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REPORT OF THE STUDY OF HEAVY TRUCKS BY THE JOINT STANDING COMMITTEE ON TRANSPORTATION

DECEMBER, 1988

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BY THE JOINT STANDING COMMITTEE ON TRANSPORTATION
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EXECUTIVE SUMMARY

The Heavy Truck Study was authorized by PL 1987, chapter 793, Part A, and conducted by the Joint Standing Committee on Transportation.

The study found that heavy trucks are a common and necessary part of everyday life, but that they do have an impact on the highways they travel. Trucks are about 8% of the traffic statewide, but they contribute about 99% of the weight-related road consumption. On average only 5% of the trucks exceed the gross weight limits, but the overload alone on overweight trucks contributes 9% or more of the weight-related road consumption. That is the primary problem which the legislation proposed in this report addresses.

The majority report includes a number of minor initiatives, but there are four major initiatives to address the problem of overweight trucks:

(1) It would tighten requirements for off-loading of excess cargo by adding positive measures to detain overweight vehicles until that condition is corrected. For violations of 20 percent gross overweight or more the arresting officer would affix an out-of-service sticker to the windshield until the vehicle is brought into compliance with the prescribed weight limits. When the vehicle is brought into compliance, the sticker could be signed by any police officer, after which it must be returned to the State Police. Present law would be retained which prohibits moving any overweight vehicle until that condition is corrected, but an added penalty would be provided for moving an overweight vehicle with an out-of-service sticker or failing to return the attested sticker which would become Class E crimes.

(2) It would increase the penalty for exceeding the allowable gross weight by 20 percent or more by making it higher than the fine under present law by 50 percent for a 1st offense and by 100 percent for subsequent offenses within a 12 month period. Such an offense would be called "aggravated overweight". For convenience, the fine schedules for aggravated overweight are recalculated and presented for percent over permit weight as a basis, in the four different permit situations.

For smaller offenses, the existing fine schedules for excessive vehicle weight are retained, as listed in 29 MRSA §1654(3), and for vehicles which exceed the limit allowed by a commodity permit, the basis of the fine would continue to revert to the road limit (up to 80,000 pounds) or, for vehicles with a general permit, 90,000 pounds.

(3) It would add enforcement targeted against repeat

offenders who are severely overweight, including: increased fines for 2nd and subsequent offenses; suspension of registration or right to operate for up to 30 days for a 3rd offense, and suspension up to 60 days for a 4th or subsequent offense. The Division of Motor Vehicles would implement the suspensions according to their normal procedures.

(4) It would increase weight enforcement personnel and portable weigh scales in accordance with the State Police recommendation of adding 12 State Police troopers and the necessary supporting equipment and facilities to the Commercial Vehicle Enforcement Unit. This would be a 43% increase in enforcement personnel above FY1988-89.

The report includes several other provisions to help provide a fair and workable approach to truck weight and enforcement:

-It continues criminal penalties and the present fine schedule for ordinary overweight violations.

-It provides for several informational activities .

-It requires continued discussions with Quebec, New Brunswick, and New Hampshire on cooperative weighing efforts.

-It requires regular progress reports on truck weight.

The minority report addresses a problem faced by truckers who are within the gross weight limits but who exceed an axle limit. For those vehicles it is proposed that the axle limits not apply. The axle limits would continue to apply to vehicles which exceed the gross weight limits.

A further minority report recommends three other changes in present procedures in order to give truckers relief from certain problems. First, it recommends that overweight fines be based on weight in excess of the (higher) weight authorized by any special permit, rather than the (lower) road limit. Second, it recommends that any truck which is less than 20% overweight be allowed to pay the fine and proceed as far as 10 miles to its destination or a suitable warehouse, without having to unload. Third, it recommends that any truck found overweight and without special permits, whether registered in Maine or out-of-state, be required to purchase a permit for the full remainder of the year.

I. INTRODUCTION

The Study of Overweight Enforcement and the Highway Maintenance and Safety Implications of Heavy Trucks was authorized by Public Law 1987, chapter 793 (L.D. 2463), effective May 1, 1988, with the study to be conducted by the Joint Standing Committee on Transportation. (See Appendix A) The Legislative Council also approved and supported the study. Funding was provided from the Highway Fund.

The Subcommittee conducting the study was composed of:

Rep. Roger M. Pouliot of Lewiston, Chair
Sen. Charles G. Dow of Kennebec
Sen. Raynold Theriault of Aroostook
Rep. Donald A. Strout of Corinth
Rep. Orland G. McPherson of Eliot
Rep. Fred W. Moholland of Princeton
Rep. Harold M. Macomber of South Portland
Rep. Jeffrey N. Mills of Bethel

The list of interested parties includes the Department of Transportation, the Division of Motor Vehicles, the State Police, trucking industry organizations, forest products and other industry organizations, and the Maine Chapter of the American Automobile Association. The full list is attached as Appendix B.

The Subcommittee met on June 16 to receive departmental background briefings and to establish the study plan. At the meeting on July 19 the Subcommittee received the views of highway users and progress reports on the data analysis. The August 18 meeting provided the Subcommittee with the results of the data analysis and reports from Subcommittee staff; an Advisory Task Force was also set up to review, analyze and report on ideas for improving compliance with weight limits (see Appendix F). At the next meeting, September 13, the Subcommittee received and acted on the report of the Advisory Task Force, and directed staff to prepare the draft report. At a public hearing on October 4, extensive comments were received, especially from the trucking and wood products industries. The Subcommittee met again on October 11 and made a number of changes in the draft report which was reported to the full Committee on October 18th. The full Committee voted to transmit the report to the Legislature by a vote of 9-3 with one absent. The minority report is included as Chapter VII.

Heavy trucks are a common and necessary part of everyday life which do have an impact on the highways they travel. The purpose of this report is to examine whether there is a significant problem with overweight trucks; to gain some understanding of the problem; and to propose remedies that will be fair and workable.

This report consists of three parts: the findings and recommendations of the study; the minority report; and background data developed in the course of the study, including an overview of overweight trucks. The first and second parts are included in the Summary Report, while the background information is in the Appendices.

II. FINDINGS

The Subcommittee makes the following findings, based on the information provided in the course of the study. Implementing recommendations are cross-referenced where appropriate,using the notation: (Rec. xx):

1. The Study Subcommittee finds that trucks (not including pickups and panels) make up about 8% of the traffic statewide, but contribute at least 99% of the weight-related road consumption impact (Table 1 & 2 and Chart 2-C).

Typically, about 5% of the trucks exceed the gross weight limits, but this figure rises to 13% or even 20% at certain locations (Table 3).

The significance of these overweight trucks is multiplied because the stress on the highway rises extremely rapidly as weight of the truck or axle increases: a 20% increase in weight doubles the impact on the highway, all else being equal (Chart 4). As a result, the overload alone on overweight trucks typically contributes a 9% or greater share of the road consumption impact (Table 3). This results in about a 9% decrease in highway life between resurfacing, and for a highway with a 20-year life, it represents about a 2-year loss in highway life. In some cases, for example I-95 in Sidney, the overweight contribution is as high as 31% of the road consumption. Thus, there is significant highway damage caused by overweight vehicles. A rough estimate of the increased maintenance cost is included in Appendix I.

2. The Study Subcommittee finds that there are about 22,000 miles of highways in Maine, including 6000 miles of federal-aid highways (260 miles of interstate, 2000 miles of primary, 700 miles of urban, and 2800 miles of secondary). There are also 2900 miles of state and state-aid highways with no federal aid, and 13,000 miles of town ways (Appendix D). Not including town ways, this gives an average of over 400 miles per weight enforcement official. And, each officer is on duty for only one-fourth of the time during the week. The Study Subcommittee observes that it is not hard to find geographical or time sanctuaries where overweight trucks can proceed without being stopped. The Department of Transportation calculates that on average, an overweight 5-axle combination goes 11,700 miles and a 6-axle combination goes 62,000 miles before being cited and convicted for a violation. (Appendix I)

3. The Study Subcommittee finds that the State Police have 21 people assigned to commercial vehicle enforcement, including thirteen State Police officers and eight civilian Motor Carrier Inspectors (Appendix G). In FY 1988-89, seven officers will be added, as approved

in the last Legislative session. However, the State Police report that additional personnel are required to provide adequate enforcement throughout the State. They recommend adding patrols in 12 problem areas, including Rumford, Belgrade, Fort Kent, Farmington, Caribou, Bingham, Skowhegan, Topsfield, Millinocket, Saco-Biddeford, Newport, and Wiscasset. Because of their law enforcement training and their greater range of capabilities, the State Police prefer to add troopers rather than civilians, even with higher costs ($26,000 salary vs $19,000 salary at the top step). The Study Subcommittee supports the request for additional state troopers. Locations should be chosen by the State Police, with an eye to fair and uniform enforcement throughout the state. (Rec. 1)

4. The Study Subcommittee finds that, for enforcement, the State has 5 sets of semi-portable scales and 73 sets of portable scales. There are 11 off-road weighing areas and 10 Interstate rest areas which can be used for weighing, in addition to the option of roadside weighing with portable scales (Appendix G). The State's permanent scales were phased out because they were easily bypassed and because of their high cost, but access is available to 14 privately owned permanent scales if necessary. The Study Subcommittee supports the change away from fixed scales. Additional weight enforcement teams would require additional portable and semi-portable scales, and additional off-road weighing areas would enhance the safety of weighing operations, especially where off-loading is contemplated.

5. The Study Subcommittee finds the Weigh-in-Motion data from the Maine Department of Transportation extremely useful in preparing reports such as this. For weight monitoring, but not enforcement, the State has seven Weigh-in Motion sites, and equipment to operate two sites at any time (Appendix G). These generate much of the data for certification to the U.S. Department of Transportation that the State is enforcing the weight laws on all federal-aid roads, as required by federal law (23 USC 141).

6. The Study Subcommittee finds that the law now requires overweight trucks to be brought into conformity before proceeding, but the State Police report that this is difficult to enforce: an overweight truck that has been stopped once may return to the highway after the trooper leaves to perform other required duties. This will only be detected if the truck gets stopped a second time. The Study Subcommittee is recommending legislation to stop this evasion, and notes that the State Police are conscious of the need for detention and unloading of the vehicle to be in a safe location. (Rec. 2)

7. The Study Subcommittee finds that the language of present law covering overweight fines (29 MRSA §1654) refers to "misdemeanors", rather than crime classifications, as in the revised criminal code (Title 17-A). The Subcommittee considered a proposal to change this word to the revised terminology but found that the change was very confusing to the truckers and decided to retain the present terminology. Nevertheless, a misdemeanor continues to be a crime, not just a civil violation. The State Police report that the criminal nature of the offense does help in prosecuting offenders from out-of-state.

The penalties for overweight include fines according to a specified schedule which reaches $500 for 32% overweight, $1,000 for 50% overweight, and can be even higher. For comparison, a Class E crime carries a fine of up to $500, and a Class D crime a fine of up to $1,000. In most parts of Title 29, in accordance with section 2303, a misdemeanor carries a term of imprisonment up to 30 days, but we have only heard of one person who ever received a jail sentence for an overweight violation in Maine.

The Subcommittee is recommending retaining the present fine schedule for ordinary overweight violations and clarifying the language to directly incorporate language on imprisonment similar to section 2303 and to emphasize that the misdemeanor of excessive vehicle weight is a criminal offense. (Rec. 5)

8. The Study Subcommittee finds that the greatest concern is with trucks that are severely overweight, but under present law, beyond the forgiveness zone, there is no distinction between small and large offenses, except for a steadily increasing fine schedule. The Study Subcommittee is recommending additional penalties for extreme overweight. (Rec. 3)

The 1986-87 State Police Arrest Record Data shows that, excluding the Interstate Highway System, there were 1392 overweight violations resulting in convictions in the two year period 1986-1987. Of these, 682 were gross weight violations, 624 axle violations, and 86 tire violations. Some of the axle violations were also gross weight violations but that number is not known. Further analysis gives a rough estimate that 24% of the vehicles cited for overweight violations have extreme gross weight violations. (Appendix H)

9. The Study Subcommittee notes that the overweight fine schedule in Maine is relatively low. For example, for a truck running 20,000 pounds over the Interstate weight limit of 80,000 pounds, Maine is 41st among the states and territories, with a fine of $350, compared to the

national median of $1000 (Chart 5). In general, Maine's fine schedule does get steeper with increasing weight, just as the highway impact of a vehicle rises more steeply with increasing weight. But, above 50% overweight, the fine schedule flattens out. Beyond that point, the fine for additional weight is actually less per thousand pounds than it would be for a vehicle between 10% and 50% overweight.

However, it is not clear how effective increasing the fines would be as a further deterrent. Until 1987, the fine schedule had a cap at $1,000, but then it was removed. Comparing the data from 1987 with 1986 does not show any systematic change in violations when the cap was removed. The Study Subcommittee does not support a change in the fine schedule at this time (see 29 MRSA §1654, which is Sec. 2 of the legislation in Chapter IV).

10. The Study Subcommittee received testimony from both the government and the trucking industry that repeat offenders are a big part of the problem. Maine does not have data available on repeat offenders at present, but it could be collected and made available to the police and the courts as is repeat offender data on other motor vehicle violations. Nine other states apply surcharges to the overweight fines for repeat offenders. Texas reports some success with a provision for prioritizing offenders and pursuing civil suits against repeat offenders to obtain a court injunction against operating overweight, and to recover damages for the resulting deterioration of the highways. The Study Subcommittee is recommending suspensions and additional fines for repeat offenders, as well as further study of the Texas approach. (Rec. 4)

11. The Study Subcommittee received information from the State Police that serious violations seem to be concentrated in certain locations, although these are scattered around the state. This may be due in part to greater enforcement in these areas, but in any event half the violations occurred in 25 towns, which seem to fall in three kinds of locations: Canadian ports of entry, paper mill towns, or on the Interstate highway. Analysis by the State Police for 1987 identified 414 violations with a fine of $500 or more. Of these, 46% involved special commodity or forest products trucks. Four-axle straight trucks and 6-axle tractor trailers accounted for 58% of these serious violations, even though they only were 9% of the truck traffic. (Appendix G)

12. The Study Subcommittee finds that Canadian and other out-of-state trucks are a significant problem. For 1986 and 1987, about 35% of the violators were out-of-state trucks. New Hampshire contributed 9%, Quebec 8%, and New Brunswick 6%. In addition, the average overweight violation for trucks from Quebec was 33%, somewhat higher

than for any other jurisdiction. Vermont was second, with 30%. (Appendix I) The Study Subcommittee is recommending continued dialogue with other jurisdictions. (Rec. 8)

13. The Study Subcommittee finds that vehicle design can greatly affect the relation between weight carried and road impact. A single axle carrying 20,000 pounds has about the same impact as a tandem carrying 37,000 pounds or a tridem carrying 54,000 pounds. Thus, adding axles can reduce the road impact of a given load, although it may not reduce the effect on bridges, which depends more on the gross weight itself (Table 4). In any event, the increased productivity of vehicles with more efficient designs can reduce the incentive to overload marginal vehicles. The Study Subcommittee is recommending promotion of suitable alternative vehicles. (Rec. 7)

14. The Study Subcommittee finds that the federal weight limits on the Interstate system are different, and lower than the state limits on other highways. This discrepancy is greatest for vehicles which have special commodity permits under State law (Table 6). The Study Subcommittee noted that it may not be easy to achieve conformity, but this difference produces some enforcement problems. For example, an overweight vehicle may bypass the weighing station on I-95 by getting off and travelling temporarily on US-1 where it is legal until it is past the weighing station on I-95. This practice also increases traffic problems on the bypass routes.

15. The Study Subcommittee finds that there are differences in the fines assessed by the courts in different jurisdictions within Maine. The statewide average fine for calendar years 1986 and 1987 was $397, but the average varied from $167 in one location up to $740 in another (Appendix I). The reasons for this unevenness are not clear, but it was suggested that differences in judges' attitudes towards weight violations is one important factor. The importance of judicial discretion was also noted, so that the Study Subcommittee is not recommending mandatory fines, but is recommending some educational and informational activities focusing on the seriousness of weight violations. (Rec. 6)

16. The Study Subcommittee finds that several states have made or are considering making shippers and receivers jointly liable with the truckers for overloads. However, representatives of these industries felt that would place an unfair burden upon them, and that enforcement should concentrate on those who carry the overweight load. The Study Subcommittee is not recommending any initiatives to assign responsibility for overweight loads to shippers and receivers at this time.

17. The Study Subcommittee finds that there was insufficient time to study the issue of truck safety as it relates to vehicle weight. However, it seems clear that improved compliance with the weight laws can only help truck safety. Brake operation and road stability of trucks are enhanced by keeping the axle weights within the legal limits.

18. The Study Subcommittee received one report showing the difficulty experienced by a small trucker in trying to make ends meet, while staying within the legal weight limits. There was not time to analyze this situation, but it does pose an interesting dilemma. Should that trucker be allowed to continue, with an implicit subsidy from the State which incurs increased costs to maintain those roads? Should the law be enforced strictly, even if it drives those small truckers out of business? Or, can incentives be devised which will allow operation within the legal weight limits to be economically viable? The Study Subcommittee finds that it would be useful for an agency with economic expertise to review and comment on this situation.

19. The Study Subcommittee finds that, while the responsible agencies were very cooperative, it took some effort to assess the status of truck weight compliance. The Study Subcommittee is recommending a regular review and report, which could be very helpful to those who wish to follow this issue. (Rec. 9)

ADDITIONAL ITEMS

The Subcommittee discussed a number of other ideas which appeared to have some merit, but felt it was not timely to act. These are discussed briefly below.

Making federal and State road limits the same by increasing federal (interstate) limits to State limits could simplify enforcement. It would be useful for the Maine Department of Transportation (MDOT) to study proposals for the federal government to increase Interstate limits to the limits on Maine State Highways, since the Interstate weight limits are lower than the State limits, even though the Interstate is better designed to handle heavier loads. However, such measures should include mechanisms to recover the costs of any additional damage to the highway and bridge system as part of the package. Alternatives such as the Turner proposal, which seeks added productivity by increasing gross weight to 105,000 pounds but which reduces road impact by reducing axle limits to 14,000 pounds for single axles and 24,000 pounds for tandems, are being explored by the Transportation Research Board of the National Research Council and should also be considered when seeking adjustments in this realm. The MDOT should recommend that the Maine Legislature memorialize Congress on this issue when and if appropriate.

Mandatory fines, perhaps imposed administratively, may be a remedy to consider in the future if fines are applied unevenly or insufficiently to address the overweight problem.

Increased fines, especially for severe overloads remain a possibility. As noted above, for 20,000 pounds overweight, Maine's fines are relatively low: 41st in the nation. However, an increase in fines for the largest overloads in 1987 does not seem to have improved compliance.

Shared responsibility for overweight operation. Some States have adopted measures giving shippers and receivers of overloads some responsibility for overload violations, along with the truckers. These include: a system of haul roads built to handle the heavier loads encountered around mills and similar locations (Kentucky has a coal haul road system); a relevant evidence law, providing that the weight records of shippers and receivers would be prima facie evidence of actual weight (like Minnesota) (similar legislation was defeated in the 1988 session of the Maine Legislature); and prohibition of receipt of overloads, for shipments received by weight. However, the Subcommittee preferred to keep the emphasis on enforcement against violators who are actually transporting the overloads.

III. RECOMMENDATIONS

The Study Subcommittee makes the following recommendations, based on the findings of Chapter II. Those requiring changes in the Revised Statutes are indicated by (Stat.) and can be coordinated with the recodification of Title 29, as that proceeds. The administrative recommendations, indicated by (Admin.), are in unallocated sections of the accompanying legislation, and can be carried out by the agencies involved. The implementing legislation is cross-referenced for each recommendation, e.g. (Sec. xx)

These recommendations include four major initiatives to address the problem of overweight trucks:

1. Tighten requirements for off-loading of excess cargo. (Stat.)

   The Study Subcommittee recommends positive measures to detain overweight vehicles until that condition is corrected, including, for violations of 20 percent gross overweight or more: the arresting officer would affix an out-of-service sticker to the windshield until the vehicle is brought into compliance with the prescribed weight limits. Present law would be retained, which prohibits moving any overweight vehicle until that condition is corrected, but an added penalty would be provided for moving an overweight vehicle with an out-of-service sticker, which would become a Class E crime. (Sec.1)

2. Increase penalties for extreme overweight. (Stat.)

   The Study Subcommittee also recommends increasing the penalty for extreme overweight (overweight by 20 percent or more on gross weight) by increasing the fine by 50 percent for a 1st offense and by 100 percent for subsequent offenses. (Sec.3)

3. Target enforcement against repeat offenders. (Stat.)

   The Study Subcommittee recommends several measures to target enforcement against repeat offenders who are severely overweight, including: increased fines for 2nd and subsequent offenses; suspension of registration or right-to-operate for up to 30 days for a 3rd offense; and suspension up to 60 days for a 4th or subsequent offense. The Study Subcommittee also recommends increased resources for the Division of Motor Vehicles to maintain the necessary data base. Any suspensions would be implemented by the DMV after conviction, using information from that data base. (Sec.4)

4. Increase weight enforcement personnel and portable weigh scales. (Stat.)

A vital deterrent to overloading is increased expectation of getting caught. The Study Subcommittee supports the State Police recommendation of adding 12 State Police troopers and the necessary supporting equipment and facilities to the Commercial Vehicle Enforcement Unit. This would be a 43% increase in enforcement personnel above FY1988-89. (Sec.9)

This study also makes several other recommendations, which will help provide fair and workable truck weight enforcement:

5. Continue criminal penalties and the present fine schedule for ordinary overweight. (Stat.)

The Study Subcommittee recommends retaining the designation of overweight violations as "misdemeanors" as in present law, but making it clear that they are criminal offenses, and that they are subject to imprisonment not to exceed 30 days, like other misdemeanors under Title 29. Although the term "misdemeanor" predates the revised criminal code, the Subcommittee found that changing to the terminology of class crimes would cause too much confusion in the trucking community at this time. The present fine schedule, including the present waivers and reductions in fines for smaller offenses and rebates for commodity permits would be retained. (Sec.2)

Refusal to be weighed would continue to be a Class E crime, with a penalty not to exceed $1500 and 30 days, as in present law. (29 MRSA §1805)

6. Improve information dissemination. (Admin.)

The Study Subcommittee recommends that the quality and availability of information for truckers from the responsible state agencies (Division of Motor Vehicles and Bureau of State Police) be improved; that industry efforts to reduce overloads be encouraged and supported; that collection and processing of data on overweight vehicles by the Department of Transportation and the Maine State Police be improved; that the Department of Transportation hold informational meetings at Judicial and District Attorney conferences to stress the

importance of weight enforcement and inform judicial officers of the damage caused by overloads, with a goal of more uniformity in enforcement and imposition of penalties throughout the state. (Sec.5)

7. Promote vehicles with reduced impact on highways. (Admin.)

The Study Subcommittee recommends that the Department of Transportation and the trucking industry promote alternative vehicles with reduced impact on the highways. The 6-axle combination is frequently cited as an example of a more efficient vehicle, as compared to the traditional 5-axle combination. These alternatives must be analyzed carefully, because a vehicle with less impact on the pavement at a given load may not have less impact on the bridges. (Sec.5)

8. Increase control of out-of-state and Canadian trucks. (Admin.)

The Study Subcommittee recommends that the State Police and the Maine Department of Transportation continue mutual discussions with bordering jurisdictions (Quebec, New Brunswick, and New Hampshire) on cooperative weighing efforts, and improvements in weighing capabilities on the Canadian border. (Sec.6)

9. Regular progress reports on weight compliance and enforcement. (Admin.)

The Study Subcommittee recommends that the Department of Transportation, the Bureau of State Police, and the Division of Motor Vehicles report in 1990, 1991 and thereafter to the Governor and the Legislature on compliance with the weight laws and progress in enforcement. (Sec.7)

The Study Subcommittee also recommends further study of the merits of civil action against flagrant offenders including judicial restraining orders, contempt of court citations, and suits to recover damages for the deterioration of the highways, with the findings to be included in the 1990 report. (Sec.8)

PROPOSED LEGISLATION, MAJORITY REPORT
HEAVY TRUCK SUBCOMMITTEE

AN ACT TO IMPROVE COMPLIANCE WITH TRUCK WEIGHT LIMITS

Sec. 1. 29 MRSA §1653 is amended to read:

§1653. Weighing of vehicles; removal of excess; risk of loss on removal

Any police officer may require the driver of any motor vehicle described in sections 1652 and 1656 to stop and submit to a weighing of the same by means of either portable or stationary scales. If such scales are not available at the place where such vehicle is stopped, the police officer may require that such vehicle be driven to the nearest public scales capable of weighing said vehicle and load if such does not increase by more than 5 miles the distance which said vehicle may reasonably travel to reach its destination.

