

**Report on Bill for Vehicle Weight Limit Exceptions
2009 Senate Bill 531/Assembly Bill 761
Prepared by the Wisconsin Department of Transportation**

**Weight Impact Study
(As Required by Wisconsin Statute 13.096)**

Under current law, with limited exceptions, no person may operate upon a highway any vehicle or combination of vehicles that exceed certain statutory limits on size, weight, or load unless that person possesses a permit issued by the Wisconsin Department of Transportation (the department). The department may issue an annual or consecutive month permit (Michigan border permit per Wisconsin Statute 348.27(9)(a)) for an oversize or overweight vehicle or combination of vehicles to: 1) transport loads within 11 miles of the Wisconsin-Michigan state line; or, 2) transport certain forest products on USH 2 in Iron County or Ashland County or in Bayfield County from the Ashland County line through Hart Lake Road, if the vehicle or vehicle combination is traveling between Wisconsin and Michigan and does not violate Michigan law (established as of April 28, 2004).

2009 Senate Bill 531 (SB-531) and Assembly Bill 761 (AB-761) allow a vehicle or vehicle combination operating under a Michigan border permit under the circumstances described in item 2), above, to operate solely within Wisconsin, eliminating the requirement the vehicle or vehicle combination be traveling between Wisconsin and Michigan. However, if the vehicle or vehicle combination is traveling between Wisconsin and Michigan, it is still subject to the requirement it not be in violation of Michigan law.

The department has determined the bill would positively impact the forest products industry, providing an opportunity for Wisconsin raw paper products to be produced and transported within the state using larger, more efficient Michigan-configured trucks. The impacts to pavements, structures (bridges) and highway safety are largely unknown since no definitive estimates of new trips and truck configurations generated by the bill can be developed. But, the impacts to the infrastructure are assumed to be minimal unless some new market force creates a substantial increase in the commodity flow along the USH 2 corridor. The bill does not modify the types of trucks operating in the state, but rather expands the types of trips using Michigan-configured trucks. The department has developed summaries for the impacts related to the State Trunk Highway System, with regard to pavements, structures, and highway operations/safety.

Since SB-531 and AB-761 establish exceptions to the vehicle weight limits specified in Wisconsin Statutes Chapter 348, the department is required to report findings and information specified under Wisconsin Statute 13.096. As prescribed by the statute, the department has sought information from individuals, organizations and local governments likely to be affected by the proposed weight limit exceptions. The

department has used that information in arriving at our findings, and based this report on that information.

Findings regarding 2009 SB-531 and AB-761

The department finds the bill would expand the types of trips eligible for Michigan-configured trucks, but cannot quantify the number of additional trips that may be generated as a result of this legislation. The bill would affect haulers in the USH 2 corridor, allowing for intrastate use of the heavier, longer trucks along with the current allowance for interstate travel with these vehicles. Operators with trucks configured consistently with this legislation would have an advantage over those trucks only configured to meet the broader Wisconsin laws for vehicle weight. This may influence Wisconsin operators to make choices to invest in equipment with limited use under Wisconsin law. New business opportunities envisioned related to this bill are speculative at this point and therefore forecasts of trips and truck configurations generated by the bill cannot be determined.

The department's structures engineers have determined the additional stresses on state bridges on USH 2 will diminish the service life of bridges and in some cases exceed the capacity of five existing bridges. These effects are described in more detail below.

The pavement impacts of this bill are dependent upon the axle spacing and total loading of the truck and of each axle. The exact layout, spacing and number of proposed axles for the heavier loads are not known. A more definitive analysis requires more information about the specific configurations of the heavier trucks and the total expected number of trips. Therefore only general pavement comparison could be made at this time. Based on the described basic assumptions of the proposed truck axle configurations and finite amount of total load transported, the impacts of this bill to the state pavements are considered to be neutral.

