



**Department of Transport**

# **15-year Review of Vehicle Overloading in South Africa 1995 to 2009**

**Presentation to the 19<sup>th</sup> Meeting of the Road Pavements Forum**

**Salt Rock, KwaZulu-Natal**

**5 May 2010**

# Introduction

- Project was commissioned by the Department of Transport
- Need for overload control statistics to be available on a central basis
- Data was collected for the period 1995 to 2009 (15 years of data)



- Data was available in two formats:
  - Electronic weigh data (weigh transactions)
  - Summary data (vehicles weighed, overloaded; chargeable) per weighbridge per month
- Electronic weigh data was converted to a uniform database structure



# Available Data

- Electronic weigh data:
  - 9 million records (vehicles weighed)
  - Data for 6 580 weighbridge-months



- Summary data:
  - Represents 920 000 vehicles weighed
  - Data for 310 weighbridge-months



- All data:
  - Represents 9.9 million vehicles weighed
  - Data for 6 890 weighbridge-months



# Weighbridges in Database

Province	Current Status				Total
	Operational	Non-operational	In disuse	Unknown	
ECAP	3				3
FRST	2	1			3
GAUT	6			14	20
KZNL	16		4		20
LIMP	6			6	12
MPUM	19		16	1	36
NCAP	7	3	3		13
NWES	3				3
WCAP	9				9
<b>Grand Total</b>	<b>71</b>	<b>4</b>	<b>23</b>	<b>21</b>	<b>119</b>



# Contents of Report

- Chapters for South Africa and each province covering:
  - General weighing statistics
  - Average Overloads
  - Distribution of vehicle overloads
  - Vehicle class statistics





- Abnormal loads exemption permits
- Overload monitoring using WIM equipment
- Conclusions and recommendations
- Addendum 1: Summary of weigh data per weighbridge per month

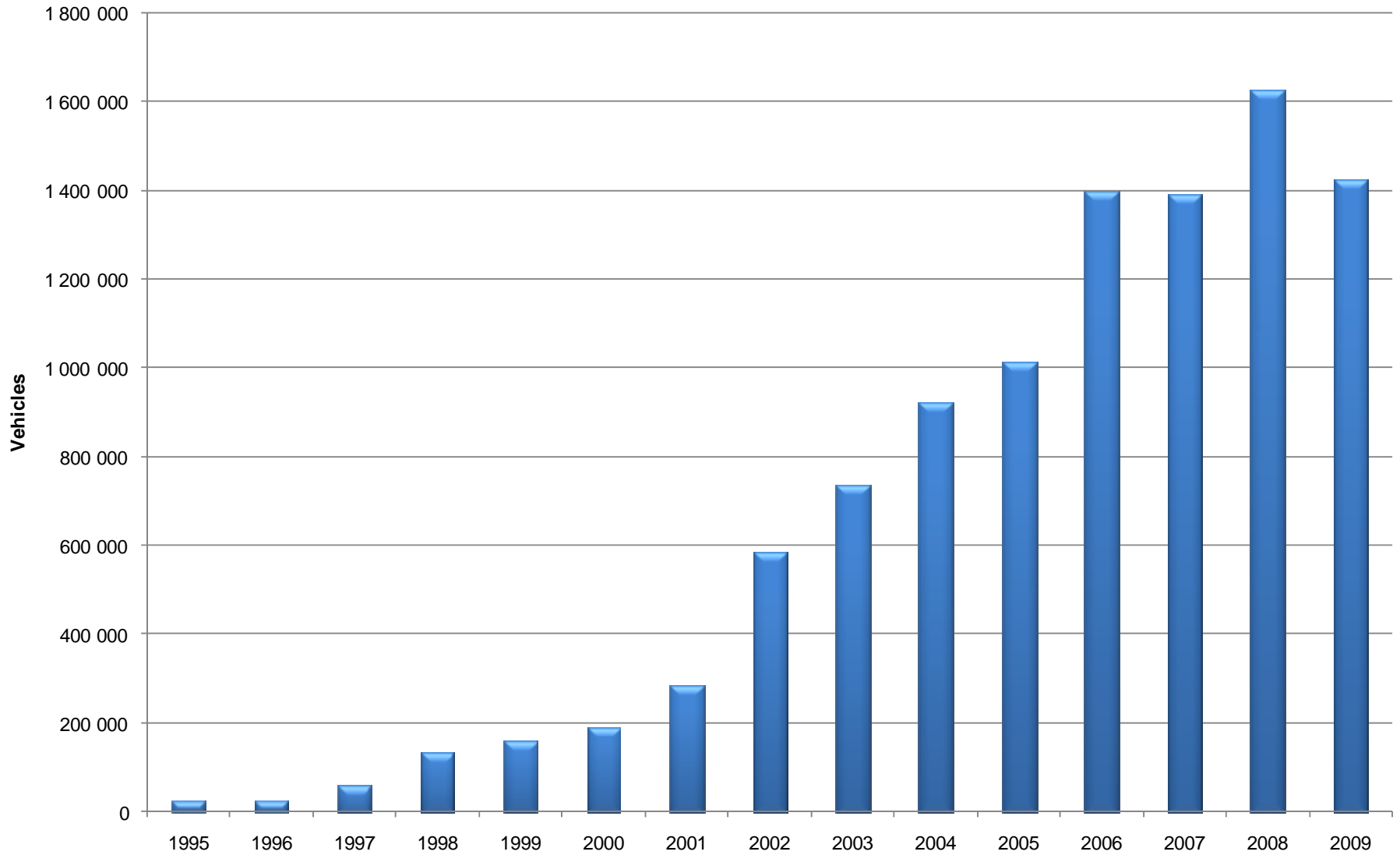


# General Weighing Statistics

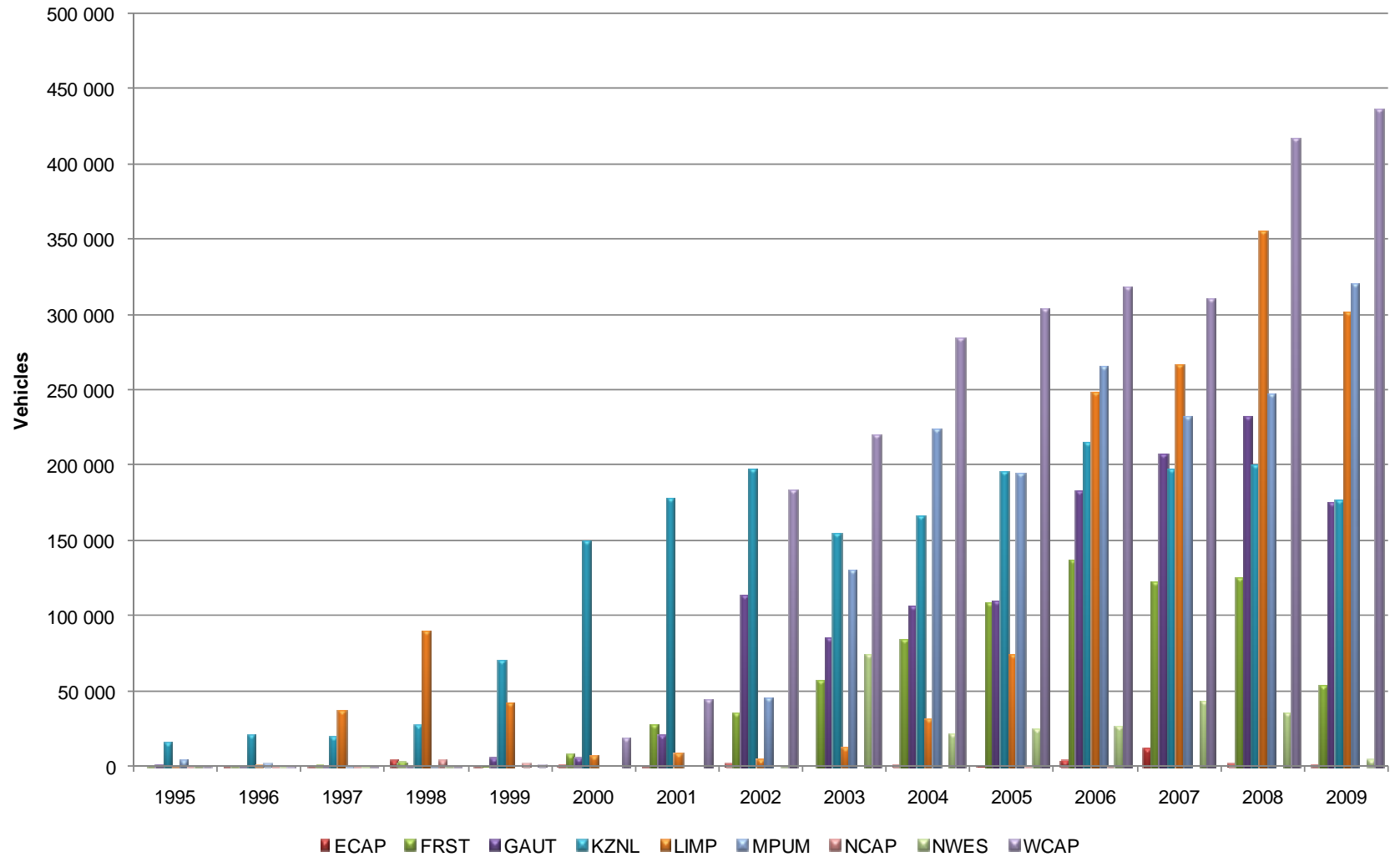
- Covers number of vehicles weighed, overloaded and chargeable
- This section is based on all data (electronic and summary)