Whenever a police officer, upon weighing a vehicle and load, determines that the weight is in excess of any of the limits prescribed in section 1652, such officer shall require the driver to stop the vehicle in a place designated by such officer and such vehicle shall not be permitted to proceed until the operator thereof shall have taken such action as may be necessary to reduce the weight of the vehicle and load to such limits as are permitted under the terms of said section 1652. If said excess weight does not exceed 2,000 pounds, said officer may in his discretion permit said vehicle to proceed without unloading said excess weight. Such police officer may summons the owner or driver of such vehicle, or he may arrest the driver forthwith. Neither the arresting officer, the State of Maine nor any political subdivision or agency thereof shall be responsible for loss or damage to such vehicle, its contents or any part thereof as a result of such unloading.

In the event the excess weight of the vehicle exceeds the allowable gross weight, including the weight specified in any applicable commodity permit, by 20 percent or more, the police officer shall affix an out-of-service sticker to the windshield until the vehicle is brought into compliance with the prescribed weight limits and shall require the operator not to move the vehicle until it is brought into compliance. Any person who moves that vehicle before it is brought into compliance and the out-of-service sticker has been signed by a

police officer to attest to that fact is guilty of a Class E crime. When the vehicle is brought into compliance, that fact may be attested by any police officer, who shall sign the out-of-service sticker. Then, the operator shall return the attested out-of-service sticker or portion thereof to the Bureau of State Police. Any operator who fails to get the out-of-service sticker attested and return it within 15 days of issuance is guilty of a Class E crime.

Sec. 2. 29 MRSA §1654 is amended to read:

§ 1654. Excessive vehicle weight

NOTE: This section is the same as existing law, except for the underlined portions. Subsections 1 to 3 are paraphrased from the first two paragraphs and the fine schedule of existing §1654. The remainder has been broken into subsections, with subsection headings added.

1. Crime. Any person who operates or causes operation of any motor vehicle in violation of any weight provision for any axle or group of axles or gross weight, if convicted, shall be guilty of the crime of excessive vehicle weight on account of each such violation. Excessive vehicle weight is a misdemeanor.

2. Penalty. Any person who is guilty of excessive vehicle weight shall be punished by a fine in accordance with this section or by imprisonment for not more than 30 days, or by both. When both gross and axle weights are exceeded, the penalty imposed shall be on the violation that results in the higher fine.

3. Schedule of fines. Except as provided elsewhere in this chapter, the court shall apply the following schedule in determining the fine to be imposed for excessive vehicle weight; the fine to be based upon the amount of gross weight or axle weight in excess of the limits prescribed in section 1652.

Percent over basic weight allowed in section 1652	Fine schedule
1	$10
2	$20
3	$30
4	$40
5	$50
6	$60
7	$70
8	$80
9	$90
10	$100
11	$115
12	$130
13	$145
14	$160
15	$175
16	$190
17	$205
18	$220
19	$235
20	$250
21	$270
22	$290
23	$310
24	$330
25	$350
26	$370
27	$390
28	$410
29	$430
30	$450
31	$475
32	$500
33	$525
34	$550
35	$575
36	$600
37	$625
38	$650
39	$675
40	$700
41	$730
42	$760
43	$790
44	$820
45	$850
46	$880
47	$910
48	$940
49	$970
50	$1,000
More than 50	$1,000 plus $10 for each percent over 50 %.

4. Waivers for minor violations. Except as provided in subsections 6 or 7, if the gross weight as specified in section 1652 or section 1655, whichever is applicable, is exceeded by less than 500 pounds multiplied by the number of axles less one, the fine shall be waived. If the gross weight is exceeded by less than 1,000 pounds multiplied by the number of axles less one, the fine shall be reduced by 50%. If the gross excess is greater than those enumerated in this paragraph the fine schedule shall apply.

Except as provided in subsections 6 or 7, if the excess on any axle or group of axles as specified in section 1652 or section 1655, whichever is applicable, is less than 1,000 pounds, the fine shall be waived. If the excess is less than 1,000 pounds plus 500 pounds multiplied by the number of axles in the axle group, the fine shall be reduced by 2/3. If the excess is less than 1,000 pounds plus 1,000 pounds multiplied by the number of axles in the axle group, the fine shall be reduced by 50%. If the axle excess is greater than those enumerated in this paragraph the fine schedule shall apply.

5. Rebate for commodity permits Any person, firm or corporation who has purchased commodity permits as defined in section 1655 for the vehicle during the registration year and who has been judged to have committed an overweight violation and who has paid a fine under this section may apply once for each vehicle during the registration year to the Secretary of State for a rebate of a portion of the fine paid. The rebate shall be equal to the fee paid for the commodity permits for the vehicle found in violation, but shall not exceed 50% of the fine. The Secretary of State shall prescribe the form of application, including requiring any information he deems necessary to administer this paragraph.

6. Redistribution of load. When an officer determines that a vehicle which is within the gross maximum weight limits is in violation of the axle weight limits by less than 2,000 pounds, the officer shall permit the operator to redistribute the load once by hand before proceeding and if the vehicle then conforms to the axle weight limits of this Title, no penalty for the violation may be imposed.

7. Reductions in fine when load redistributed. If the violation is at least 2,000 pounds but less than 3,000 pounds and the load is redistributed to remove the violation, the fine shall be reduced by 2/3. If the violation is at least 3,000 pounds but less than 4,000 pounds and the load is redistributed to remove the violation the fine shall be reduced by 50%. If a fine is reduced under this paragraph then no other reductions shall apply.

8. Minimum fine. Except when the fine is waived under the provisions of this section, the minimum fine for any gross or axle violation shall be $10, except that.notwithstanding any other provision in this section, for vehicles using the interstate system as defined in the Federal Highway Act of 1956, there shall be a minimum fine of $20 and cost of court.

9. Scales For the purposes of this Title, weights as indicated by any type of stationary or portable scales approved by the Department of Transportation and tested within 12 calendar months prior to the time of use by a person and method approved by the department shall be deemed accurate.

10. Application to carriers holding certificates or permits. Section 1656 exempting from penalty operators employed by carriers holding permits or certificates from the Bureau of State Police, who have not participated in loading the vehicles and pertaining to appointment of a resident agent, representative or attorney upon whom all lawful processes regarding any violation may be served and who may be required to appear in court on behalf of the carrier regarding the violation, and the provisions of the section relating to the suspension of permits or certificates issued by the Bureau of State Police for failure to appoint an agent, representative or attorney, or for failure to satisfy any penalty imposed by any court, shall likewise apply in full force for the purposes of violations under this section.

11. Six-axle vehicles carrying general commodities. Notwithstanding this section, with respect to vehicles operated under the provision of section 1652, subsection 1, paragraph F, gross weight violations shall be calculated from the basis of 80,000 pounds.

Sec. 3. 29 MRSA §1654-A is enacted as follows:

§1654-A. Aggravated excessive gross weight violations

1. Crime. Any person who operates or causes operation of any motor vehicle in violation of any provision for gross weight by exceeding the allowable weight, including the weight specified in any applicable commodity permit, by 20 percent or more, if convicted, shall be guilty of the crime of aggravated excessive vehicle weight on account of each such violation. Aggravated excessive vehicle weight is a misdemeanor.

2. Penalty. Any person who is guilty of aggravated excessive vehicle weight shall be punished by a fine in accordance with this section or by imprisonment for not more than 30 days or by both.

3. Fine. The court shall impose a fine for aggravated excessive vehicle weight in accordance with the following schedules. For purposes of this section, the basic weight from which the percent overweight is measured shall be the allowable gross weight, including the weight specified in any applicable commodity permit.

A. SCHEDULE FOR VEHICLES WITH NO PERMIT OR WITH A 90,000 POUND GENERAL PERMIT UNDER 29 MRSA §1652(1)E

Percent over allowable gross weight including permit	Fine for 1st offense by vehicle	Fine for 2nd and subsequent offenses by vehicle
20	$375	$500
21	$405	$540
22	$435	$580
23	$465	$620
24	$495	$660
25	$525	$700
26	$555	$740
27	$585	$780
28	$615	$820
29	$645	$860
30	$675	$900
31	$712	$950
32	$750	$1000
33	$787	$1050
34	$825	$1100
35	$862	$1150
36	$900	$1200
37	$937	$1250
38	$975	$1300
39	$1012	$1350
40	$1050	$1400
41	$1095	$1460
42	$1140	$1520
43	$1185	$1580
44	$1230	$1640
45	$1275	$1700
46	$1320	$1760
47	$1365	$1820
48	$1410	$1880
49	$1455	$1940
50	$1500	$2000
More than 50	$1500 plus $15 for each percent over 50%	$2000 plus $20 for each percent over 50%

B-1. SCHEDULE FOR VEHICLES WITH SPECIAL COMMODITY PERMIT UNDER 29 MRSA §1655 EXCEPT FOR 100,000 POUND PERMIT

Percent over allowable gross weight including permit	Fine for 1st offense by vehicle	Fine for 2nd and subsequent offenses by vehicle
20	$750	$1000
21	$792	$1056
22	$833	$1100
23	$875	$1166
24	$915	$1220
25	$957	$1276
26	$998	$1330
27	$1040	$1386
28	$1086	$1448
29	$1136	$1514
30	$1185	$1580
31	$1235	$1646
32	$1284	$1712
33	$1339	$1778
34	$1383	$1844
35	$1433	$1910
36	$1482	$1976
37	$1511	$2014
38	$1527	$2036
39	$1544	$2058
40	$1560	$2080
41	$1577	$2102
42	$1593	$2124
43	$1610	$2146
44	$1626	$2168
45	$1643	$2190
46	$1659	$2212
47	$1666	$2234
48	$1692	$2256
49	$1709	$2278
50	$1725	$2300
More than 50	$1725 plus $16.50 for each percent over 50%	$2300 plus $22 for each percent over 50%

B-2. SCHEDULE FOR VEHICLES WITH 100,000 POUND SPECIAL COMMODITY PERMIT UNDER 29 MRSA §1655

Percent over allowable gross weight including permit	Fine for 1st offense by vehicle	Fine for 2nd and subsequent offenses by vehicle
20	$800	$1067
21	$842	$1122
22	$883	$1178
23	$925	$1233
24	$967	$1289
25	$1008	$1344
26	$1050	$1400
27	$1100	$1467
28	$1150	$1533
29	$1200	$1600
30	$1250	$1667
31	$1300	$1733
32	$1350	$1800
33	$1400	$1867
34	$1450	$1933
35	$1500	$2000
36	$1517	$2022
37	$1533	$2044
38	$1550	$2067
39	$1567	$2089
40	$1583	$2111
41	$1600	$2133
42	$1617	$2156
43	$1633	$2178
44	$1650	$2200
45	$1667	$2222
46	$1683	$2244
47	$1700	$2267
48	$1717	$2289
49	$1733	$2311
50	$1750	$2333
51	$1767	$2356
52	$1783	$2378
53	$1800	$2400
More than 53	$1800 plus $16 2/3 for each percent over 53% rounded to nearest dollar	$2400 plus $22 2/9 for each percent over 53% rounded to nearest dollar

C. SCHEDULE FOR VEHICLES WITH A 100,000 POUND GENERAL COMMODITY PERMIT UNDER 29 MRSA §1652(1)F

Percent over allowable gross weight incl. permits	Fine for 1st offense	Fine for 2nd and subsequent offenses by vehicle
20	$1500	$2000
21	$1519	$2025
22	$1537	$2050
23	$1556	$2075
24	$1575	$2100
25	$1594	$2125
26	$1612	$2150
27	$1631	$2175
28	$1650	$2200
29	$1669	$2225
30	$1687	$2250
31	$1706	$2275
32	$1725	$2300
33	$1744	$2325
34	$1762	$2350
35	$1781	$2375
36	$1800	$2400
37	$1819	$2425
38	$1838	$2450
39	$1856	$2475
40	$1875	$2500
41	$1894	$2525
42	$1913	$2550
43	$1931	$2575
44	$1950	$2600
45	$1969	$2625
46	$1988	$2650
47	$2006	$2675
48	$2025	$2700
49	$2044	$2725
50	$2062	$2750
More than 50	$2062.50 plus $18.75 for each percent over 50%	$2750 plus $25 for each percent over 50%

Sec. 4. 29 MRSA §1654-B is enacted as follows:

§1654-B. Repeat offenders

1. Record keeping. The Secretary of State, Division of Motor Vehicles, shall maintain a record of excessive vehicle weight violations and aggravated excessive vehicle weight violations sufficient to determine whether a given offense is a repeat offense for a given vehicle. The arresting officer shall investigate to determine whether the charged person has any prior convictions for aggravated excessive vehicle weight before referring the case to district court. Thereupon, the Secretary of State shall promptly supply the arresting officer with information, and if necessary, documentation, as to the number of previous convictions for those offenses involving that vehicle during the preceding 12 calendar months, for presentation to the court. Upon conviction, the court shall supply the Secretary of State with any information necessary to maintain the records required by this section.

2. Suspension for repeat offenders. In addition to the penalties of section 1654-A, in the event the records maintained by the Secretary of State pursuant to subsection 1 show any person to have been convicted of three or more aggravated excessive vehicle weight violations in any 12 month period, involving the same vehicle, the Secretary of State shall suspend, without preliminary hearing, the registration plates and certificate, any operating authority for that vehicle granted under section 2703 and any fuel use decal issued under provisions of section 246-A applicable to the vehicle. The term of suspension for a 3rd conviction shall be for a period not to exceed 30 days, and the term of suspension for a 4th or subsequent conviction shall be for a period not to exceed 60 days.

Sec. 5. Informational activities. The Department of Transportation, the Division of Motor Vehicles and the Bureau of State Police shall conduct an interagency truck weight informational effort. That effort shall be directed towards improving the information on weight laws and regulations provided by the State to truckers; sharing information with the Attorney General and the judiciary about the major impact that overweight vehicles have on the highways; and identifying and making known to potential users those vehicle types which have reduced impact on the highways.

Sec. 6. Efforts with other jurisdictions. The Bureau of State Police and the Department of Transportation shall continue to work with officials of neighboring states and Canadian Provinces to develop joint efforts in weight enforcement, and other efforts which will improve compliance with the weight limits by vehicles from other jurisdictions, and improve compliance by Maine truckers with the weight limits in those other jurisdictions.

Sec. 7. Report. The Department of Transportation, with the assistance of the Division of Motor Vehicles and the Bureau of State Police, shall report in January 1990 and January 1991, and biennially thereafter, to the Governor and the Legislature on the status of compliance with the vehicle weight laws, the enforcement of those laws, and progress in achieving improved compliance with them.

Sec. 8. Study of civil and equitable action. The Department of Transportation shall study the possibility of pursuing civil and equitable action against persons who are guilty of repeated aggravated overweight violations, including such measures as injunctions, posting of bond, and civil suits for damages to the highways. The Department shall include its findings in the 1990 report required by section 7 of this Act.

Sec. 9. Allocation. The following funds are allocated from the Highway Fund for the fiscal years ending June 30, 1990 and June 30, 1991 for the purposes of improved enforcement of the vehicle weight laws.

	1989-90	1990-91
STATE POLICE, BUREAU OF		
Positions	(12)	(12)
Personal Services	$ 520,812	$520,812
All other	$ 120,507	$126,532
Capital Equipment	$ 416,673	-
TOTAL	1,047,992	$647,344
MOTOR VEHICLES, DIVISION OF		
Positions	(1)	(1)
Personal Services	$20,305	$20,305
All other	$ 1,860	$ 1,860
Capital	$ 7,200	.....
TOTAL	$29,635	$22,165

STATEMENT OF FACT

This bill is the majority report of the Heavy Truck Study, authorized by PL 1987, chapter 793, Part A. It includes four major initiatives to address the problem of overweight trucks:

Section 1 would tighten requirements for off-loading of excess cargo by adding positive measures to detain overweight vehicles until that condition is corrected. For violations of 20 percent gross overweight or more the arresting officer would affix an out-of-service sticker to the windshield until the vehicle is brought into compliance with the prescribed weight limits. When the vehicle is brought into compliance, the sticker could be signed by any police officer, after which it must be returned to the State Police. Present law would be retained which prohibits moving any overweight vehicle until that condition is corrected, but an added penalty would be provided for moving an overweight vehicle with an out-of-service sticker or failing to return the attested sticker which would become Class E crimes.

Section 3 would increase the penalty for extreme overweight (gross overweight of 20 percent or more) by increasing the fine by 50 percent for a 1st offense and by 100 percent for subsequent offenses. Four tables for the new penalties are provided in the legislation,with the choice depending on the type of permit under which the vehicle is operating. The fine schedules for aggravated excessive vehicle weight are calculated using the schedule from 29 MRSA §1654(3) for excessive vehicle weight, increased by 50 percent for a first offense, and by 100 percent for a second or subsequent offense during a 12 month period. For purposes of this calculation the basic weight from which the percent overweight is measured in order to determine the appropriate fine is as follows:

- For vehicles with no permits, the road limit provided in §1652(1)(A);
- For vehicles with a general permit under §1652(1)(E), 90,000 pounds;
- For vehicles with a special commodity permit under §1655, the road limit provided in 1652(1)(A); or, for 6-axle vehicles with a 3-axle tractor and 3-axle semitrailer, 90,000 pounds, as provided in §1652(1)(E); and
- For vehicles with a 100,000 pound general commodity permit under §1652(1)(F), 80,000 pounds.

Section 4 would add enforcement targeted against repeat offenders who are severely overweight, including: increased fines for 2nd and subsequent offenses; suspension of registration or right to operate for up to 30 days for a 3rd offense, and up to 60 days for a 4th or subsequent offense. The Division of Motor Vehicles would implement the suspensions, and opportunity for hearing would be provided according to their normal procedures. Section 9 of the bill would provide increased resources for the Division of Motor Vehicles to maintain the necessary data base.

Section 9 would increase weight enforcement personnel and portable weigh-scales in accordance with the State Police recommendation of adding 12 State Police troopers and the necessary supporting equipment and facilities to the Commercial Vehicle Enforcement Unit. This would be a 43% increase in enforcement personnel above FY1988-89.

This legislation includes other provisions to help provide a fair and workable approach to truck weight and enforcement:

Section 2 continues criminal penalties and the present fine schedule for ordinary overweight violations. The designation of overweight violations as "misdemeanors" as in present law is retained because a change to the terminology of class crimes as in Title 17-A was found to be confusing to the trucking community. But, the language of 29 MRSA §1654 is modified to make it clear that excessive vehicle weight is a crime, like other misdemeanors under Title 29,and is subject to a fine in the amount provided in §1654 and imprisonment not to exceed 30 days. The present fine schedule, including the present waivers and reductions in fines for smaller offenses and rebates for commodity permits would be retained. Refusal to be weighed would continue to be a Class E crime, with a penalty not to exceed $1500 and 30 days, as in present law. (29 MRSA §1805)

Section 5 provides for several informational activities including: improvement in the quality and availability of information for truckers from the responsible state agencies (Division of Motor Vehicles and Bureau of State Police); informational meetings to be held by the Department of Transportation for judicial and District Attorney personnel to stress the importance of weight enforcement and inform them of the damage caused by overloads, with a goal of more uniformity in enforcement and imposition of penalties throughout the state; and promotion by the responsible agencies of alternative vehicle designs with reduced impact on the highways.

Section 6 addresses the issue of out-of-State and Canadian trucks by requiring that the State Police and the Maine Department of Transportation continue mutual discussions with bordering jurisdictions (Quebec, New Brunswick, and New Hampshire) on cooperative weighing efforts, and improvements in weighing capabilities on the Canadian border.

Section 7 would require regular progress reports on weight compliance and enforcement from the Department of Transportation, the Bureau of State Police,and the Division of Motor Vehicles to the Governor and the Legislature, beginning in 1990, and continuing in 1991 and biennially thereafter.

Section 8 would require the Department of Transportation to study and report on the possibility of pursuing civil and equitable action against persons who are guilty of repeated aggravated overweight violations, an approach that has been used in the State of Texas.

V. BACKGROUND DATA ON OVERWEIGHT TRUCKS

Tables and Charts

This chapter includes several tables and charts which support the findings of Chapter II. Further details are given in the Appendices. They show:

(1) Trucks (not including pickups and panels) make up about 8% of the traffic statewide, but this share rises to 11% on the interstates and drops to 5% on federal-aid urban highways. (See Tables 1A, 1B & 1C) (based on 1986 Vehicle Miles Travelled (VMT) data from MDOT).

(2) The impact of vehicles on road consumption can be measured in Equivalent Standard Axle Loads (ESALs). This information can be determined by using Data from Weigh-In-Motion (WIM) scales. Trucks contribute at least 99% of the road consumption impact on each class of highway, measured in ESALs. (See Tables 2A & 2B based on 1986 VMT and WIM data from MDOT).

(3) Typically, about 5% of the trucks are overweight on gross weight (based on sampling at Freeport, Nobleboro and Chelsea). But, this figure rises to about 12% at Sidney and about 20% at Wilton. (Table 3) (based on 1986-1988 WIM data from MDOT).

(4) The overload alone on overweight trucks contributes a share of the road consumption impact which ranges between 9% and 31%. These are the "Excess ESALs", which do not include the legal portion of the load carried by those axles. (Table 3).

(5) The ESAL load increases very rapidly with axle weight. For example, on a tandem axle the legal axle weight of 34,000 pounds gives a loading of one ESAL, but it only takes an additional 6,000 pounds to add another ESAL of loading. It is also notable that adding axles reduces the impact of a given load: while a single axle reaches one ESAL at 18,000 pounds a tandem can carry 34,000 pounds and a tridem 48,000 pounds before reaching a load of one ESAL. (Chart 4)

(6) The national median for overweight truck fines is $1,000, using a truck carrying 20,000 pounds above an 80,000 pound weight limit as an example. Maine is 41st of the states and territories with a fine of $350. (Chart 5)

(7) The gross weight limits and axle weight limits for Maine are listed in Table 6 for reference.

TABLE 1-A VEHICLE MILES TRAVELLED
by Vehicle Category

Vehicle Category	VMT (billions)	% of VMT
autos	6.6	66
pickup/panel trucks	2.4	24
single unit trucks	.5	5
combination trucks	.3	3
misc. & rounding	.2	2
TOTAL	10.0	100

TABLE 1-B VEHICLE MILES TRAVELLED
by Vehicle Category and Road System

	Federal Aid Highways				
VMT(billions) Vehicle Category	Interstate (incl. TPK	Primary (mostly SH)	Secondary (SH & SA)	Urban (SH & SA)	Non- Fed Aid (TW & SA)
autos	1.25	2.30	.91	.96	1.27
pickups & panels	.29	.84	.44	.29	.56
single unit	.07	.17	.09	.05	.10
combo	.13	.12	.04	.01	.03
misc.	.02	.04	.03	.02	.05
TOTAL	1.76	3.47	1.51	1.33	1.91

TPK= Maine Turnpike SH= State Highways SA= State Aid Highways TW= Town Ways

TABLE 1-C VEHICLE MILES TRAVELLED
Percentage Distribution by Vehicle Category and Road System

Vehicle Category	Inter-state	Primary	Urban	Secondary	Non-Fed Aid	All
autos	71	66	72	60	61	66
pickups/ panels	16	24	22	29	29	24
single units	4	5	4	6	5	5
combo	7	3	1	2	2	3
misc. & rounding	2	2	1	3	3	2

TABLE 2-A ESALS TIMES VMT
raw data, 1986

HIGHWAY SYSTEM	BASIC VEHICLES	STRAIGHT TRUCKS	COMBO TRUCKS	ALL VEHICLES
Interstate	537.14	18,141.45	157,696.32	176,374.91
Primary	1,302.71	102,403.47	128,828.21	232,534.39
Secondary	617.59	69,892.31	56,506.53	127,016.43
Urban	479.37	28,256.56	12,230.93	40,966.86
Local	796.90	74,809.44	38,103.59	113,709.93
ALL	3,733.71	293,503.23	393,365.58	690,602.52

TABLE 2-B ESALS TIMES VMT
Percent by System, 1986

HIGHWAY SYSTEM	BASIC VEHICLES	STRAIGHT TRUCKS	COMBO TRUCKS	ALL TRUCKS	ALL VEHICLES
Interstate	0.30	10.29	89.41	99.70	100.00
Primary	0.56	44.04	55.40	99.44	100.00
Secondary	0.49	55.03	44.49	99.51	100.00
Urban	1.17	68.97	29.86	98.83	100.00
Local	0.70	65.79	33.51	99.30	100.00
ALL	0.54	42.50	56.96	99.46	100.00

CHART 2 SHARE OF ESALS BY HIGHWAY SYSTEM
State of Maine, 1986

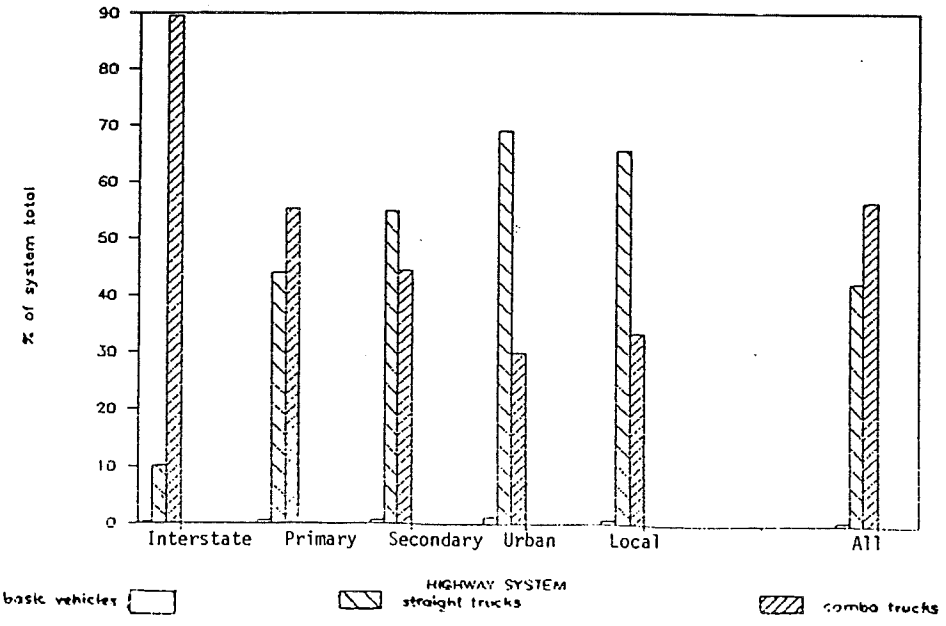


TABLE 3
SUMMARY OF TRUCK OVERWEIGHT INFORMATION

Location	Dates	#Trucks	# Trucks Over Gross	%	# Axle Units	# Axles OVWT	%	ESALs	EXCESS ESALs	%
FREEPORT I-95	sample only _/__/88	910	49	5%	2,150	102	5%	423	117	28%
SIDNEY I-95	9/3-12/22 '86	155,585	18,379-19,512	13%	444,131	32,862	7%	172,196	53,872	31%
NOBLEBORO US-1	10/26-12/3/87	16,390	321 - 645 1,185 - 1,670	2-4- 7-10%	40,572	711- 1,683	2- 4%	13,565	1,253	9%
WILTON US-2	5/27-7/6/87	30,165	3,897 - 4,970 7,107 - 7,928	13-17- 24-27%	77,566	4,843- 10,796	.6- 22%	47,114	5,372	11%
CHELSEA** ME-___	7/ '88	8,764	159 - 419 592 - 781	2-5- 7-9%	19,480	424- 831	2- 4%	5,531	576	10%

Notes:

(1) On non-interstate highways, there are two weight limits, so the numbers of trucks, axles and ESALs overweight are calculated for each: the 1st line refers to the (higher) commercial limit, and the 2nd to the (lower) state road limit.

