1. **What are Safe, Productive, Infrastructure-Friendly Vehicles (SPIF)?**

The new regulation is intended to cause a migration of tractor trailers to Safe, Productive, Infrastructure-Friendly (SPIF) alternatives. The regulation includes 13 SPIF tractor-trailer combinations. These vehicles provide a range of productive alternatives without the associated excessive damage to roads and bridges.
Highway safety will improve as SPIF vehicles provide superior stability and control and can operate within acceptable amounts of space when turning or making emergency manoeuvres. In addition, the heavy 5 and 6-axle SPIF semi-trailers are equipped with an enhanced braking system to minimize the risk of brake failure and warn the driver of potential problems.

A number of SPIF semi-trailers make use of self-steering axles in place of rigid lift-axles. The self-steering axles remain on the road at all times when the vehicle is loaded so that all axles take their proper share of the weight and contribute to the stability and braking ability of the vehicle. To further protect highway pavement, all axles on SPIF semi-trailers automatically load-equalize so that the weight of the trailer and load is equally spread over all trailer axles.

2. How do SPIF vehicles improve industry productivity?

As SPIF semi-trailers are equipped with self-steering axles and load-equalization, MTO has determined that there is no longer a need to apply special restrictive weights to aggregate vehicles that meet the SPIF standards. The method of calculating the allowable gross weight of SPIF tractor-trailers is therefore the same regardless of product being carried.

SPIF vehicles include a number of productivity improvements. All SPIF semi-trailers have a standardized maximum length of 16.2m (53’). All SPIF combinations may be equipped with additional lift-axles for deployment in other jurisdictions. Tandem and tridem axle weight increases have been extended to double trailers to further improve harmonization of rules with Quebec and the Atlantic provinces. Tri-drive tractors have been introduced for situations where greater traction is needed. Axles equipped with wide single tires are allowed up to 8,000 kg which is 2,000 kg higher than previously allowed under Regulation 32/94.

3. What are the four phases of Vehicle Weight & Dimension Reforms?
Phase 1 was introduced in 2001 and subsequently modified to address all non-dump semi-trailers with 3 or less axles. Except for some very specialized tankers, all of these semi-trailers must meet SPIF standards by January 1, 2006 or incur a 3,000 kg reduction from their allowable gross weight. This reduction will increase to 4,500 kg in 2011 or 2021 depending on semi-trailer body style.

Phase 2 was introduced in mid-2002 and addressed dump semi-trailers, including end-dumps and open hopper dumps. Any of these trailers built after 2002 must meet SPIF standards, or operate at reduced weights. All such trailers built prior to 2003 are grandfathered and may continue to operate for their reasonable operating life. Also as part of Phase 2, it was determined that the special, more restrictive method of calculating allowable gross weights for aggregate vehicles was no longer necessary for tractor-trailer combinations that meet SPIF standards.

Phase 3 addresses all non-dump semi-trailers with 4 or more axles and all double trailers. Any of these trailers built after 2005 must meet SPIF standards, or operate at significantly reduced weights. All such trailers built prior to 2006 are grandfathered and may continue to operate for their reasonable operating life.

Phase 4 will address straight trucks and their trailers. In addition, SPIF 4-axle tractor alternatives will be further explored. Policy development will commence in 2006. Research, testing and stakeholder consultations are expected to take at least two years. No changes are therefore expected until some time in 2008 or 2009.

4. Where can I get a copy of the new Regulation 413/05?

The regulation is available at www.e-laws.gov.on.ca. Under the listing for the Highway Traffic Act look for the regulation titled, "Vehicle Weights and Dimensions - for Safe, Productive, Infrastructure-Friendly Vehicles". If you do not have direct internet access, you should enquire at a public library - most libraries provide internet access and assistance in its use.
5. **How do these changes affect operation of my tractor-trailer?**

The starting point is to determine whether or not your tractor-trailer combination qualifies as SPIF. SPIF vehicles are referred to in the regulation as "Designated Combinations":

1) To qualify as SPIF, the combination must meet the description and dimensional limits set out in one of the Schedules referred to in Section 37 of the regulation as well as any Preconditions listed in Sections 5 to 14. If your vehicle qualifies as a designated SPIF combination, its allowable weights are as described in the Weight Limit Chart of the Schedule.

If the combination does not qualify as SPIF:

2) There are no changes to the method of calculating weight allowances on non-SPIF combinations. Allowable weights on aggregate and non-aggregate vehicles continue to be determined separately as described in Sections 24 and 25 of the regulation. But, as a result of vehicle weight and dimension reforms, tractor-trailers that do not qualify as SPIF will face additional reductions from allowable gross weights. These reductions may take place now or at a specified date in the future - there are no exceptions.

