ASSEMBLY BILL 188/SENATE BILL 77
WISCONSIN DEPARTMENT OF TRANSPORTATION
APRIL 15, 1999

1. Background

This report complies with Wisconsin Statutes 13.096 which imposes a responsibility upon the Department of Transportation to fully examine the impact of the proposed weight exception.

2. Exceptions Proposed in AB 188/SB 77

Requires that highway maintaining authorities exempt septic haulers in specific instances from special or seasonal weight limitations on highways. This exemption does not apply to weight limits on bridges and culverts. The specific instances are when, because of health concerns, the septic material needs to be hauled out within 24 hours after the septic hauler is contacted. Currently, maintaining authorities **may** exempt septic haulers but are not required to exempt. The roads that are used must be the most direct route from septic or holding tank to where the contents will be unloaded. The septic hauler must also notify the maintaining authority within 72 hours over which highways the move occurred.

3. Findings

Roadway and Bridge Impacts

The pavements analysis takes into account that these type of trucks have twice the impact on roadways during the spring thaw postings than they do in the remainder of the year. The state only has 315 miles of highways that are subject to special or seasonal weight limits. The rest of the state system has pavements built to standards that allow for normal 80,000 pound weight limits to be carried year round. It is estimated that if over 300 trips per year are generated on the State Trunk Highway System, the cost is $210,000 per year in reduction to the pavements service life. If less than 300 trips per year are generated, then the impact would be negligible. *(See Appendix 1 for more information)*

Based on the above, the impact of the septic haulers will be negligible on the state trunk highway system if less than 300 trips and $210,000 per year if greater than 300 trips per year. The greatest impact would occur on town and other local roads which are built to lesser standards. There are many more miles of local roads that are subject to special and seasonal weight limitations (posted roads).

This bill does not exempt septic haulers from bridge postings. As such there are no bridge impacts.

Safety and Environmental Impacts

This bill deals with exemptions for truck weights that are normally legal. The vehicles would not be carrying any more weight than they would normally carry. For this reason, no safety or operational impact is anticipated.

Adoption of this bill would have a minimal reduction in the number of truck trips required. This would slightly reduce fuel usage and the resultant emissions.

4. Hardship and Cost Caused by Current Weight Limits

In certain instances, the weight of the empty truck exceeds or is very close to the posted seasonal or special weight limit. This has the effect of either not allowing the truck to even get to where the material needs to be pumped from or allows them to haul only a very small amount of material necessitating several trips. The other issue is that exemptions can be granted from the maintaining authority, but it is not also able to obtain the exemption in a timely manner. This can be especially true at night or on weekends when a septic system backs up. During business hours, finding the correct official to obtain permission from can often be hard. This is especially true with townships, where most septic systems and holding tanks are located.

5. Other Efforts to Resolve Problem

1997 AB 592 also dealt with exempting septic haulers and household goods movers from seasonal weight limits. This bill differs from 1997 AB 592 in that it only deals with the septic haulers along with language to apply only when there are health concerns and that the material needs to be removed within 24 hours. This bill also addresses concerns raised by local authorities with regard to 1997 AB 592 of potential abuse by septic haulers. This has been addressed by requiring septic haulers to notify the highway authority within 72 hours after they have made a haul over posted roads.

6. Motor Carriers Degree of Control Over Weight

The septic hauler has a good degree of control over their weight. As listed in the safety section, this bill deals with weights that are otherwise legal. Due to this, control over the weight is not at the heart of this issue. Rather, the exemption is to allow a truck to haul out septic material in limited instances.

7. Laws in other States

Minnesota has no exemptions.
Michigan has an exemption for milk haulers.
Iowa DOT does not post for below the legal limit. Locals have the same authority as current Wisconsin law.
Illinois DOT does not post for below the legal limit. No exemptions on local roads.

Appendix 1

CORRESPONDENCE/MEMORANDUM ***State of Wisconsin***

DATE: April 14, 1999

TO: Mark Morrison, P.E.
Traffic Safety Engineer

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SUBJECT: AB 188/SB 77 Impact to Highway Pavement Structures

Here is a brief overview of the highway pavement structures impact analysis of AB188/SB77.

IMPACT ASSUMPTIONS:

- 315 miles of pavement are affected by this bill.
- The pavement structure involved is a 4" AC surface over 10" CABC.
- The subgrade has an E = 13,000 psi during the summer and an E = 5,000 psi during the "spring thaw".
- The average age of these pavements is 10 years.
- The designed yearly ESALs = 14,600.
- The critical loading is a 35 kip tandem dual tire axle (q=80 psi) of a gross 80 kip vehicle.

PAVEMENT STRUCTURE ANALYSIS:

Normal Condition:

$k_1 = 20$ $k_2 = 2$ $H = 0.4$ $A = 0.8$

calculated tensile strain in AC = 384

calculated allowable repetitions = 137,102

Spring Thaw:

$k_1 = 20$ $k_2 = 5$ $H = 0.4$ $A = 0.8$

calculated tensile strain in AC = 480

calculated allowable repetitions = 65,783

∴ During spring thaw, these vehicles have twice the impact to the pavement structure compared to summer conditions. During the summer, this truck is equivalent to 2.88 ESALs. During the spring thaw, this truck is equivalent to 5.76 ESALs.

CONCLUSIONS/RECOMMENDATIONS:

# of Trucks during Spring Thaw	ESALs	% of Yearly Design ESALs
100	576	4
200	1152	8
300	1720	12
400	2304	16
500	2880	20

The impact of less than 300 truck trips a year is considered negligable. If this bill produces more than 300 truck trips a year, the impact would be reflected in reduction of service life. The economic reflection of this would be a cost of $211,680 for each year with more than 300 truck trips.