(2) Except for Freeport, the WIM data mixes 3 and 4-axle vehicles, which have different gross weight limits, so the numbers of trucks over gross are calculated as a range, assuming the 4-axle limit and again with the 3-axle limit.

(3) In Wilton, Excess ESALs are calculated from the Forest Products limit; in Nobleboro and Chelsea they are calculated from the commodity limit. This tends to understate the excess, because some of the vehicles in those locations were only permitted for the (lower) road limits. In Sidney, the calculation is basaed on the following Interstate axle limits: 22,000 pounds for singl; 34,000 for tandem; 46,000 pounds for tridem. This tends to underestimate the excess because in some cases lower limits would apply.

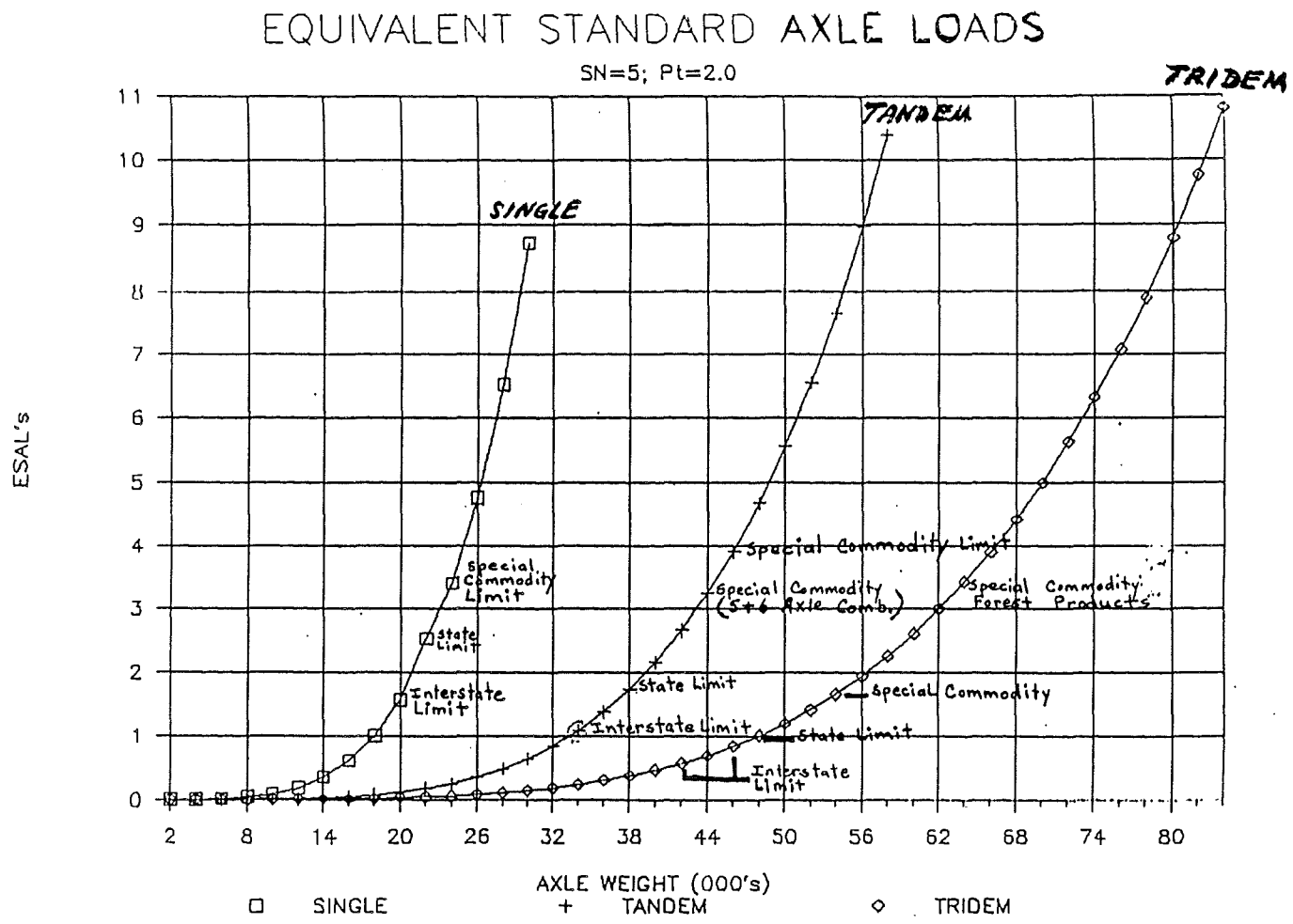
(4) In Freeport, the excess ESALs were calculated using a sample of 942 trucks, slightly more than were used for the other calculations.

Sources: Weigh-in-Motion (WIM)
Analysis: H. Whiteside OPLA
Data: G. Hinkley, MDOT

6325* p 36, character set 9

Equivalent Standard Axle Loads (ESAL's) are a relative measure of pavement consumption. One ESAL is the effect of a single 18,000 pound axle load. Highways are designed for a certain number of ESAL's over their useful life. Thus an increase in the number of ESAL's carried per day above the design load reduces the pavement life proportionately. Chart 4 shows the number of ESAL's as a function of axle weight for a flexible pavement with a structured number (SN) typical of primary highways and pavement serviceability (PT) (end quality before repaving) typical of secondary highways.

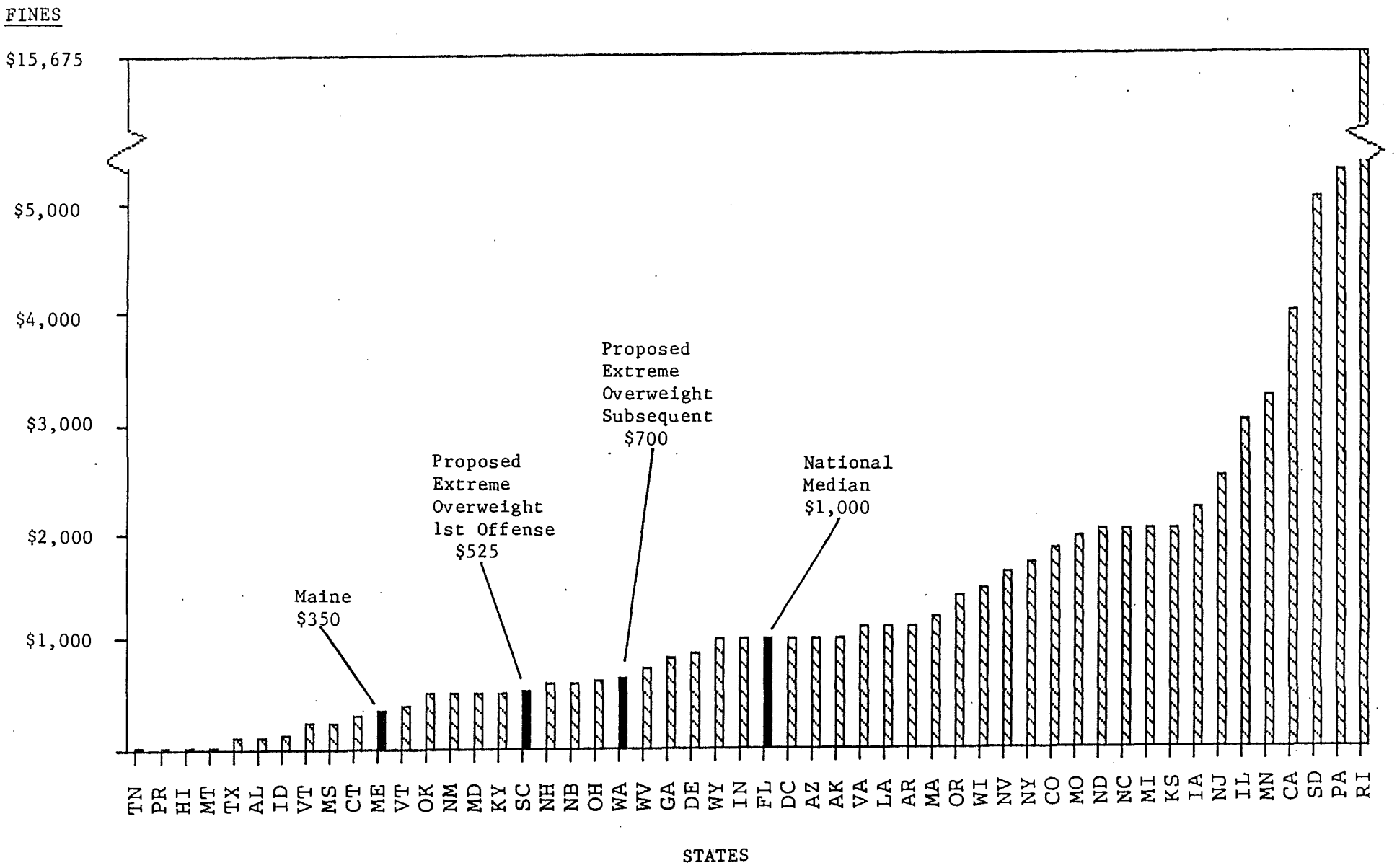
CHART 4



Source: ASSHTO Pavement Design Manual

CHART 5

OVERWEIGHT TRUCK FINES BY STATE FOR TRUCKS THAT EXCEED AN 80,000 LBS. WEIGHT LIMIT BY 20,000 LBS.



SOURCE: "Overweight Vehicles - Penalties and Permits", Fed. Highway Admin., U.S. D.O.T., June 1988

TABLE 6

WEIGHT LIMITS, STATE OF MAINE, JANUARY 1989

Commercial Vehicles - Gross Weight Limits (pounds)

Number of Axles	No Permit "Road Limit"[1]	General Permit	6-Axle General Commodity Permit[5]	Special Commodity Permit[6]
2	34,000			37,400
3	54,000			59,400
4	69,000[2]			75,900
5	80,000[3]			88,000
6	80,000[3]	90,000[4]	100,000	100,000
Title 29 ref:	§1652(1)(A)	§1652(1)(E)	§1652(1)F	§1655

Commercial Vehicles - Axle Weight Limits (pounds)

		Other Highways			
Number of Axles in Unit	Interstate Highway System	No Permit or 6-Axle General Permit	6-Axle General Commodity Permit	Special Commodity Permit	4-Axle Forest Products Permit
Single Axle	22,000[7]	22,400	(22,400)	24,200	24,200
Tandem	34,000	38,000	41,000	46,000[9]	46,000
Tri-axle	42,000-[8]	48,000	50,000	54,000	64,000
Title 29 ref:	§1652(2)B	§1652(2)(B)	§1652(1)F	§1655	§1655

NOTES:

(1) For the Interstate Highway System, the "Road Limit" above applies, but the vehicle must also stay within the "Bridge Formula"

$$W=500\left(\frac{LN}{N-1} + 12N + 36\right)$$

where L = number of axles; N = maximum distance between axles; and W = allowed weight (round to nearest 500 pounds). (§1652(1)(A))

(2) Less 1,000 lb/ft under 18ft (§1652(1)(B))
(3) Less 2,000 lb/ft under 24ft (§1652(1)(B))
(4) Less 2,000 lb/ft under 32ft (§1652(1)(B))
(5) At least 36 ft. long
(6) 3-3 combinations
(7) 20,000 lb for GVW above 73,280
(8) Based on Bridge Formula for L = 8ft; 45,000 lbs for 12 ft, etc.
(9) 44,000 lbs for 5 or 6 axle combinations

VI. CONCLUSION

Heavy trucks are a common and necessary part of everyday life which do have a major impact on the highways they travel. This study has developed background information showing that overweight trucks are a problem in Maine, and that these overweight loads do add significantly to highway consumption. As a result, the Subcommittee has identified a number of fair and workable remedies that will address this issue. These include regular progress reports so that the actual results can be easily assessed by the Legislature and responsible government officials.

VII. MINORITY REPORTS

While generally agreeing with the proposals put forth in the majority report to address the problems of overweight trucks, we believe those proposals should be accompanied by measures to alleviate certain inequities and hardships in the present system of truck weight regulation.

Trucks are sometimes within the gross weight limit but exceed the weight limit on an axle or group of axles. Without weighing equipment in the field it is hard to estimate the gross weight of a load. It is even harder to estimate the weight on an axle. Therefore, for vehicles which are within their authorized gross weight, we recommend legislation which repeals the axle weight limits. For vehicles which exceed their authorized gross weight the axle weight limits would remain as in present law.

Rep. Fred W. Moholland
Rep. Jeffrey N. Mills
Rep. Daniel J. Callahan

ADDITIONAL VIEWS OF REP. MOHOLLAND

In addition to the measure described above, I believe there are three more changes that should be made in truck weight enforcement. These will help avoid burdensome measures against minor offenders, while promoting fairness and allowing enforcement to focus on major offenders. Proposed legislation is not presented here, but will be discussed when the study bill is considered in the next Legislature. These changes are:

- First, base the fines on weight in excess of the weight authorized by any special permits. At present, if the truck exceeds the permit weight, the basis of the fine reverts down to the road limit. That is not fair, because the trucker has already paid to carry the higher weight allowed by the permit.

- Second, allow any truck found overweight (but not aggravated overweight) to proceed as far as 10 miles to its destination or a suitable warehouse, rather than making it wait until it is brought into compliance. It will be safer and more convenient, and any additional damage to the highway will be small.

- Third, require any overloaded truck which is stopped and which is without special permits to purchase a permit. At present, if they are stopped for running overweight without a permit, trucks registered in Maine are required to purchase a permit while interstate or foreign trucks are not, which is unfair.

DRAFT 6884
11-02-88
Truck Wt. Minority

PROPOSED LEGISLATION
MINORITY REPORT
HEAVY TRUCK STUDY

AN ACT to Remove Inequities in the Truck Weight Laws

Be it enacted by the People of the State of Maine as follows:

29 MRSA §1652, subsection 2 is amended to read:

2. Axle weight limits.

A. One axle, or 2 axles less than 4 feet apart, shall be considered as a single axle unit; 2 or more axles at least 4 feet and not more than 8 feet apart shall be considered as a tandem axle unit; 3 axles measuring more than 8 feet between the first and 3rd axles and less than 12 feet shall be considered as a tri-axle unit; and if a single axle unit is closer than 10 feet, or in the case of a steering axle 9 feet, to the nearest axle of a tri-axle unit, the gross weight on the 4 axles shall not exceed that allowed for a tri-axle unit.

B. Except as provided in paragraph D and in section 1655, no ~~No~~ vehicle may be operated or caused ~~cause~~ to be operated, with a gross weight exceeding 22,400 pounds on a single axle unit, 38,000 pounds on a tandem axle unit or 48,000 pounds on a tri-axle unit, specifically excepting the Interstate Highway System as defined in the Federal Aid Highway Act of 1956, where the gross weight on a single axle unit shall not exceed 22,000 pounds when the gross weight of the vehicle is 73,280 pounds or less nor 20,000 pounds when the gross weight of the vehicle is in excess of 73,280 pounds, the gross weight on a tandem axle unit shall not exceed 34,000 pounds and the gross weight on a tri-axle unit shall not exceed the gross weight as determined by the formula set out in subsection 1, paragraph A; and provided that:

(1) Nothing contained in section 1655 may permit an axle or tandem axle weight on the Interstate Highway System as defined in the Federal Aid Highway Act of 1956 in excess of the limits established for the system in this section;

(2) No single axle of a tandem axle unit may support more than 60% of the total weight supported by that tandem axle unit. It shall not be deemed a violation of this subparagraph if neither axle of a tandem axle unit exceeds the weight legally allowed on a single axle unit of that vehicle;

(3) No single axle of a tri-axle unit may support more than 40% of the total weight supported by that tri-axle unit; and

(4) The gross weight of a vehicle shall not be increased by the addition of a trailing axle, so called, unless that axle supports at least 50% of the added weight permitted by the addition of that trailing axle.

C. Notwithstanding any other provision of this Title, no vehicle shall be operated or caused to be operated when the load imparted to the road surface is greater than 600 pounds per inch width tire, manufacturer's rating, excepting farm trucks transporting potatoes directly from the field to the place of storage or to a processing facility during the potato harvesting season.

D. Except for vehicles operating on the Interstate Highway System, the axle weight limits of paragraph B and of section 1655 applicable to single axle units, tandem axle units and tri-axle units shall not apply to any vehicle operating within the applicable gross weight limit for that vehicle.

STATEMENT OF FACT

This bill is the minority report of the Heavy Truck Study, authorized by PL 1987, Chapter 793, Part A. For vehicles which are within their authorized gross weight, including any applicable permits, it repeals the axle limits. For vehicles which exceed their authorized gross weight the axle limits would remain.

**********6325m**********

APPENDICES TO
REPORT OF THE STUDY OF HEAVY TRUCKS
BY THE JOINT STANDING COMMITTEE ON TRANSPORTATION

December 1988

A. Public Law 1987, Chapter 793, Part A Section 16 and Part C Section 2.

B. List of Interested Parties.

C. Agendas.

D. Overview of Overweight Trucks, Report by Haven Whiteside, Legislative Analyst, Subcommittee Staff.

E. Compliance and Enforcement Experience in other States, Memo by Herbert Perry, Research Assistant, Subcommittee Staff.

F. Report of the Advisory Task Force on Improved Weight/Safety Enforcement and Compliance, Gedeon Picher, Chair, Maine Department of Transportation, Sept. 12, 1988.

G. Material from the Maine State Police, including excerpts from the Vehicle Size and Weight Plan for Fiscal Year 1988; Memo on Commercial Vehicle Enforcement, Sept. 12, 1988, Deputy Chief Lt. Col. Alfred R. Skolfield, and Summary of serious violations, 1987.

H. Analysis of Extreme Overweight Violations 1986-87, based on data from from Maine State Police.

I. Additional information from Maine Department of Transportation including: WIM monitoring data; correlation of gross weight to axle weight; frequency of overweight violations; average fines by court jurisdiction within the State; and overweight violations by State.

APPENDIX A

CHAPTER 793

H.P. 1799 — L.D. 2463

AN ACT to Fund a Supplemental Highway Program and to Establish a Program to Fund the Construction of Extraordinary Bridges.

Emergency preamble. Whereas, Acts of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, the State is experiencing an unanticipated loss of federal highway construction funds of approximately $20,000,000 this biennium due to federal budget cuts; and

Whereas, the State's highway system is in need of considerable improvements to reach safe, modern standards; and

Whereas, the State is faced with the need to construct or reconstruct several bridges of unusual size and complexity; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore,

Be it enacted by the People of the State of Maine as follows:

PART A

Sec. 16. **Study of overweight enforcement; and the highway maintenance and safety implications of heavy trucks.** The Joint Standing Committee on Transportation, with the assistance of the Department of Transportation, the Department of Public Safety and other interested parties shall study the impacts and implications of overweight trucks on highway safety, highway and bridge consumption and trucking competition and the enforcement of truck weight limits and report its findings and recommendations, including any proposed legislation to the Legislature, on or before December 6, 1988. The committee shall establish a 5-member subcommittee to conduct the study and shall hold a public hearing in the course of the study. Members of the Joint Standing Committee on Transportation shall receive the legislative per diem, as defined in the Maine Revised Statutes, Title 3, section 2, for each day of attendance at meetings of the study and shall receive reimbursement for expenses upon application to the Executive Director of the Legislative Council. Staff assistance shall be requested from the Legislative Council.

PART C

Sec. 2. **Allocation.** The following funds are allocated from the Highway Fund to carry out the purposes of this Act.

	1988-89
LEGISLATURE	
Study Commission — Funding	
Personal Services	$ 1,815
All Other	9,000
Provides funds for per diem, travel and related expenses of the members of the Joint Standing Committee on Transportation involved in the study of the Local Road Assistance Program. Funds are also provided to contract for staff assistance.	
Study Commission — Funding	
Personal Services	$ 1,815
All Other	9,000
Provides funds for per diem, travel and related expenses of the members of the Joint Standing Committee on Transportation involved in the study of the impact of truck weight on the highways. Funds are also provided to contract for staff assistance.	
LEGISLATURE TOTAL	$ 21,630

Emergency clause. In view of the emergency cited in the preamble, this Act shall take effect May 1, 1988.

Effective May 1, 1988.

APPENDIX B

Interested Parties
Heavy Truck Study
June 24, 1988
Doc. #5675m

Kay Rand
Maine Municipal Assoc.
Community Drive
Augusta, ME 04330

Edward Johnston
Me. Forest Products Council
146 State Street
Augusta, ME 04330

Clifford Gray
Me. Motor Transport Assoc.
524 Western Avenue
Augusta, ME 04330

Kenneth Sweeney
Data Systems Engineer
Bureau of Planning
Dept. of Transportation
Station #16

Dr. John Alexander, Chairman
Dept. of Civil Engineering
University of Maine
103 Boardman Hall
Orono, ME 04469

Herbert P. Perry
14 Nottingham Drive
Saco, ME 04072

Lt. Col. Alfred Skolfield
Deputy Chief, State Police
Dept. of Public Safety
Station #42

Eric Baxter, Director
Public Affairs Div.
AAA Maine
P.O. Box 3544
Portland, ME 04104

William Richardson
Division Administrator
Federal Highway Admin.
40 Western Avenue
Augusta, ME 04330

Jane Lincoln
Assist. to Commissioner
Dept. of Transportation
Station #16

Mike Burns
Office of Policy Analysis
Dept. of Transportation
Station #16

Haven Whiteside
Simpson Point Road
Brunswick, ME 04011

Dick Anderson
Barton & Gingold
30 Exchange Street
Portland, ME 04101

William Dowling, Assist to
Deputy Sec. of State
Div. of Motor Vehicles
Station #29

Richard Jones
Me. Motor Transport Assoc.
524 Western Avenue
Augusta, ME 04330

Garry Hinkley
Human Resources Group
Dept. of Transportation
Station #16

Gedeon Picher, Director
Policy Analysis
Dept. of Transportation
Station #16

Sgt. Bruce Dow
State Police
Dept. of Public Safety
Station #42

Tim Leet
Fiscal & Program Review
State House Station #5

Henry A. Magnuson, II
President
Paper Industry Info. Office
133 State Street
Augusta, ME 04330

APPENDIX C

JOINT STANDING COMMITTEE ON TRANSPORTATION
HEAVY TRUCK STUDY

AGENDA

June 16,1988
Room 122, State Office Building
Augusta, Maine

10:30 Opening Remarks - Sen. Dow, Rep. Moholland

-Introduction of Study - Selection of Chair

10:45 Draft Study Plan - Haven Whiteside, L.A.

