17	4:01 am	MP 198.5	3	34"	D. Crew #2	No	Unsalvageable	Bull-calf
3-17	8:17 pm	MP 226.0	3	31"	Talkeetna Sec.	Yes	ARRC Xing 225.7	Bull-calf
3-18	9:00 pm	MP 195.6	1 (RDC) 3	34"	D. Crew #2	Yes	ARRC Xing 185.5	Bull-calf
3-18	9:00 pm	MP 329.9	1 (RDC) 3	33"	Hurricane Sec.	Park	N/A (w/i National Park)	Left per Park Svc. (notifie
3-21	3:13 am	MP 274.7	3	75"	Hurricane Sec.	Yes	ARRC Xing 279.7	Bull
3-21	1:10 pm	MP 070.8	3	20"	Tunnel Sec.	Yes	(State Hwy.Maint.Bldg.) @ Girdwood, 75.0	Cow-1 yr.
3-22	9:25 pm	MP 206.3	5	34"	D.Crew #2/Tka S.	No	Unsalvageable	Found @ 206.0 Bull-calf

Total Contacts w/i Den. Nat."Park" Mo. to date: (1)
Total Missing (M) Mo. to date: 6
Total KILLED Mo. to date: 43
Total SALVAGED Mo. to date: 27
Total UNSALVAGEABLE Mo. to date: 16

Grand Total M/T contacts w/i "Park" Winter '88-'89: (1
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts Mo. to date: 49
GRAND TOTAL Moose Killed Winter '88-'89: 223

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freig train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/age)
1989								
3-23	9:30 pm	MP 198.9	3	32"	D. Crew #2	No	Unsalvageable	Found @ 199.0 Cow
3-23	11:26 pm	MP 242.5	3	42"	Gold Cr. Sec.	No	Unsalvageable	—
3-26	1:41 am	MP 424.0	1 (RDC) 5	36"	Fbks. YM/ Dist.4RM/Fbks.S.	No	Unsalvageable	Bull
3-26	9:07 am	MP 329.5	1 (RDC) 5	20"	Dist. 3 RM	No	Unsalvageable	Found @ 330.0
3-27	9:10 pm	MP 202.0	6	30"	Talkeetna Sec.	Yes	ARRC 202.9	Bull
3-27	9:45 pm	MP 220.5	6	32"	Talkeetna Sec.	Yes	ARRC Xing 214.3	Cow-calf
3-27	10:42 pm	MP 250.7	5	46"	Dist.3RM/Gold Cr	No	Unsalvageable	Cow
3-28	3:50 am	MP 205.7	5	30"	Talkeetna Sec.	Yes	ARRC Xing 206.3	Cow-preg.
3-28	8:35 pm	MP 178.6	5	20"	D. Crew #2	Yes	ARRC Xing 185.5	Cow-preg.
3-28	11:05 pm	MP 266.7	6	46"	Gold Cr. Sec.	Yes	@ Gold Creek	Found @ 266.0 Bull
3-28	11:05 pm	MP 266.7	6	46"	Gold Cr. Sec.	M	Could not locate	—
3-29	3:36 am	MP 214.5	4	30"	D.Cr.#2/Tka.Sec.	Yes	ARRC Xing 214.3	Cow-preg.
3-29	3:36 am	MP 214.5	4	30"	D.Cr.#2/Tka.Sec.	Yes	ARRC Xing 214.3	Bull-calf
3-29	unk.	MP 221.0	4	30"	D. Crew #2	No	Unsalvageable	Found on 4-1
3-30	4:33 am	MP 058.5	2	28"	Dist.1 RM/ Tunnel/Ptg. Secs	Yes	(Portage Glacer Xing) ARRC Xing 62.9	Cow
3-30	3:10 pm	MP 008.5	2	14"	Moose Pass Sec.	Yes	(Bear Lake Xing) ARRC Xing 6.7	Cow-1 yr.
3-31	10:32 pm	MP 223.5	3	30"	D. Crew #2	Yes	@ Talkeetna ARR Depot	Bull-calf

Total Contacts w/i Den. Nat."Park" Mo. of Mar.: (1)
Total Missing (M) Mo. of March: 7
Total KILLED Mo. of March: 59
Total SALVAGED Mo. of March: 37
Total UNSALVAGEABLE Mo. of March: 22

Grand Total M/T contacts w/i "Park" Winter '88-'89: (1
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts March 1989: 66
GRAND TOTAL Moose Killed Winter '88-'89: 239

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freig train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Milepost column.