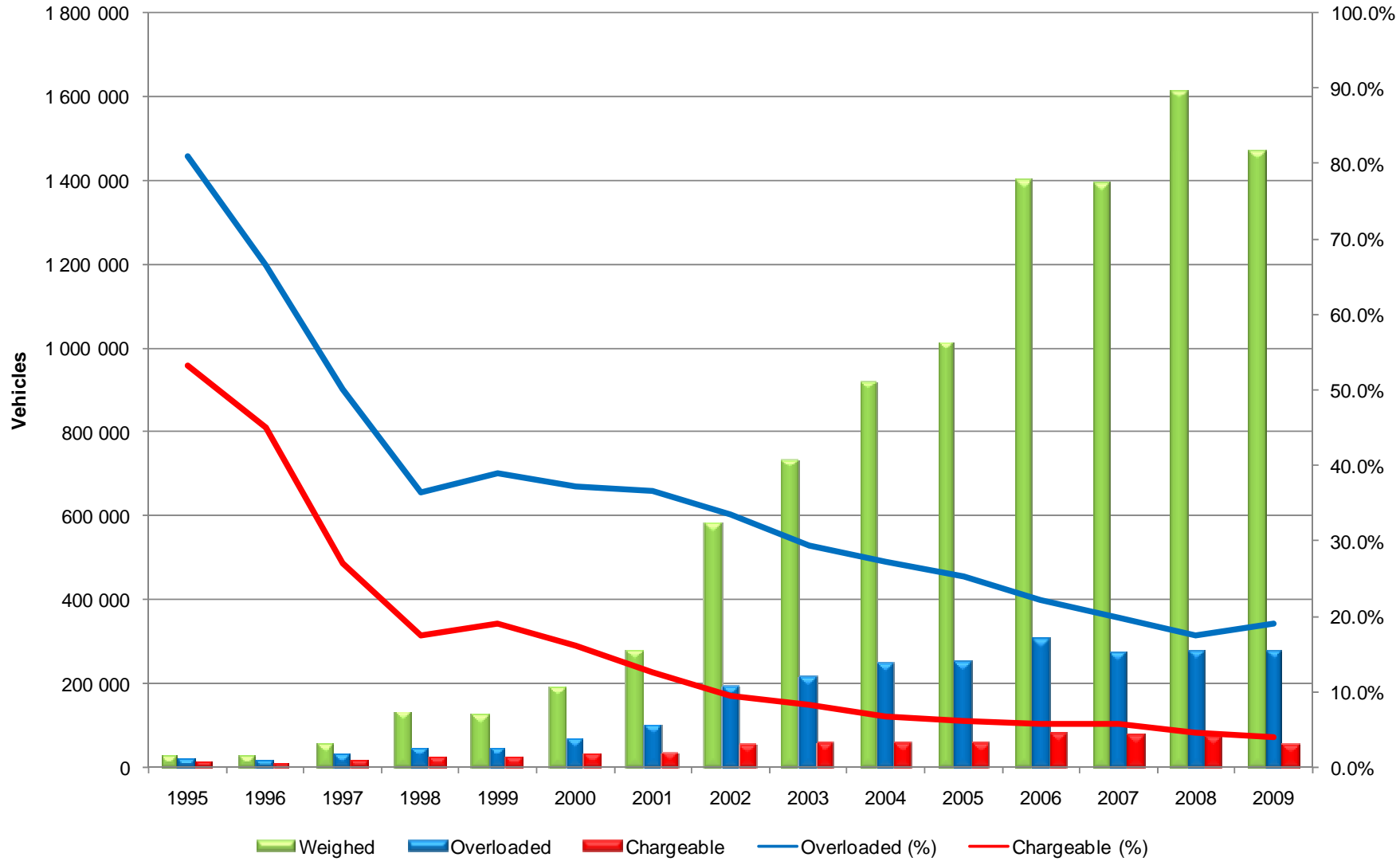
## Vehicles Weighed per Annum in SA



## Vehicles Weighed per Province per Annum



# Vehicles Weighed, Overloaded, Chargeable per Annum in SA

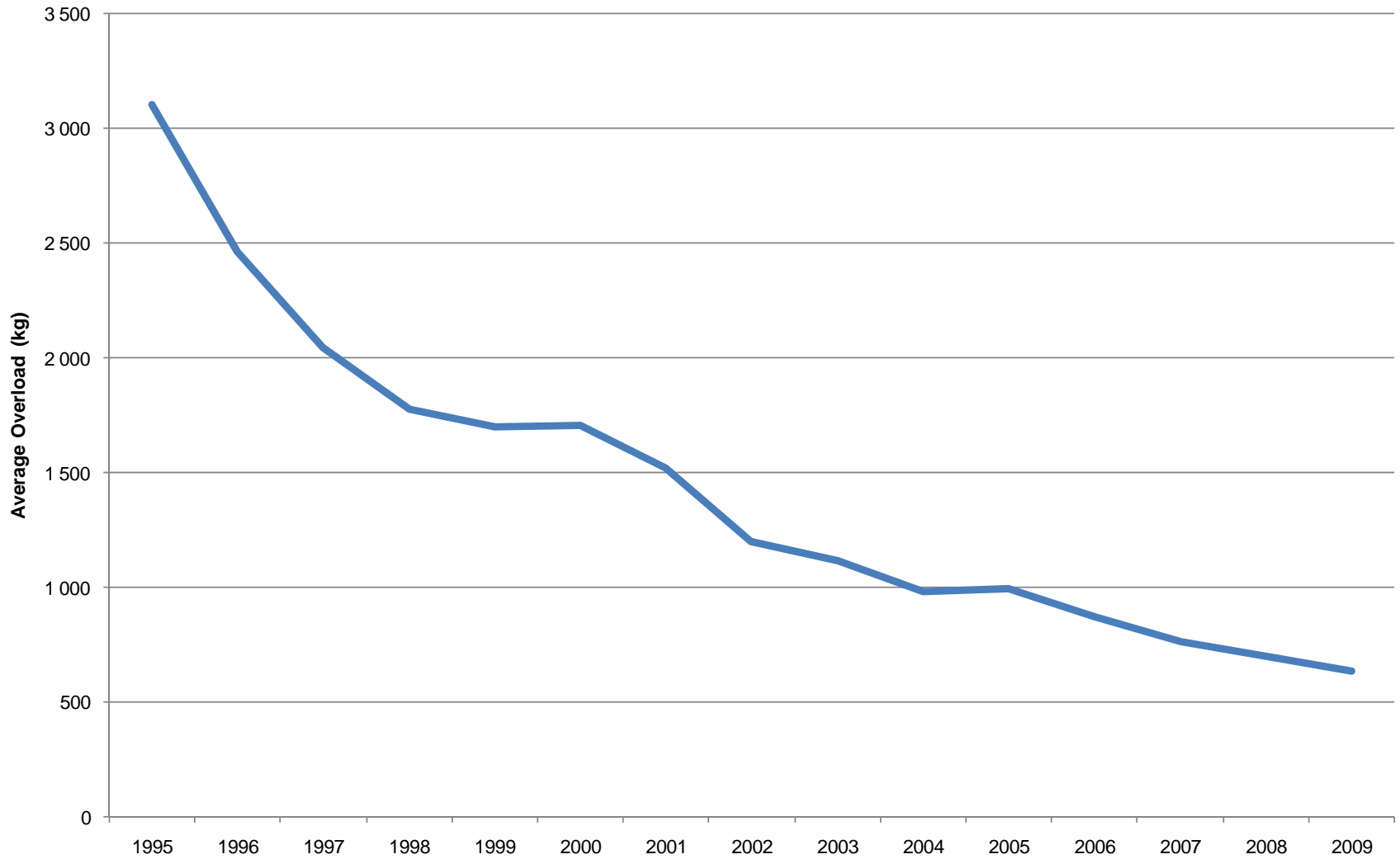


# Specific Weighing Statistics

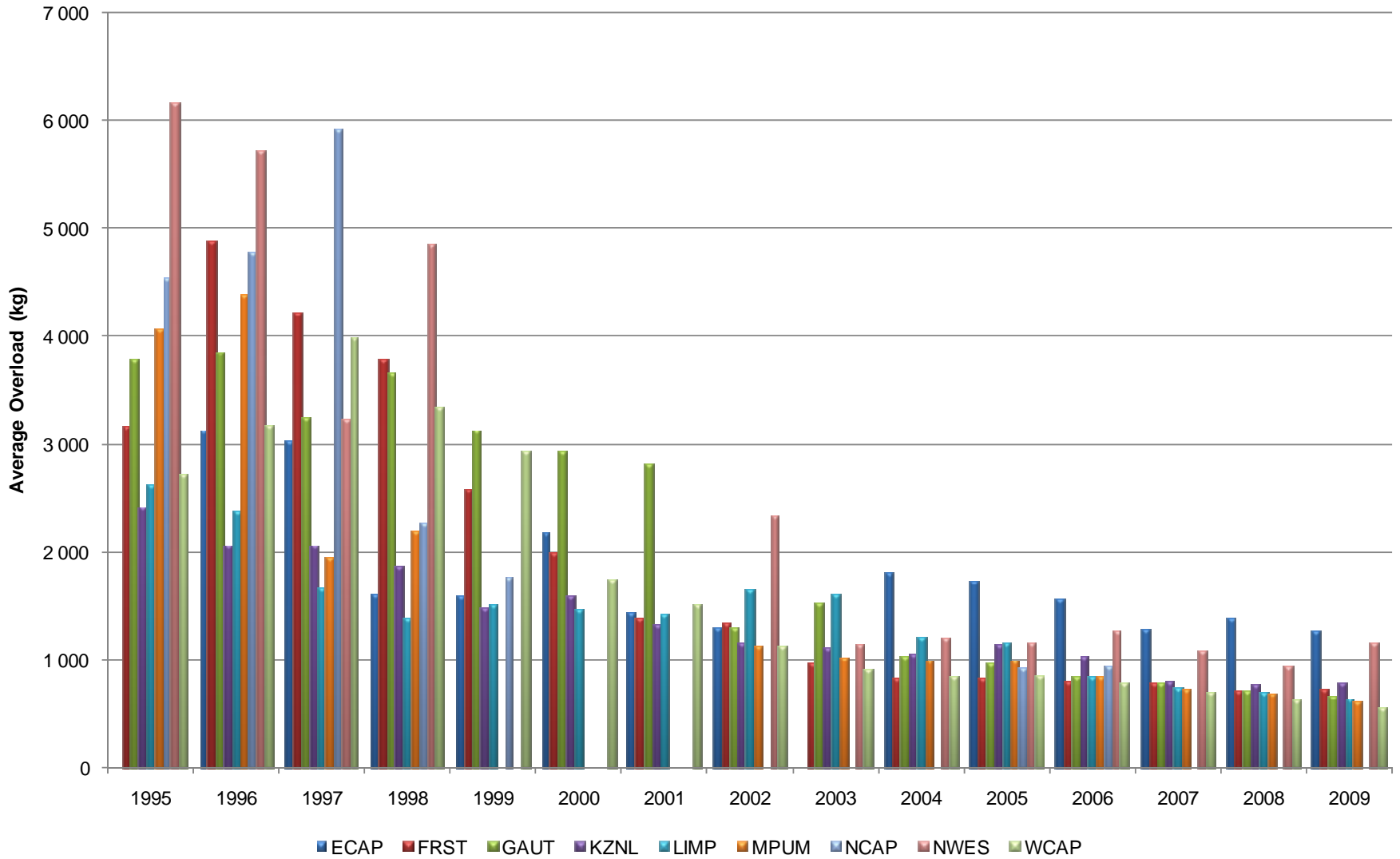
- Covers topics such as:
  - Average overloads
  - Distribution of vehicle overloads
  - Vehicle class statistics
- This section is based on electronic data only