11:00 Background Briefings

- Division of Motor Vehicles - William Dowling, Assistant to Deputy Secretary of State

-Truck Registrations

- Bureau of State Police, Lt. Col. Alfred Skolfield, Jr., Deputy Chief

-Present enforcement capabilities (personnel & equipment
-Future plans
-Major problems

- Department of Transportation, Jane Lincoln, Assistant to the Commissioner

Ken Sweeney, Engineer - Data Systems Division, Bureau of Planning

-DOT's Role in the Size & Weight Enforcement Plan
-Maine accident records systems
-Past and present truck weight data collection activities

Mike Burns, Engineer, Office of Policy Analysis

-Highway Cost Allocation Study: Status & Data Sources

12:00 Discussion of Study Plan

-content
-schedule
-staffing
-public hearing
-interested parties

12:30 ADJOURN

JOINT STANDING COMMITTEE ON TRANSPORTATION
HEAVY TRUCK STUDY

AGENDA

July 19,1988
Room 122, State Office Building
Augusta, Maine

9:00 Opening Remarks - Rep. Pouliot, Chairman
- Introduction of Research Assistant: Herbert Perry

9:15 Views of Highway Users

- Clifford Gray, Maine Motor Transport Association
- Eric Baxter, American Automobile Association, Maine
- Edward Johnston, Maine Forest Products Council

10:30 Progress Reports on Data Analysis

- Data from Weigh-in-Motion (WIM) Scales, Gary Hinckley, Dept. of Transportation
- Fine & Arrest Data - Lt. Col. Alfred Skolfield & Sgt. Bruce Dow, Harlan Pierson Dept. of Public Safety
- Effect of changing the overweight fine schedule (1986) - Gedeon Picher, Tim Bolton Maine Dept. of Transportation
- Preliminary Indications from the Cost Allocation Study - Mike Burns, Maine Dept. of Transportation

11:30 Discussion

12:00 Adjourn

STATE OF MAINE

ONE HUNDRED AND THIRTEENTH LEGISLATURE

COMMITTEE ON TRANSPORTATION

JOINT STANDING COMMITTEE ON TRANSPORTATION
SUBCOMMITTEE ON HEAVY TRUCKS
Meeting, August 18, 1988
State House, Room 334
Augusta, Maine

AGENDA

8:30 Representative Pouliot- Introductory Remarks by the Chairman.

8:35 W. Dowling, Div. of Motor Vehicles- Registration data.

8:45 H.Perry, Research Assistant- Experience in other states.

9:15 G.Picher, Dept. of Transportation- Effect of increasing fines; degree of overweight; jurisdiction of origin of overweight vehicles.

9:45 G.Hinkley, Dept. of Transportation- Correlations between axle violations and gross weight violations.

10:00 H.Whiteside, Legislative Analyst- Overview of the overweight problem in Maine.

10:30 Subcommittee- initial discussion of ideas for improved compliance with weight limits, to identify those which merit further staff analysis.
Set date for next meeting.

11:00 ADJOURN

Note that the Local Road Assistance study will be meeting at 11:00 am in the same room.

STATE HOUSE STATION 115, AUGUSTA, MAINE 04333 TELEPHONE: 207-289-4147

JOINT STANDING COMMITTEE ON TRANSPORTATION
HEAVY TRUCK SUBCOMMITTEE

AGENDA

Tuesday, September 13, 1988
Room 122, State Office Building
Augusta, Maine

9:00 a.m. Introductory Remarks - Rep. Pouliot, Subcommittee Chair

9:15 a.m. Improving Compliance with Weight Limits
-Recommendations of Advisory Task Force - Gedeon Picher, MDOT

(1) Informational activities
(2) Vehicle types
(3) Weight limits
(4) Enforcement personnel & equipment
(5) Enforcement methods
(6) Penalties in general
(7) Penalties for repeat offenders

-Additional Comments, Subcommittee staff, Haven Whiteside and Herb Perry

-Subcommittee discussion

11:00 a.m. Safety Measures
-Ideas for consideration (Advisory Task Force - Gedeon Picher)

-Subcommittee discussion

11:15 a.m. Other issues: Economics of Truck Weight: DOT cost allocation study; DOT 100,000 pound general commodity study.

11:30 a.m. Instructions to the staff on preparation of draft report

11:45 a.m. Schedule future meetings and public hearings

12:00 noon ADJOURN

Note: The Local Road Assistance Subcommittee is meeting this afternoon at 1:30 p.m.

6245m

STATE OF MAINE
ONE HUNDRED AND THIRTEENTH LEGISLATURE
COMMITTEE ON TRANSPORTATION

JOINT STANDING COMMITTEE ON TRANSPORTATION
SUBCOMMITTEE ON HEAVY TRUCKS
October 4, 1988
Room 122, State Office Building
Augusta, Maine

9:00 AM Public Hearing to receive comments on the draft study report, dated September, 1988. Copies were distributed to the interested parties list, and are available from the Office of Policy and Legal Analysis, 289-1670.

Testimony was received from the following:

Richard C. Jones	Maine Motor Transport Association
Edward Johnston	Maine Forest Products Council
Christopher Almy	District Attorney, Bangor
George Parke	Parkeway Transport & MMTA
Cheryl H. Russell	Hannington Brothers & MFPC
John Leighton	trucker, Pembroke
Roger Ryder	Macdonald Logging
Herbert C. Haynes	Maine Forest Products Council
Michael Whalen	Maine Hardwood Association
Newt Stowell	United Timberland Transportation
Walt McCarty	trucker, Litchfield
Don Bishop	Maine Fence Co., Pittsfield
Earl Bessey	Maine Forest Products Council
Ed Havelock	Ed Havelock & Sons, Inc.
Donald McNelly	trucker
Gerald Chernes	Guilford
Hillier Artman	trucker, Parkman
Jim Wallace	Georgia-Pacific, Baileyville
Wayne Darling	trucker, East Corinth

2:45 PM Subcommittee discussion

7007*

STATE OF MAINE
ONE HUNDRED AND THIRTEENTH LEGISLATURE
COMMITTEE ON TRANSPORTATION

JOINT STANDING COMMITTEE ON TRANSPORTATION
HEAVY TRUCK STUDY SUBCOMMITTEE

AGENDA

October 11, 1988
Room 113, State Office Building
Augusta, Maine

9:30 AM Rep. Roger Pouliot, Chair

Review of revised draft study report
(Staff draft of October 11, 1988)

7008*

STATE H[illegible] STATION 115, AUGUSTA, MAINE 04333 TELEPHONE: 207-289-4147

STATE OF MAINE
ONE HUNDRED AND THIRTEENTH LEGISLATURE
COMMITTEE ON TRANSPORTATION

JOINT STANDING COMMITTEE ON TRANSPORTATION
HEAVY TRUCK STUDY SUBCOMMITTEE

AGENDA

October 18, 1988
Room 122, State Office Building
Augusta, Maine

9:30 AM Rep. Roger Pouliot, Chair

9:36 AM Nelson Durand, Division of Motor Vehicles
- Report on Commercial Vehicle Drivers Licenses under federal law

10:00 AM Review of draft study reportwith additional revisions

2:00 PM FULL COMMITTEE

Meeting to receive and act upon the report of the Heavy Truck Subcommittee

7009*

APPENDIX D

HELEN T. GINDER, DIRECTOR
HAVEN WHITESIDE, DEP. DIRECTOR
GILBERT W. BREWER
DAVID C. ELLIOTT
GRO FLATEBO
MARTHA E. FREEMAN, SR. ATTY.
JERI B. GAUTSCHI
WILLIAM T. GLIDDEN, JR.

JULIE S. JONES
JOHN B. KNOX
EDWARD POTTER
MARGARET J. REINSCH
LARS H. RYDELL
JOHN R. SELSER
CAROLYN J. CHICK, PARALEGAL
ROBERT W. DUNN, RES. ASST.
HARTLEY PALLESCHI, JR. RES. ASST.

STATE OF MAINE
OFFICE OF POLICY AND LEGAL ANALYSIS
ROOM 101/107/135
STATE HOUSE STATION 13
AUGUSTA, MAINE 04333
TEL.: (207) 289-1670

Updated
November 3, 1988

TO: Heavy Truck Study Subcommittee

FROM: Haven Whiteside, LA

SUBJ: Overview of Overweight Trucks

I. Highway Mileage

There are about 22 thousand miles of highways in Maine, including 260 miles of federal-aid interstate, 2000 miles of federal-aid primary, 700 miles of federal-aid urban, 2,800 miles of federal-aid secondary, 2,900 miles of state and state aid highways with no federal aid, and 13,000 miles of town ways.

II. Traffic Distribution

There are about 10 billion vehicle miles travelled (VMT) per year in Maine. The traffic is unevenly distributed. Two-thirds of the traffic is concentrated on the federal-aid interstate, primary, and urban highways even though these constitute only 14% of the mileage. Another one-fourth of the traffic travels on the federal aid secondary and non-federal aid state and state aid highways that make up one-fourth of the mileage. Finally, town ways carry only 11% of the traffic even though they make up 60% of the mileage.

III. Truck Share of Traffic

Trucks (not including pickups and panels) make up about 8% of that traffic, but this share rises to 11% on the interstates and drops to 5% on federal-aid urban highways. The difference in these cases is due to tractor-trailer combinations. Statewide, about 5% of the traffic is straight trucks and 3% is tractor-trailers.

Statewide, the Vehicle Miles Travelled (VMT) are allocated among the various categories as follows:

Vehicle Category	VMT (billions)	% of VMT
autos	6.6	66
pickup/panel trucks	2.4	24
single unit trucks	.5	5
combination trucks	.3	3
misc. & rounding	.2	2
TOTAL	10.0	100

This VMT data may be further analyzed according to the type of road as follows:

VMT (billions) Vehicle Category	Federal Aid Highways Interstate (incl. TPK	Primary (mostly SH)	Secondary (SH & SA)	Urban (SH & SA)	Non Federal Aid (TW & SA)
autos	1.25	2.30	.91	.96	1.27
pickups & panels	.29	.84	.44	.29	.56
single unit	.07	.17	.09	.05	.10
combo	.13	.12	.04	.01	.03
misc.	.02	.04	.03	.02	.05
TOTAL	1.76	3.47	1.51	1.33	1.91

TPK = Maine Turnpike SH = State Highways
SA = State Aid Highways TW = Town Ways

In percentages the traffic on each type of road is divided among vehicle categories as follows:

Vehicle Category	Interstate	Primary	Urban	Secondary	Non-Fed. Aid	All
autos	71	66	72	60	61	66
pickups/ panels	16	24	22	29	29	24
single units	4	5	4	6	5	5
combo	7	3	1	2	2	3
misc. & rounding	2	2	1	3	3	2

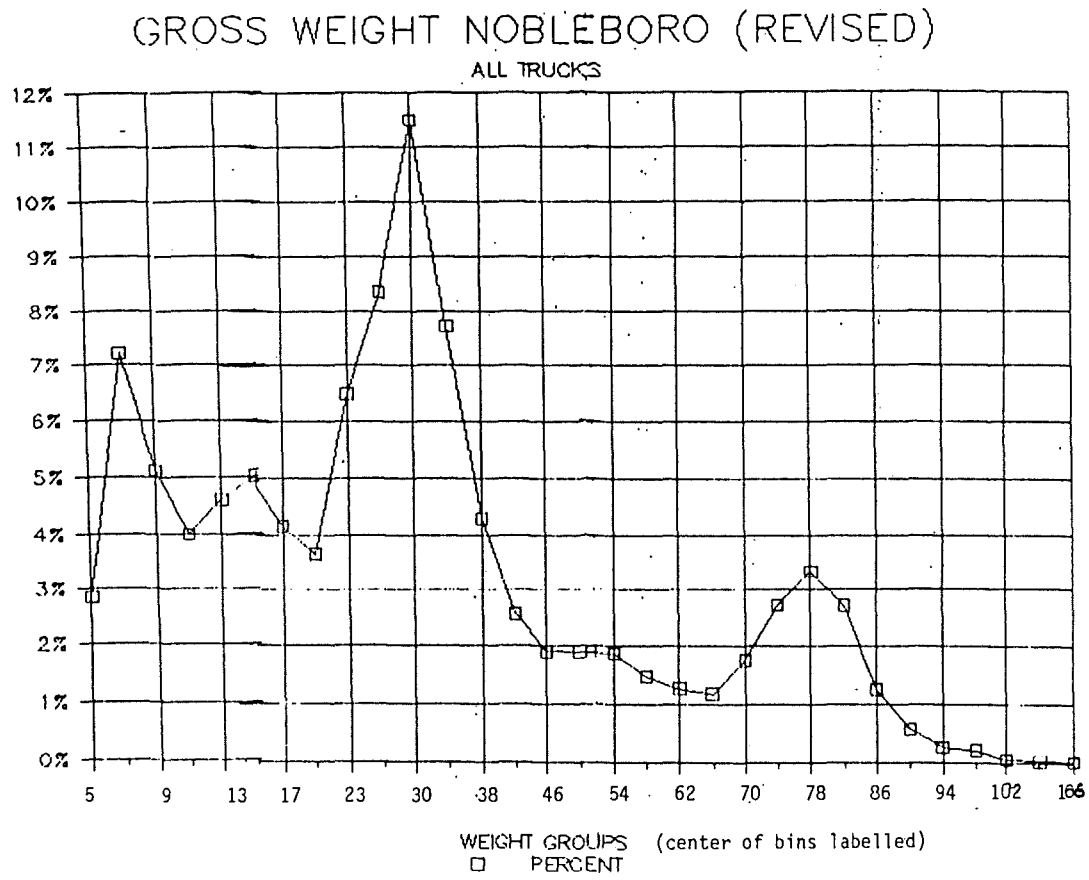
IV. Truck Weights Observed

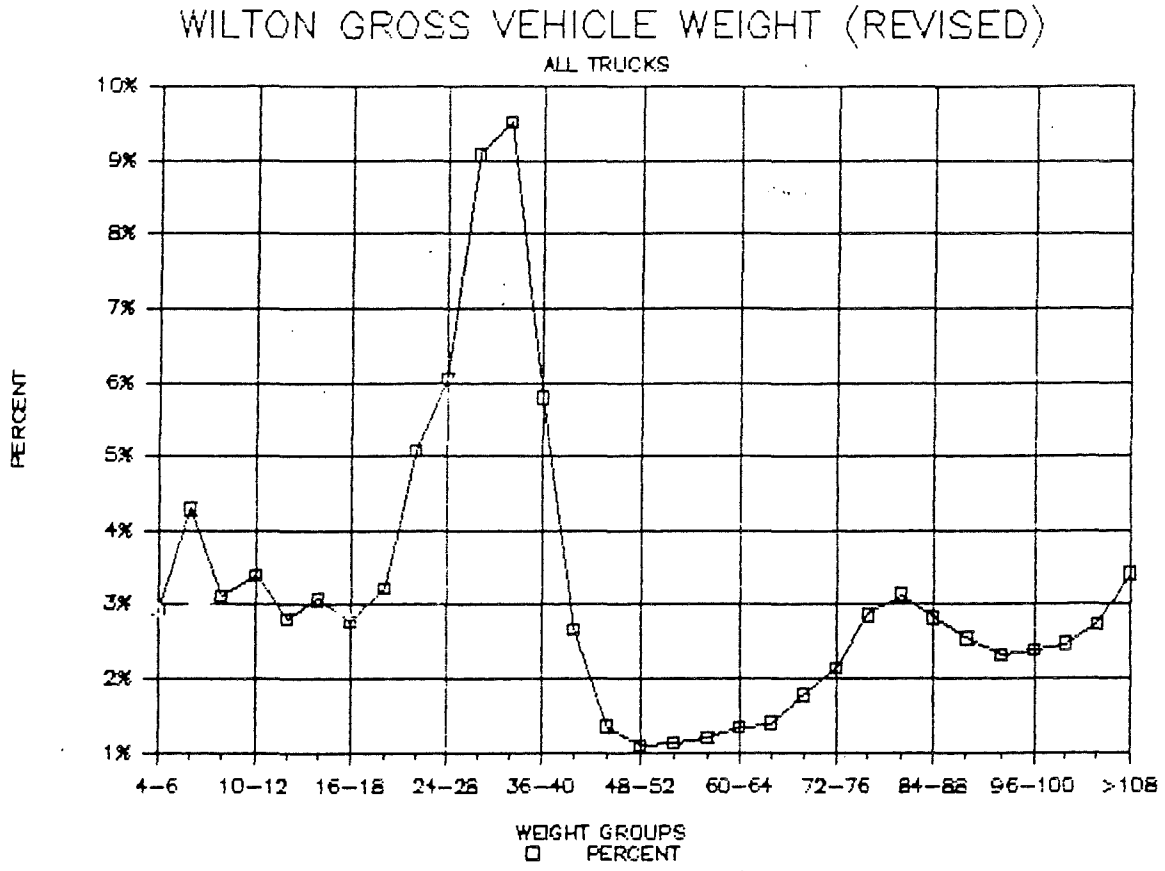
The gross weight distribution from the Weigh-In-Motion (WIM) sites is interesting to provide a picture of the truck traffic on those highways. Nobleboro is shown as an example.

In Nobleboro, 3 peaks and 2 shoulders are evident: a peak at 78,000 pounds, probably from loaded 5 and 6-axle combinations; a shoulder at 54,000, probably due to loaded 3 and 4-axle single units; a peak at 30,000, perhaps due to "empty" 3, 4, 5, and 6-axle vehicles; a shoulder at 15,000 perhaps due to loaded 2-axle single units, and a peak at 7,000 probably due to "empty" 2-axle vehicles.

In Wilton, the pattern is similar, except that the 54,000 pound shoulder does not appear, and there is a significant number of vehicles above 92,000 pounds, probably reflecting special commodity permits..

The other sites could be analyzed in the same fashion, but that was not done here.



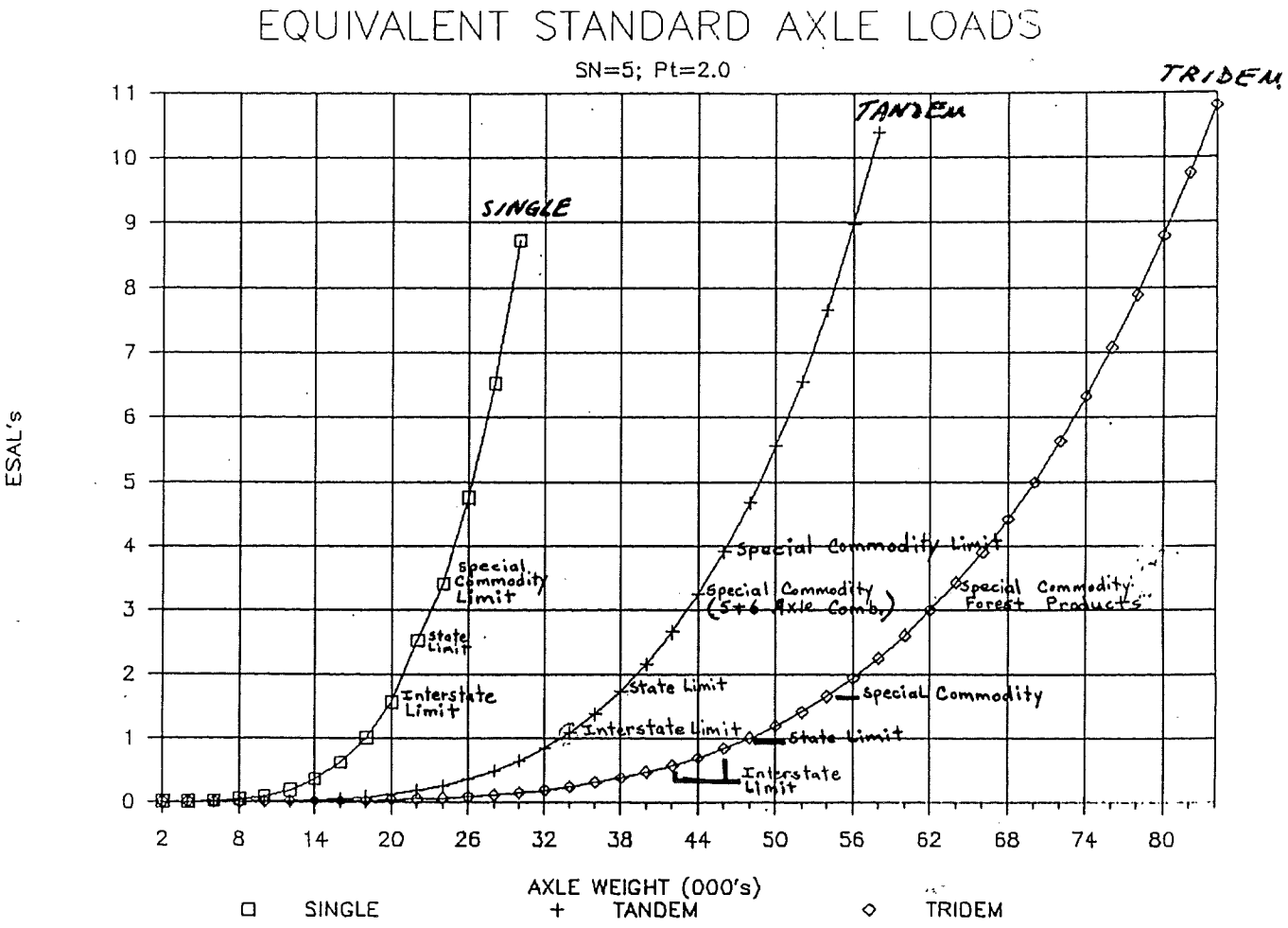


V. Highway Impact vs. Vehicle Weight

What is the impact of vehicles on the highways? This is best analyzed in terms of axle weights. Equivalent Standard Axle Loads (ESAL's) are a relative measure of pavement consumption. One ESAL is equivalent to the effect of a single 18,000 pound axle or 5,000 autos. Engineering test data shows that the number of ESAL's rises exponentially with the fourth power of axle weight.

The result is to magnify the importance of heavily loaded axles. A 20% increase in weight more than doubles the impact. Similarly, a 20% decrease reduces the impact to less than half. For example, a tandem axle has the following characteristics:

Load (lbs)	ESAL's
27,200	.41
34,000	1.08
40,800	2.36



Note also that adding axles allows more weight to be carried per ESAL: one ESAL represents the impact of a single 18,000 pound axle; a 33,000 pound tandem; or a 48,000 pound tridem.

VI. Impact of Truck Weight

A truck, because of its weight, has a greater impact on the highway than an auto. For example, on federal aid primary roads, with typical loads, a 3-axle straight truck is equivalent to about 4,550 cars, while a 5-axle tractor-trailer is equivalent to about 5,050 cars. (This uses a 3200 pound car, with .0002 ESALs for reference.)

VII. Non-Compliance

The degree of non-compliance may be estimated from the WIM data. This comes from Weigh-in-Motion scales placed in the roadway. The data is recorded electronically, without stopping traffic, but individual vehicles are not identified. The results for an interstate highway are shown by the Sidney and Freeport data, which show compliance as follows. (A range of overweight percentages is quoted for 3 & 4 axle vehicles because they have different weight limits but are not separated in the data).

Sidney (Interstate-95) (2 months, Northbound)

Truck Type	Number	Overweight
2 axle	34,461	1%
3 & 4 axle single	10,162	1 to 6%
3 & 4 axle combo	17,897	1 to 3%
5 axle combo	91,073	19%
6 axle combo	1,992	39%
TOTAL	155,585	13%

Freeport (Interstate-95)

Truck Type	Number	Overweight
(details by type not available)		
TOTAL	910	5%

On non-interstate highways, because of the existence of a higher commodity weight limit in addition to the general weight limit for a given configuration it is harder to do a similar analysis. The estimated results are given for Nobleboro, Wilton, and Chelsea, assuming all trucks must meet the road limit, and recalculated assuming all trucks may carry the commodity limit. The truth will lie somewhere between these estimates.

Nobleboro (US-1)

Truck Type	Number	Overweight	Ovwt (commod)
2 axle	6,812	3%	1%
3 & 4 axle single	2,345	2 to 14%	1 to 7%
3 & 4 axle combo	2,022	13 to 24%	13 to 18%
5 axle combo	5,008	13%	2%
6 axle combo	203	10%	2%
TOTAL	16,390	7 to 10%	2 to 4%

Wilton (US-2)

Truck Type	Number	Overweight	Ovwt (commod)
2 axle	8,550	2%	1%
3 & 4 axle single	4,964	22 to 38%	13 to 34%
3 & 4 axle combo	1,489	0 to 2%	0 to 1%
5 axle combo	7,515	30%	11%
6 axle combo	7,167	51%	33%
TOTAL	29,685	24 to 27%	13 to 17%

Chelsea secondary road

Truck Type	Number	Overweight	Ovwt (commod)
2 axle	4,656	3%	1%
3 & 4 axle single	1,296	12 to 26%	3 to 23%
3 & 4 axle combo	575	0 to 3%	0 to 1%
5 axle combo	2,095	12%	1%
6 axle combo	142	36%	24%
TOTAL	8,764	7 to 9%	2 to 5%

VIII. Highway Impact

The WIM data and the VMT data may be combined to give the ESAL impact of each vehicle type on each part of the highway system. The results, tabulated below, show that trucks contribute 99% or more of the ESALs on each system, while autos, pickups and panels contribute 1 % or less. The truck share is dominated by tractor-trailers on the interstate system. Straight trucks are more important on urban and local roads.