Bridges

The bill allows intrastate travel of 169,000 pound gross vehicle weight trucks transporting specified forest product commodities when properly configured for axle weight and spacing, modifying the current law that allows only interstate trips on portions of USH 2 at that gross weight. This vehicle configuration exceeds the acceptable rating on five bridges on USH 2. The department's bridge engineers reached this determination based on the information the department maintains about the condition and load ratings of its highway bridges. These bridges, their respective maximum vehicle weights (MVW) and costs to replace them are enumerated the following table:

<u>Bridge No.</u>	<u>Feature</u>	<u>Max. Vehicle Wt.</u>	<u>Replacement Cost</u>
B020005	Bad River	150,000 pounds	\$1,299,000
B020006	Kakagon Slough	130,000 pounds	255,000
B040015	Iron River	140,000 pounds	283,000
B260007	Montreal River	110,000 pounds	461,000

<u>B260008</u>	<u>Montreal River</u>	<u>120,000 pounds</u>	<u>691,000</u>
TOTAL			\$2,989,000

The permits issued for these heavy trucks do not limit the speed of these trucks, nor limit the number of vehicles on a bridge at one time. This 169,000 pound gross vehicle weight (GVW) is almost twice the legal GVW of 80,000 pounds.

The additional affect resulting from this bill on these bridges is more trips of the heavier Michigan truck configurations on these deteriorated bridges. There may be other local bridges adversely affected as well.

Pavements

The pavement impacts of this bill are dependent upon the axle spacing and total loading of the truck and of each axle. The exact layout, spacing and number of proposed axles for the heavier loads are not known. Because of this, the department’s analysis assumed there were no single axles other than the steering axle. This legally loaded truck configuration yields greater pavement impacts per load. However, the net impact on affected state highway pavement is negligible if there is a resultant decrease in the number of currently permitted trucks.

Pavement life is finite and related to the number of trips and loadings of each trip. Reducing axle loadings and using vehicles requiring fewer trips would provide a benefit. Conversely, increased axle loadings and a greater number of trips will result in a net loss of pavement life.

A more definitive analysis requires more information about the specific configurations of the heavier trucks and the total expected number of trips. No conclusive data was available to determine the change in the number of trucks or loads possible at the heavier gross weights authorized under this legislation. Therefore, only a general pavement comparison could be made at this time. Based on the described basic assumptions of the proposed truck axle configurations and a finite amount of total load transported, the impacts of this bill to the state pavements are considered to be neutral.

Highway Operations and Safety

The Michigan/Wisconsin Border Permit, s. 348.27(9), has two provisions. The first provision allows operation of heavier vehicles in an 11 air-mile zone on the Wisconsin side of the UP border, with no restriction as to the point of origin or destination. This provision is valid for transport of any commodity and limits the maximum gross vehicle weight to 154,000 pounds. The second provision, created by subsequent legislation, added an allowance for travel on portions of US 2 within and beyond the 11 air-mile zone for trips involving interstate movement of only specified forest product commodities, extending west to a point in Bayfield County. This provision also allows use of some local roads subject to agreement of the local agency. The maximum gross vehicle weight for this provision is 169,000 pounds.

The bill would eliminate the interstate travel requirement for movement of certain forest products authorized by the second provision of existing law. In dropping the interstate requirement, the bill will allow for new intrastate trips on the USH 2 corridor – “in Iron County, Ashland County, and Bayfield County from the Ashland County line through Hart Lake Road” per Chapter 348.27(9)(a) – using the maximum 169,000 pound gross vehicle weight trucks referenced above.

Therefore, the bill will allow for increased opportunities for trucks and combination vehicles to operate with heavier loads. As these loads increase in weight, the operational characteristics of these vehicle types change. These changes include longer times to reach highway speeds, longer distances to safely stop and reduced maneuverability. These changes in operational characteristics increase the potential for conflicts with other vehicles.

In addition, other operational constraints may arise for these heavier vehicles including where they may safely stop or move to the roadway shoulder to allow overtaking traffic to safely pass, or for the heavier vehicle to maintain a safe following distance of 500 feet between the vehicle and any preceding vehicle. These changes in vehicle characteristics become increasingly important as traffic volumes increase and the potential for traffic operational conflicts increase.