## Average Overload per Annum in SA

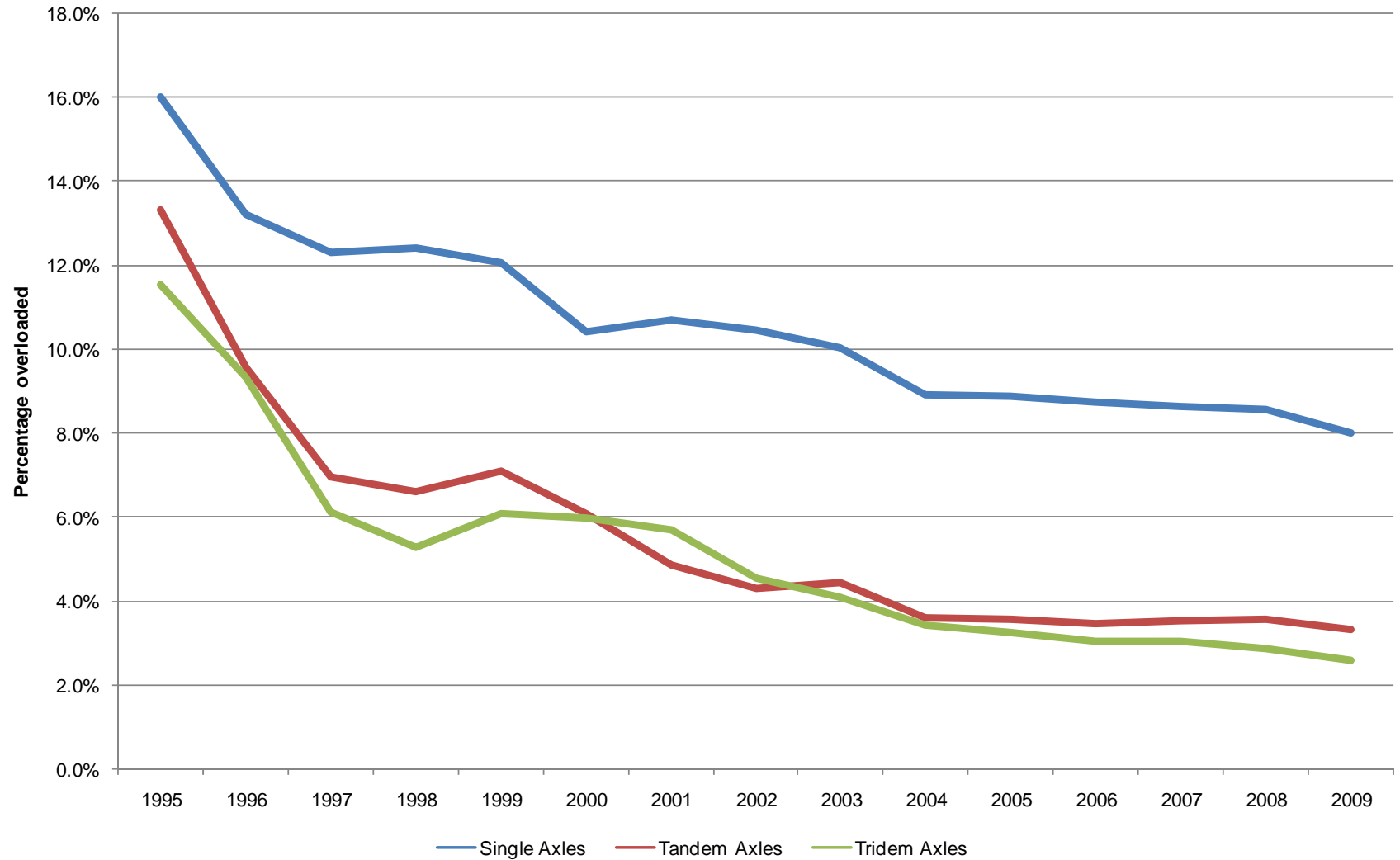


# Average Overload per Overloaded Vehicle Province per Annum

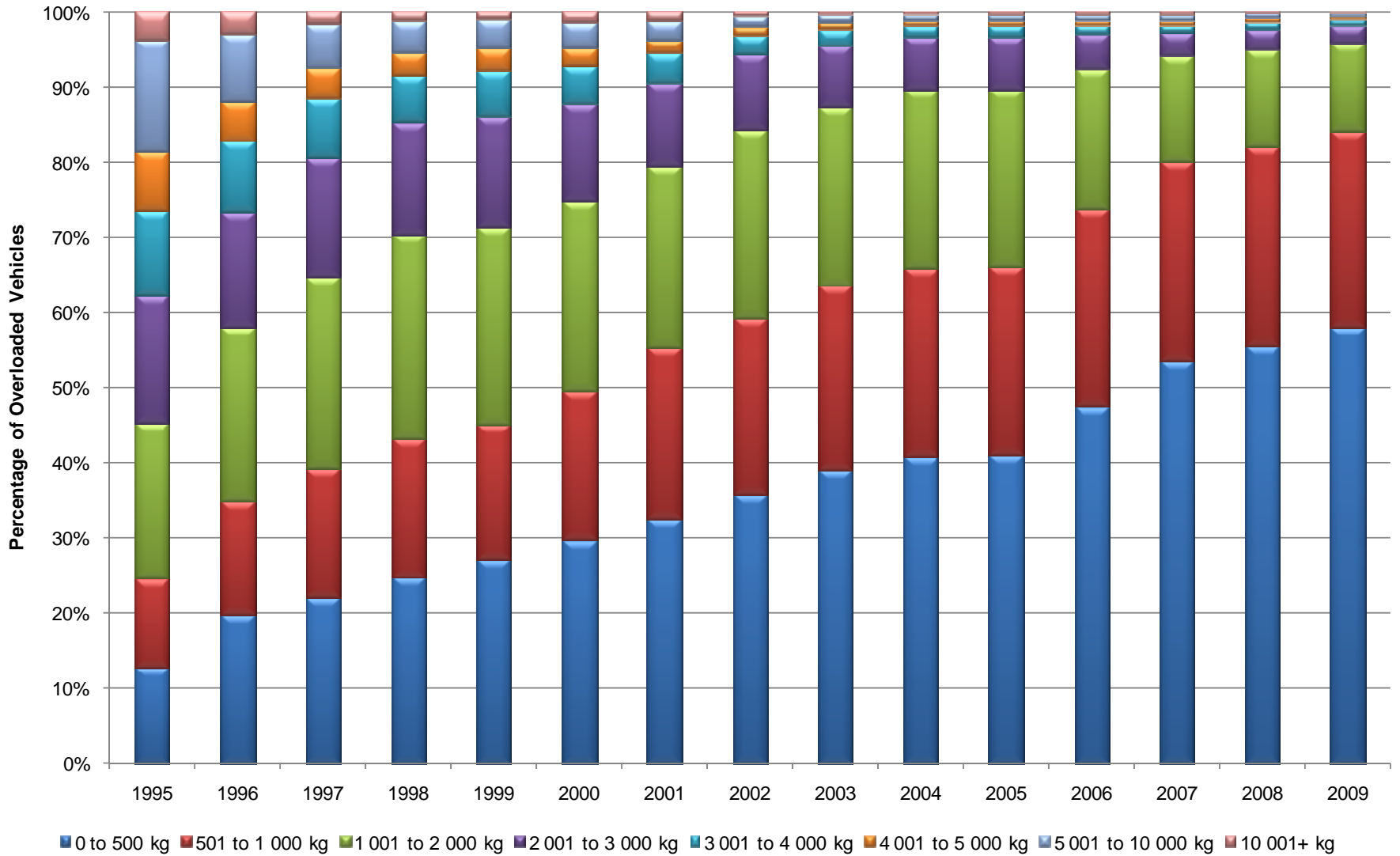




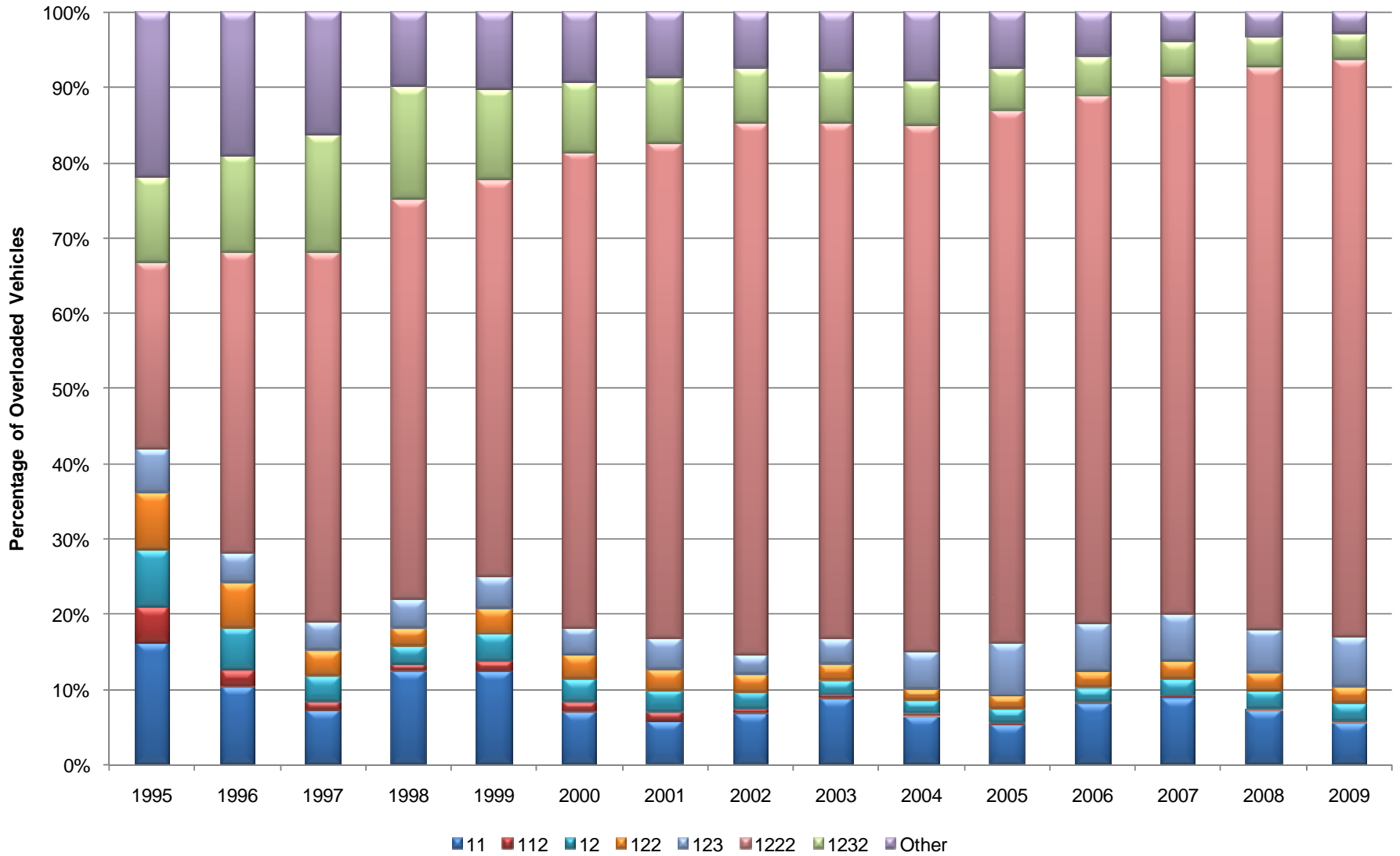
## Average percentage overload per axle/axle unit in SA



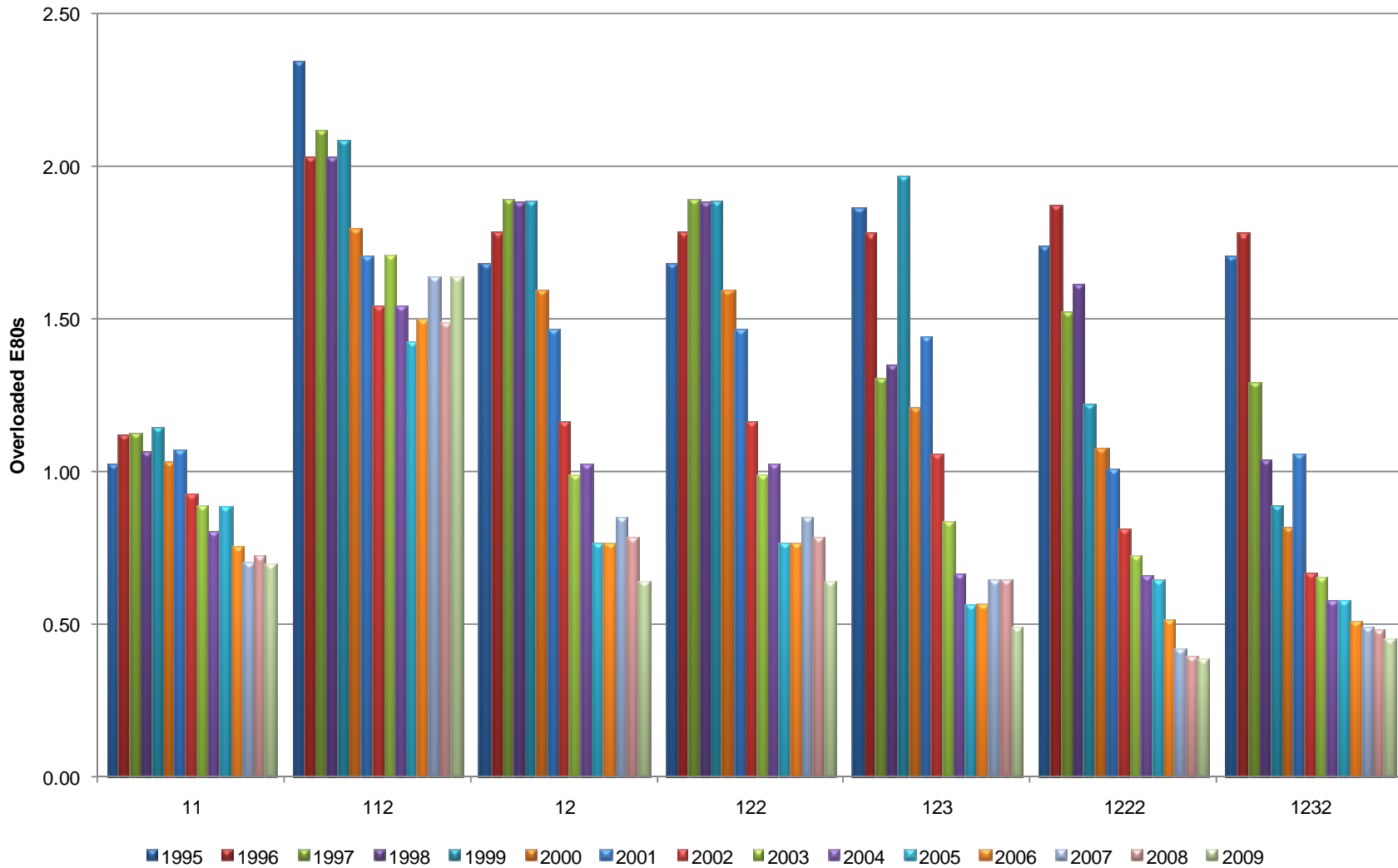
# Distribution of Vehicle Overloads (percentage) per Annum in SA



## Distribution of Overloaded Vehicles per Class per Annum in SA



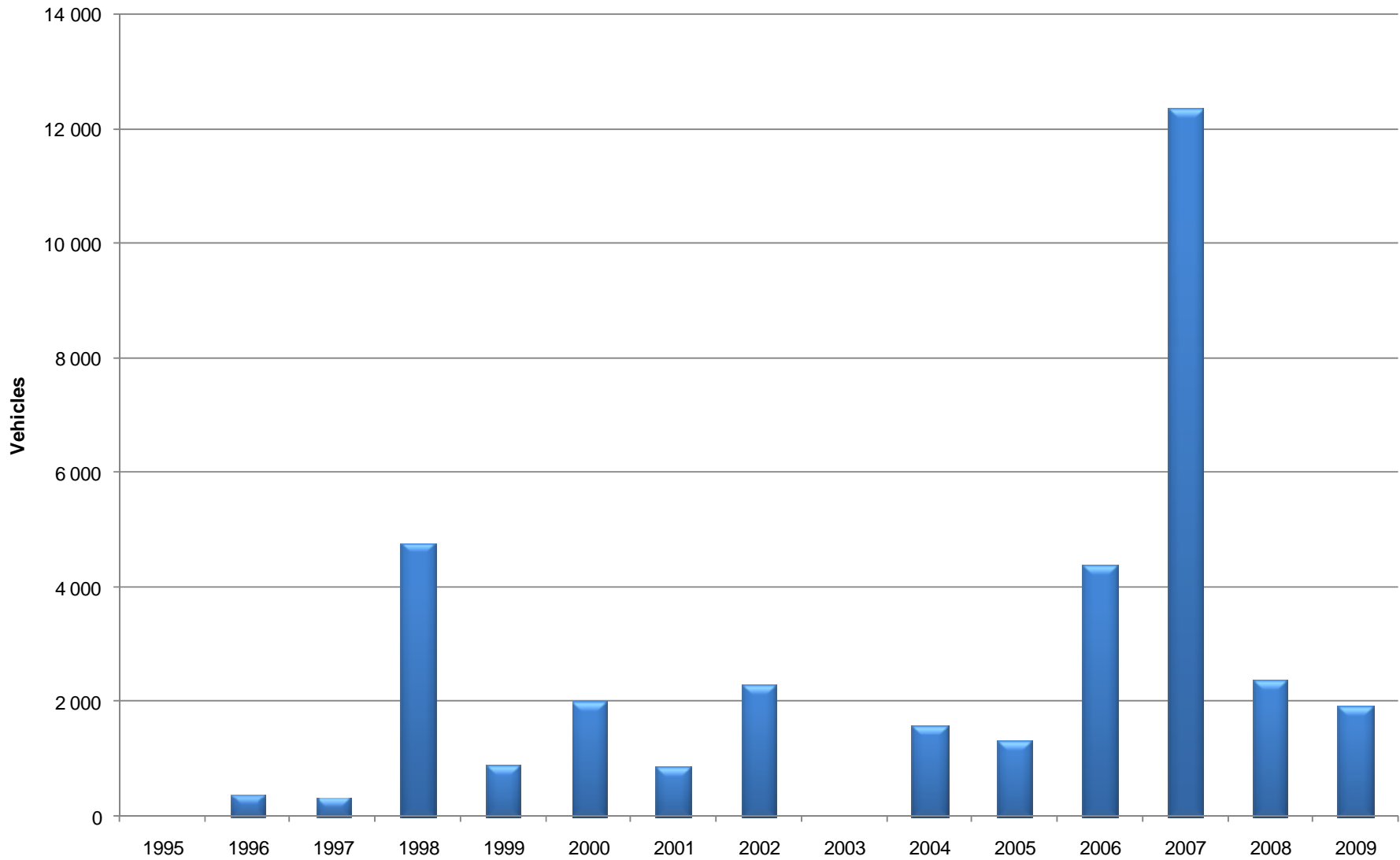
# Overloaded E80s per Vehicle Class in SA



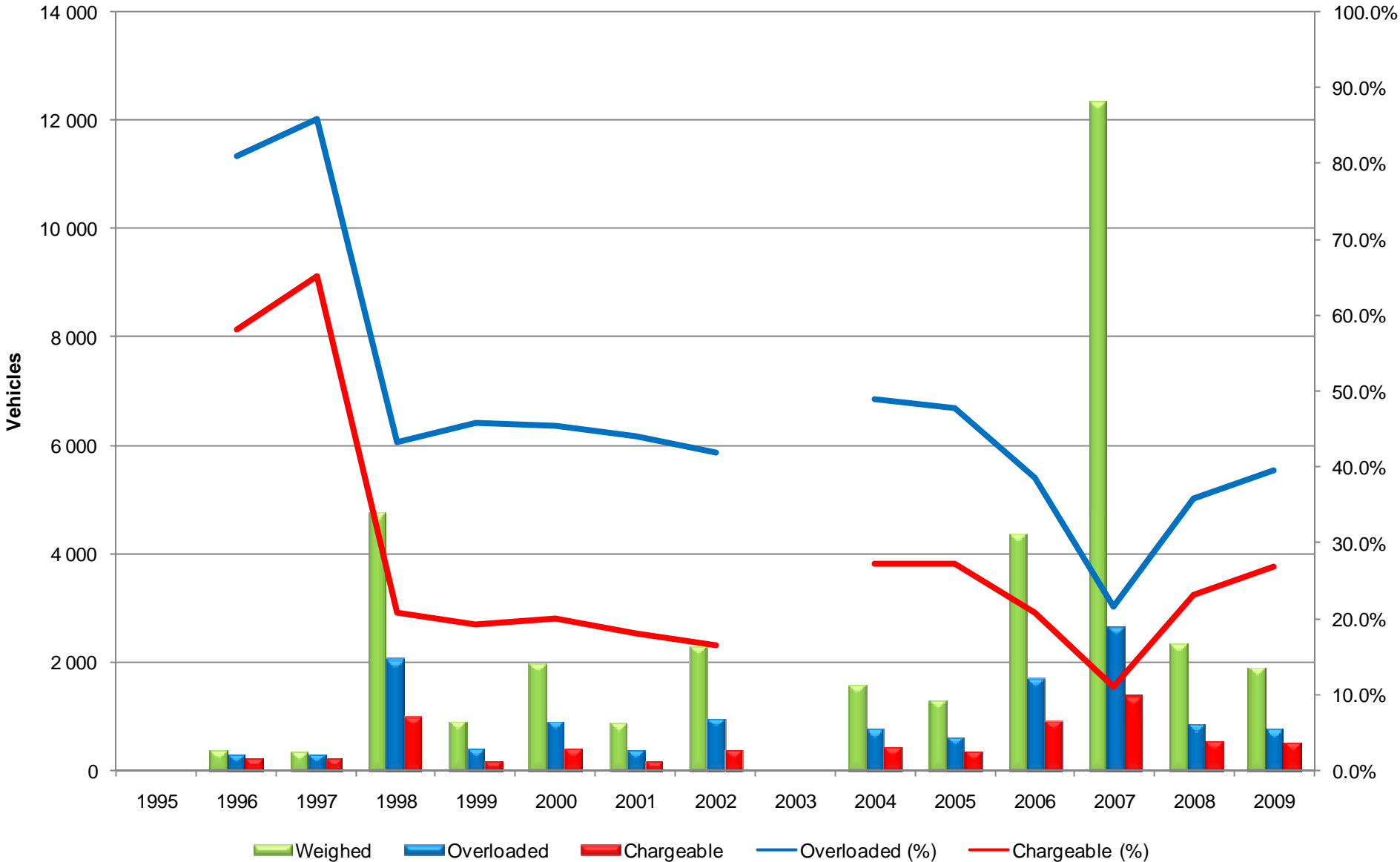
# General Weighing Statistics per Province