ESALs TIMES VMT, PERCENT BY VEHICLE TYPE
FOR EACH ROAD SYSTEM, 1986

HIGHWAY SYSTEM	BASIC VEHICLES	STRAIGHT TRUCKS	COMBO TRUCKS	ALL TRUCKS	ALL VEHICLES
Interstate	0.30	10.29	89.41	99.70	100.00
Primary	0.56	44.04	55.40	99.44	100.00
Secondary	0.49	55.03	44.49	99.51	100.00
Urban	1.17	68.97	29.86	98.83	100.00
Local	0.70	65.79	33.51	99.30	100.00
ALL	0.54	42.50	56.96	99.46	100.00

There are factors other than axle weight which cause highways to wear out. These include weather and vehicle miles. The DOT Highway Cost Allocation Study is addressing those in some detail.

IX. Impact of Overweight Vehicles

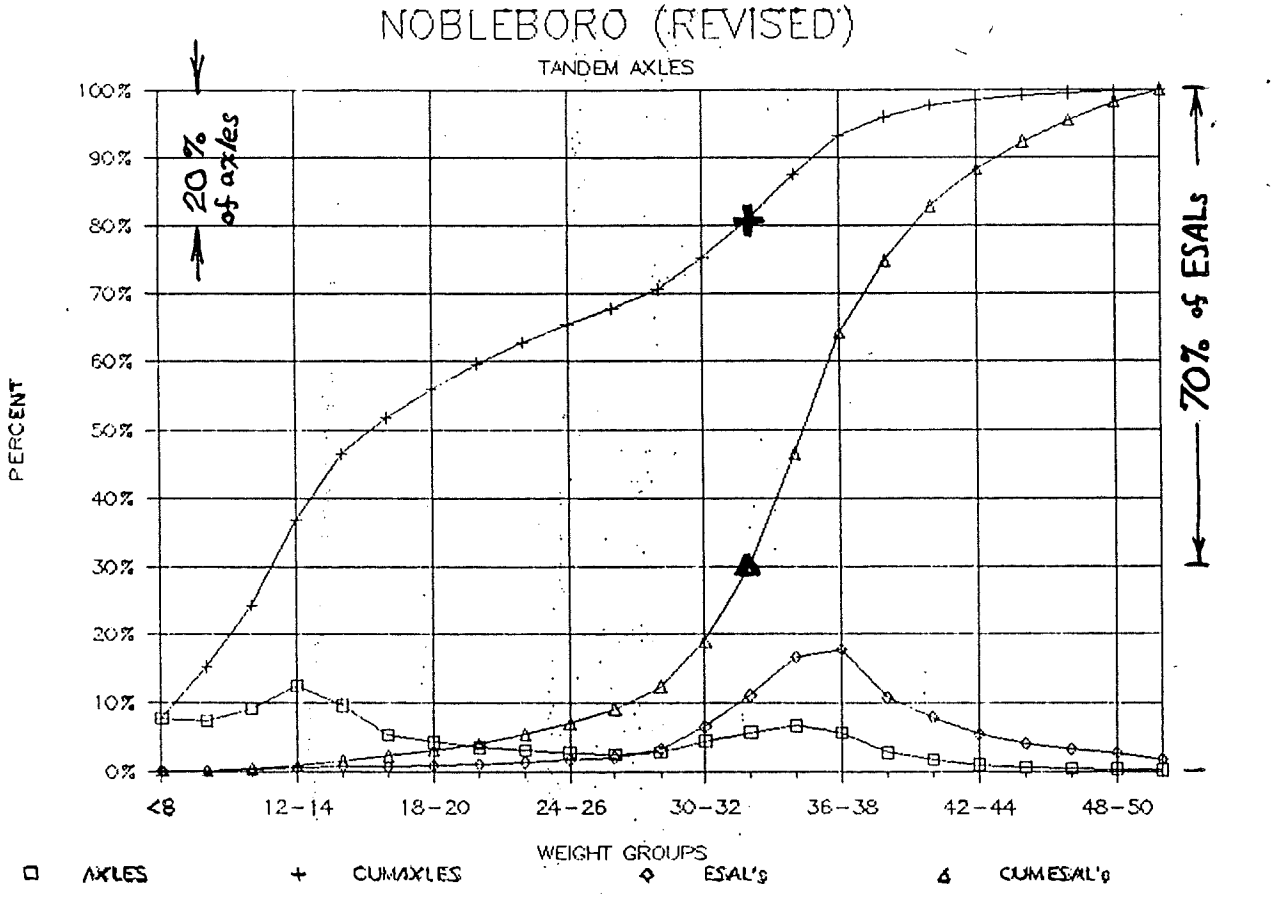
The impact of truck weight on highways may be analyzed further by separating the impact from legal loads from the impact due to overloads. The data from the Interstate Highway at Sidney, tabulated below, show that 68% of the ESALs come from legal truck axle loads, while 31% come from the overload alone from the trucks which are overloaded. Thus, 31% of the Truck ESAL's on that highway are Excess ESAL's. It would be reasonable to conclude that the life of this highway is being reduced by about 31% by the excess loads.

ESAL DATA FROM SIDNEY

Axle Type	Limit	No. of Axle Units	Total ESAL's	No. of Overwt Axles	Excess ESAL's	Excess ESAL's
Front	22	160,518	11,723	14	42	.4%
Single	22	67,857	18,971	1,712	2,514	13%
Tandem	34	212,411	139,289	30,458	50,488	36%
Tridem	48	3,345	2,213	678	828	37%
TOTAL		444,131	172,196	32,862	53,872	31%

In Nobleboro on US Route 1, 91% of the ESAL's come from legal truck axle loads, while 9% are Excess ESAL's. Figures from elsewhere are included in Table 3 of the Heavy Truck Study Report.

The following chart illustrates these points further: in Nobleboro, 70% of the ESAL's from tandem axles are contributed by the 20% of the axles above the road limit. Of course, those axles may legally carry a load which has an impact of a significant number of ESALs, but further analysis shows that only half the impact of these axles is due to the legal portion of the load. The other half is due to the overload.



X. Effect of Weight on Highway Life and Maintenance Costs

The 1988 Maine Department of Transportation Study of Fiscal Effects of the 100,000 pound General Commodity Vehicle estimated the increased pavement damage due to newly-authorized permits which would allow 6-axle vehicles to carry 100,000 pounds of general commodities. the study assumed that:

(1) 200 of the 5-axle, 80,000 pound vehicles move to 6-axle 100,000 pound general commodity operation; and

(2) 300 of the 6-axle, 90,000 pound vehicles move to 6-axle

100,000 pound general commodity operation. That study found increased Pavement Damage Factors (ESAL's) and corresponding annual maintenance cost increases on all State roads, as follows. The overlay cycle of these roads is reduced by the same percentages as the increase in ESALs.

EFFECT OF 100,000 POUND GENERAL COMMODITY PERMIT

Highway System	Percent Increase ESALs	Added Cost per year
Federal Aid Primary	1.64%	$200,000
Federal Aid Secondary	1.675%	$115,000
Federal Aid Urban	.725%	$ 24,000
State Aid & Misc.	1.78%	$ 82,000
AVG	1.62%	$421,000 TOTAL

The results of that DOT study may be generalized to estimate that, on average, a one percent increase in ESAL's on the roads results in a one percent decrease in highway life and a $260,000 increase in highway overlay costs, not including the Interstate system. As discussed above, the heavy truck study found at least a 9% increase in ESAL's due to overweight loads, statewide. This would mean a 9% decrease in highway life and an increase in annual highway overlay costs of $2.3 million plus any increase on the Interstate system.

Conclusions

There are 10 billion Vehicle Miles Travelled per year in Maine. About 8 percent of these are contributed by trucks. Typically, there is an estimated non-compliance with the weight limits by trucks of at least 5 percent, but this rises to 13 or even 20 percent at certain locations. And, numbers of vehicles does not tell the whole story: These overloads increase the highway impact of trucks by at least 9 percent over what it would otherwise be. The measure of these overloads can be called "excess ESALs". It appears that the highway impact of truck traffic is substantially increased by the fraction of trucks which are overweight. A rough estimate is that trucks contribute 99 percent or more of the ESAL impact on the highways while the remaining 1 percent is contributed by cars, pickups and panels. Of the truck impact, about 9 percent is contributed by "excess ESALs", but on the Interstate highway, I-95, this rises to 29 percent.

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September 26, 1988

TO: Heavy Truck Study Subcommittee

FROM: Herbert Perry, Research Assistant

SUBJ: Compliance and Enforcement Experience in Other States

INTRODUCTION

Most states possess insufficient data to determine the level of compliance with overweight truck laws in their states. Because of this, states must rely on whatever information does exist, most often the percentage of trucks cited out of those weighed. This figure underestimates the level of illegal activity. The Federal Highway Administration acknowledges the difficulty of monitoring compliance with weight laws:

> "The extent of overweight trucks is extremely difficult to quantify. Drivers of overweight trucks generally try to avoid having their vehicles weighed. Further, the labor-intensive process of weighing and the associated high costs of the staff and the necessary equipment limit the amount of data that states can collect. The small number of weigh stations in most States and the suspected avoidance of scales by overweight trucks undermine the collection of representative data on truck weights...Available information can neither substantiate nor refute the magnitude of a nationwide overweight truck problem." (Overweight Vehicles - Penalties and Permits, An Inventory of State Practices, FHWA Report, December, 1985)

To improve the monitoring of weight law compliance, the FHWA is promoting the use of weigh-in-motion (WIM) systems. These systems automatically measure the number of axles, the weight of each truck, the distance between axles and the speed of vehicles travelling at normal speeds. States can record the number and degree overweight of all trucks that pass by, and determine the degree of compliance with weight laws on roads

with WIMS installed. The data collected from these sites can be extrapolated to roads statewide to determine statewide compliance. In 1983, Wisconsin, using WIM equipment, found 25 percent of trucks in violation of weight laws, while less than 1 percent of the trucks weighed at their fixed scales were cited for violations.

WIM equipment can also be used in weight enforcement as a pre-screening device. All trucks approaching a weighing station pass over the WIM scale, but only those registering near or above the weight limit are signalled to stop for precise weighing at the scale of record. The remaing trucks continue on their way without delay.

PROFILE OF NATIONAL WEIGHING OPERATIONS

The above-mentioned FHWA report summarizes information on truck weight enforcement activities in the 50 states, the District of Columbia and Puerto Rico over the period from October 1985 through September 1986. It reflects information submitted by the states as required in their annual truck weight enforcement certification to the FHWA, and includes these findings:

--As shown in Table 1, the number of trucks weighed in 1986 was 115 million: an increase of 7 percent over 1985; 13 percent higher than the number in 1984; and 40 percent higher than the number in 1981. Twenty-four states conducted more than 1,000,000 weighings annually. The most active weighing programs in 1986 were: Virginia (10 million vehicles) Georgia (9 million vehicles); California, Mississippi, North Carolina, and Tennessee (8 million vehicles); and Louisiana and Ohio (7 million vehicles). Maine weighed 62,000, down 30% from 1981.

--As a comparison, the number of registered truck tractors in 1986 was 1,398,937. This is:

a 6 percent increase over the number registered in 1985;

a 12 percent increase over the number registered in 1984; and

an 11 percent increase over the number registered in 1981.

--As shown in Table 2, the number of citations issued by the States for overweight violations in 1986:

increased by one percent over 1985;

was one percent less than the number in 1984,;and

was 16 percent higher than the number in 1981. Note that the number of trucks weighed increased by 40 percent from 1981 to 1986 yet there was only a 16 percent increase in the overweight citations: thus the ratio of citations to number of trucks weighed is decreasing. One probable reason is increased scale avoidance by overweight trucks.

--Table 3 presents the number of trucks weighed in each state during 1986 broken down by the types of scales used. The predominant form of truck weighing used in the United States is fixed scale weighing. About 90 percent of the vehicle weighings occur on fixed platform scales, about 2 percent occur on semi-portable or portable equipment, and about 9 percent are on weigh-in-motion equipment alone.

--The types of citations issued by the States for overweight truck violations in 1986 are indicated in Table 4. The total of 364,000 axle violations represent a one percent increase over 1985, however, the gross weight violation total of 120,000 shows a nine percent increase. Federal bridge formula citations totalling 208,000 represent an eight percent increase over 1985.

Table 5 provides a State-by-State comparison of minimum fines for three selected overweight violations. There is a broad range of fines: from $20 to $1,000 for a 4,000 pound tandem axle violation, from $25 to $10,000 for a 10,000 pound gross violation and from $25 to $20,000 for a 20,000 pound gross violation.

Table 5 also describes the type of adjudication method used in each state. In 43 states, including Maine, the fine is applied judicially, while in 9 it is applied administratively. Generally speaking, the courts have discretion at least on the amount of the fine if judicially applied. Except for Rhode Island, the states which apply the fines administratively have no discretion. These include: CA, CO, DC, FL, GA, IL, LA, MI NC, ND, and SC.

Table 5A shows the ranking of states according to the severity of the penalty for operating 10,000 pounds over the interstate gross weight level of 80,000 pounds. The national average is $500. Maine ranks 41st, with a fine of $130.

Table 5B ranks states according to the severity of the penalty for operating 20,000 pounds overweight. The national average is $1,000. Maine ranks 42nd with a fine of $350.

Chart 1 graphically depicts Maine's relative position to the other states according to the information in Table 5B. It also shows Maine's climb in the rankings to 36th after

calculating a first offense fine of $525 for extreme overweight and to 32nd for a fine of $700 for a subsequent offense.

Table 5C ranks the ratio of the 20,000 lbs. fine to the 10,000 lbs. fine--a measure of the relative increase in fines from one level to another. The national average is 2.00. West Virginia has the highest ratio: 4.50; nine states share the lowest ratio: 1.00. Maine ranks 11th with a 2.69 ratio.

Table 6 describes the fines for the ten states which penalize repeat offenders. For these states, the fine for a 2nd offense is typically 50 - 100% higher than for a 1st offense, while the fine for a 3rd offense is higher still.

TRUCK WEIGHT ENFORCEMENT PROGRAMS IN CERTAIN STATES

A brief summary of the weight enforcement programs in six selected states follows in order to give a sample of the programs outside Maine. Of particular interest are the relevant evidence law in Minnesota and the use of civil suits for highway damage in Texas.

Connecticut

The Connecticut State Police are the primary enforcement agents, but the inspection squads also include Motor Vehicle Department inspectors and Department of Public Safety employees. In 1988, there are three separate squads comprising a total of 48 people.

The Connecticut program involves multiple operations. Besides examining a vehicle for compliance with size and weight limits, the squads check for proper registration, compliance with economic regulatory requirements, compliance with highway use tax laws, and observance of special permit requirements. Trucks are also checked for compliance with state and federal safety requirements. Trucks are almost never only weighed.

Connecticut now has only two functional fixed scale facilities. The state police operate four sets of semi-portable scales which can be transported to weighing locations on special trailers. Each of the three truck squads has a complete set of 14 portable wheel scales. Each scale is transported in a van assigned to each squad.

Enforcement weighings have been decreasing even as commercial traffic has grown significantly, particularly on I-95. Partly because of the reliance upon portable scales, Connecticut's program depends upon selective enforcement techniques which include identification and inspection of the most likely violators but consequently less frequent "mass weighings."

The Department of Transportation uses a portable weigh-in-motion system acquired in 1986 to collect vehicle information for planning, analytical and design purposes, but not for weight enforcement.

The state police truck squads normally operate on weekdays during daylight and evening hours on an alternating basis; around one-third of the squads' work is scheduled at night. Random weighing operations are scheduled during weekend periods as necessary. In 1986 112,000 trucks were checked for overweight violations. Of these, 5,206, 5 percent, were cited.

Connecticut officials believe that some of the most seriously overweight trucks come from New York, Massachusetts, and Rhode Island which allow higher gross weights.

Connecticut has a "mandatory" fine system but judges often do not impose the full fine. Connecticut is now exploring a fine system that penalizes both the driver and the shipper.

Indiana

Indiana is rebuilding three permanent scale sites and adding another. They also use portable scales. Enforcement personnel come from the state police. They are given three weeks of classroom instruction and serve a one-year apprenticeship. The mobile units operate mostly during the day, but the permanent stations are open on a 24-hour basis and are staffed by Department of Transportation teams performing safety inspections and regulatory compliance checks. In 1986, Indiana reported almost 980,000 weighings. Less than one percent--6900 trucks--were cited.

Indiana does not use WIM scales to monitor compliance with truck weight laws. The State Police does not claim to know with any certainty what the level of compliance is to weight limits of axles and gross weight in their state. They believe that most offenders caught at fixed scales either did not know the law or did not understand it. Those seriously overweight probably attempt to bypass fixed scales.

Minnesota

The Department of Public Safety is responsible for weight enforcement in Minnesota. It operates nine permanent scale locations and 11 portable scale teams.

Minnesota's newest permanent scale site is located near the Wisconsin border on I 94, an east-west freeway. The site is operated 24 hours a day, seven days a week. At this site WIM scales screen trucks driving at thirty miles per hour. Those exceeding weight limits are directed by computer-controlled

signals to one of the permanent scales. The WIM site also measures the height and weight of all trucks. Those trucks screened within acceptable limits are signalled to a lane that directs them back to the highway. In addition, television cameras record the license plate numbers of all trucks which turn off onto an off-ramp that is located up the road from the permanent scale site. Often, portable scales are used at this and other bypass routes. Minnesota weighed 457,000 trucks in 1986. Of these, 5,000, or 11 percent, were cited.

Violation of Minnesota's vehicle weight laws as determined by actual weighings is a misdemeanor (a criminal offense). When a misdemeanor ticket is issued for an overweight violation, it is the driver who is charged, but responsibility can be attributed to the driver's employer, usually in a countersuit by the driver. The shipper is not charged. Because this is a criminal offense, the defendant is entitled to a trial where guilt must be established beyond a reasonable doubt.

Relevant Evidence Law

Since 1980, Minnesota law permits the inspection of shipping records in order to find and then fine those violating weight laws. This so-called Relevant Evidence Law provides that bills of lading, weight tickets, volume documents and other records that reveal (directly or indirectly) a vehicle's weight can be used as evidence in establishing that a weight violation has taken place. A violation established in this manner is a civil violation, and the driver, the shipper, the owner and the lessee can each be assessed all or part of the fine depending on the involvement of each in causing the overweight movement. Contrary to criminal overweight enforcement , this recognizes that there are times when the driver is not responsible for the truck being overweight and the party who is responsible for the truck being overweight is fined. Because this is a civil offense, if there is a preponderance of evidence (more evidence supporting than refuting the claim) demonstrating that an overweight vehicle movement did occur, then the violation is proven.

Minnesota has determined that being held liable for both criminal fines and civil penalties for the same illegal movement is not double jeopardy: a criminal fine has the violator pay for the wrong that has been done. A civil penalty is assessed to make the plaintiff whole. Thus, the criminal fine is the punishment and deterrent, and the civil penalty is reimbursement for the cost of the damage the overweight vehicle has done.

Minnesota reports improved compliance since the imposition of the relevant evidence law. Enforcement officers feel that the number of seriously overweight vehicles on Minnesota's trunk highway system has been reduced noticeably. Furthermore, North Dakota enforcers have noted a reduction in the weights of

trucks travelling into Minnesota and have expressed appreciation for the resulting reduction in highway stress and, industry representatives have confided that there is improved compliance with weight laws reported.

New Hampshire

At present New Hampshire does not have any permanent weighing facilities. All truck weighing is done with about 100 sets of portable scales and three sets of semi-portable scales. New Hampshire does not use Weigh-In-Motion scales. Weight enforcement is under the authority of the Division of Enforcement. Its 44 officers have full police powers. New Hampshire weighed 32,000 trucks in FY 1986. Of these, 1,700, or 5 percent, were cited.

New Hampshire recently passed a new law permitting certification of divisible loads up to 99,000 pounds with a 5% tolerance. Department of Transportation officials believe that this law is worsening the condition of New Hampshire's non-interstate roads and bridges--roads already inferior in quality to the state's interstate roads.

Texas

"Texas Scheme"

Texas has developed a unique method to fine and deter repeat offenders with numerous offenses. The Attorney General's Office is not given direct responsibility for enforcement of the load-limit statutes. However, the Highway Division of the Attorney General's Office does receive and investigate complaints concerning the use of public highways and has the authority under the Tort Claim Act to file damage suits against violators of weight statutes. In addition, the Highway Division represents the State Department of Highways and Public Transportation in cases to recover damages to the state's highways. Suits against 20 trucking companies and four shippers have been filed, each seeking $1 million in actual damages to the highways and $50,000 per company in punitive damages.

Initially, the Attorney General's Office had difficulty providing evidence of specific damage by violators. However, a creative application of an earlier Texas Supreme Court decision, Landers v. East Texas Salt Water Disposal, allows the Attorney General to show damages by overweight violators to the highway system, instead of specific damages for each individual violator. This combined with use of injunctions has been somewhat effective in reducing violations by flagrant offenders.

In 1986 Texas weighed 217,000 trucks and cited 19,000 of them--9 percent--for overweight violations.

Vermont

The Department of Public Safety and the Department of Motor Vehicles each have responsibility for enforcing weight law violations. Seven Department of Motor Vehicle inspectors operate the state's three permanent weighing facilities, eight portable units and one semi-portable unit. The State Police have six sets of portable scales which are used primarily during routine patrol. Thirty-four commercial scales located throughout the state are also available for use by the State Police.

In November, 1987 the State Police began implementing a new program to increase the emphasis its officers placed on weight enforcement. A three officer unit was formed which could respond to a request from an officer in the field for assistance in weighing a suspect truck and in checking for other violations. While these three officers hold administrative responsibilities, they are still free to respond at any time to a call for assistance. The assistance team's mobility, expertise, and readiness to assist in weight enforcement has influenced field officers to be more aware of weight and other violations. Before, field officers usually concentrated only on speed limit violations.

This "assistance team" also has had an effect on at least the traffic patterns of overweight trucks. Previously, weight enforcement by the State Police usually occurred during weekday hours from Monday through Friday. Overweight trucks operated at night and bypassed permanent scales sites. Now, the assistance team operates at night and at known routes travelled by overweight trucks, causing them to change their routes, though not completely stopping them from operating overweight.

The most serious and numerous offenders on Vermont roads are logging trucks and milk tankers--though Vermont does issue special certificates to such trucks for hauling unprocessed, nondivisible loads up to 90,000 pounds. Vermont weighed 17,000 trucks in FY 1986. Of these, 900, or 5 percent, were cited.

The State Police attempt to fine the truck itself rather than the driver--except in the case of repeated violations by one driver. Fines are "mandatory" and progressive according to weight, but judges do not generally impose maximum fines.