Conversely, allowing intrastate transport on USH 2 of heavier loads on a single truck or vehicle combination may generate a positive effect of reducing the number of these vehicle types operating on the highway system, if it is assumed the volume of material to be transported is constant. However, this positive effect on highway safety may be negated if instead the volume of material to be transported increases due to positive economic factors resulting from the increased weight allowance for intrastate trips. Therefore, the net impact of the bill on highway safety cannot be fully evaluated without knowing the bill’s potential effect on the frequency of intrastate trips.

Other specific findings

Additionally, to meet the specific requirements for information to be included in the findings, the department has contacted stakeholders to obtain feedback on issues prescribed in Wisconsin Statute 13.096. Input was provided to the department by:

- Ashland County, Bayfield County, Florence County, Forest County, Iron County, Marinette County and Vilas County
- Great Lakes Timber Professionals Association
- Midwest Forest Products Company
- Wisconsin County Highways Association
- Wisconsin Motor Carriers Association
- Wisconsin Paper Council
- Wisconsin Towns Association

(a) The problem addressed by the proposed vehicle weight limit exception.

The exception will allow the use of heavier, specially configured on the named portions of USH 2 for trip origins and destinations solely within Wisconsin. Currently the use of these vehicles in Wisconsin is limited to interstate travel between Wisconsin and Michigan. These heavier trucks can transport much higher volumes of cargo than non-permitted loads since they are designed with additional axles and lower ESAL ratings. The intent of the original border permit law was to facilitate commerce between Wisconsin and Michigan. The interstate requirement reflected the typical commodity flows at the time. Some timber industry representatives in Wisconsin want to eliminate the interstate travel requirement so they can expand their customer base within the state and service them with the specially configured trucks that would increase cargo per truck and provide trucking efficiencies.

The bill will not affect the existing law within the 11 mile border area except on USH 2.

Two significant outcomes of the legislation would include:

- Providing a new limited opportunity to utilize trucks specially configured to operate under the Wisconsin border permit or to operate in Michigan
- Allowing more cargo to be transported with each truck movement on this specified route, increasing the per trip hauling efficiency, reducing the number of required truck trips, lowering the fuel consumption per ton of transported cargo, and reducing vehicle emissions.

Industry members also identified a lack of a level playing field for those transporting raw forest products in Wisconsin. They indicated it is harder for Wisconsin-based companies to compete with Michigan loggers using the Michigan-configured trucks in Wisconsin. With this bill, Wisconsin haulers with a point of origin in Wisconsin would be able to utilize the same types of vehicles in the designated corridor as truckers coming with a load from Michigan.

Government officials are concerned about the “creep” or expansion of vehicle weight limit exceptions and the increasing deterioration of roadway pavements and bridges. Legislation that may encourage Wisconsin operators to acquire specially configured equipment with a very narrow ability to use the equipment under state law may then push for expanded routes to support the specialized equipment.

(a1) Whether the current vehicle weight limit creates a hardship, and if so, the degree of the hardship.

Forest products industry representatives noted the current vehicle weight limit creates a burden by limiting cargo capacities and increasing the cost to move their products for trips solely within Wisconsin. They indicate the bill will benefit Wisconsin loggers, who now have a harder time competing with Michigan loggers using larger and/or heavier trucks. Being able to use the Michigan-configured trucks for trips solely in Wisconsin will provide additional opportunities for suppliers to expand their customer base.

Local governments viewed the matter differently, mentioning the impacts of the current weight limits on the infrastructure and their challenges with maintaining deteriorating pavements and bridges. The desire of various industries to transport heavier loads is not limited to certain forest products, and the cost issues for the public and for the industry do not change based on the commodity being transported.

(a2) The costs associated with complying with the current vehicle weight limit and any anticipated savings likely to result from the proposed vehicle weight limit exception.

The specific costs associated with complying with the current vehicle weight limit and any anticipated savings likely to result from the proposed vehicle weight exception are not known by the department. Timber industry representatives indicate more trucks are on the road as a result of the interstate requirement in the Wisconsin-Michigan border permit. As an example, they mentioned the payload for a non-permitted load in Wisconsin can be up to 40,000 pounds, while a Michigan-configured truck can transport up to a 100,000 pound payload.