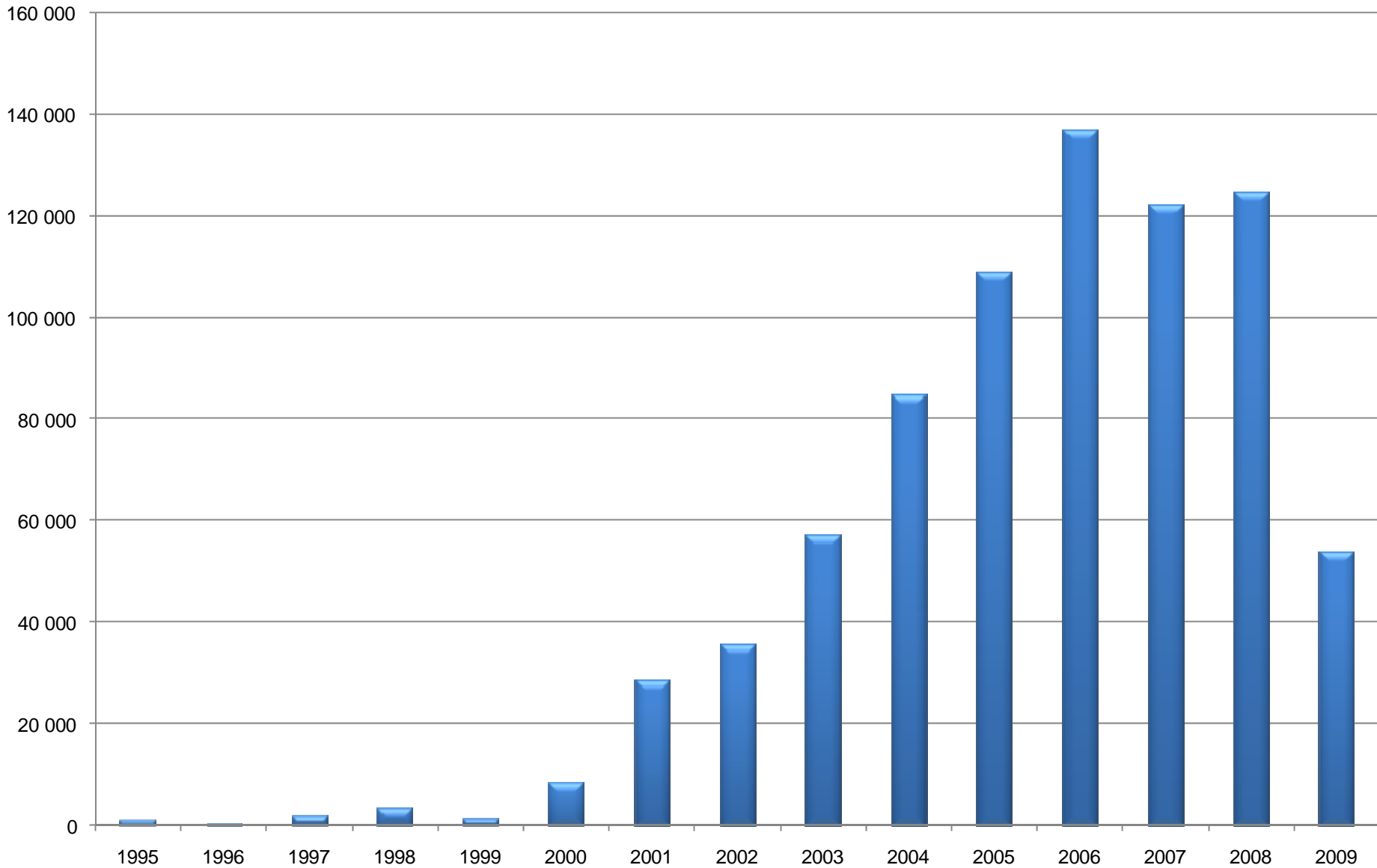
## Vehicles Weighed per Annum in Eastern Cape