LIST OF TABLES

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Table 1

Number of Vehicles Weighed and Change (in Percent) from Previous Years

State	Fiscal Year 81	Fiscal Year 84	Fiscal Year 85	Fiscal Year 86	Change (%) from FY 81 to FY 86	Change (%) from FY 84 to FY 86	Change (%) from FY 85 to FY 86
Alabama	43,559	51,550	35,216	80,232	84.2	55.6	127.8
Alaska	84,287	152,286	146,476	100,534	19.3	-34.0	-31.4
Arizona	1,100,405	1,414,707	1,683,995	1,904,470	73.1	34.6	13.1
Arkansas	3,776,146	5,392,789	7,047,917	6,641,179	75.9	23.1	-5.8
California	4,568,247	6,466,861	6,697,153	8,347,876	82.7	29.1	24.6
Colorado	1,905,287	2,580,135	2,848,893	2,757,351	44.7	6.9	-3.2
Connecticut	115,543	293,568	104,010	112,010	-3.1	-61.8	7.7
Delaware	56,250	177,794	220,028	212,124	277.1	19.3	-3.6
D. of Columbia	2,366	1,517	2,059	1,781	-24.7	17.4	-13.5
Florida	3,064,422	2,998,058	3,338,409	3,425,193	11.8	14.2	2.6
Georgia	2,524,968	6,467,704	7,745,653	8,972,026	255.3	38.7	15.8
Hawaii	34,696	34,761	35,743	35,215	1.5	1.3	-1.5
Idaho	1,153,495	1,077,932	882,754	794,894	-31.1	-26.3	-10.0
Illinois	6,510,460	5,589,371	5,320,804	5,083,389	-21.9	-9.1	-4.5
Indiana	1,402,084	1,483,314	956,682	979,050	-30.2	-34.0	2.3
Iowa	711,586	554,086	536,177	766,010	7.6	38.2	42.9
Kansas	743,147	836,991	746,314	860,924	15.8	2.9	15.4
Kentucky	635,673	817,573	1,059,239	1,298,751	104.3	58.9	22.6
Louisiana	5,720,831	7,441,172	7,693,910	7,389,830	29.2	-0.7	-4.0
Maine	88,812	84,148	73,441	62,336	-29.8	-25.9	-15.1
Maryland	273,437	401,549	442,740	1,250,550	357.3	211.4	182.5
Massachusetts	20,270	33,029	24,549	19,564	-3.5	-40.8	-20.3
Michigan	1,817,561	2,303,088	2,226,147	2,402,100	32.2	4.3	7.9
Minnesota	411,971	535,048	519,752	457,127	11.0	-14.6	-12.0
Mississippi	6,891,898	5,189,137	6,948,029	8,136,050	18.1	56.8	17.1
Missouri	2,726,661	2,781,994	2,829,175	2,766,834	1.5	-0.5	-2.2
Montana	498,732	682,926	631,237	560,062	12.3	-18.0	-11.3
Nebraska	1,263,349	1,300,895	1,349,788	1,312,231	3.9	0.9	-2.8
Nevada	31,776	37,173	38,848	61,773	94.4	66.2	59.0
New Hampshire	27,262	16,737	45,118	31,997	17.4	91.2	-29.1
New Jersey	119,795	398,683	451,600	451,518	276.9	13.3	0.0
New Mexico	3,325,906	3,255,175	3,162,949	3,482,071	4.7	7.0	10.1
New York	175,000	189,066	212,062	261,495	49.4	38.3	23.3
North Carolina	4,553,846	6,455,302	6,788,980	8,032,210	76.4	24.4	18.3
North Dakota	780,593	787,180	787,362	788,396	1.0	0.2	0.1
Ohio	4,675,193	7,843,935	7,124,244	7,217,400	54.4	-8.0	1.3
Oklahoma	537,286	1,846,978	1,455,924	1,672,492	211.3	-9.4	14.9
Oregon	1,755,313	1,538,071	1,819,393	1,918,029	9.3	24.7	5.4
Pennsylvania	216,210	394,116	387,163	442,400	104.6	12.3	14.3
Puerto Rico	5,022	7,019	5,973	5,636	12.2	-19.7	-5.6
Rhode Island	3,224	3,944	1,336	3,604	11.8	-8.6	169.8
South Carolina	281,514	390,349	329,663	346,218	23.0	-11.3	5.0
South Dakota	97,833	417,397	507,181	503,107	414.3	20.5	-0.8
Tennessee	5,222,100	6,896,971	7,952,219	7,991,005	53.0	15.9	0.5
Texas	197,474	215,931	211,812	217,297	10.0	0.6	2.6
Utah	1,245,806	1,451,652	1,427,122	1,446,237	16.1	-0.4	1.3
Vermont	26,108	14,485	15,627	16,935	-35.1	16.9	8.4
Virginia	6,979,330	9,079,585	9,400,632	9,932,733	42.3	9.4	5.7
Washington	1,828,055	1,095,594	1,271,603	1,302,715	-28.7	18.9	2.4
West Virginia	312,852	460,885	452,634	433,342	38.5	-6.0	-4.3
Wisconsin	1,608,442	1,369,025	1,269,997	1,300,013	-19.2	-5.0	2.4
Wyoming	53,618	629,764	569,270	509,630	850.5	-19.1	-10.5
Total	82,205,701	101,939,000	107,835,002	115,097,946			

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., 1988.

Table 2

Number of Citations Issued and Change (in Percent) from Previous Years

State	Fiscal Year 81	Fiscal Year 84	Fiscal Year 85	Fiscal Year 86	Change (%) from FY 81 to FY 86	Change (%) from FY 84 to FY 86	Change (%) from FY 85 to FY 86
Alabama	4,842	4,017	4,312	5,426	12.1	35.1	25.8
Alaska	1,634	1,156	1,566	554	-66.1	-52.1	-64.6
Arizona	2,604	808	1,777	1,374	-47.2	70.0	-22.7
Arkansas	9,836	4,868	14,028	17,271	75.6	254.8	23.1
California	54,225	77,598	67,407	72,657	34.0	-6.4	7.8
Colorado	3,937	9,135	9,032	8,910	126.3	-2.5	-1.4
Connecticut	2,239	5,966	4,986	5,206	132.5	-12.7	4.4
Delaware	1,097	1,100	845	272	-75.2	-75.3	-67.8
D. of Columbia	1,638	1,157	2,952	3,029	84.9	161.8	2.6
Florida	14,641	31,585	31,715	34,692	137.0	9.8	9.4
Georgia	19,107	63,451	82,753	85,649	348.3	35.0	3.5
Hawaii	515	423	498	415	-19.4	-1.9	-16.7
Idaho	7,392	7,513	5,189	4,231	-42.8	-43.7	-18.5
Illinois	21,220	15,025	16,251	13,405	-36.8	-10.8	-17.5
Indiana	11,218	13,991	9,881	6,897	-38.5	-50.7	-30.2
Iowa	16,280	19,686	17,005	13,441	-17.4	-31.7	-21.0
Kansas	7,704	3,473	2,965	3,622	-53.0	4.3	22.2
Kentucky	6,412	4,676	2,710	9,617	50.0	105.7	254.9
Louisiana	16,227	32,610	28,057	26,736	64.8	-18.0	-4.7
Maine	3,060	2,510	1,884	2,031	-33.6	-19.1	7.8
Maryland	5,263	8,990	11,416	19,141	263.7	112.9	67.7
Massachusetts	2,308	4,136	3,910	5,646	144.6	36.5	44.4
Michigan	4,189	6,836	5,252	4,269	1.9	-37.6	-18.7
Minnesota	5,942	5,189	4,339	5,050	-15.0	-2.7	16.4
Mississippi	33,907	5,197	6,584	8,539	-74.8	64.3	29.7
Missouri	20,581	13,550	15,587	15,905	-22.7	17.4	2.0
Montana	8,338	5,382	4,585	4,707	-43.5	-12.5	2.7
Nebraska	16,098	31,893	15,787	14,735	-8.5	-53.8	-6.7
Nevada	1,160	811	964	875	-24.6	7.9	-9.2
New Hampshire	1,221	1,363	1,905	1,696	38.9	24.4	-11.0
New Jersey	9,516	17,236	16,531	13,400	40.8	-22.3	-18.9
New Mexico	4,558	3,819	8,272	5,324	16.8	39.4	-35.6
New York	17,322	16,451	19,873	13,003	-24.9	-21.0	-34.6
North Carolina	20,609	33,803	28,513	30,995	50.4	-8.3	8.7
North Dakota	2,105	2,213	1,917	2,625	24.7	18.6	36.9
Ohio	12,811	20,086	17,196	22,434	75.1	11.7	30.5
Oklahoma	12,838	4,243	2,899	3,365	-73.8	-20.7	16.1
Oregon	53,162	29,889	30,786	29,685	-44.2	-0.7	-3.6
Pennsylvania	3,200	5,568	5,195	5,128	60.3	-7.9	-1.3
Puerto Rico	326	208	179	78	-76.1	-62.5	-56.4
Rhode Island	127	260	87	205	61.4	-21.2	135.6
South Carolina	7,105	11,909	10,162	10,035	41.2	-15.7	-1.2
South Dakota	2,133	3,056	3,563	3,332	56.2	9.0	-6.5
Tennessee	36,074	17,811	20,975	19,500	-45.9	9.5	-7.0
Texas	40,536	37,684	30,955	19,219	-52.6	-49.0	-37.9
Utah	5,122	5,318	5,975	7,883	53.9	48.2	31.9
Vermont	222	1,198	1,086	891	301.4	-25.6	-18.0
Virginia	21,431	55,413	58,726	61,106	185.1	10.3	4.1
Washington	10,192	8,255	10,411	11,811	15.9	43.1	13.4
West Virginia	1,979	2,244	2,087	1,625	-17.9	-27.6	-22.1
Wisconsin	10,084	12,317	10,540	11,331	12.4	-8.0	7.5
Wyoming	1,361	1,310	1,963	1,755	28.9	34.0	-10.6
Total	577,648	674,386	664,033	670,728			

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 3

Number of Vehicles Weighed by Scale Type for Fiscal Year 1986

State	Fixed	Semi-port	Portable	WIM(1)	Total
Alabama	0	0	31,641	48,591	80,232
Alaska	100,115	0	419	0	100,534
Arizona	1,891,293	13,093	84	0	1,904,470
Arkansas	4,468,596	0	22,304	2,150,279	6,641,179
California	8,301,200	0	46,676	0	8,347,876
Colorado	2,697,405	59,946	0	0	2,757,351
Connecticut	84,533	0	27,477	0	112,010
Delaware	211,594	0	530	0	212,124
D. of Columbia	188	0	1,593	0	1,781
Florida	3,394,946	0	30,247	0	3,425,193
Georgia	2,880,555	181,081	145,225	5,765,165	8,972,026
Hawaii	19,125	16,090	0	0	35,215
Idaho	784,033	8,704	2,157	0	794,894
Illinois	5,013,942	69,447	0	0	5,083,389
Indiana	927,210	0	51,840	0	979,050
Iowa	722,528	2,689	8,586	0	766,010(2)
Kansas	791,862	30,526	38,536	0	860,924
Kentucky	1,279,094	0	19,657	0	1,298,751
Louisiana	7,361,439	0	28,391	0	7,389,830
Maine	0	52,469	9,867	0	62,336
Maryland	599,171	27,467	11,783	612,129	1,250,550
Massachusetts	77	0	19,487	0(3)	19,564
Michigan	2,399,139	0	2,961	0	2,402,100
Minnesota	446,827	0	10,300	0	457,127
Mississippi	8,071,638	5,482	58,930	0	8,136,050
Missouri	2,681,152	0	85,682	0	2,766,834
Montana	541,872	11,977	6,213	0	560,062
Nebraska	1,287,524	428	24,279	0	1,312,231
Nevada	1,159	37,782	10,821	12,011	61,773
New Hampshire	27,981	779	3,237	0	31,997
New Jersey	428,606	0	22,912	0	451,518
New Mexico	3,477,100	3,480	1,491	0	3,482,071
New York	0	217,532	43,963	0	261,495
North Carolina	7,896,733	0	135,477	0	8,032,210
North Dakota	779,897	0	8,499	0	788,396
Ohio	7,711,341	0	6,059	0	7,217,400
Oklahoma	170,901	0	78,500	0	1,672,492(4)
Oregon	1,717,623	11,267	16,676	172,463	1,918,029
Pennsylvania	45,418	0	13,856	383,126	442,400
Puerto Rico	0	5,086	550	0	5,636
Rhode Island	0	0	0	0	3,604(5)
South Carolina	325,919	0	20,299	0	346,218
South Dakota	406,306	96,801	0	0	503,107
Tennessee	7,971,117	94	19,794	0	7,991,005
Texas	91,561	70,377	55,359	0	217,297
Utah	1,170,829	0	7,370	268,038	1,446,237
Vermont	11,115	0	5,820	0	16,935
Virginia	9,304,077	0	11,926	616,730	9,932,733
Washington	1,274,569	0	28,146(6)	0	1,302,715
West Virginia	50,300	298,220	81,115	3,707	433,342
Wisconsin	1,293,643	0	6,370	0	1,300,013
Wyoming	190,518	16,489	0	302,623	509,630
Total	100,803,771	1,237,306	1,263,105	10,334,862	115,0979,946

Footnotes:

(1) Number includes only those vehicles weighed solely on WIM scales and not subsequently weighed on static scales.
(2) Total includes 32,207 vehicles weighed on public fixed scales or on patrol operations.
(3) Number of vehicles weighed on WIM scales is unknown.
(4) Total includes 1,423,091 vehicles weighed by the Tax Commission and not broken down by type of scale.
(5) Total includes 3,604 vehicles weighed on semi-portable or portable scales, but not stratified by the state.
(6) Total includes 28,146 vehicles weighed on semi-portable or portable scales, but not stratified by the state.

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 4

Number of Weighing Violations for Fiscal Year 1986

State	Axle Weight	Gross Weight	Bridge Formula	Total
Alabama	1,090	2,465	1,871	5,426
Alaska	450	104	0	554
Arizona	277	1,097	0	1,374
Arkansas	2,706	7,356	7,209	17,271
California	57,270	9,334	6,053	72,657
Colorado	5,413	2,941	556	8,910
Connecticut	2,250	2,573	383	5,206
Delaware	0	0	0	272(1)
D. of Columbia	209	1,410	1,410	3,029
Florida	8,143	4,334	21,930	34,692(2)
Georgia	9,140	11,259	65,250	85,649
Hawaii	289	122	4	415
Idaho	2,049	1,678	504	4,231
Illinois	10,200	1,854	1,351	13,405
Indiana	4,780	1,217	900	6,897
Iowa	10,820	987	1,634	13,441
Kansas	2,969	253	400	3,622
Kentucky	3,961	3,109	2,547	9,617
Louisiana	18,922	7,814	0	26,736
Maine	1,680	152	199	2,031
Maryland	14,512	1,162	3,467(3)	19,141
Massachusetts	2,250	2,279	1,117	5,646
Michigan	4,269	0	0	4,269
Minnesota	2,347	676	2,027	5,050
Mississippi	5,638	2,869	32	8,539
Missouri	14,203	976	726	15,905
Montana	2,653	2,054	0	4,707(4)
Nebraska	12,120	735	1,880	14,735
Nevada	527	70	278	875
New Hampshire	172	908	616	1,696
New Jersey	10,873	1,686	841	13,400
New Mexico	4,896	0	428	5,324
New York	9,024	1,858	2,121	13,003
North Carolina	10,965	13,329	6,701	30,995
North Dakota	1,365	0	1,260	2,625
Ohio	0	0	0	22,434(5)
Oklahoma	2,150	290	925	3,365
Oregon	18,201	2,757	8,727	29,685
Pennsylvania	1,641	1,436	2,051	5,128
Puerto Rico	0	78	0	78
Rhode Island	27	178	0	205
South Carolina	3,138	5,453	1,444	10,035
South Dakota	2,981	73	278	3,332
Tennessee	16,943	1,666	891	19,500
Texas	13,079	3,611	2,529	19,219
Utah	7,279	440	164	7,883
Vermont	122	658	111	891
Virginia	50,319	10,787	0	61,106(6)
Washington	8,101	2,384	1,326	11,811
West Virginia	127	255	1,243	1,625
Wisconsin	753	10,578(7)	0	11,331
Wyoming	807	229	719	1,755
Total	364,100	129,534	152,469(8)	670,728
1985 Totals	365,972	118,424	190,840	714,032
1984 Totals	334,759	131,690	164,211	674,211

Footnotes

(1) Total represents all weight violations (not broken out by type).
(2) Total includes 285 violations of overweight permits.
(3) Includes bridge formula and other violations.
(4) 1,263 of total violations are bridge formula violations.
(5) Total represents axle and gross weight violations (not broken out by type).
(6) 51,623 of total violations are bridge formula violations.
(7) No breakdown of group axle and gross weight violations.
(8) Does not include Montana's and Virginia's 52,886 bridge formula violations. Actual total for bridge formula violations is 206,989.

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 5

COMPARISON OF FINES AND ADJUDICATION METHODS

MINIMUM OVERWEIGHT FINES FOR SELECTED VIOLATIONS (IN DOLLARS) (1)

STATE	TANDEM AXLE GROUP 4,000 LBS. OVERWEIGHT	GROSS LOAD 10,000 LBS. OVERWEIGHT	GROSS LOAD 20,000 LBS. OVERWEIGHT	RATIO OF FINES: 20,000 LBS. TO 10,000 LBS.	ADJUDICATION METHODS (2)
ALABAMA	100	100	100	1.00	JD
ALASKA	200	500	1,000	2.00	J
ARIZONA	700	1,000	1,000	1.00	J
ARKANSAS	300	600	1,100	1.83	JD
CALIFORNIA	125	1,500	4,000	2.67	A
COLORADO	25	615	1,835	2.98	A
CONNECTICUT	100	100	300	3.00	JD
DELAWARE	90	350	850	2.43	JD
D OF COLUMBIA	100	400	1,000	2.50	A
FLORIDA	160	500	1,000	2.00	A
GEORGIA	68	318	818	2.57	A
HAWAII	25	25	25	1.00	JD
IDAHO	30	100	125	1.25	JD
ILLINOIS	320	1,500	3,000	2.00	A
INDIANA	250	500	1,000	2.00	JD
IOWA	200	1,200	2,200	1.83	J
KANSAS	120	1,000	2,000	2.00	JD
KENTUCKY	200	500	500	1.00	J
LOUISIANA	60	400	1,100	2.75	A
****MAINE****	65	130	350	2.69	J
MARYLAND	200	500	500	1.00	J
MASSACHUSETTS	120	300	1,200	4.00	J
MICHIGAN	240	1,000	2,000	2.00	JD
MINNESOTA	210	1,210	3,210	2.65	JD
MISSISSIPPI	50	125	250	2.00	A
MISSOURI	335	935	1,935	2.07	J
MONTANA	30	30	30	1.00	JD
NEBRASKA	150	200	600	3.00	JD
NEVADA	80	600	1,600	2.67	J
NEW HAMPSHIRE	150	200	600	3.00	JD
NEW JERSEY	900	1,500	2,500	1.67	J
NEW MEXICO	40	425	500	1.18	JD
NEW YORK	350	700	1,700	2.43	JD
NORTH CAROLINA	400	1,000	2,000	2.00	A
NORTH DAKOTA	160	1,000	2,000	2.00	J
OHIO	65	225	625	2.78	JD
OKLAHOMA	180	480	500	1.04	JD
OREGON	80	700	1,400	2.00	JD
PENNSYLVANIA	500	2,250	5,250	2.33	J
PUERTO RICO	25	25	25	1.00	J
RHODE ISLAND	600	10,000	15,675	1.57	AD
SOUTH CAROLINA	40	125	520	4.16	A
SOUTH DAKOTA	400	2,500	5,000	2.00	JD
TENNESSEE	25	25	25	1.00	JD
TEXAS	100	100	100	1.00	JD
UTAH	90	150	250	1.67	JD
VERMONT	20	100	400	4.00	JD
VIRGINIA	180	600	1,100	1.83	J
WASHINGTON	170	350	650	1.86	J
WEST VIRGINIA	25	160	720	4.50	JD
WISCONSIN	170	750	1,450	1.93	J
WYOMING	25	500	1,000	2.00	JD
MEDIAN VALUE	138	500	1,000	2.00	

FOOTNOTES

(1) Minimum dollar amounts for first offense; court costs are additional.

(2) Method of application:

JD: Judicial, total court discretion

J: Judicial (mandatory), court discretion limited to fine amount

AD: Administrative, operating agency discretion

A: Administrative (mandatory), no discretion - statutory control

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 5a

COMPARISON OF FINES AND ADJUDICATION METHODS
(SORTED BY GROSS LOAD 10,000 LBS. OVERWEIGHT)

MINIMUM OVERWEIGHT FINES FOR SELECTED VIOLATIONS (IN DOLLARS) (1)

STATE	TANDEM AXLE GROUP 4,000 LBS. OVERWEIGHT	GROSS LOAD 10,000 LBS. OVERWEIGHT	GROSS LOAD 20,000 LBS. OVERWEIGHT	RATIO OF FINES: 20,000 LBS. TO 10,000 LBS.	ADJUDICATION METHODS (2)
RHODE ISLAND	600	10,000	15,675	1.57	AD
SOUTH DAKOTA	400	2,500	5,000	2.00	JD
PENNSYLVANIA	500	2,250	5,250	2.33	J
CALIFORNIA	125	1,500	4,000	2.67	A
ILLINOIS	320	1,500	3,000	2.00	A
NEW JERSEY	900	1,500	2,500	1.67	J
MINNESOTA	210	1,210	3,210	2.65	JD
IOWA	200	1,200	2,200	1.83	J
ARIZONA	700	1,000	1,000	1.00	J
KANSAS	120	1,000	2,000	2.00	JD
MICHIGAN	240	1,000	2,000	2.00	JD
NORTH CAROLINA	400	1,000	2,000	2.00	A
NORTH DAKOTA	160	1,000	2,000	2.00	J
MISSOURI	335	935	1,935	2.07	J
WISCONSIN	170	750	1,450	1.93	J
NEW YORK	350	700	1,700	2.43	JD
OREGON	80	700	1,400	2.00	JD
COLORADO	25	615	1,835	2.98	A
ARKANSAS	300	600	1,100	1.83	JD
NEVADA	80	600	1,600	2.67	J
VIRGINIA	180	600	1,100	1.83	J
ALASKA	200	500	1,000	2.00	J
FLORIDA	160	500	1,000	2.00	A
INDIANA	250	500	1,000	2.00	JD
KENTUCKY	200	500	500	1.00	J
MARYLAND	200	500	500	1.00	J
WYOMING	25	500	1,000	2.00	JD
OKLAHOMA	180	480	500	1.04	JD
NEW MEXICO	40	425	500	1.18	JD
D OF COLUMBIA	100	400	1,000	2.50	A
LOUISIANA	60	400	1,100	2.75	A
DELAWARE	80	350	850	2.43	JD
WASHINGTON	170	350	650	1.86	J
GEORGIA	68	318	818	2.57	A
MASSACHUSETTS	120	300	1,200	4.00	J
OHIO	65	225	625	2.78	JD
NEBRASKA	150	200	600	3.00	JD
NEW HAMPSHIRE	150	200	600	3.00	JD
WEST VIRGINIA	25	160	720	4.50	JD
UTAH	90	150	250	1.67	JD
****MAINE****	65	130	350	2.69	J
MISSISSIPPI	50	125	250	2.00	A
SOUTH CAROLINA	40	125	520	4.16	A
ALABAMA	100	100	100	1.00	JD
CONNECTICUT	100	100	300	3.00	JD
IDAHO	30	100	125	1.25	JD
TEXAS	100	100	100	1.00	JD
VERMONT	20	100	400	4.00	JD
MONTANA	30	30	30	1.00	JD
HAWAII	25	25	25	1.00	JD
PUERTO RICO	25	25	25	1.00	J
TENNESSEE	25	25	25	1.00	JD
MEDIAN VALUE	138	500	1,000	2.00	

FOOTNOTES

(1) Minimum dollar amounts for first offense; court costs are additional.