DATE	TIME	MILEPOST	# TRAINS OPR. THRU*	SNOW DEPTH	ARRC SECTION NOTIFIED	SALVAGED (Y/N)	DISPOSITION (if recov., xing at)	COMMENTS (if known, sex/age
1989			2 (RDC)					Found @ 249.9
4-6	10:35 pm	MP 250.0	4	40"	Gold Cr. Sec.	No	Unsalvageable	Cow
4-7	2:30 am	MP 294.5	2	35"	Cantwell Sec.	No	Unsalvageable	Cow-7 yrs.
4-11	12:05 am	MP 326.7	5	30"	Dist.3 RM	M	Could not locate	Train cr. saw run c
4-11	12:05 am	MP 326.7	5	30"	Dist.3 RM	M	Could not locate	Train cr. saw run o
4-17	12:25 am	MP 294.0	6	70"	Hurricane Sec.	No	Unsalvageable	Cow

Total Contacts w/i Den. Nat."Park" Mo. of Apr.: (0)
Total Missing (M) Mo. of April: 2
Total KILLED Mo. of April: 3
Total SALVAGED Mo. of April: 0
Total UNSALVAGEABLE Mo. of April: 3

Grand Total M/T contacts w/i "Park" Winter '88-'89: (1
(some w/i Denali Nat. Pk. not incl. in counts)

Total M/T Contacts April 1989: 5
GRAND TOTAL Moose Killed Winter '88-'89: 242

* # Trains Opr.: Indicates no. of trains operating thru area on date of contact; if train(s) other than freig train(s), a "P" or "RDC" for passenger train(s) and no. operating will be shown in parenthesis

SNOW DEPTH: Off Rail—Snow estimate from Section Foreman

Note: If moose hit on a bridge, shown with a "B" in parenthesis in Mileopst column

January 31, 1990

The Honorable Curt Menard
Alaska State Representative
P.O. Box V
Juneau, AK 99811

Dear Representative Menard,

I attended and signed to testify at the public teleconference at the Legislative Information Office last night. However, after waiting 2 hours, a previous commitment required I leave before having the opportunity to express my concerns regarding the extremely high number of train-killed moose. I am sending you my comments via this letter.

The carnage of the moose by the Alaska Railroad must stop. Far too many animals have died as a result of being run down by trains. The Alaska Railroad has done too little, too late. Alaska Railroad has not been responsive in clearing the railbed right-of-way adequately early on in winter. Only this past week was a pilot car travelling ahead of the train to move moose off the track initiated. The Alaska Railroad admits they could begin plowing a wider path. This should have been in ACTION early on in the winter, NOT ater 400 moose have been killed and reported through the media. This is a similar situation to the Exxon Valdez disaster - only until the situation becomes tragic is any action taken, and then the party responsible for the destruction bumbles around trying to shift the blame onto other parties wasting precious time that could be used to begin saving the animals' lives. There has been too much complacency in the railroad's attempt to remedy the LIVE removal of moose from the railbed. I have spoken with Alaska Railroad officials and I am not satisfied with their exeplanation that they are in the business to make money; it is the responsibility of ADF&G to come up with a solution; and worse, that the moose kill is simply the "cost" of doing business. That attitude is inexcusable! More needs to be done and done now.

Procedures to implement immediately:

Snow plowing at a steeper angle to allow the moose to exit from the railbed. Channel 2 News in Anchorage on Thursday, January 25, showed snow depth at 3 feet deep just a few feet from the railbed and deeper as a result of the practice of shallow-angle plowing.

Plow wide corridors on BOTH sides along the railbed to allow moose a place to step off the track. This is not currently being done by the railroad.