Heavier truck loads create industry savings through reduced fuel costs and lower labor costs as the amount transported by one driver would increase. Long term equipment cost savings might be attained as additional capital investment for reconfigured trucks are factored in and a smaller truck fleet could be achieved. These savings would not be realized if the volume of cargo increased and the fleet size did not contract.

Local governments viewed the cost issue differently. Comments were made about the accelerated deterioration of bridges along USH 2 and the resultant higher life cycle costs, pavement damage such as rutting in the wheel path along USH 2, and a generally shorter useful life for USH 2. Government officials indicated there would be no net savings from the weight limit exception. They predicted the result would be additional cost to taxpayers to maintain the area bridges and pavement. Those increased maintenance or rehabilitation efforts also increase inconvenience the public when work is required. One official did concede there may be an increase in timber sale revenues, but it would be outweighed by the damage to the roadway.

(a3) Whether any other efforts have been made to resolve the problem addressed by the proposed vehicle weight limit exception.

The exceptions now in place for raw forest products are evidence efforts have been made to resolve the problem of the economics of moving raw forest products in Wisconsin. Past legislation allowed for the movement of heavier, Michigan-configured trucks within the USH 2 corridor, but this was premised upon truck movements between Wisconsin and Michigan. The bill eliminates the interstate requirement for these trucks, providing uniformity in the vehicles allowed on the specified route, regardless of the origin or destination of the load. Stakeholders were not aware of any other efforts to resolve this issue aside from seeking the change to the Wisconsin-Michigan border permit.

Efforts to also include enhanced enforcement provisions, such as paper enforcement utilized in Minnesota, have to this point not been adopted. An important issue for highway agencies is assuring high levels of conformance to legal limits. The intent of the

interstate provision was to provide a level playing field for truckers. However, the intent now would be to expand and allow higher weights in Wisconsin.

(a4) The degree of control by motor carriers over the weight and weight distribution of the vehicle or load.

The timber industry indicates trucks transporting raw forest products have increasingly accurate controls over the weight and weight distribution of the vehicle and the load on the vehicle. Provisions allowing higher maximum limits for raw forest products were premised in part on the ability to estimate weights of materials loaded in the woods. Over time, technologies have become widely available to weigh during loading operations. The Midwest Forest Products Company, for example, has a certified scale at their Iron River chip mill.

Local governments viewed the matter differently, citing the need for additional motor carrier enforcement and scales to ensure compliance with existing vehicle weight limits. Counties also mentioned their ability to post county truck highways for maximum loads, which helps them control the weight of vehicles on deteriorated parts of their road network. Data indicating a substantial level of noncompliance with existing weight limits raises questions about how the ability to accurately weigh and load truck is being used.

(b) A description of the proposed vehicle weight limit exception, including any changes on all of the following: (b1) Gross weight limitations and gross axle and axle combination weight limitations. (b2) Width, height and length limitations.

The Wisconsin-Michigan border permit provided by Wisconsin Statute 348.27(9)(a) allows exceptions to Wisconsin's gross vehicle weight and length limitations for interstate travel between Wisconsin and Michigan. Eligible trucks cannot violate weight and length limits established, as of April 28, 2004, under Michigan law. This annual or consecutive permit provides for the following truck travel:

- Operation of eligible trucks up to a maximum 154,000 pound gross vehicle weight (gvw) in an 11-mile zone on the Wisconsin side of the border, from the upper peninsula of Michigan. There is no restriction as to origin or destination, and all commodities are eligible for transport.
- If the vehicle is transporting exclusively peeled or unpeeled forest products cut crosswise, wood chips, or forestry biomass, the 11-mile limit does not apply and vehicles with permits can operate on other specified roads. This includes travel anywhere on USH 2 in Iron or Ashland Counties, as well as on USH 2 in Bayfield County, from the Ashland County line west to Hart Lake Road. A maximum 169,000 gvw applies in these cases and the trip must involve interstate movement.