(2) Method of application:

- JD: Judicial, total court discretion
- J: Judicial (mandatory), court discretion limited to fine amount
- AD: Administrative, operating agency discretion
- A: Administrative (mandatory), no discretion - statutory control

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 5b

COMPARISON OF FINES AND ADJUDICATION METHODS
(SORTED BY GROSS LOAD 20,000 LBS. OVERWEIGHT)

MINIMUM OVERWEIGHT FINES FOR SELECTED VIOLATIONS (IN DOLLARS) (1)

STATE	TANDEM AXLE GROUP 4,000 LBS. OVERWEIGHT	GROSS LOAD 10,000 LBS. OVERWEIGHT	GROSS LOAD 20,000 LBS. OVERWEIGHT	RATIO OF FINES: 20,000 LBS. TO 10,000 LBS.	ADJUDICATION METHODS (2)
RHODE ISLAND	600	10,000	15,675	1.57	AD
PENNSYLVANIA	500	2,250	5,250	2.33	J
SOUTH DAKOTA	400	2,500	5,000	2.00	JD
CALIFORNIA	125	1,500	4,000	2.67	A
MINNESOTA	210	1,210	3,210	2.65	JD
ILLINOIS	320	1,500	3,000	2.00	A
NEW JERSEY	900	1,500	2,500	1.67	J
IOWA	200	1,200	2,200	1.83	J
KANSAS	120	1,000	2,000	2.00	JD
MICHIGAN	240	1,000	2,000	2.00	JD
NORTH CAROLINA	400	1,000	2,000	2.00	A
NORTH DAKOTA	160	1,000	2,000	2.00	J
MISSOURI	335	935	1,935	2.07	J
COLORADO	25	615	1,835	2.98	A
NEW YORK	350	700	1,700	2.43	JD
NEVADA	80	600	1,600	2.67	J
WISCONSIN	170	750	1,450	1.93	J
OREGON	80	700	1,400	2.00	JD
MASSACHUSETTS	120	300	1,200	4.00	J
ARKANSAS	300	600	1,100	1.83	JD
LOUISIANA	60	400	1,100	2.75	A
VIRGINIA	180	600	1,100	1.83	J
ALASKA	200	500	1,000	2.00	J
ARIZONA	700	1,000	1,000	1.00	J
D OF COLUMBIA	100	400	1,000	2.50	A
FLORIDA	160	500	1,000	2.00	A
INDIANA	250	500	1,000	2.00	JD
WYOMING	25	500	1,000	2.00	JD
DELAWARE	80	350	850	2.43	JD
GEORGIA	68	318	818	2.57	A
WEST VIRGINIA	25	160	720	4.50	JD
WASHINGTON	170	350	650	1.86	J
OHIO	65	225	625	2.78	JD
NEBRASKA	150	200	600	3.00	JD
NEW HAMPSHIRE	150	200	600	3.00	JD
SOUTH CAROLINA	40	125	520	4.16	A
KENTUCKY	200	500	500	1.00	J
MARYLAND	200	500	500	1.00	J
NEW MEXICO	40	425	500	1.18	JD
OKLAHOMA	180	480	500	1.04	JD
VERMONT	20	100	400	4.00	JD
****MAINE****	65	130	350	2.69	J
CONNECTICUT	100	100	300	3.00	JD
MISSISSIPPI	50	125	250	2.00	A
UTAH	90	150	250	1.67	JD
IDAHO	30	100	125	1.25	JD
ALABAMA	100	100	100	1.00	JD
TEXAS	100	100	100	1.00	JD
MONTANA	30	30	30	1.00	JD
HAWAII	25	25	25	1.00	JD
PUERTO RICO	25	25	25	1.00	J
TENNESSEE	25	25	25	1.00	JD
MEDIAN VALUE	138	500	1,000	2.00	

FOOTNOTES

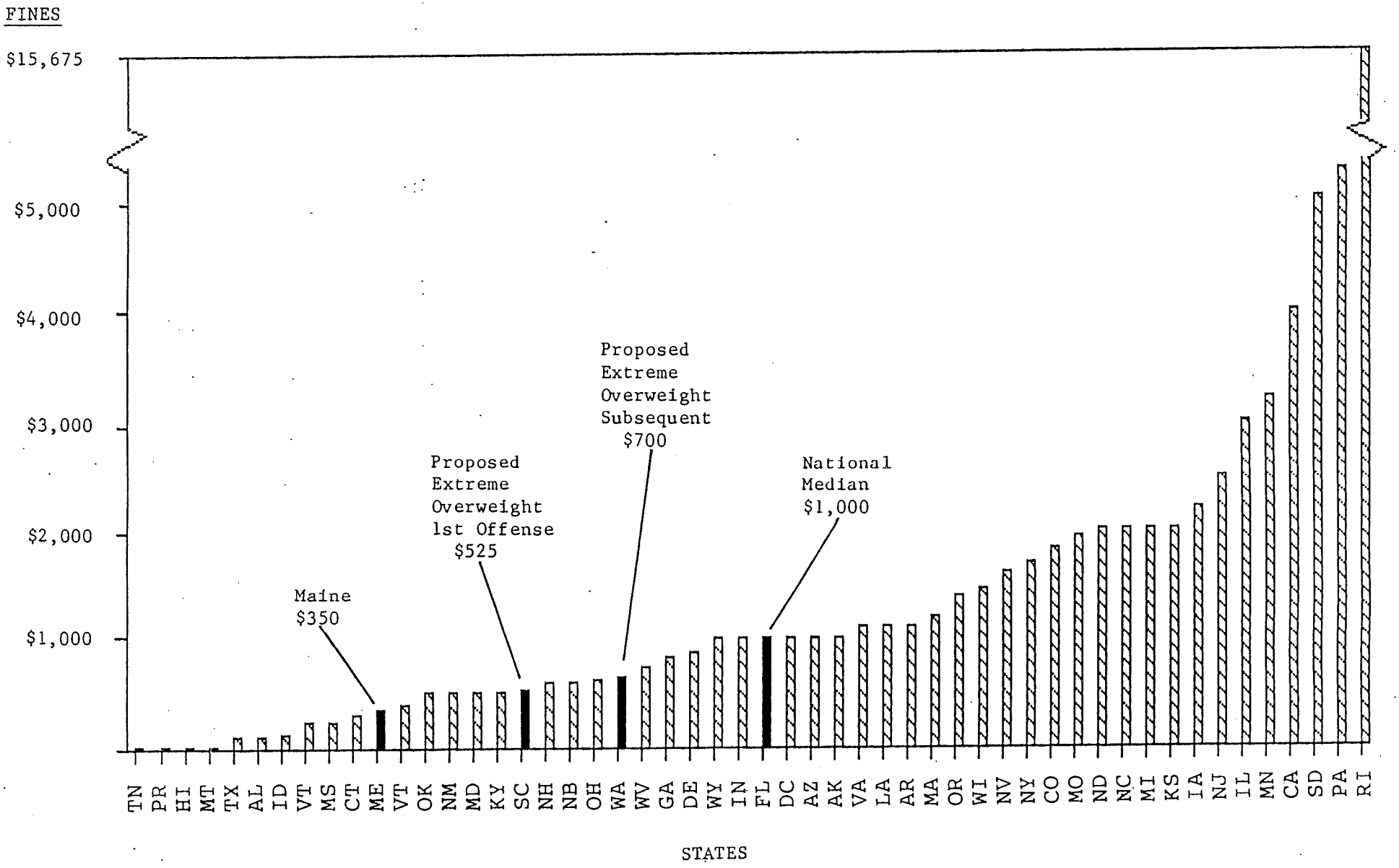
(1) Minimum dollar amounts for first offense; court costs are additional.

(2) Method of application:

- JD: Judicial, total court discretion
- J: Judicial (mandatory), court discretion limited to fine amount
- AD: Administrative, operating agency discretion
- A: Administrative (mandatory), no discretion - statutory control

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

OVERWEIGHT TRUCK FINES BY STATE FOR TRUCKS THAT EXCEED AN 80,000 LBS. WEIGHT LIMIT BY 20,000 LBS.



SOURCE: "Overweight Vehicles - Penalties and Permits", Fed. Highway Admin., U.S. D.O.T., June 1988

Table 5c

COMPARISON OF FINES AND ADJUDICATION METHODS
(SORTED BY RATIO OF FINES)

MINIMUM OVERWEIGHT FINES FOR SELECTED VIOLATIONS (IN DOLLARS) (1)

STATE	TANDEM AXLE GROUP 4,000 LBS. OVERWEIGHT	GROSS LOAD 10,000 LBS. OVERWEIGHT	GROSS LOAD 20,000 LBS. OVERWEIGHT	RATIO OF FINES: 20,000 LBS. TO 10,000 LBS.	ADJUDICATION METHODS (2)
WEST VIRGINIA	25	160	720	4.50	JD
SOUTH CAROLINA	40	125	520	4.16	A
MASSACHUSETTS	120	300	1,200	4.00	J
VERMONT	20	100	400	4.00	JD
CONNECTICUT	100	100	300	3.00	JD
NEBRASKA	150	200	600	3.00	JD
NEW HAMPSHIRE	150	200	600	3.00	JD
COLORADO	25	615	1,835	2.98	A
OHIO	65	225	625	2.78	JD
LOUISIANA	60	400	1,100	2.75	A
****MAINE****	65	130	350	2.69	J
CALIFORNIA	125	1,500	4,000	2.67	A
NEVADA	80	600	1,600	2.67	J
MINNESOTA	210	1,210	3,210	2.65	JD
GEORGIA	68	318	818	2.57	A
D OF COLUMBIA	100	400	1,000	2.50	A
DELAWARE	80	350	850	2.43	JD
NEW YORK	350	700	1,700	2.43	JD
PENNSYLVANIA	500	2,250	5,250	2.33	J
MISSOURI	335	935	1,935	2.07	J
ALASKA	200	500	1,000	2.00	J
FLORIDA	160	500	1,000	2.00	A
ILLINOIS	320	1,500	3,000	2.00	A
INDIANA	250	500	1,000	2.00	JD
KANSAS	120	1,000	2,000	2.00	JD
MICHIGAN	240	1,000	2,000	2.00	JD
MISSISSIPPI	50	125	250	2.00	A
NORTH CAROLINA	400	1,000	2,000	2.00	A
NORTH DAKOTA	160	1,000	2,000	2.00	J
OREGON	80	700	1,400	2.00	JD
RHODE ISLAND	600	10,000	15,675	1.57	AD
SOUTH DAKOTA	400	2,500	5,000	2.00	JD
WYOMING	25	500	1,000	2.00	JD
WISCONSIN	170	750	1,450	1.93	J
WASHINGTON	170	350	650	1.86	J
ARKANSAS	300	600	1,100	1.83	JD
IOWA	200	1,200	2,200	1.83	J
VIRGINIA	180	600	1,100	1.83	J
NEW JERSEY	900	1,500	2,500	1.67	J
UTAH	90	150	250	1.67	JD
IDAHO	30	100	125	1.25	JD
NEW MEXICO	40	425	500	1.18	JD
OKLAHOMA	180	480	500	1.04	JD
ALABAMA	100	100	100	1.00	JD
ARIZONA	700	1,000	1,000	1.00	J
HAWAII	25	25	25	1.00	JD
KENTUCKY	200	500	500	1.00	J
MARYLAND	200	500	500	1.00	J
MONTANA	30	30	30	1.00	JD
PUERTO RICO	25	25	25	1.00	J
TENNESSEE	25	25	25	1.00	JD
TEXAS	100	100	100	1.00	JD
MEDIAN VALUE	138	500	1,000	2.00	

FOOTNOTES

(1) Minimum dollar amounts for first offense; court costs are additional.

(2) Method of application:

JD: Judicial, total court discretion

J: Judicial (mandatory), court discretion limited to fine amount

AD: Administrative, operating agency discretion

A: Administrative (mandatory), no discretion - statutory control

SOURCE: "OVERWEIGHT VEHICLES - PENALTIES AND PERMITS", FED. HIGHWAY ADMIN., U.S. DEPT. OF TRANS., JUNE 1988.

Table 6

REPEAT OFFENDERS FINES

State	Weight Range (if applicable)	1st Offense	2nd Offense	3rd Offense	4th & Succeeding
Arizona	1,000-1,250	$ 50	$ 75 (within 6 mos.)	$100 (within yr.)	
	1,251-1,500	$100	$150 (within 6 mos.)	$200 (within 1 yr.)	
	1,501-2,000	$150	$225 (within 6 mos.)	$300 (within 1 yr.)	
	2,001-2,500	$200	$300 (within 6 mos.)	$400 (within 1 yr.)	
	(no extra penalties for repeat offenses at higher weights.)				
Arkansas		$100 (max)	$200 (max)	$500 (max)	
	(repeat offense fines in addition to per pound fines)				
Delaware	1st 5,000	2¢/lbs.	5¢/lbs.		
		5¢/lbs. remaining	10¢/lbs. remaining		
Idaho		$10-$25	$25-$50	$50-$100	
Kansas			1.5 times applicable amt. (2 yrs)	2 times applicable amount (2 yrs.)	25 times applicable amount (2 years)
New Hampshire		$100 (max)	$250 (max) (1 yr.)		
Texas		$100-$150 (within 1 year)	$150-$250 (within 1 yr.) (and/or 60 days confinement)	$250-$500 (and/or 60 days confinement)	
Vermont			fine & 5% (1 yr.)	fine & 10% (1 yr.)	fine & 15% (1 yr.)
Washington		3¢/lbs. + $50 (min)	$75 (min)	$100 (min)	
Wisconsin	Up to 2,000	$ 50-$200 + 1¢/lbs.	$100-$300 + 2¢/lbs. (12 mos.)		
	2,001-3,000	2¢/lbs.	4¢/lbs.		
	3,001-4,000	3¢/lbs.	6¢/lbs.		
	4,001-5,000	5¢/lbs.	4¢/lbs.		
	Over 5,000	7¢/lbs.	10¢/lbs.		

6467m

REPORT OF THE TASK FORCE ON IMPROVED WEIGHT/SAFETY ENFORCEMENT AND COMPLIANCE

MAINE DEPARTMENT OF TRANSPORTATION
September 12, 1988

I. INTRODUCTION

At the request of the Heavy Truck Study Sub-Committee of the Transportation Committee of the Legislature, a meeting was held on Sept. 7, 1988 at the Associated General Contractors Building in Augusta to discuss alternatives for improving weight and safety enforcement and compliance in Maine. The task force was chaired by Gedeon Picher, Director of MDOT's Office of Policy Analysis. An attendance list is attached. Membership in the task force was designed to reflect, as far as possible, a reasonable cross section of representatives from industry and State and Federal governments. All task force members, except for Legislative staff people, participated in the selection of proposed alternatives. This paper represents the combined view of the majority of participants. Individual participant's positions vary from the norm of the group. It should also be noted that major participants made disclaimers which allowed latitude for higher level policy makers in their organizations. This was particularly the case for MDOT and the State Police agencies. In spite of this, the following describes the process and recommendations of the participants with respect to initiatives which could be undertaken to improve weight enforcement and compliance at this time and which could be expected to receive reasonably broad support for passage.

Prior to the meeting, a list of possible alternatives compiled by Legislative staff was sent to those invited. They were asked to prioritize the alternatives on weight enforcement before the meeting and bring with them other alternatives. The bulk of the meeting concerned discussion of the alternatives in the group, clarification of terms, and several rounds of voting as a group to determine those alternatives meriting top priority. In the latter part of the meeting, safety enforcement and compliance alternatives were compiled without regard to order of priority.

II. TASK FORCE WEIGHT ENFORCEMENT PRIORITIES

Task force recommendations are listed in descending order with those alternatives receiving the greatest support listed first.

Improve information dissemination from state agencies.

The group felt that this involves a total public relations effort. Industry efforts to reduce overloads should be encouraged and supported. MDOT should hold informational meetings at Judicial and District Attorney conferences to stress the importance of weight enforcement and inform judicial officers of the damage caused by overloads. Collection and processing of data on overloads should be improved as part of this effort.

Increase weight enforcement personnel (troopers, inspectors) and portable weigh scales.

Some industry members felt that the proper emphasis should be on enforcement by weight enforcement people through appropriate staff increases, rather than by requiring industry to share in weight enforcement responsibilities. Such mechanisms as relevant evidence laws or weight audits of shippers and/or receivers were seen by some industry members as placing an unfair burden on industry. There was broad agreement by all present that a vital deterrent to overloading was increased expectation of getting caught. Another vital deterrent is the presence of an effective penalty, especially for major and repeated offenses. State Police spokesmen noted that they are studying the personnel requirements of the weight enforcement unit and will make a recommendation to the Commissioner of Public Safety on the number of additional staff needed. The State Police noted that weight enforcement "technicians" are less useful than troopers, as technicians lack both the police powers of arrest and the necessary training in law enforcement.

There was general agreement that increasing the number of portable scales is a needed supplement to increased personnel. Stationary scales were viewed as less efficient and not cost effective.

Promote vehicles with reduced impact on highways.

Industry members of the group felt that the increased productivity of such vehicles would reduce the incentive to overload marginal vehicles. The six axle combination was cited as an example of a more efficient vehicle.

Target the repeat offender.

Industry members noted that the majority of truckers act responsibly with regard to weight limits, but are unfairly "painted with the same brush" as the repeat violator. Measures receiving the backing of the group include establishing an overweight "point system" with regard to violations, civil actions against repeaters for actual highway or bridge damage, establishing a system to identify chronic weight violators, increasing fines for repeat violators, and the "Texas approach" which involves prioritizing offenders and issuing restraining orders and contempt of court citations, if necessary, against repeat offenders.

Criminal penalties for extreme overweights.

The task force favors removal of ambiguities in the present law to clearly define extreme overweights as a criminal offense.

Tighten requirements for off-loading of excess cargo.

State Police people noted that out-of-service vehicles sometimes return to the highway after the trooper leaves to perform other required duties. Task force members strongly

favored positive detention, such as booting of vehicles, lifting a trucker's credentials, and "baby-sitting" of out-of-service vehicles at the expense of the offender as measures to alleviate this problem.

Increase fines for major overloads.

Industry members noted that severe overloaders should be targeted, not minor overloaders who exceeded limits inadvertently. They noted that penalties for major overloaders should be costly enough to ensure compliance. One noted that a 20,000 pound overload could not be excused as an accident. MDOT's spokesman noted that the Department favored increased fines, as recent data indicates removal of the fine cap had not discouraged overloading.

Increase time coverage of weighing to prevent "time sanctuaries".

State police members noted that they have already expanded time coverage of weight enforcement officers. Remaining sanctuaries should be addressed if additional staffing is available.

Increase control of out-of-state, Canadian trucks.

This would include mutual discussions with bordering jurisdictions (Quebec, New Brunswick, N. H.) and U. S. Customs on a cooperative weighing effort, improvements in weighing capabilities on the Canadian border, and restrictions on the number of truck entry locations. State Police members noted that more cooperation by U. S. Customs agents with State Police weighing efforts was needed.

Uniform weight enforcement and penalties.

Enforcement and imposition of penalties should be uniformly applied throughout the state. Undesirable variation exists as a product of uneven court action.

Make federal and state road limits the same by increasing federal (interstate) limits to state limits.

Proposals should be made through the Maine Congressional delegation to increase Interstate limits to conform to Maine law. Some in the group questioned the Interstate limits, which place more stringent requirements on the road system best designed to handle heavier loads. Such measures should include mechanisms to recover the costs of any additional damage to the highway and bridge system as part of the package. Alternatives such as the Turner proposal which seeks added productivity in terms of gross weight but with reduced axle limits are being explored by the Transportation Research Board and should be considered when seeking adjustments in this realm.

Establish mandatory fines.

Undesirable judicial discretion in the amount of fine imposed was discussed. The group felt that schedule fines should be adhered to so that fines are imposed fairly and evenly throughout Maine.

III. OTHER WEIGHT ENFORCEMENT ALTERNATIVES DISCUSSED

The task force members examined a number of other proposals to improve weight enforcement and compliance. Although not chosen as priority alternatives, some members of the group viewed them as worthy measures. Lack of inclusion in the priorities above does not indicate lack of merit, but merely less effectiveness at this time than the items chosen.

In the area of informational activities, vehicles and fees, a public information campaign on weight limits was viewed as unnecessary as this information is well disseminated. Requiring a small hole in commodity trucks to detect overloads and increasing fees for high impact vehicles found no support from industry members.

Proposals for a haul roads system, targeting mills and other receivers for weight surveillance, reducing weight limits to the bridge formula, and maintenance agreements for shipper feeder roads were not considered priority items.

Proposals in the area of administration and law were not chosen as group priorities. These included relevant evidence laws, weight enforcement audits of shippers-receivers, identification of vehicles at weigh-in-motion sites, removal of weight tolerances, and administrative adjudication of fines. Proposals on penalties which were not chosen included civil penalties for minor overloads, penalties against the loader as well as the trucker, and making truck companies and owners jointly responsible for overweight violations.

Proposals to encourage rail and barge traffic as alternative modes of transportation were not supported in the context of enforcement alternatives..

IV. TASK FORCE SAFETY IMPROVEMENT RECOMMENDATIONS

Proposals to improve safety enforcement and compliance were submitted by task force members but were not prioritized. They are provided for the information of the Sub-committee and staff.

1. "Baby-sit" vehicles taken out-of-service for safety violations at the cost of the violator.

2. Charge the owner with safety violations.

3. Boot vehicles having serious safety violations.

4. Increased legislative support for the single drivers license and private efforts to implement MCSAP and CVSA.

5. Random terminal inspection program--technicians and a few troopers.

6. Improved safety fine structure.

7. Informational activities package for safety (as in weight enforcement).

8. Increased safety personnel; raise pay.

9. Increase assurance with respect to the out-of-service vehicle.

10. Encourage a more appropriate unique identifier than the Social Security number for identifying drivers (retina or thumb print).

V. CLOSURE

The special task force is pleased to have been able to participate in the search for more effective enforcement measures. Thus, provided with this input, legislative staff and state agency staff may then expect to consider and flesh out the proposals further, include top level policy considerations and arrive at definite recommendations for legislative action.

Respectfully submitted,
Gedeon G. Picher, Chairperson
TASK FORCE ON IMPROVED
WEIGHT/SAFETY ENFORCEMENT
AND COMPLIANCE

WEIGHT AND SAFETY ENFORCEMENT TASK FORCE

Al Skolfield	Maine State Police
Harlan Pierson	Maine State Police
Nelson Durand	Motor Vehicles
William D. Richardson	Federal Highway Administration
Janice Brown *	Federal Highway Administration
Richard Jones	Maine Motor Transport
George Parke	Parkeway Transport
Thomas Bartholomew	Dragon Products Company
David P. Twomey	Dragon Products Company
Henry Magnuson	Paper Industry Information Office
Jerry G. Haynes	Associated General Contractors
Richard Harnum	Webber Oil Company
Thomas Whalen	Webber Oil Company
James A. Mason	Forest products trucker-MFPC
Cheryl H. Russell	Hanington Brothers-MFPC
Eric Baxter	American Automobile Association
Haven Whiteside	Legislative Council
Herbert Perry	Legislative Council
Gedeon Picher	MDOT, Director, Off. of Policy Analysis
Tim Bolton	MDOT, Office of Policy Analysis
Garry Hinkley	MDOT, Human Resources
Ken Sweeney	MDOT, Bureau of Planning
Robert McEvoy **	Bureau of Motor Carrier Safety

* Observer
** Safety portion only

APPENDIX G

MATERIAL FROM MAINE STATE POLICE

1. Vehicle Size and weight plan for Fiscal Year 1988 (excerpts)

2. Memo on Commercial Vehicle Enforcement, Sept. 12,1988

3. Summary of Serious Violations, 1987

Excerpts from the "Vehicle Size and Weight Plan of Enforcement" for FY 1988 developed by the Maine Departments of Trans- portation and Public Safety in accordance with federal law (see 23 CFR 657.9)

Maine's present enforcement plan is as follows:

Equipment

The State has no permanent scales, but there are 14 privately owned permanent scales throughout the State which can be used if any officer has reason to believe that a vehicle is overweight and there are no State scales readily available.

The State has seven Weigh-In-Motion sites. They are located on I-95 in Sidney, on U.S. #201 in Skowhegan, on U.S. #2 in Wilton, on S.R. #9 in Chelsea, on S.R. #5 in Brownfield, on U.S. #1 in Nobleboro and on I-95 in Freeport. There are two sets of scales and electronics which allows the instrumentation of 2 lanes at 2 sites at any given time.

The State has five (5) sets of Lodec Semi-Portable Scales. Each set is comprised of two (2) platforms, cables and scoreboard readout, and serves as an independent weighing unit.

As for portable scales, the state has 71 sets of MD 400 portable scales (two (2) scales per set). 22 sets of Heanni low profile portable scales (two (2) scales per set); and 2 sets of MD 500 portable scales (two (2) scales per set) used in conjunction with the Lodec semi-portable scales.

Weighing Areas

Off-road weighing areas include the following: 2 in Lebanon (portable only) - located on S.R. #11 and U.S. #202; 1 in Topsfield on U.S. #1 at the junction of U.S. #1 and S.R. #6 (portable or semi-portable); 2 in Wilton - located on U.S. #2 and S.R. #4 (eastbound, portable only - westbound, semi-portable) 1 in Houlton (semi-portable) - located on U.S. #1, 1 in Sandy Bay (semi-portable) - located on U.S. #201, 2 in Kittery on U.S. #1 (north and southbound, semi-portable); and 2 in Ellsworth on U.S. #1 (northbound and southbound, semi-portable) will be completed for use during 1989.

There are 2 truck weight facilities on I-95 in Kittery (one northbound and one southbound) designed for semi-portable scales. Both areas were opened in late 1982. These areas allow for full enforcement of size and weight laws, and in addition, space is available for checks of equipment, as well as fuel tax enforcement. Adequate space is available for off-loading of overweight vehicles and for out-of-service vehicles. A truck weight facility is operated using federal property on I-95 in Houlton at the Canadian Border which accommodates semi-portable scale operations and provide ample parking for out-of-service vehicles. It is also possible to use the Interstate Rest Areas on I-95: Augusta N.B.; Sidney S.B.; Pittsfield N.B. & S. B.; Hampden N.B. & S.B.; Old Town N.B. & S.B.; and Medway N.B. & S.B. These areas can accommodate either portable or semi-portable scale operations, except for Augusta N.B. which can only accommodate portable scales.

The primary enforcement agency is the Maine State Police, but the Maine Department of Transportation monitors compliance through analysis of WIM data, etc. The State Police have twenty-one (21) people assigned to commercial vehicle enforcement as follows: one (1) supervisor State Police Sergeant; twelve (12) State Police officers; eight (8) Civilian Investigators; three (3) Troops B, D, and G, generally dedicate an average of 10 hours per month to truck weight enforcement; and during 1989 six (6) State Police officers will be added to the "Commercial Enforcement Unit" and one (1) supervisor (State Police Sergeant).

In 1989, the Department of Public Safety plans to fill the two (2) existing vacant positions which resulted from retirements and the seven (7) positions approved in the last Legislative session. The projected timetable to fill these positions is as follows:

December 1987 - Two (2) Truck Weight Officers (Existing vacancies)

January 1988 - One (1) Sgt. for Size & Weight (New position)

February 1988 - Two (2) TrucK Weight Officers (New positions)

April 1988 - Two (2) Truck Weight Officers (New positions)

June 1988 - Two (2) Truck Weight Officers (New positions)

The Department will also advertise projects for two (2) off-road weighing areas; one on S.R. #9 in the Beddington area and one on U.S. #2 west of Rumford. These are presently in the preliminary engineering phase of project development. A review of the I-95 Corridor between Portland and Brunswick has been completed and a preliminary engineering project has been requested and approved for an off-road weigh area. MDOT & MDOPS will review the existing rest areas in Old Town on I-95 for the feasibility of converting them to truck weight areas. A public hearing was held in Skowhegan to obtain comments concerning the proposed construction of an off-road weight area on U.S. Route 201 south of the Skowhegan built-up area. The Department of Transportation has determined that it would be reasonable to provide adequate truck-weight facilities through constructing weight areas north and south of the Scott Mill complex. The new areas will be constructed within the existing right of way.

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INTER-DEPARTMENTAL MEMORANDUM

SUBJECT: Commercial Vehicle Enforcement

DATE: September 12, 1988

TO: Joint Standing Committee on Transportation Heavy Truck Study

FROM: Lt. Col. Alfred R. Skolfield, Deputy Chief, Maine State Police

At the request of your committee, we have reviewed staffing levels and operating procedures for the Commercial Vehicle Enforcement Unit. It appears that additional personnel are needed to address heavy or overweight trucking. Studies of manpower allocation have identified twelve patrols that need staffing to expedite enforcement. Attached is a list of those areas.