Plow wide perpendicular escape corridors from the tracks, again on BOTH sides offering escape for the animals. Again, not currently being done by the railroad.

Continue to use the pilot truck ahead of trains, which has only been recently implemented as a test, as a means to scare the moose off the railbed. Do this on both northbound freight-laden trains as well as the empty southbound trains.

As soon as the snow is gone, begin brushing foliage back a distance of 200 ft.

Implement Permanent Solution:

Construct a "moose fence" and one-way gates from approximately milepost 180 - 240 of railraod, like the fencing along the Glenn Hwy from Muldoon to the truck weigh station north of Anchorage. Emphasize the natural corridors such as creeks and rivers to be utilized as underpasses. Build underpasses. The Glenn Hwy Project has been successful in drastically reducing, if not eliminating, moose collisions in a historic migratory route. The moose learn to use the corridor to migrate and the cows will pass this traffic pattern on to their offspring. The surviving offspring will continue to use those underpasses as migratory corridors. The moose were migrating from their summer range to winter range long before the railroad was built. However, there will be few moose left in that area at all if action is not taken immediately. Migration is natural behavior for moose - to locate better browse, for easier mobility in winter, and probagation of the species. Moose are going to and must migrate to survive -- make it safer for them.

I recently spoke with biologist with Alaska Department of Fish and Game and understand the cost of the fencing would actually be less per foot than that for the Glenn Hwy project, as the Department of Transportation & Public Facilities mistakenly ordered 4' high fencing and had to double the quantity to make the fence 8' by wiring the two sections together. Eight foot height moose fence can be ordered from Canada for less than the 4'height, and ordered in quantity, be more cost effective.

Ms. Sasha Hughes testified at last nights teleconference that her family was involved with the White Pass Railroad, and as you may recall hearing, the White Pass Railroad reduced the number of train-killed moose in Canada from a several hundred to just three. The moose fencing was financed by the Provincial Government. She said at first it seemed costly, however, not to place a dollar value on the animals, but SAVE your natural resource of these animals. The expenditure is an investment

made once, not season after season with nothing to show for the money. The moose-fence is a good investment. I encourage the Alaska State Legislature to contact the Canadian Government for information on how the Alaska Railroad/State of Alaska can implement the White Pass Railroad's Moose Fencing Project here in Alaska.

Financing the fence project should be a Legislative priority. I appeal to you to introduce a bill immediately to appropriate funds to construct moose fencing along the rail corridor north of Willow through the area of high mortality on moose. However, I also feel that the Alaska Railroad should fund a portion of the project. The railroad had somewhere in the neighborhood of $11 million in profit last year, I understand, and should be obligated to allocate a portion of the profits to fund the moose-fencing project. The Alaska Railroad is a public agency and must be responsive to the public's concerns.

Another source of funding for the moose-fencing project to consider is the Railbelt Fund. Or, perhaps a combination of Legislative approrpation, Alaska Railroad funding, and the Railbelt Fund could be arranged, but the most important object right now is to implement action to stop the horrendous moose kill.

I would appreciate hearing from you at your earliest opportunity regarding this issue.

Sincerely,

Sharon Harris

Sharon Harris
6841 E. 3rd Ave.
Anchorage, AK 99504

Representative Bette Cato, Chair
House Transportation Committee

DATE: 3/13/90

PLACE: Room 17

SUBJECT OF MEETING:
HB 570
HB 484

NAME	REPRESENTING	BUSINESS/PERSONAL MAILING ADDRESS	ZIP	(H) PHONE	(W) PHONE	DO YOU WANT TO TESTIFY?		WHAT SUBJE[CT] WHICH BILL
C.D. Valinske	Arco Board	6910 Chad St ~~HB 484~~ Anch AK	99518			(Y)	N	HB484
Larry Houle	Alaska Railroad	HB 484 HB 570				(Y)	N	
[illegible]	[illegible]					Y	N	[illegible]
Bob Link	Dept of Admin	PO Box C MS0210 Juneau	99811		465 2250	(Y)	N	HB 570 [illegible]
						Y	N	
						Y	N	
						Y	N	
						Y	N	
						Y	N	
						Y	N	
						Y	N	

