



Legislative Studies on Overweight Trucks Operating Under Permit

Gary R. Allen, Ph.D.
Chief of Technology

Background of the Bills

	HB2917 <i>Sand and Gravel Trucks</i>	HB1645 <i>Pipe Cleaning Trucks</i>	SB1321 <i>Petroleum Tank trucks</i>
Configuration	Mainly 3 or 4 axle SU	3 axle SU	2 axle SU
Payload	Gravel, sand, etc.	Water, debris	Heating oil, propane
Overweight Allowance	+5,000 - 11,000 lbs. More for 5+ axles	+10,000 lbs.	+4,000 lbs.
Other	Applies to 7 SW VA severance tax counties only. Since 1999.	DMV estimates only 20 trucks affected in VA	Temporary one year fee of \$800

Legislative Requirements

	HB2917 <i>Sand & gravel</i>	HB1645 <i>Pipe cleaning</i>	SB1321 <i>Tank wagons</i>
Mandate	VDOT to recommend legislation by 12/1/07	VDOT to recommend legislation by 12/1/07	VDOT to implement permanent fee structure by 7/1/08. No APA requirement.

Study Approach

- Objective: Estimate *additional* maintenance costs of overweight vehicles operating under permits
 - Focus: added weight-related pavement damage
 - Higher axle weights increase pavement damage—ample scientific evidence
 - Number of axles and axle configuration are key
 - Conservative approach in terms of bridges

Study Approach, cont.

- VTRC pavement damage model uses standard engineering pavement design concept of 18,000 lb. equivalent single axle load (ESAL)
 - Pavements designed to carry a certain number of ESAL's before needing repair/replacement
- Calculated overweight-under-permit vs. non-overweight ESAL's for each truck type
- Identified % of budgeted FY07 maintenance costs attributable to:

– Axle loads	16%
– Costs Common to all vehicles	79%
– Costs attributed to specific vehicles	5%
- Calculated added FY07 maintenance costs due to overweight-under-permit ESALs for each truck type

Cost Responsibility Study

- Study request from Secretary
- Examining both truck and passenger vehicles
- Methodology capable of examining all truck classes
- Draft report nearing completion

Findings

- Businesses seek overweight exceptions to improve their efficiency and use the full payload capacity of larger trucks
 - Or because they believe the *Code of Virginia* already makes overweight exceptions for businesses similar to theirs
- Calculation of added annual maintenance cost due to operating overweight under permit is sensitive to ESAL increase and the estimates of mileage traveled
- Same approach can be used to estimate added maintenance cost of a single overweight trip

Findings, cont.

- Sand and gravel not hauled in same types of trucks as coal any longer
 - Sand and gravel overweight exception does not appear to provide a “safety net” for coal haulers in downturns
 - Instead, the exception benefits gas well drilling, which is a strong market

Results of the Cost Analysis

Truck	GVW		Annual Miles	Added ESALs	Added Maintenance Cost
	Before Code Change (lb.)	After (lb.)			
3 axle SU tandem for gravel/sand	49,000	60,000	40,000	0.70	\$1,023
4 axle SU tri-axle for gravel/sand	65,000	70,000	70,000	0.26	\$675
3 axle SU tandem for pipe cleaning	52,000	64,000	13,000	0.48	\$229
3 axle SU tandem for hydroexcavation	54,000	64,000	6,000	0.39	\$85
2 axle SU petroleum tank wagon	32,000	36,000	26,000	0.24	\$227

Proposed Legislative Options

- Option A: Establish fees only for the 3 specific types of haulers using added maintenance cost approach.
 - Update analysis bi-annually to reflect VDOT's maintenance cost experience
- Option B: Recommend that fees be established in same way for *all* haulers currently eligible for no-cost overweight permits by 2009
 - Includes: concrete, containerized cargo, excavated material, well-drilling equipment, solid waste, cotton modules
- Exempt both options from Administrative Process Act