It should be noted that truck weight officers historically generate fine money equivalent or exceeding their cost. Last year each officer returned $72,447.00 on average to the highway fund. Attached is a fiscal note reflecting costs.

ARS:jb
Attachs.

MANPOWER REQUIREMENTS
MAINE STATE POLICE COMMERCIAL VEHICLE ENFORCEMENT UNIT

In order to provide adequate enforcement of truck weight laws throughout the State of Maine additional personnel must be committed to the State Police Commercial Vehicle Enforcement Unit. Recently, shift work has been initiated within the unit in order to prevent time sanctuaries. However, this has caused problems with geographical sanctuaries since each shift does not have sufficient manpower to cover the entire state thoroughly. Twelve problem areas have been identified as needing increased enforcement effort. These areas are mostly in the vicinity of paper mills or Canadian ports of entry and are areas where single unit enforcement patrols can effectively target the most serious weight violations.

1.Rumford	This is a paper mill town, the assigned officer could also work east to the off road facility in Wilton or west on Rt 2 to the N.H. state line. Considerable forest products traffic.
2.Belgrade	This is a central location from which the assigned officer could work north to the Farmington and Skowhegan areas (forest products) or he could work I-95 (Sidney rest area) and local construction traffic.
3.Fort Kent	Currently vacant, near Canadian ports of entry at Madawaska, Fort Fairfield as well as Fort Kent itself. Forest product traffic to Fraser Paper.
4.Farmington	This officer could work both the Rte 27 and the Rte 201 corridors north to the Canadian border. Could also work other forest product traffic along Rte 2, near International Paper, Boise Cascade, James River, and Scott Paper.
5.Caribou	To provide shift coverage opposite personnel in Fort Kent and Presque Isle. Cover Canadian ports of entry and forest product traffic near the Sherman rail siding.
6.Bingham	To work north on Route 201, utilize the Sandy Bay offroad facility, large amounts of forest product traffic. Could also work over into Piscataquis County.

7.Skowhegan	To provide shift coverage opposite the officer in Bingham, would work the same area.
8.Topsfield	Could work forest product traffic near Woodland, Canadian ports of entry at Vanceboro, Forest City, and Calais. Would work the opposite shift to the man in Calais.
9.Millinocket	Would work the opposite shift to the man in Lincoln, could cover the Medway facility. Target forest product traffic to Great Northern and Champion International. Great Northern uses a great amount of Canadian wood.
10.Saco-Biddeford	Provide manpower needed for integrated details in Southern Maine. Try to control the bypass problem when off road facilities are being used.
11.Newport	Centrally located to work either I-95 or heavy forest products traffic in Piscataquis County (Rte 7 and 15) and Rte 2 from Skowhegan to Bangor.
12.Wiscasset	This officer could work I-95 from Brunswick to Sidney, local traffic in Knox, Lincoln and Sagadahoc counties, and general commodities on Rte 1.

This list of priority areas differs slightly from that which was previously submitted as two officers selected to fill existing vacancies live in two of the towns that were listed before as problem areas (Belfast and Calais). Consequently, the areas vacated by their predecessors are still unfilled (Belgrade and Skowhegan).

To: Lt. Col Alfred Skolfield, Deputy Chief
From: Roland Leach, Director of Administrative Services

Subject: Truck Size and Weight Enforcement

Based upon the Department's recommendation of adding twelve (12) State Police Troopers to the Commercial Vehicle Enforcement Unit the following information is provided:

	1990	1991
Positions	(12)	(12)
Personal Services	520,812	520,812
All Other	120,507	126,532
Capitol Equip	416,673	------
TOTAL	1,047,992	647,344

Summary of Serious Weight Violations, 1987

	Towns with 5 or More Serious Weight Violations	Percent of Weight Violations that are Serious	
Lincoln	19	40%	Paper mill town
Houlton	18	21%	Off-road weigh facility Canadian port of entry
Kittery	18	7%	Tremendous traffic volume, off-road facilities
York	17	3%	
Easton	12	36%	Chip mill
Falmouth	10	18%	
Berwick	9	20%	
Bethel	8	66%	Vicinity of a paper mill
Jackman	8	73%	Canadian port of entry-forest products
Lebanon	8	24%	Off-road weigh facilities
Skowhegan	7	22%	Vicinity of a paper mill
Madison	6	55%	Vicinity of a paper mill
Medway	6	38%	Vicinity of a paper mill
Pittsfield	6	8%	I-95 rest area
Presque Isle	6	40%	Near a chip mill
Rumford	6	46%	Paper mill town
Saco	6	29%	
South Portland	6	25%	
Ashland	5	38%	Chip mill
Augusta	5	18%	I-95 rest area
Farmington	5	33%	Vicinity of a paper mill
Sandy Bay	5	63%	Canadian port of entry-forest products
South Berwick	5	38%	
T2, R8	5	71%	Vicinity of paper mill
Wilton	5	15%	Vicinity of paper mill off-road facility
25 towns	211 violations: 51% of serious violations occurred in these towns		

Officers on random patrol will show a higher percentage of serious violations than details working off-road facilities. Off-road details check all trucks where officers on individual patrol select only those trucks that definitely appear to be in violation.

Source: Maine State Police

APPENDIX H

HELEN T. GINDER, DIRECTOR
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STATE OF MAINE
OFFICE OF POLICY AND LEGAL ANALYSIS
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October 7, 1988

To: Heavy Truck Study Subcommittee
From: Haven Whiteside, Legislative Analyst

Subj: Extreme Overweight Violations

Ref: 1986-87 State Police Arrest Record Data

The 1986-87 State Police Arrest Record shows that there were 1392 overweight violations resulting in convictions in the two year period 1986-1987. Of these, 682 were gross weight violations, 624 axle violations, and 86 tire violations. Some of the axle violations were also gross weight violations but that number is not known. Further analysis shows that 206 of the gross weight violations (30%) were extreme (20% or more over the permit weight) and that 262 of the axle violations (42%) were extreme. Overall, between 15% and 34% of the violators had extreme gross weight violations. The actual number depends on how many extreme axle violations were also extreme gross weight violations. A rough estimate is that 24% of the vehicles cited for overweight violations have extreme gross weight violations.

1986-87 State Police Arrest Record Data

VIOLATION TYPE & CODE NUMBER	TYPE OF PERMIT	# VIOLATIONS	#* EXTREME	EXTREME PERCENT
TIRE WEIGHT				
21 tire size		86	32	37%
AXLE WEIGHT				
22 single axle	gen law	82	38	
42	com permit	13	4	
23 tandem axle	gen law	212	122	
43	com permit	100	13	
24 tridem axle	gen law	70	51	
44	com permit	55	27	
54	forest products	92	7	
	SUBTOTAL, AXLE WEIGHT	624	262	42%
GROSS WEIGHT				
27 gross weight	gen law	308	133	
	gen permit (90K)	31	16	
	com permit (100K)	343	57	
	SUBTOTAL, GROSS WT	682	206	30%
TOTAL, ALL WEIGHT VIOLATIONS		1,392	206 to 468	15% to 34%
	BEST ESTIMATE OF EXTREME OVERWEIGHT			24%

*Extreme violations are defined as 20% or more above the allowed weight, including permits.

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APPENDIX I

MATERIAL FROM THE MAINE DEPARTMENT OF TRANSPORTATION

1. Summary of WIM Monitoring Data 1987-88
2. Correlation of Gross Weight to Axle Weight for 3 and 4 Axle Combinations
3. Frequency of overweight violations
4. Average fines by court jurisdiction
5. Overweight violations by state

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SUMMARY OF WIM MONITORING DATA 1987-88

Source: G. Hinkley, MDOT
9/19/88

SIDNEY SUMMARY	COUNT	REVISED >LIMIT	%	ESAL's	AVG	EXCESS	%
FRONT	160,518	14	0%	11,723	0.07	42	0.4%
SINGLE	67,857	1,712	3%	18,971	0.28	2,514	13.3%
TANDEM	212,411	30,458	14%	139,289	0.66	50,488	36.2%
TRIDEM	3,345	678	20%	2,213	0.66	828	37.4%
TOTAL	444131	32862	7%	172196		53872	31.3%

Excess ESALs figured from Interstate limit

SIDNEY SUMMARY GROSS WEIGHT (REVISED)	COUNT	>ROAD LIMIT	%
2-AXLE SU	34,461	248	0.7%
3-4 AXLE SU	10,162	117	1.2%
		615	6.1%
3-4 AXLE COMB	17,897	87	0.5%
		518	2.9%
5-AXLE COMB.	91,073	17,150	18.8%
6-AXLE COMB.	1,992	777	39.0%
TOTAL	155,585	19,512	12.5%

NOBLEBORO AXLE SUMMARY

	COUNT	>RD LIM	%	>COM LIM	%	ESAL's	AVG	EXCESS	%
FRONT	16,532	4	0.0%	3	0.0%	788	0.05	5	0.6%
SINGLE	9,700	670	6.9%	564	5.8%	4,763	0.49	902	18.9%
TANDEM	13,941	944	6.8%	193	1.4%	7,783	0.56	290	3.7%
TRIDEM	399	65	16.3%	39	9.8%	231	0.58	56	24.2%
TOTAL	40,572	1,683	4.1%	799	2.0%	13,565	0.33	1,253	9.2%

Excess ESALs figured from commodity limit

NOBLEBORO GROSS WT SUMMARY

	COUNT	>RD LIM	%	>COMM. LIM	%
2-AXLE SU	6812	175	2.6%	37	0.5%
3&4 AXLE SU	2345	56	2.4%	25	1.1%
		327	13.9%	158	6.7%
3&4 AXLE COMB	2022	270	13.4%	157	13.4%
		484	23.9%	362	17.9%
5-AXLE COMB.	5008	663	13.2%	98	2.0%
6-AXLE COMB.	203	21	10.3%	4	2.0%
TOTAL	16390	1185	7.2%	321	2.0%
		1670	10.2%	659	4.0%

WILTON AXLE SUMMARY (REVISED)

	COUNT	>RD LIM	%	>COM LIM	%	ESAL	AVG	EXCESS	%
FRONT	30,212	1	0.0	0	0.0%	2,398	0.1	0	0.0%
SINGLE	11,354	325	2.9	200	1.8%	3,704	0.3	320	8.6
TANDEM	27,199	6379	23.5	2174	8.0%	29,238	1.1	3829	13.1
TRIDEM	8,801	4091	46.5	2469	28.1%	11,774	1.3	1223	10.4
TOTAL	77,566	10,796	13.9	4,843	6.2%	47,114	0.6	5,372	11.4

Excess ESALs figured from commodity limit

WILTON GROSS WT. SUMMARY

	TOTAL	>RD LIM	%	>COM LIM	%
2-AXLE	8550	128	1.5%	44	0.5%
3&4 AXLE SU	4964	1083	21.8%	638	12.9%
		1870	37.7%	1691	34.1%
3&4 AXLE COMB	1489	1	0.1%	0	0.0%
		35	2.4%	20	1.3%
5-AXLE COMB	7515	2273	30.2%	827	11.0%
6-AXLE COMB	7167	3622	50.5%	2388	33.3%

CHELSEA SUMMARY

	COUNT	>RD LIM	%	>COM LIM	%	ESAL's	AVG	EXCESS	%
FRONT	8446	2	0.0%	0	0.0%	552	0.07	0	0.0%
SINGLE	5651	201	3.6%	139	2.5%	1670	0.30	190	11.4%
TANDEM	4996	406	8.1%	145	2.9%	2761	0.55	229	8.3%
TRIDEM	387	222	57.4%	140	36.2%	548	1.42	157	28.6%
TOTAL	19480	831	4.3%	424	2.2%	5531		576	10.4%

EXCESS ESALS FIGURED FROM COMM. LIMIT

CHELSEA GROSS WT.

	TOTAL	> ROAD LIM.		> COMM. LIMIT	
2-AXLE	4656	120	2.6%	60	1.3%
3-4 AXLE SU	1296	161	12.4%	41	3.2%
		336	25.9%	294	22.7%
3-4 AXLE COMB.	575	1	0.2%	0	0.0%
		15	2.6%	7	1.2%
5 AXLE COMB.	2095	259	12.4%	24	1.2%
6 AXLE COMB.	142	51	35.9%	34	23.9%
LOW TOT	8764	592	6.8%	159	1.8%
HIGH TOT		781	8.9%	419	4.8%

STATE OF MAINE

Inter-Departmental Memorandum Date 7/27/88

To Haven Whiteside, Deputy Director Dept. Policy & Legal Analysis

From Garry R. Hinkley, Plng. & Res. Assoc. Dept. Transportation

Subject Correlation of Gross Weight to Axle Weight for the Four Axle Single Unit Truck.

As requested by Senator Theriault I have looked at the correlation of gross weight to triaxle weight for the four-axle single unit truck. If I understand correctly, he and other members of the truck committee were concerned that 240 class forest products vehicles are unable to stay within the triaxle weight of 64,000 lbs. when operating at the maximum gross weight of 75,900 lbs.

Using WIM data from Nobleboro and Wilton, we were able to analyze 325 240 class vehicles. These are the same 240's used for the cost allocation analysis, and represent the entire population of 240's for the collection period.

The analysis consisted of arranging the data by gross weight and triaxle weight, and performing a regression analysis. The regression analysis clearly demonstrates that there is a strong correlation between gross weight and triaxle weight (0.91). The results may be seen clearly in the attached graphs.

As the accompanying printouts show, only two of the 325 vehicles had triaxle weights in excess of the special commodity (FP) limit while staying within the gross limit. Eleven vehicles were over on gross but within axle limits. Twenty three vehicles were over on both gross and axle limits and the remaining 289 vehicles were within legal limits on both gross and axle limits.

	Axle $\leq$ 64	Axle $>$ 64
Gross $\leq$ 76	289	2
Gross $>$ 76	11	23
	W = 325	

The data clearly indicate that for the 240 FP operating within the maximum gross weight of 75,900 lbs., it is entirely possible to stay within the maximum triaxle weight of 64,000 lbs. The two vehicles that were found to be within gross but over on the triaxle were extremely light on the front axle.

The true problem is that when a 240 FP is found to be in violation of the triaxle limit, he will also be in violation of the gross limit but the triaxle violation will result in the much larger fine. Because the gross violation is ignored, over time this has come to mean that the trucker is okay on gross but way over on the triaxle.

The triaxle violation is always higher because fines are calculated from the applicable road limit. Because the 240 FP enjoys a privilege that no other vehicle and product enjoys, i.e. the 64,000 triaxle, the first step in the fine schedule is very steep. We believe this is reasonable in light of the high pavement and bridge consumption factors associated with this vehicle, the special privilege involved, and the forgiveness and rebates that are already in place.

If I may provide any further information, do not hesitate to contact me.

GRH/cab

STATE OF MAINE

Inter-Departmental Memorandum

Date 7/28/88

To Haven Whiteside, Deputy Director Dept. Policy & Legal Analysis

From Garry R. Hinkley, Pl. & Res. Assoc. Dept. Transportation

Subject Gross and Axle Weight Correlation - 3-axle Single Unit Trucks

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I have performed the same analysis for 3-axle single unit trucks as I did for the 4-axle single unit vehicles. In general the findings are the same although there is less margin for error for the 230 than for the 240. It is entirely possible to stay within maximum permissable tandem axle weight of 46,000 lbs., while operating at the maximum permissable gross weight of 59,400 lbs.

	TANDEM $\leq$ 46	TANDEM $>$ 46
GROSS $\leq$ 60	839 (94%)	27 (3%)
GROSS $>$ 60	4 (0%)	23 (3%)
	N = 893	

Only 27 3-axle single unit vehicles exceeded the tandem limit, while staying within the gross limit. Twenty one of the 27 tandem axles exceeded the commodity limit by 2000 pounds or less.

As with the 4-axle single unit vehicles, there is a very strong correlation between gross and axle weight.

GRH/cab

STATE OF MAINE

Inter-Departmental Memorandum

Date 7/29/88

To Haven Whiteside, Deputy Dir. Dept. Policy & Legal Analysis

From Garry R. Hinkley, Pl. & Res. Assoc. Dept. Transportation

Subject Gross Versus Axle Weight - 5 and 6 Axle Combination

I have done the sort of analysis for five and six axle combination, as I did for single unit vehicles. Specifically, I looked to see if there was a problem with exceeding axle weight limits, while staying within gross limits. As with the single unit trucks, it appears to be no problem for combinations operating at the commodity permit limits to stay within axle limits if they are within gross limits. Again, the database is a complete collection of WIM data from Wilton and Nobleboro of about six weeks each. It is the same data that is being used for cost allocation.

As the attached graphs show, combination vehicles have more flexibility in weight distribution, and therefore, have wide variation in axle weight. Only 9 of 3687 five axle vehicles measured had a tandem axle violation (44K) while staying within the gross weight limit of 88K. The violations were relatively minor, and resulted from poor load distribution.

Five Axle Combination

	Tandem ≤ 44	Tandem > 44
Gross ≤ 88	3630 (98%)	9 (0%)
Gross > 88	27 (1%)	19 (0%)

N=3687

The findings are similar for the six-axle combination except that 127 out of 450 vehicles exceeded at least one weight limit. There were 84 gross weight violations, 31 tandem violations, and 12 tridem violations. These were the most significant violations; many vehicles had other lesser weight violations as well.

Six Axle Combination

	Tandem ≤ 44 and Tri < 54	Tandem > 44 or Tri > 54
Gross ≤ 100	323 (72%)	2 (0%)
Gross > 100	38 (8%)	87 (19%)

N=450

A total of 11 out of 4137 (0.3%) 5 and 6 axle combination vehicles exceeded axle weight limits while staying within gross limits. A closer examination of those vehicles indicated that each vehicle had poor load distribution, that careful loading might have avoided.

Office of Policy Analysis
MDOT
August, 1988

FREQUENCY OF OVERWEIGHT VIOLATIONS

	5 axle semi (332)	6 axle semi (333)
annual miles of non-interstate travel (1986)	143,196,611	35,828,228
% over maximum legal load	1.1%	23.6%
miles of travel over legal load	1,589,482	8,448,296
annual number of gross overweight violations	135	136
average miles driven per year	65,000	50,000
total miles per violation	1,060,716	263,443
overweight miles per violation	11,774	62,120
years per violation (total miles)	16.3	5.3
years per violation (overweight miles)	0.2	1.2

AVERAGE OVERWEIGHT FINE COLLECTIONS BY COURT
1986 & 1987

Source: MDOT
October 1988

Summary: @AVG Field: FINE Field: FINEDIFF

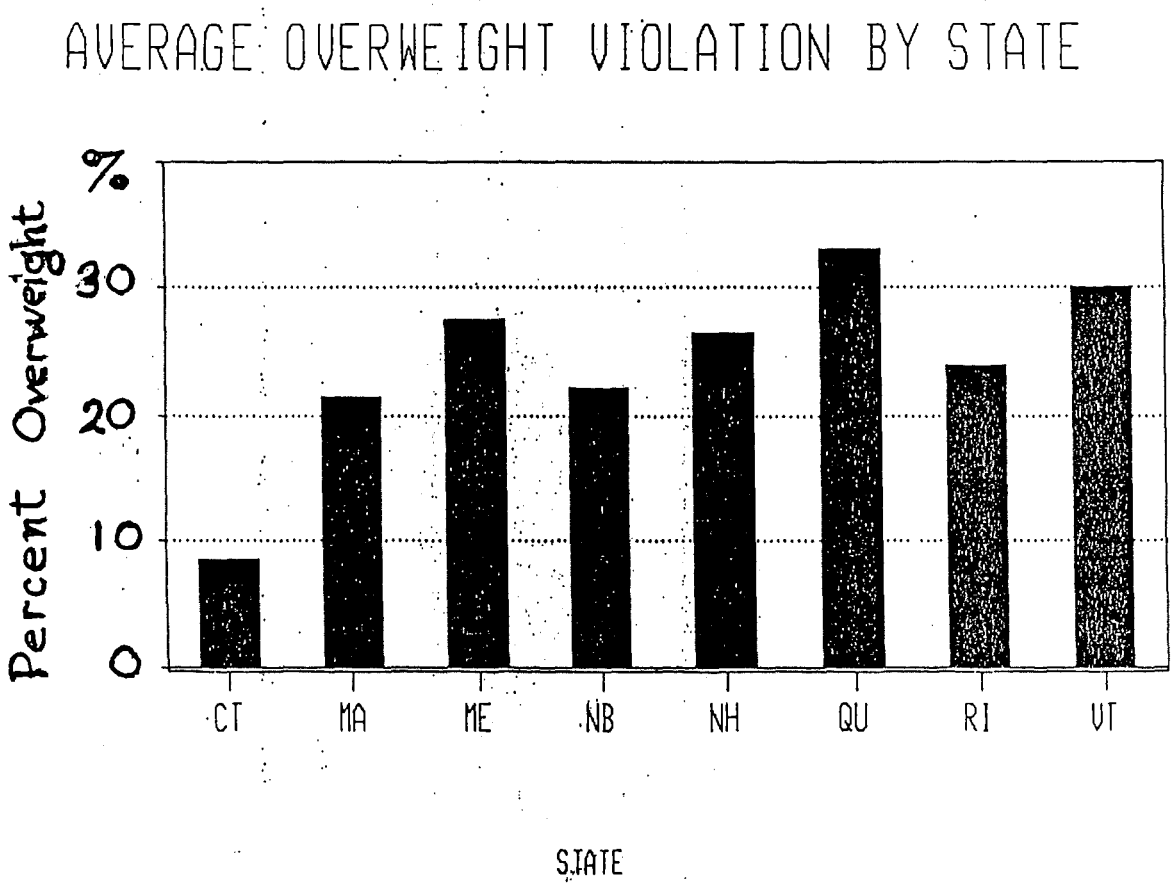
COURT	YEAR 1986	1987	ALL	1986	1987	ALL
AUGUSTA	$268	$391	$313	$3	$19	$9
BANGOR	$440	$542	$506	$0	($20)	($13)
BATH		$301	$301		$16	$16
BELFAST		$406	$406		$200	$200
BIDDEFORD	$299	$353	$324	$12	$8	$10
BRIDGTON	$483	$647	$578	$0	$50	$29
BRUNSWICK	$440		$440	$0		$0
CALAIS	$167		$167	$0		$0
CARIBOU	$500	$200	$250	$125	$26	$43
DOVER-FOXCRO	$480	$602	$571	($125)	$16	($19)
ELLSWORTH	$407	$247	$335	$32	$120	$72
FARMINGTON	$451	$346	$414	$21	$31	$24
FORT KENT	$875	$701	$740	$0	$70	$54
HOULTON	$408	$309	$341	$43	($13)	$5
KITTERY	$204	$309	$243	$11	($12)	$2
LEWISTON	$256	$190	$254	$4	$0	$4
LINCOLN	$562	$448	$461	($20)	$66	$57
LIVERMORE FA	$330	$100	$215	($10)	$68	$29
MACHIAS	$80	$333	$282	$0	$144	$115
MADAWASKA		$344	$344		$281	$281
MILLINOCKET		$343	$343		$11	$11
NEWPORT	$160	$374	$355	$0	($4)	($4)
PORTLAND	$353	$404	$385	$8	$18	$14
PRESQUE ISLE	$516	$433	$471	$33	$33	$33
ROCKLAND	$200	$478	$422	$0	($33)	($26)
RUMFORD	$658	$498	$580	($3)	$10	$3
S. PARIS	$633	$20	$388	$283	$215	$256
SKOWHEGAN	$494	$431	$457	$14	$34	$26
SPRINGVALE	$380	$384	$382	$9	$1	$6
VAN BUREN		$280	$280		($45)	($45)
WATERVILLE	$418	$193	$343	$15	($8)	$7
WISCASSET	$412	$350	$396	($8)	$0	($6)
ALL	$396	$398	$397	$16	$24	$20

FINEDIFF is the difference between the projected and the actual fine for the specific overweight offense.

DISTRIBUTION OF VIOLATIONS BY TYPE AND STATE
1986 & 1987

Summary: @COUNT Field: PCOVER % Total

		VIOLAT 21	22	23	24	27	37	42	43	44	47	54	ALL
R	CT	0	0	0.07	0	0	0	0	0	0	0	0	0.07
E	MA	1.07	0.21	1.14	0.21	1.00	0	0	0.07	0.07	0.14	0	3.91
G	ME	3.20	5.77	9.32	4.13	7.83	1.92	0.50	5.27	3.77	17.7	5.55	64.9
S	NB	0.14	0	0.71	0.21	3.13	0.21	0	0.28	0.07	0.85	0.28	5.91
T	NH	1.00	0.28	2.85	0.50	2.21	0	0.14	1.07	0	0.93	0.14	9.11
A	QU	0	0	0.50	0	2.49	0.14	0	0.43	0.07	4.13	0.64	8.40
T	RI	0.14	0	0	0	0.07	0	0	0	0	0.21	0	0.43
E	VT	0.07	0.07	0.21	0	0.50	0	0	0	0	0.36	0	1.21
	ALL	6.05	6.33	15.4	5.12	21.9	2.42	0.64	7.12	4.06	24.3	6.62	100



Source: Maine Department of Transportation