# Vehicles Weighed, Overloaded, Chargeable per Annum in Eastern Cape

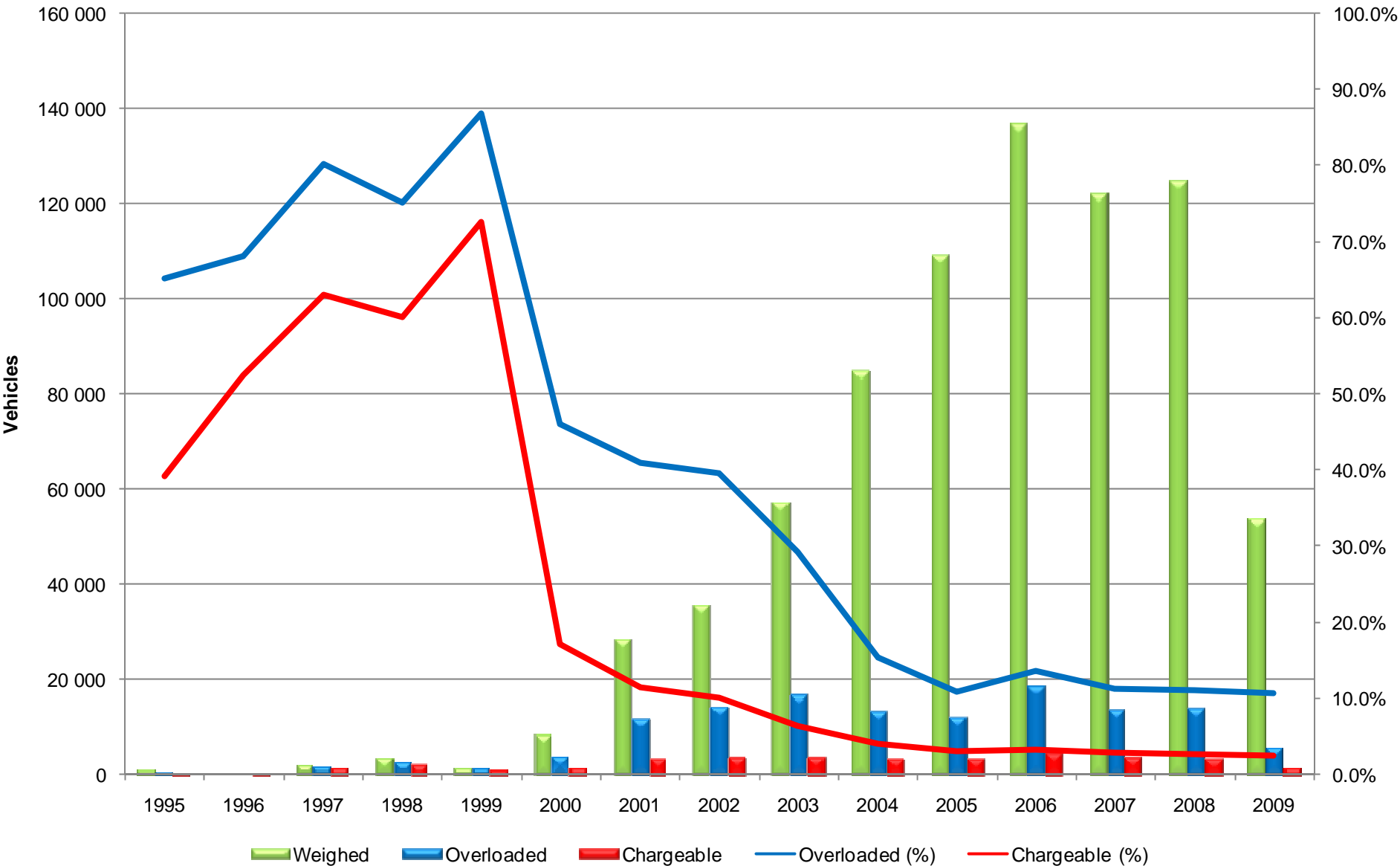


## Vehicles Weighed per Annum in Free State

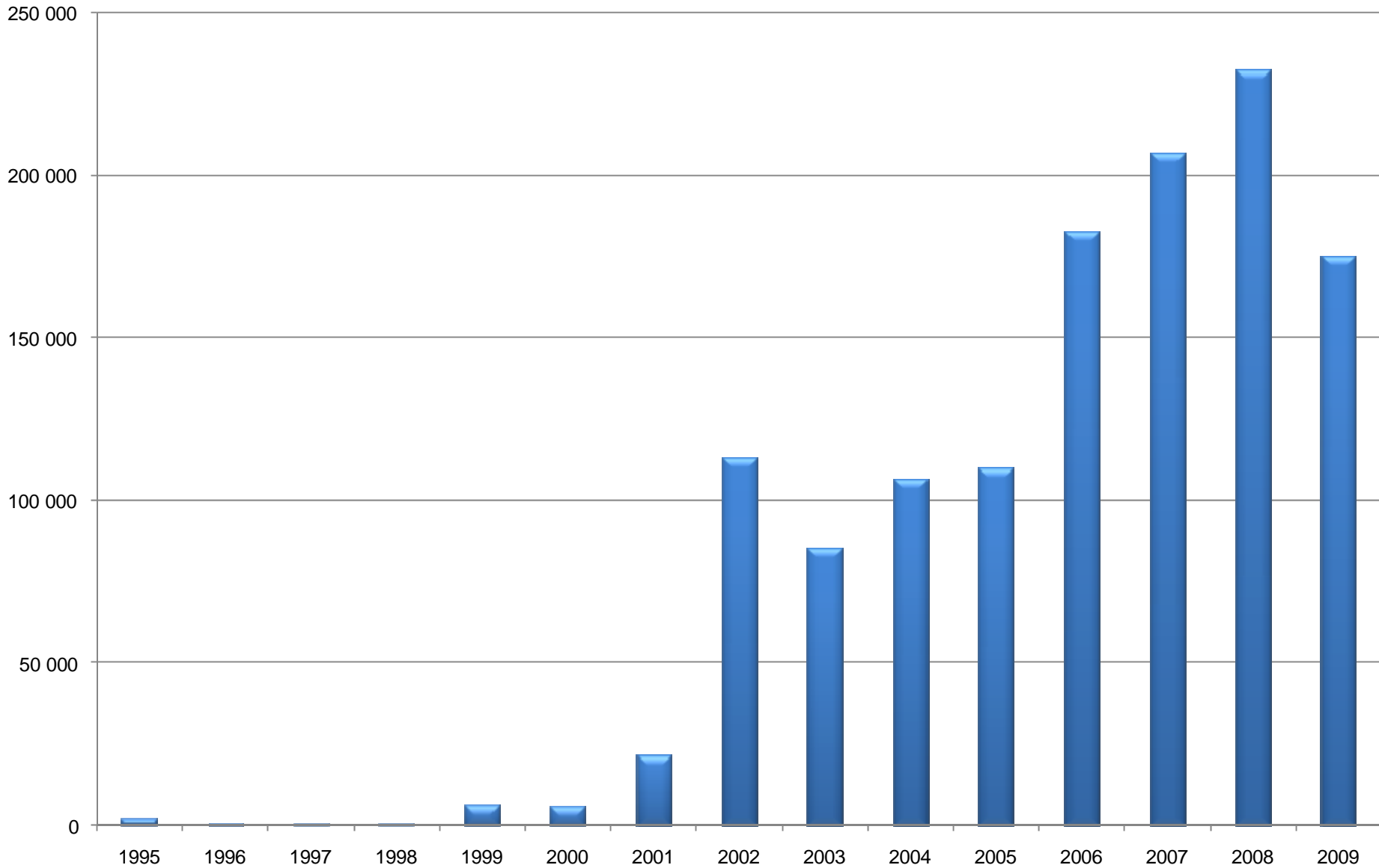




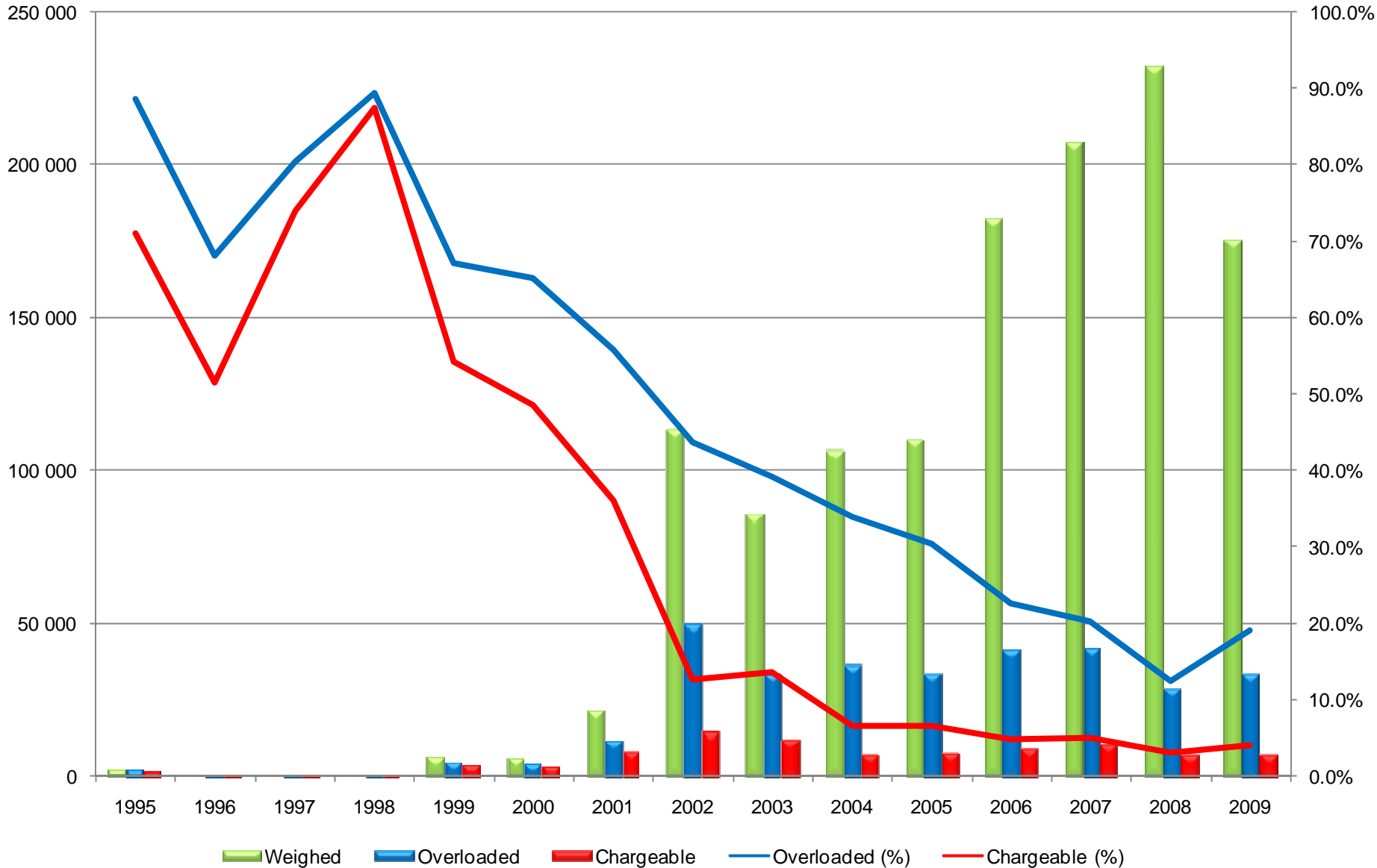
## Vehicles Weighed, Overloaded, Chargeable per Annum in Free State



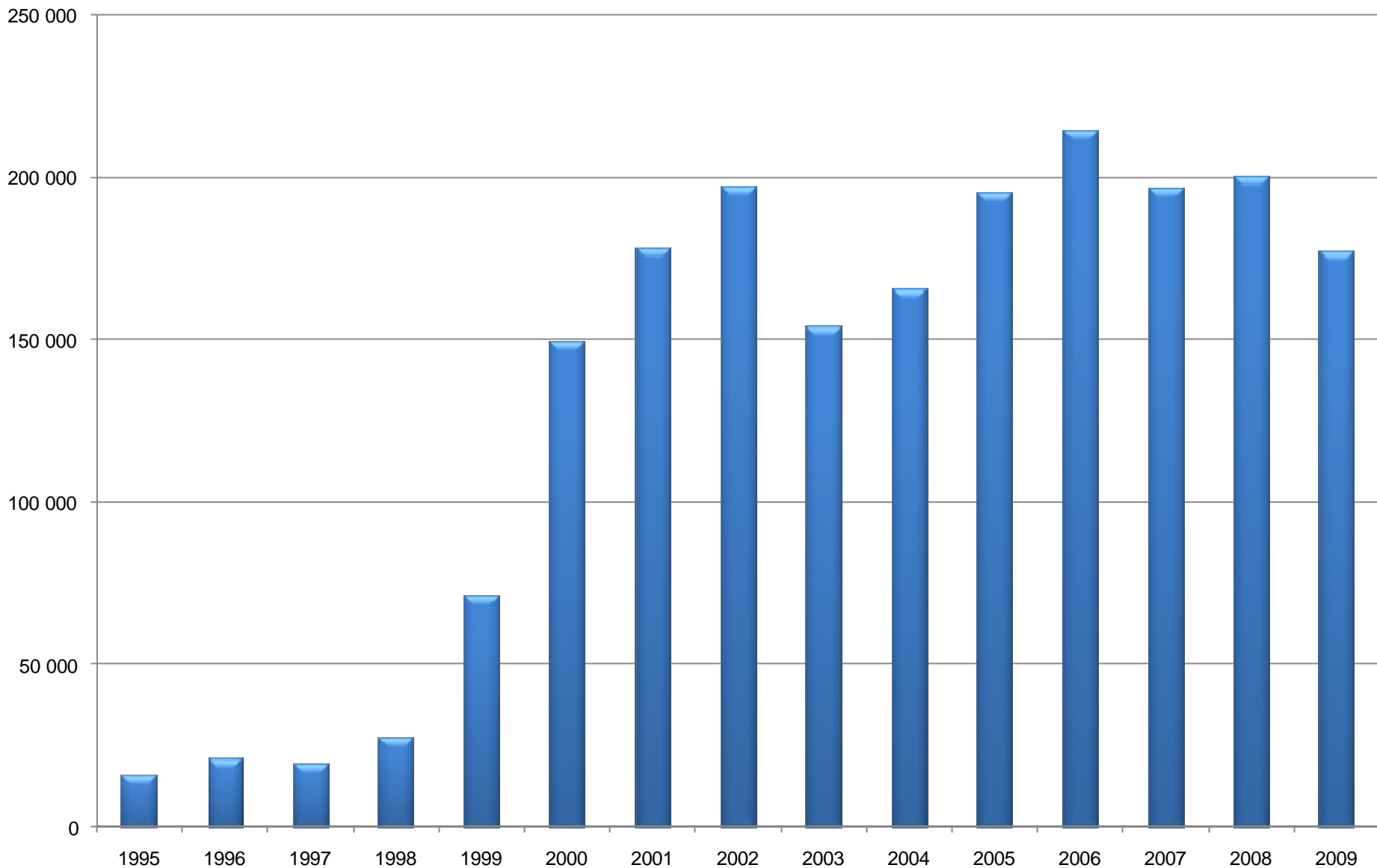
## Vehicles Weighed per Annum in Gauteng



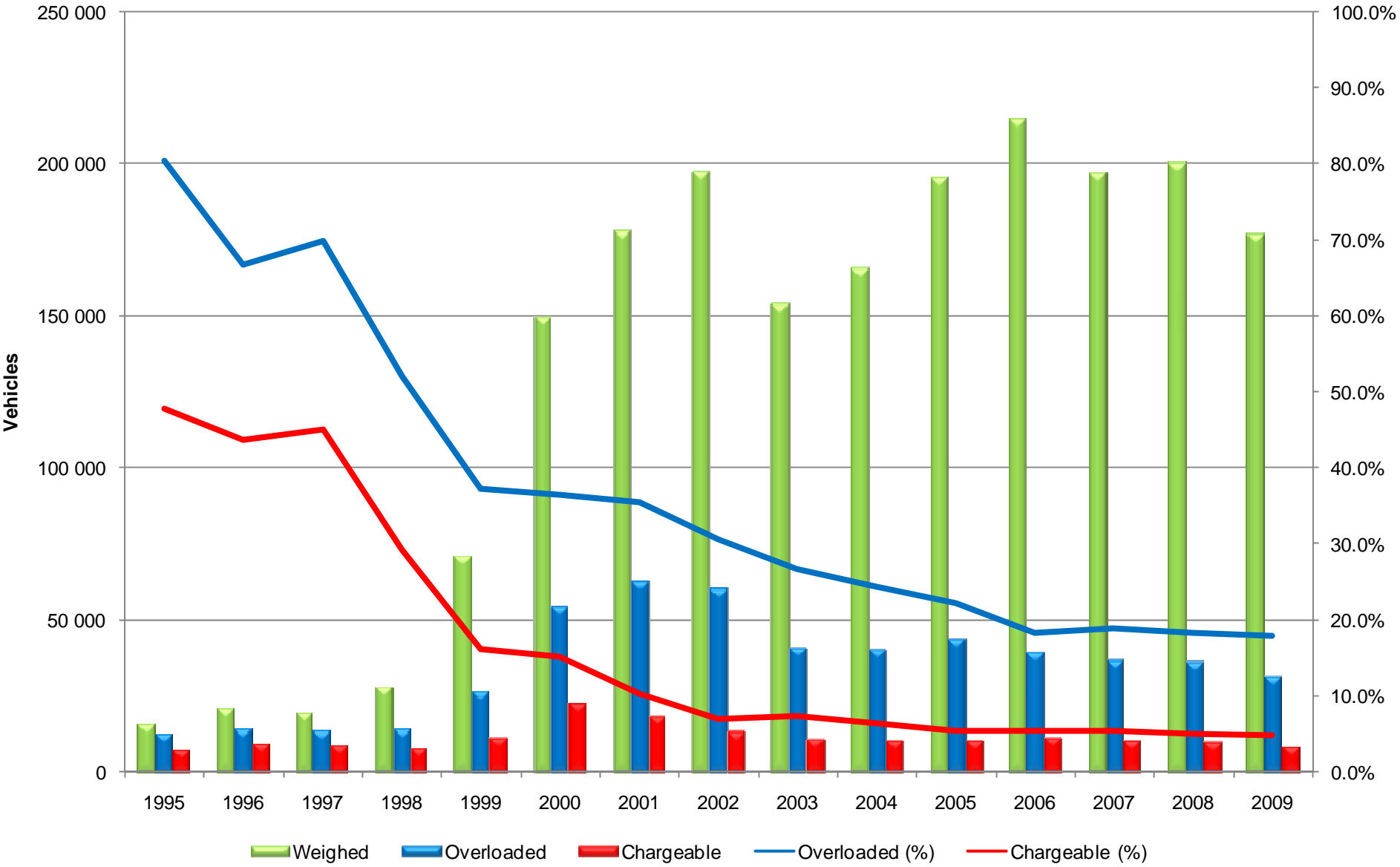
## Vehicles Weighed, Overloaded, Chargeable per Annum in Gauteng



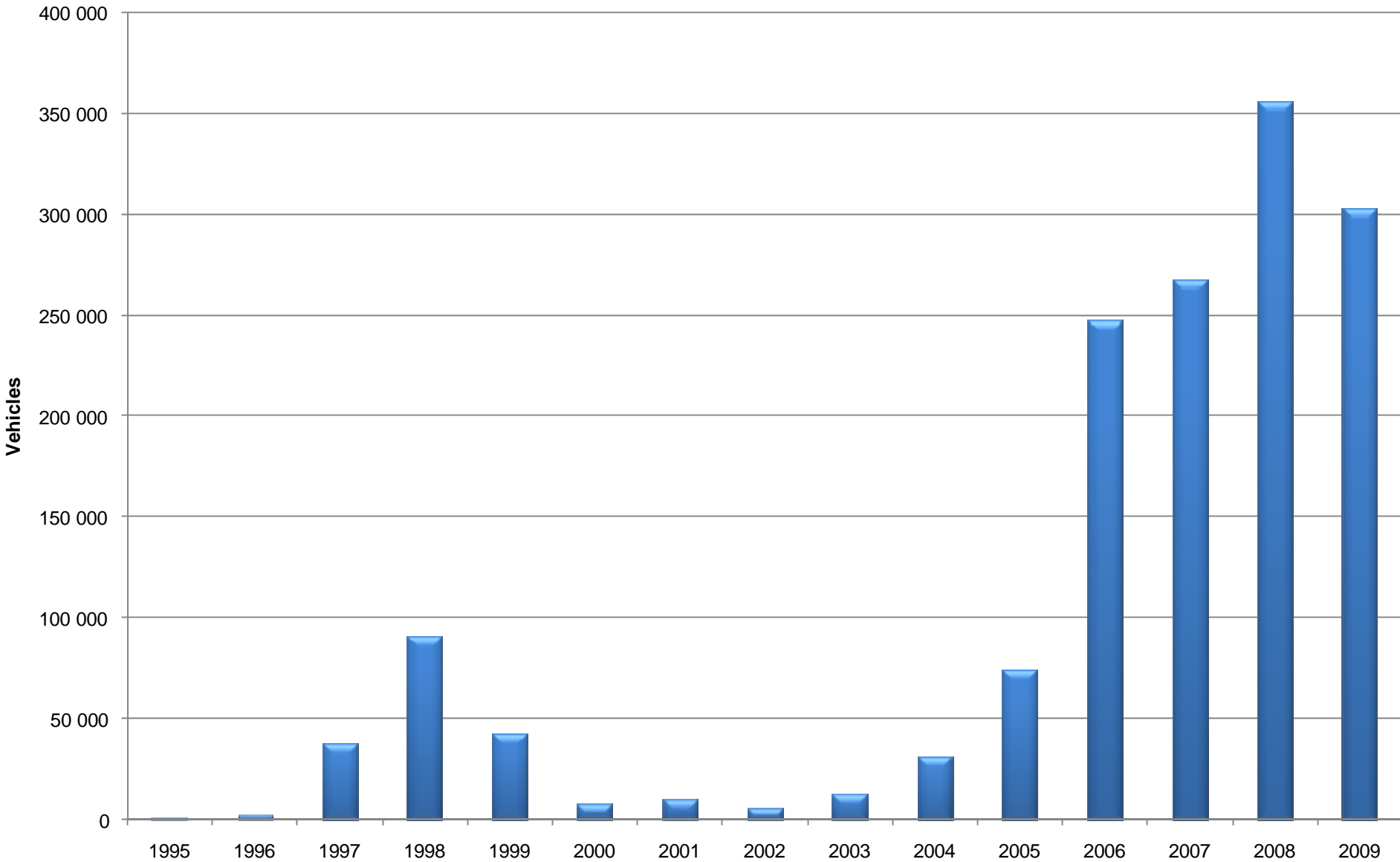
## Vehicles Weighed per Annum in KwaZulu-Natal