6. **What are the non-SPIF weight reductions?**

1. **Dump semi-trailers** - see Sections 27 and 34 of regulation
   - built before 2003 - grandfathered at current weights for reasonable life
   - built after 2002 - immediate reduction of 4,500 kg or 9,000 kg if not SPIF

2. **Non-dump semi-trailers with 3 or fewer axles** - see Sections 28 to 30 of regulation
   - 3,000 kg reduction effective January 1, 2006 if not SPIF (except for specialized tankers)
   - reduction increases to 4,500 kg in 2011 or 2021

3. **Non-dump semi-trailers with 4 or more axles** - see Sections 31 and 34 of regulation
Vehicle Weight and Dimension Limits in Ontario - FAQ

4. **Double trailer combinations** - see Sections 32 to 34 of regulation
   - both trailers built before 2006 - grandfathered at current weights for reasonable life
   - either trailer built after 2005 - immediate reduction of 4,500 kg or 9,000 kg if not SPIF

7. **Will Ontario continue to hold 'long combinations' to a higher accountability?**

   Yes. Ontario introduced long combinations, including 53' semi-trailers and 25m double trailer combinations, in the early 1990's under strictly prescribed conditions included in Regulation 32/94. To ensure these larger vehicles met all dimensional and safety guidelines - the combination was considered overlength and not allowed to operate on Ontario highways if it failed to meet any of the prescribed requirements.

   Regulation 32/94 is now revoked and allowances for long combinations are expanded to all SPIF combinations. Nevertheless, these long combinations continue to be held to higher accountability. A long combination that fails to qualify as SPIF is subject to any weight reductions noted above and will continue to be considered an 'overlength' vehicle.

   If your tractor-trailer combination includes a semi-trailer over 14.65m, includes double trailers with a box length over 18.5m, or the combination's overall length exceeds 23m - the vehicle is considered a long combination and must meet all SPIF requirements to operate on Ontario highways.

8. **What about 3-axle tractor wheelbase limits?**

   Tractor wheelbases may exceed 6.2m (244") if:
9. What are the rules for wide-based single tires?

Axles equipped with wide single tires are limited to a maximum of 9,000 kg per axle if:
- the combination is SPIF (other than a long combination) where all trailers in the combination are built before 2006; or
- the combination is non-SPIF.

Axles equipped with wide single tires are limited to a maximum of 8,000 kg per axle if:
- the combination is a SPIF 'long combination' as described above; or
- the SPIF combination includes one or more trailers built after 2005.

The SPIF self-steer triaxle and self-steer quad semi-trailers continue to have special rules as stated in the schedules of the regulation.

10. Are there restrictions on the controls to raise or lower self-steering axles?

Yes. Self-steering axles may be raised out of the way when the vehicle is empty or lightly loaded as long as the remaining axles are within legal weight limits. These axles can also be raised when the vehicle is reversing, in off-road applications and in certain situations where additional drive traction is required.
Manual controls to raise and lower self-steering axles must be trailer mounted and not accessible to the driver in the cab of the tractor. The trailer may be equipped with a self-contained device to automatically raise the self-steering axle(s) when the vehicle is reversing.

Tractor-trailers, where the semi-trailer is designed to haul raw forest products, are exempt from the above restriction and may have controls in the tractor cab to raise and lower the self-steering axles in off-road operations only. These controls may not be used on a public highway.

Certain SPIF tractor-trailers may be equipped with controls that allow weight to be transferred to the tractor drive axles to increase traction when climbing snow or ice covered inclines. To accomplish this weight transfer, the control would allow the forward self-steer axle to be raised or its weight reduced. Similarly, B-trains may be equipped with a control to reduce the weight on the most forward tridem axle of the lead trailer. These controls are allowed providing the following conditions are met:

a. the control will not engage unless the vehicle's emergency 4-way flashers are on; and
b. the control contains a device to prevent the weight transfer at speeds over 60 kph.

There is no restrictions on controls to raise and lower additional lift-axles which may only be used outside of Ontario.

If the vehicle has lift-axle controls other than described above, it will no longer qualify as SPIF. If operators use the above controls in circumstances other than described, and this results in axle or gross weights in excess of maximums allowed, the vehicle will be considered overweight.

11. **What happens to vehicles operating under special trial permits?**

Special trial permits, such as those issued for 16.2m (53’) self-steer quads, are no longer required provided the vehicle meets all of the SPIF conditions in the regulation. If the compliance label or manufacture's ID plate does not have the notation "SPIF" or "Reg 597 (Ont)-4", then you will have to make arrangements with the trailer manufacturer to have the notation added or the label replaced.
12. How are float semi-trailers affected by these changes?

Float semi-trailers are impacted the same as other non-dump semi-trailer combinations. If the semi-trailer has three or fewer axles, the combination must conform to SPIF standards by January 1, 2006 or face a 3,000 kg reduction from the allowable gross weight. If the trailer has 4 or more axles and is built prior to 2006, it may continue to operate at current weight allowances under grandfather provisions. If built after 2005, it must meet SPIF standards or face an immediate 4,500 kg reduction (9,000 kg if equipped with two or more lift-axles).

On January 1, 2006, the weight limits on SPIF semi-trailers equipped with tridem axle spreads of 3.6 to 3.7m will be increased to 26,000 kg. It is expected that this configuration will become the primary replacement for existing floats equipped with four axles.

To ensure adequate deck space, annual permits for float semi-trailers - defined as a semi-trailer designed to carry vehicles and equipped with a removable gooseneck which is not intended to carry cargo - will be modified to provide an exemption from the 12.5m maximum semi-trailer wheelbase limit specified in the SPIF schedules. All other standards must be met.