****

* DELIVER TO: LIOCBLS *

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* ORIGINAL *
* SENT: 03/13/90 TIME: 08:21 *
* FROM: LIOCINE *
* SUBJECT: 90-03-061;BL;MOOSE FEE;3-13 *
* PRINT DATE: 03/13/90 TIME: 08:21 *

*

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TC NO: 90-03-061

DATE: MARCH 13, 1990
SPONSOR: HOUSE TRANSPORTATION AND PUBLIC FACILITIES
SUBJECT: HB 484: FEE FOR MOOSE KILLED BY ALASKA RAILROAD
MODERATOR: INEZ WEBB
SITE: ANCHORAGE

SITES FOR TODAY'S TELECONFERENCE:

1. JUNEAU **CHAIRING SITE**
2. PALMER -- CARL GRAUVOGEL
3. MAT-SU -- 3 TO LISTEN

*** I CALLED LEW PAMPLIN'S OFFICE. HE IS ON ANNUAL LEAVE AND BELIEVED TO BE OUT OF STATE.

EMAIL ADDRESS: LIOCINE
BACKUP NUMBER: 561-1199

DELIVER TO: LIOCBLS

ORIGINAL
SENT: 03/13/90 TIME: 08:21
FROM: LIOCMAT
SUBJECT: PART./FINAL STATS-MINI UPDATE
PRINT DATE: 03/13/90 TIME: 08:22

T/C NO: 90-03-061

DATE: 3/13/90
SPONSOR: HOUSE TRANSPORTATION
SUBJECT: HB484
MODERATOR: MARY
SITE: MATSU

PARTICIPANT LIST

FINAL STATS

TESTIFIED

	NAME/REPRESENTING	ADDRESS	PHONE	BILL NO.
1.				
2.				
3.				
4.				
5.				

OBSERVED

	NAME/REPRESENTING	ADDRESS	PHONE	BILL NO.
1.	JIM PAGE			
2.	STEVE STRUBE			
3.	JACK DIDRICKSON			
4.				
5.				

TESTIFIED: 0
UNABLE: 0
OBSERVED: 3
TOTAL: 3

START TIME: 8:20AM END TIME:

Alaska State Legislature

Official Business

P.O. Box V
State Capitol
Juneau, Alaska 99811

MEMORANDUM

TO: House Transporation Committee

FROM: Representative Menard

DATE: February 27, 1990

RE: HB 484, " An Act relating to the destruction of moose"

Everyone has become aware of the number of moose destroyed along the Alaska Railroad, and the fact that I have introduced this legislation to charge the railroad an incentive fee of $1000 per moose killed.

Since the introductiuon of HB 484, the railroad has expended $180,000 to implement many of the measures that has been discussed in our meetings with the Fish and Game, and the railroad. With the implementation of these measures, the moose mortality rate has decreased to less then five per day.

Our incentive fee bill is as much for the future as for the present crisis. It is my intent that these measures continue to be used each year so we are not faced with this needless slaughter each winter. The Alaska railroad must accept the responsibility of continuing these measures so that the future winters are not a repeat of this present one.

I would like this committee to give serious consideration to this legislation before you.

HB 510

ALASKA PUBLIC UTILITIES COMMISSION

COMMENTS ON HB 510

FEBRUARY 26, 1990

The Commission does not have a position on the policy of whether or not railroads should be regulated.

The Commission recognizes and is quite familiar with the provisions proposed in HB 510 since they closely parallel those of AS 42.06 (the Pipeline Act). The Commission, however, is unfamiliar with railroads and has had insufficient time to research whether these same provisions are logical and appropriate to regulate railroads. If the Legislature desires, the Commission will obtain the necessary expertise to identify and evaluate the regulatory mechanics that are applicable to railroads.

The Commission also requests that the Legislature allow the presentation of a fiscal note to be deferred since the Commission does not have sufficient information at this time to make a reasonably accurate estimate. Because of the need to develop the necessary expertise and to develop the regulations proposed in the legislation, the Commission anticipates that there would be considerable "start up" costs during the first two years after such legislation is enacted.