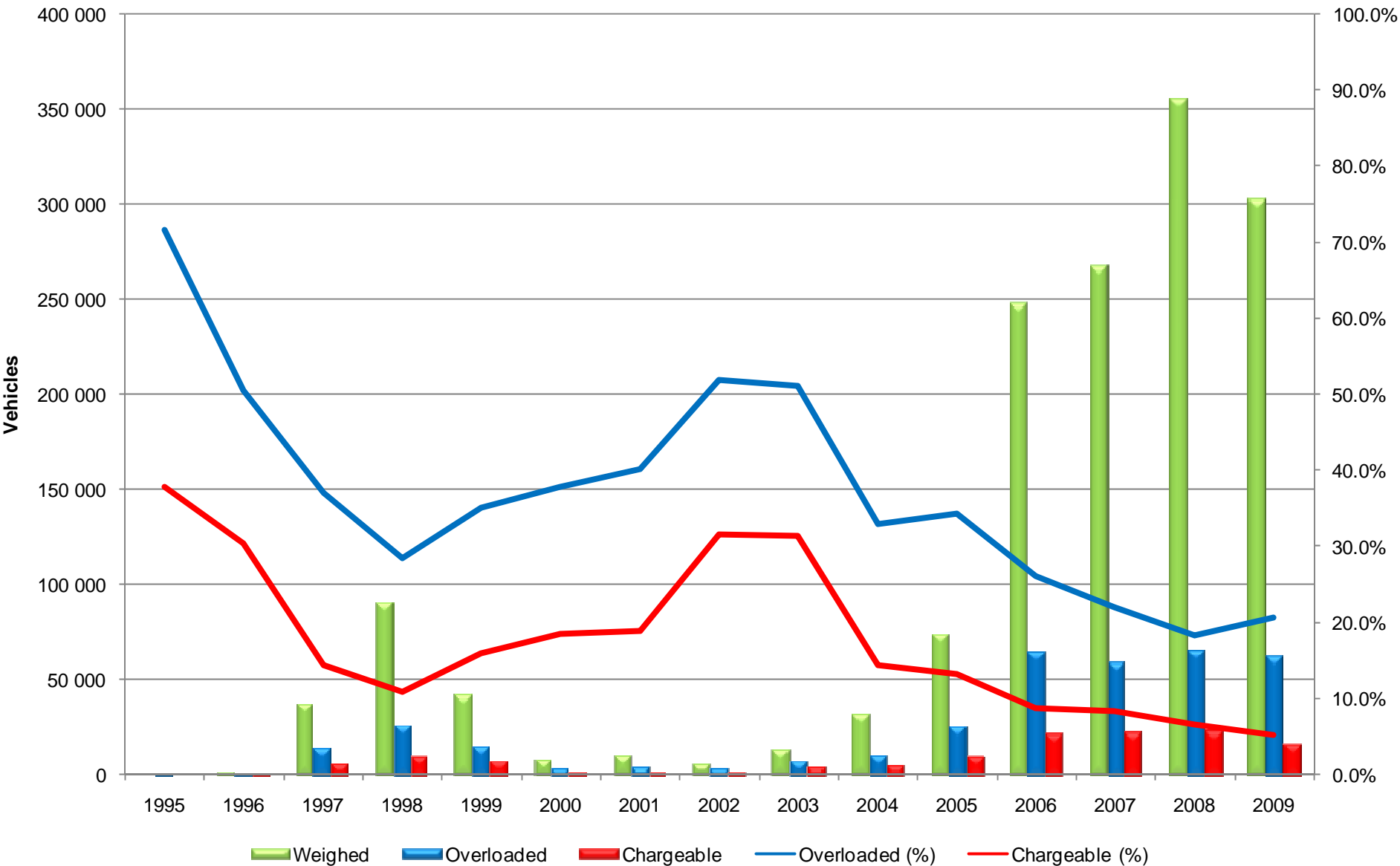
# Vehicles Weighed, Overloaded, Chargeable per Annum in KwaZulu-Natal



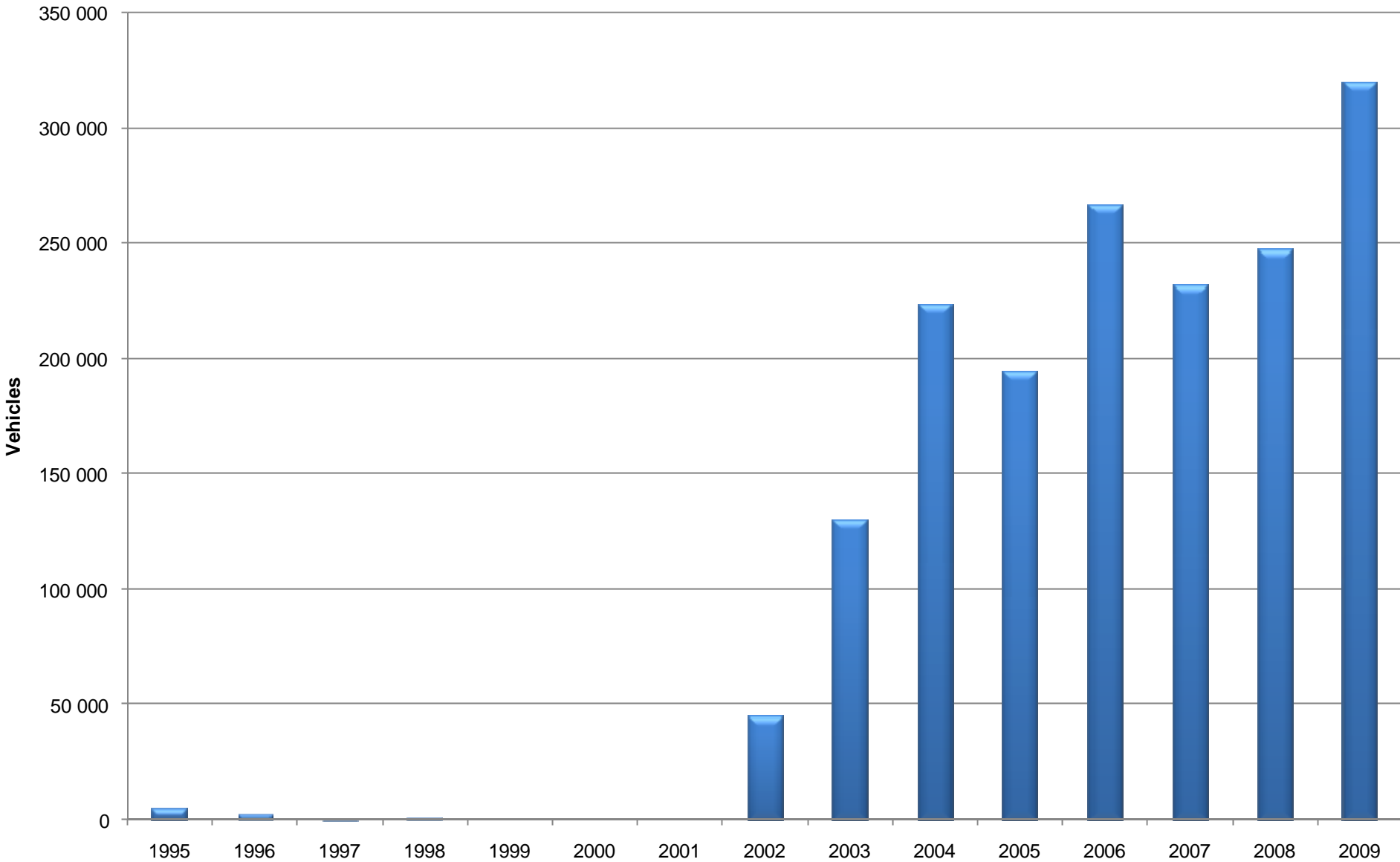
## Vehicles Weighed per Annum in Limpopo