The vehicle weight limit exception will expand the *types (i.e. intrastate) and number of trips* eligible for the Wisconsin-Michigan border permit. The bill allows for the operation of Michigan-configured trucks solely within Wisconsin, eliminating the requirement the vehicle or vehicle combination be traveling between Wisconsin and Michigan. But the proposed legislation does not modify the *types of vehicles* eligible for a Wisconsin-Michigan border permit. These vehicles will continue to be required to comply with Michigan law established as of April 28, 2004. These Michigan-configured trucks are

typically longer and heavier than non-permitted loads in Wisconsin, but have additional axles to limit ESAL values and associated pavement damage.

(b3) The transportation of particular commodities.

Being able to haul additional cargo for trips solely within Wisconsin will generally benefit Wisconsin truckers with Michigan-configured trucks hauling peeled or unpeeled forest products cut crosswise, wood chips, or forestry biomass. The bill will specifically benefit the chip mill in Iron River, Wisconsin. The mill is owned by Midwest Forest Products Company and provides wood fiber to the paper industry. The mill is located on Hart Lake Road east of Iron River and has a production capacity between 60 and 120 truck loads per week. The company had been transporting timber products from the chip mill to a paper mill in Ontonagon, Michigan. The Ontonagon mill has since closed and the Midwest Forest Products Company would like the interstate requirement eliminated so they could use their Michigan-configured trucks to transport materials from Iron River, Wisconsin to new customers in Wisconsin, potentially including the Excel Energy biomass plant in Ashland. The company has worked with Senator Jauch to introduce Senate Bill 531 during the 2009 legislative session.

(b4) Any highway, highway route or area of the state substantially affected by the proposed vehicle weight limit exception.

The Wisconsin-Michigan border permit allows oversize or overweight vehicle or combination of vehicles to: 1) transport loads within 11 miles of the Wisconsin-Michigan state line; or, 2) transport certain forest products on USH 2 in Iron County or Ashland County or in Bayfield County from the Ashland County line through Hart Lake Road. The proposed legislation allows a vehicle or vehicle combination operating under a Michigan border permit under the circumstances described in item 2), above, to operate solely within Wisconsin, eliminating the requirement the vehicle or vehicle combination be traveling between Wisconsin and Michigan. The highway affected by the proposed exception is USH 2 from the Wisconsin-Michigan border to Hart Lake Road in Bayfield County, and any local road along that corridor where the local authority may agree to this use.

(b5) Seasonal transportation patterns.

Most representatives from the timber industry and local government were not able to specifically forecast if the bill would influence seasonal transportation patterns. One person suggested the bill may create an incentive to transport more loads during the winter, prior to the spring thaw weight restrictions that typically begin in early March of each year.

(c) Any other special considerations concerning the proposed vehicle weight limit exception, such as the frequency of use of the proposed exception, the support and involvement of businesses, industries and local authorities affected by the proposed exception.

The bill is supported by several timber industry representatives who spoke in favor of the bill at the public hearing on Senate Bill 531 and/or Assembly Bill 761. Supporters

include, but are not limited to, individual legislators, loggers, the Great Lakes Timber Professionals Association and the Midwest Forest Products Company.

Conclusion

The department has determined the bill would positively impact the forest products industry, providing an opportunity for Wisconsin raw paper products to be produced and transported within the state using larger, more efficient Michigan-configured trucks. The impacts to pavements, structures (bridges) and highway safety are largely unknown since no definitive estimates of new trips generated by the bill or their specific truck configurations can be developed. But the impacts to the infrastructure are assumed to be minimal unless some new market force creates a substantial increase in the commodity flow along the USH 2 corridor.

The additional stresses on state bridges on USH 2 will diminish the service life of bridges and in some cases exceed the capacity of five existing bridges. The pavement impacts of this bill are dependent upon the axle spacing and total loading of the truck and of each axle. The exact layout, spacing and number of proposed axles for the heavier loads are not known. A more definitive analysis requires more information about the specific configurations of the heavier trucks and the total expected number of trips. Therefore only general pavement comparison could be made at this time. Based on the described basic assumptions of the proposed truck axle configurations and finite amount of total load transported, the impacts of this bill to the state pavements are considered to be neutral.