In 1993, Minnesota law deemed all IOH as exempt from size, weight and load restrictions on MN roads, with the following exceptions:

- Pneumatic tires may not be operated on a public highway with a maximum wheel load that exceeds 500 pounds per inch of tire width.
- In 2009, the law was modified: a person operating or towing an implement of husbandry on a bridge must comply with state load restrictions.

This law allows IOH of any size, weight and load, to drive on any paved or gravel roads in MN with no weight or axle restrictions.

### Current Law:

In 1993, Minnesota law deemed all IOH as exempt from size, weight and load restrictions on MN roads, with the following exceptions:

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- In 2009, the law was modified: a person operating or towing an implement of husbandry on a bridge must comply with state load restrictions.

#### Subdivision 1. Exemption from size, weight, load provisions.

Current Law:

- The provisions of sections 169.80 to 169.88 that govern size, weight, and load do not apply to an implement of husbandry while operated in compliance with this section.

#### Subdivision 2. Weight restrictions.

Despite subdivision 2, a person operating or towing an implement of husbandry on a bridge must comply with a sign that limits the maximum weight allowed on a bridge.

- A recent research study at the MnDOT MnROAD Pavement Testing Facility indicates that heavy IOH accelerate damage to paved roads. Local paved roads are deteriorating at a much faster rate than expected, increasing the cost and labor for local agencies maintaining paved roads.

### Resources/Research

- Impacts of Heavy Loads: Effects of Implements of Husbandry on Pavement Performance: LRRB (2012-08)
  - Full Report: [https://www.lrrb.org/media/reports/201208.pdf](https://www.lrrb.org/media/reports/201208.pdf)
  - Technical Summary: [http://www.lrrb.org/media/reports/201208TS.pdf](http://www.lrrb.org/media/reports/201208TS.pdf)
- 2015 Minnesota Statutes:
  - 169.801 IMPLEMENT OF HUSBANDRY
    - [https://www.revisor.mn.gov/statutes/?id=169.801](https://www.revisor.mn.gov/statutes/?id=169.801)
  - 169.823 TIRE WEIGHT LIMITS
    - [https://www.revisor.mn.gov/statutes/?id=169.823](https://www.revisor.mn.gov/statutes/?id=169.823)
  - 169.824 GROSS WEIGHT SCHEDULE
    - [https://www.revisor.mn.gov/statutes/?id=169.824](https://www.revisor.mn.gov/statutes/?id=169.824)

### Impacts:

A recent research study at the MnDOT MnROAD Pavement Testing Facility indicates that heavy IOH accelerate damage to paved roads. Local paved roads are deteriorating at a much faster rate than expected, increasing the cost and labor for local agencies maintaining paved roads.

### History:

In 1993, MN passed a law exempting Implements of Husbandry (IOH) from size, weight and load restrictions. Over the last two decades, as farming practices have changed from family to corporation, the size and weight of IOH have increased dramatically. As IOH continue to increase in size and weight, there is a serious concern about how these IOH are damaging roads. The states surrounding Minnesota have addressed this concern by establishing maximum gross weights and gross axle weights. Minnesota has not. This brochure provides background information on the history of IOH: summarizes neighboring states’ IOH weight restrictions and provides links to recent research data that details the damaging effects IOH have on pavements.

The 1993 law exempting IOH from size, weight and load restrictions was established due to influence from the agriculture industry. In recent years, farms have consolidated and increased in size significantly, requiring farm equipment manufacturers to respond by producing larger and heavier equipment.

Changes to the law in 2009 require IOH to comply with posted bridge weight restrictions. However, the change did not address the concerns of pavement damage to roads and highways. The Minnesota Department of Transportation (MnDOT), local road authorities and industry partners are concerned about the potential damage to pavements due to this increased size and weight. In 2001, MnDOT conducted a scoping study on the impact of agricultural equipment on Minnesota's low-volume roads. One of the recommendations from the study was to conduct an investigation using the MnROAD Pavement Test Facility to specifically address pavement damage due to agricultural equipment. The LRRB then participated in a five-year pooled-fund study titled Effects of Implements of Husbandry (Farm Equipment) on Pavement Performance at MnROAD to test the impacts of various IOH on fully instrumental pavements of different thicknesses. Furthermore, the project aimed to quantify the pavement damage caused by heavy farm equipment as compared to the damage caused by a typical 5-axle, 80 kip semi-truck. The report was published in 2012 and provides many specific findings, with these major findings:

- Pavement was significantly impacted by IOH
- Pavement response is governed by axle weight, not gross vehicle weight
- Fully loaded farm equipment should not be allowed to drive on pavements as they cause significant damage. Additional increase in pavement damage occurs during certain conditions: Fully saturated soil, thawed base/subbase and high asphalt concrete temperature

### Resources/Research

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  - 169.801 IMPLEMENT OF HUSBANDRY
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Comparison of Maximum IOH Allowable Weights By Neighbor States

<table>
<thead>
<tr>
<th>Neighbor State</th>
<th>Maximum Gross Weight</th>
<th>Maximum Axle Weight</th>
<th>Spring Weight Restrictions</th>
<th>Maximum Bridge Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota</td>
<td>105K lbs</td>
<td>500 lbs/in of tire width</td>
<td>Must comply with posted weight limits.</td>
<td>119.5K lbs</td>
</tr>
<tr>
<td>Iowa</td>
<td>96,000 lbs</td>
<td>28,000 lbs</td>
<td>24,000 lbs per axle 96,000 lbs max GW</td>
<td>80K lbs max GW. 20K lbs/axle. Must comply with posted weight limits where signed.</td>
</tr>
<tr>
<td>North Dakota</td>
<td>105,500 lbs</td>
<td>Exempt</td>
<td>Local road authorities post annually</td>
<td>20K lbs/axle. Must comply with posted weight limits where signed.</td>
</tr>
<tr>
<td>South Dakota</td>
<td>660 lbs per inch of tire width</td>
<td>22,000 lbs</td>
<td>Local road authorities post annually.</td>
<td>Exempt within 75 miles, otherwise 92,000 lbs</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>Exempt within 75 miles, otherwise 92,000 lbs</td>
<td>Exempt within 75 miles, otherwise 23,000 lbs</td>
<td>Local road authorities post annually.</td>
<td>Exempt within 75 miles, otherwise 92,000 lbs</td>
</tr>
</tbody>
</table>

How IOH Have Increased In Size Over Time

<table>
<thead>
<tr>
<th>Year</th>
<th>Grain Cart*</th>
<th>Liquid Manure*</th>
<th>Terragator</th>
<th>Semi Tractor Trailer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>7,500 lbs</td>
<td>20,000 lbs</td>
<td>25,000 lbs</td>
<td>73,000 lbs</td>
</tr>
<tr>
<td>1990</td>
<td>45,000 lbs</td>
<td>35,000 lbs</td>
<td>40,000 lbs</td>
<td>80,000 lbs</td>
</tr>
<tr>
<td>2015</td>
<td>85,000 lbs</td>
<td>119,500 lbs</td>
<td>60,000 lbs</td>
<td>80,000 lbs</td>
</tr>
</tbody>
</table>

*These weights do not include the weight of the tractor that pulls them.