## Vehicles Weighed, Overloaded, Chargeable per Annum in Limpopo

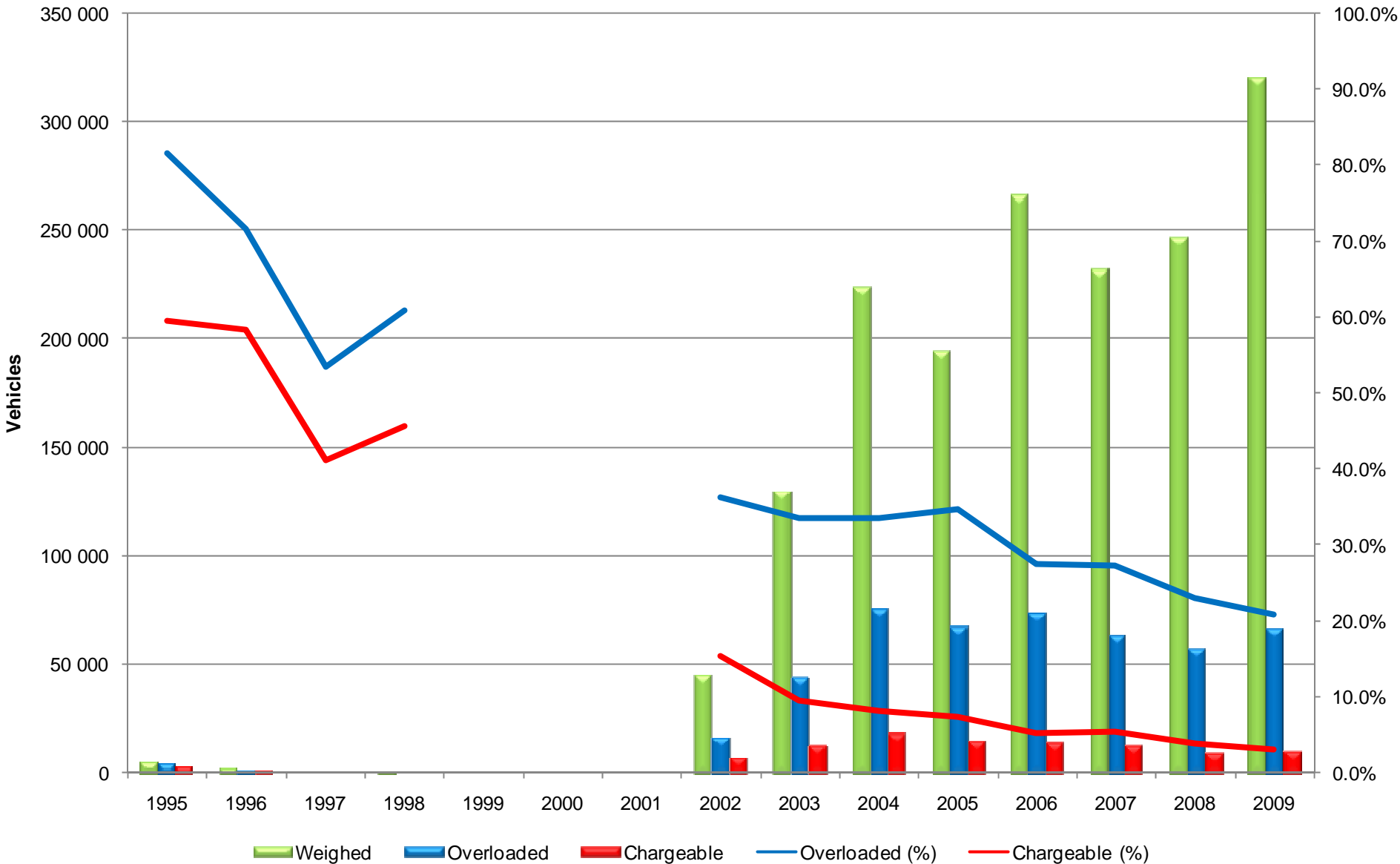


## Vehicles Weighed per Annum in Mpumalanga

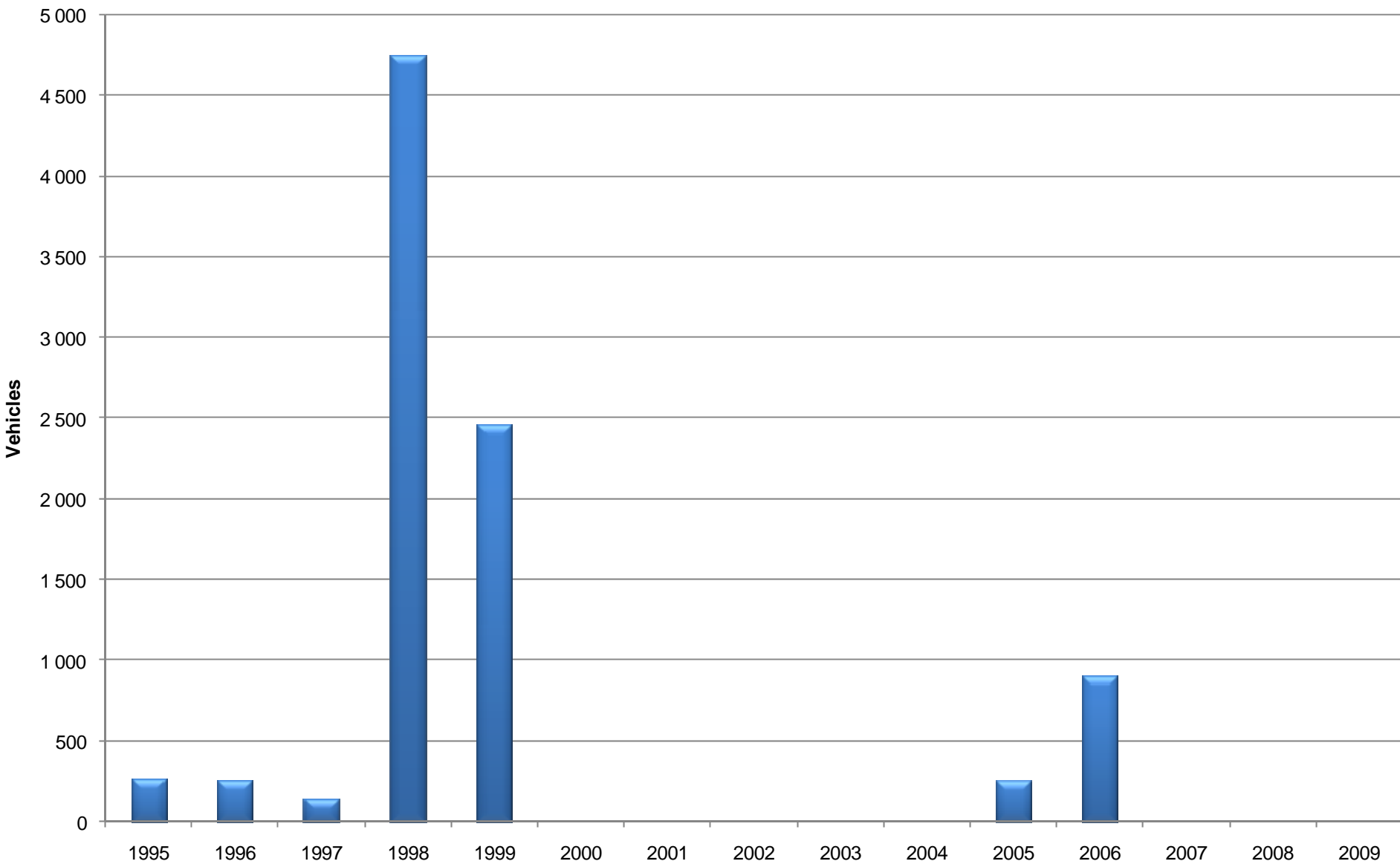




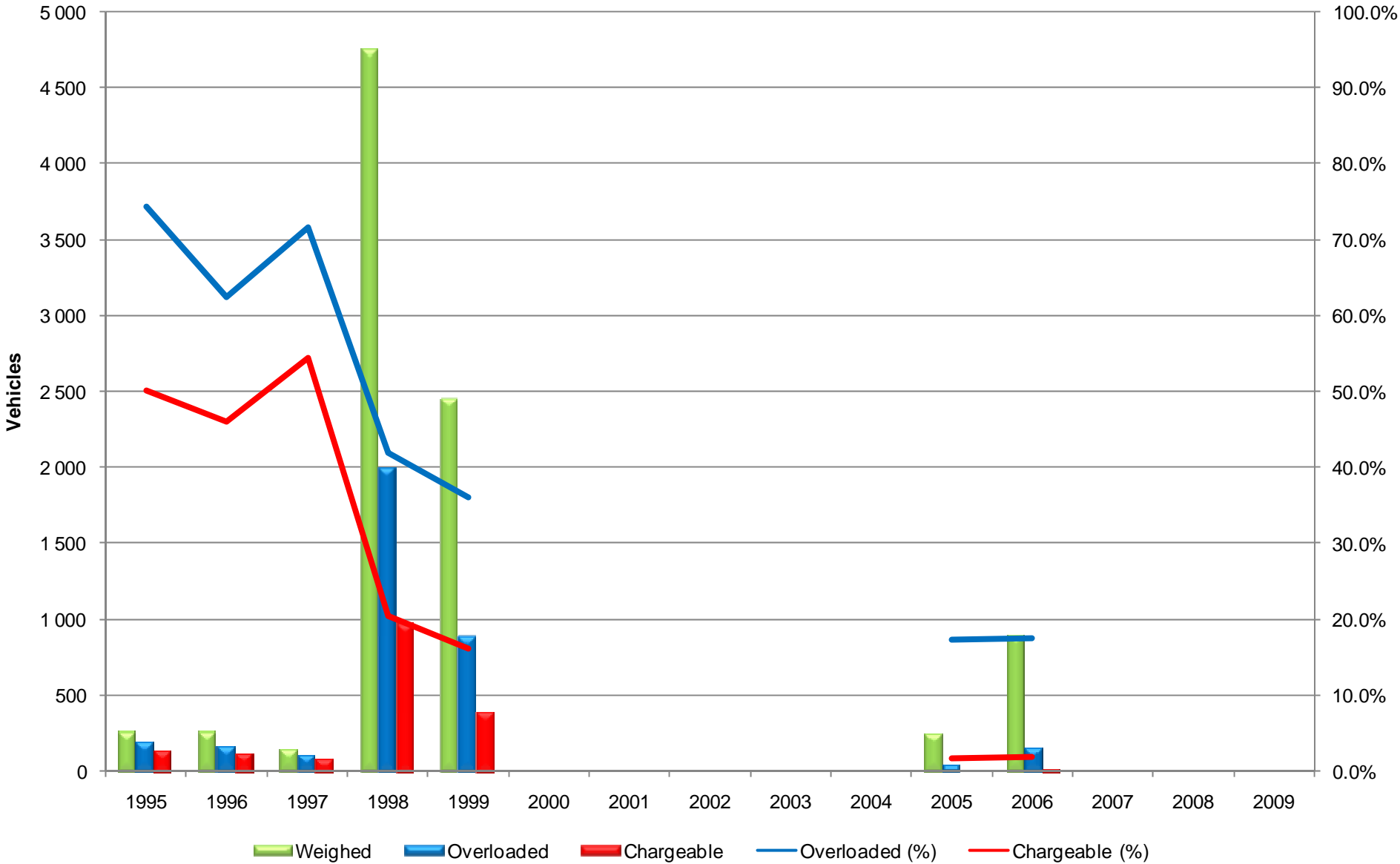
# Vehicles Weighed, Overloaded, Chargeable per Annum in Mpumalanga



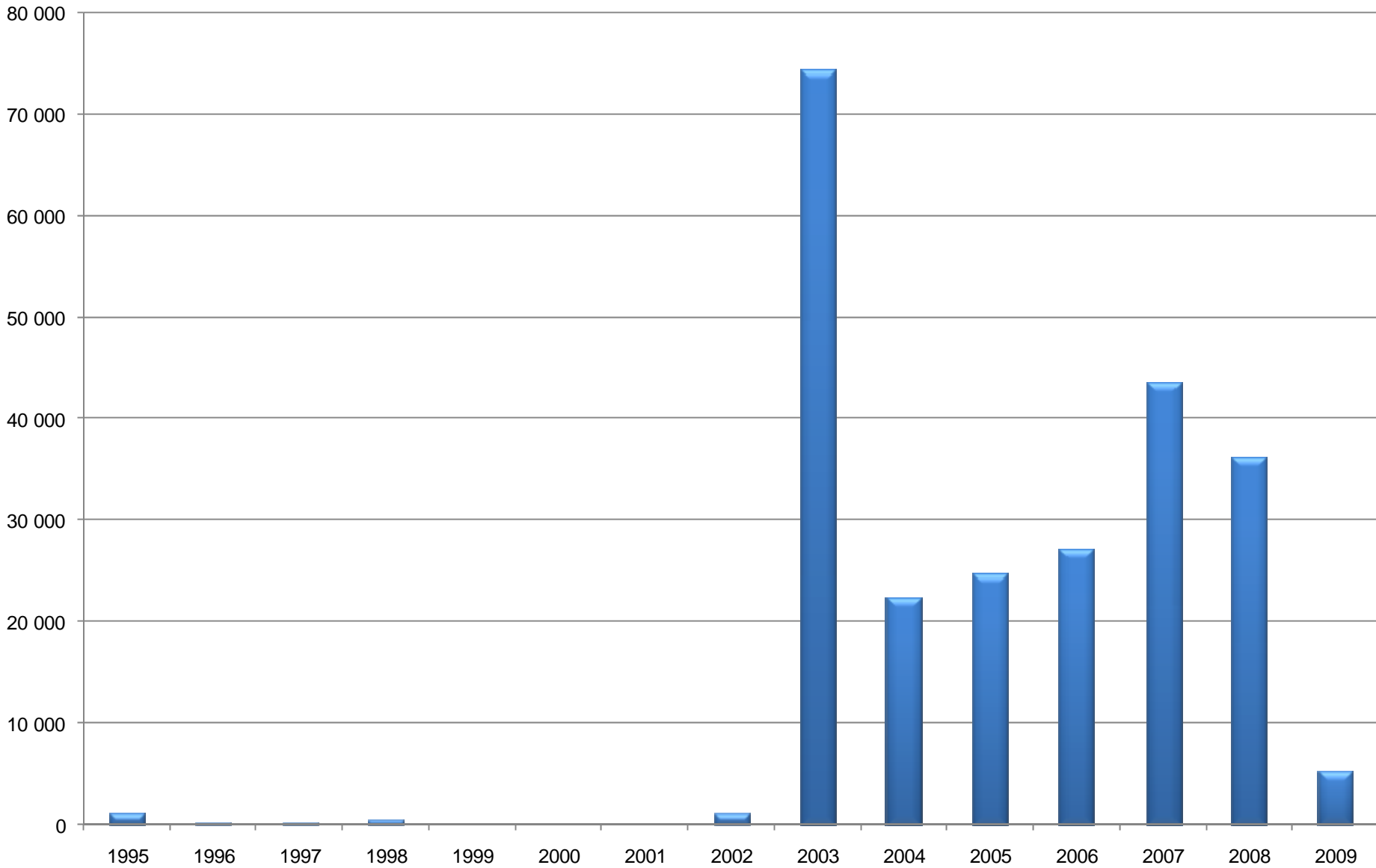
## Vehicles Weighed per Annum in Northern Cape



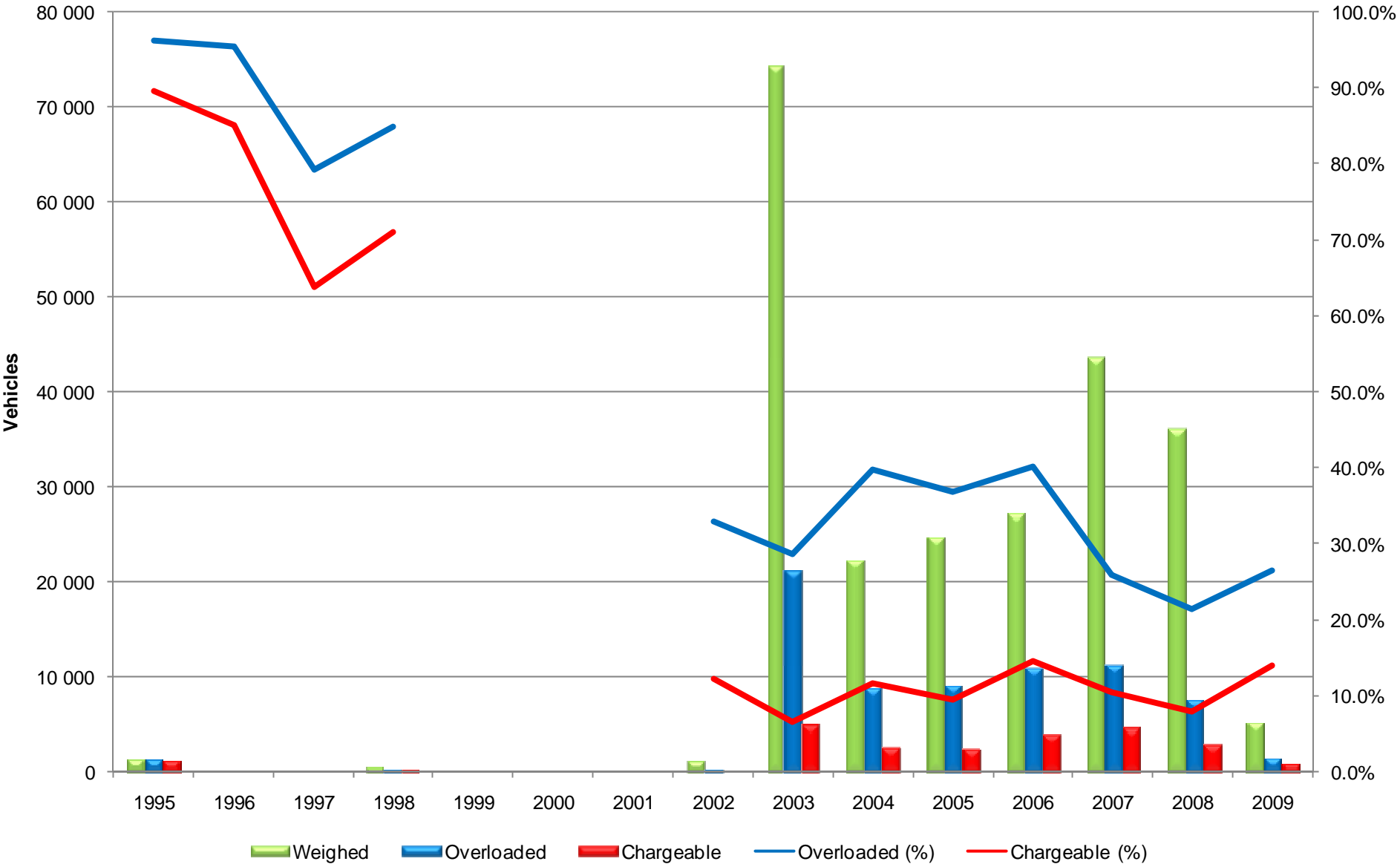
# Vehicles Weighed, Overloaded, Chargeable per Annum in Northern Cape



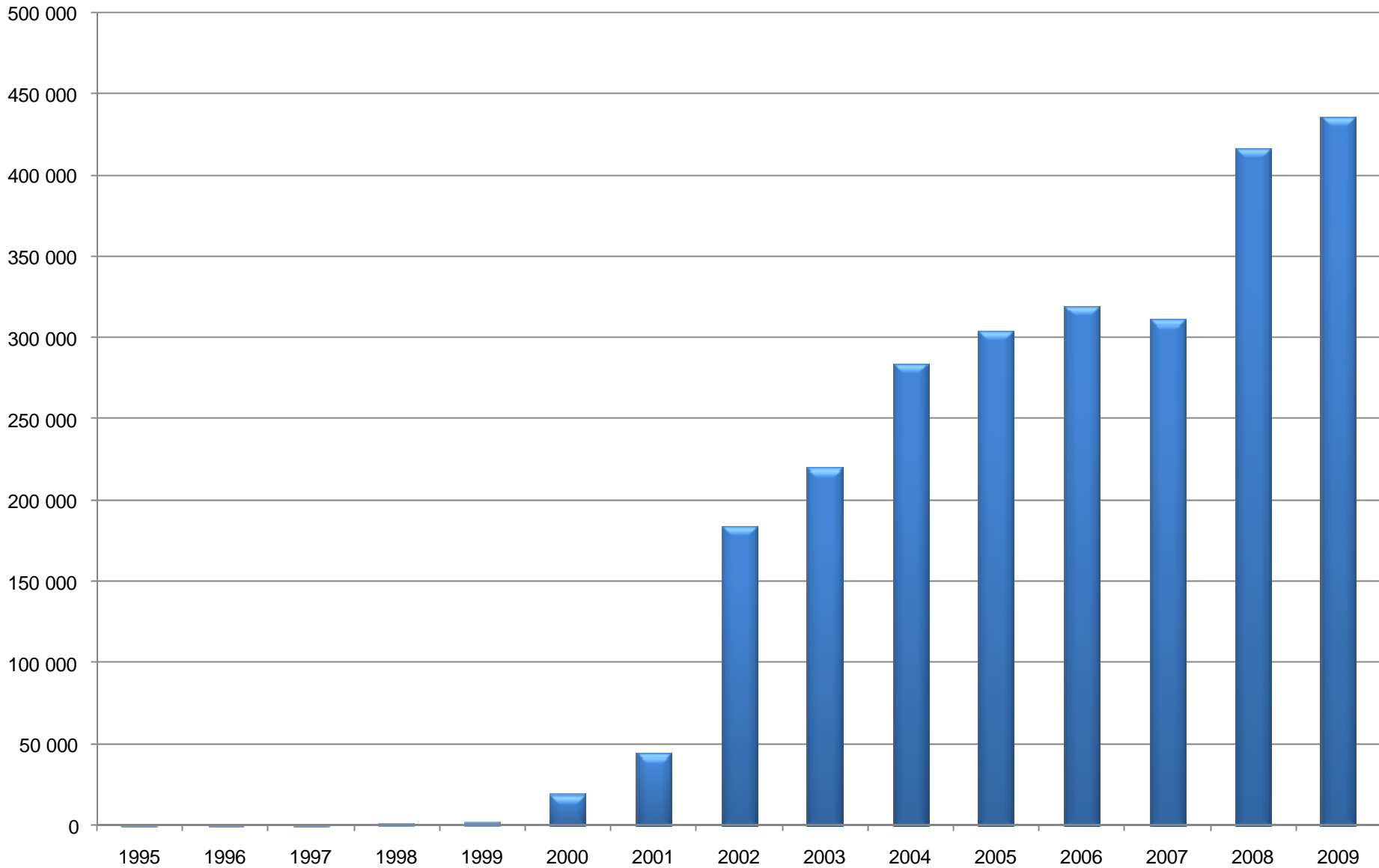
## Vehicles Weighed per Annum in North West



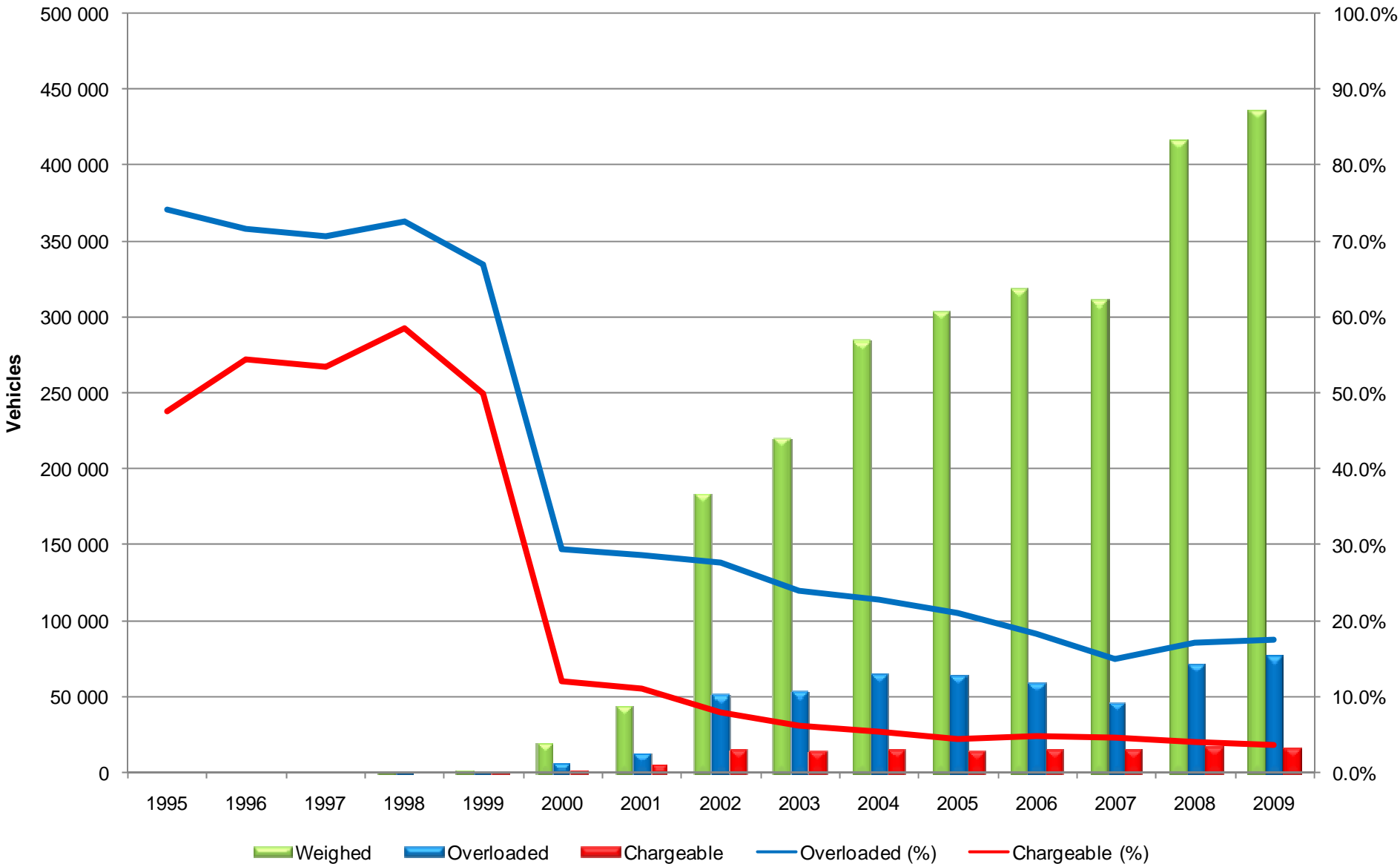
# Vehicles Weighed, Overloaded, Chargeable per Annum in North West



## Vehicles Weighed per Annum in Western Cape



# Vehicles Weighed, Overloaded, Chargeable per Annum in Western Cape

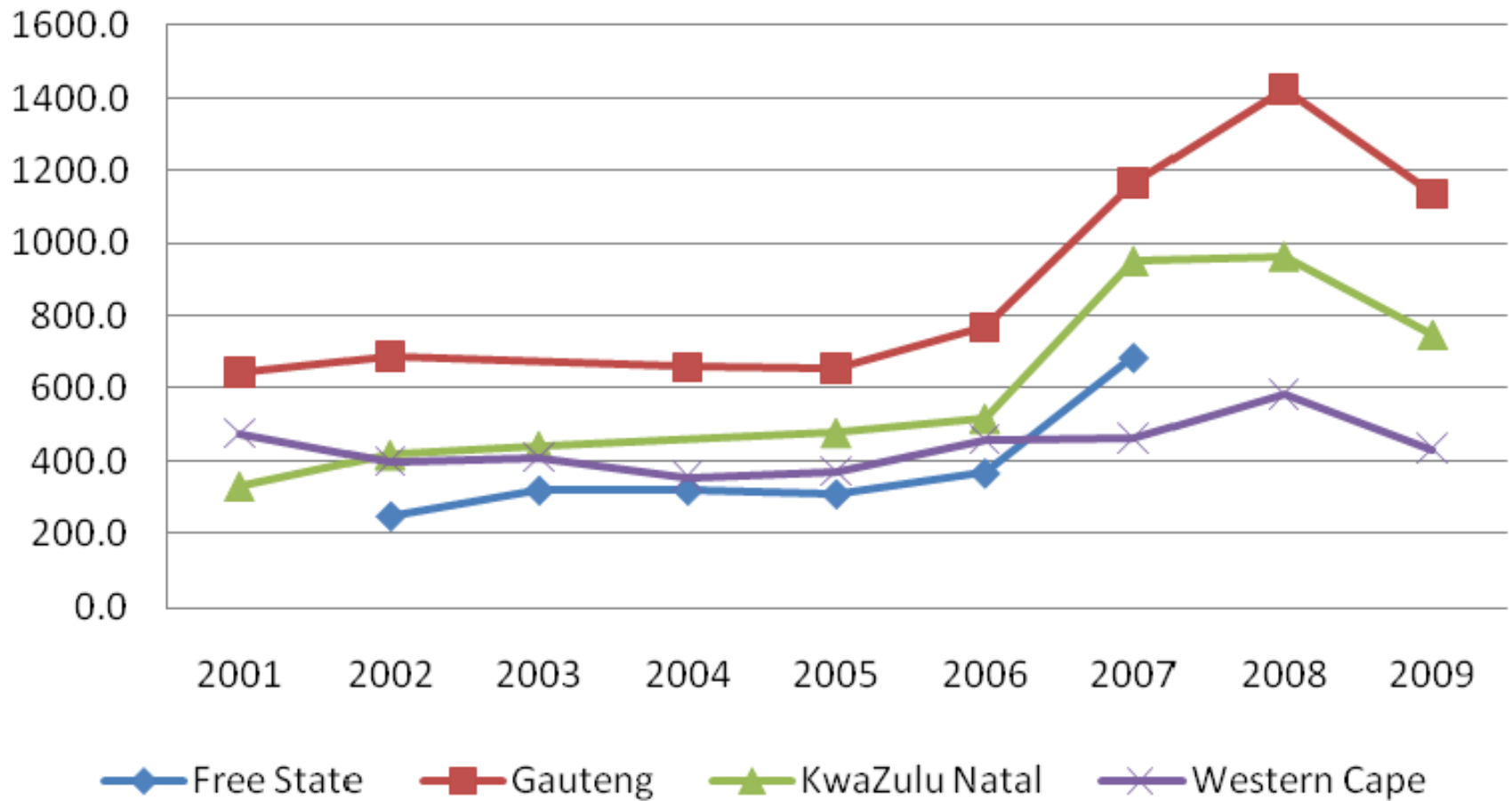


# Abnormal Load Permits

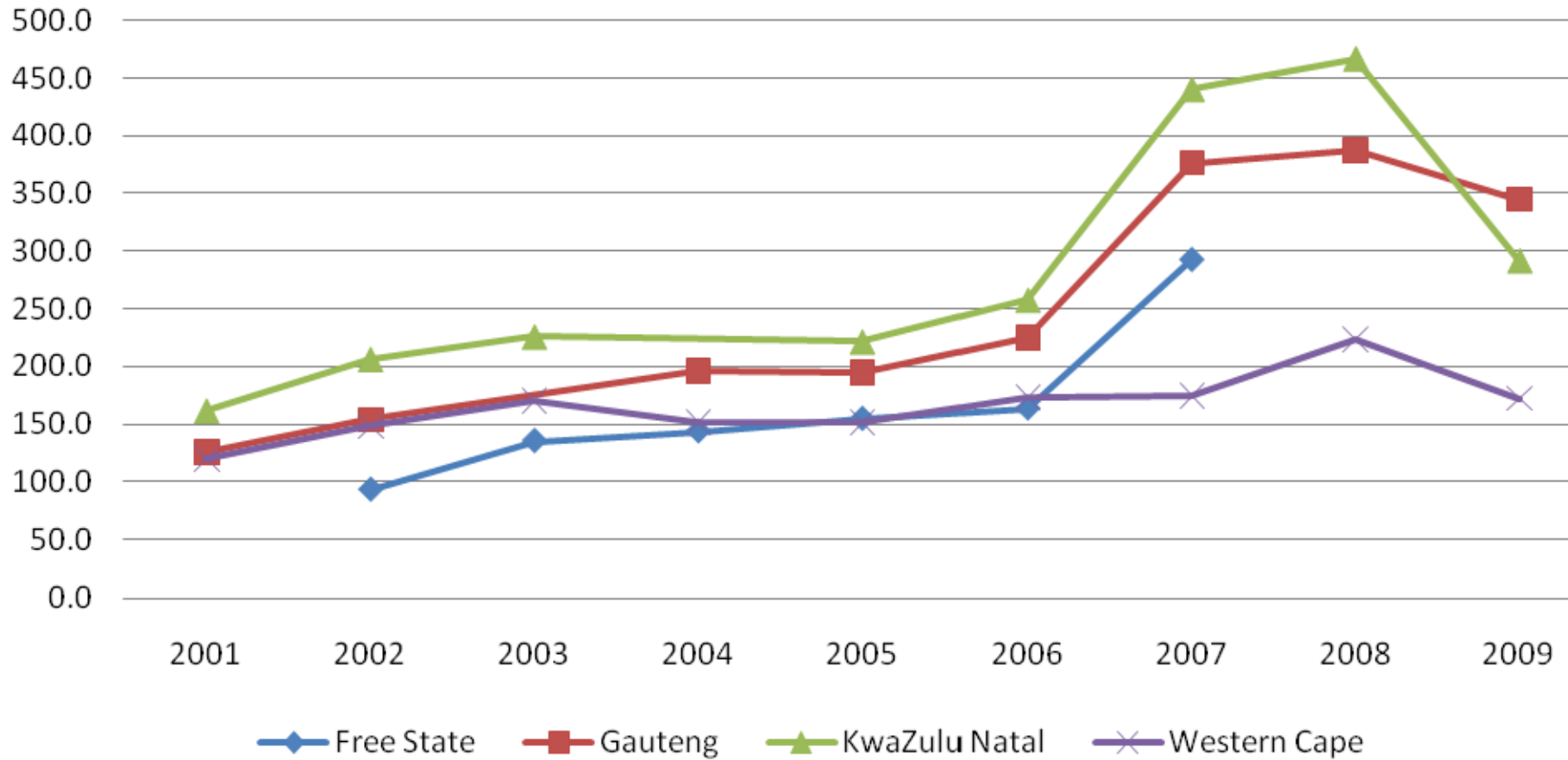




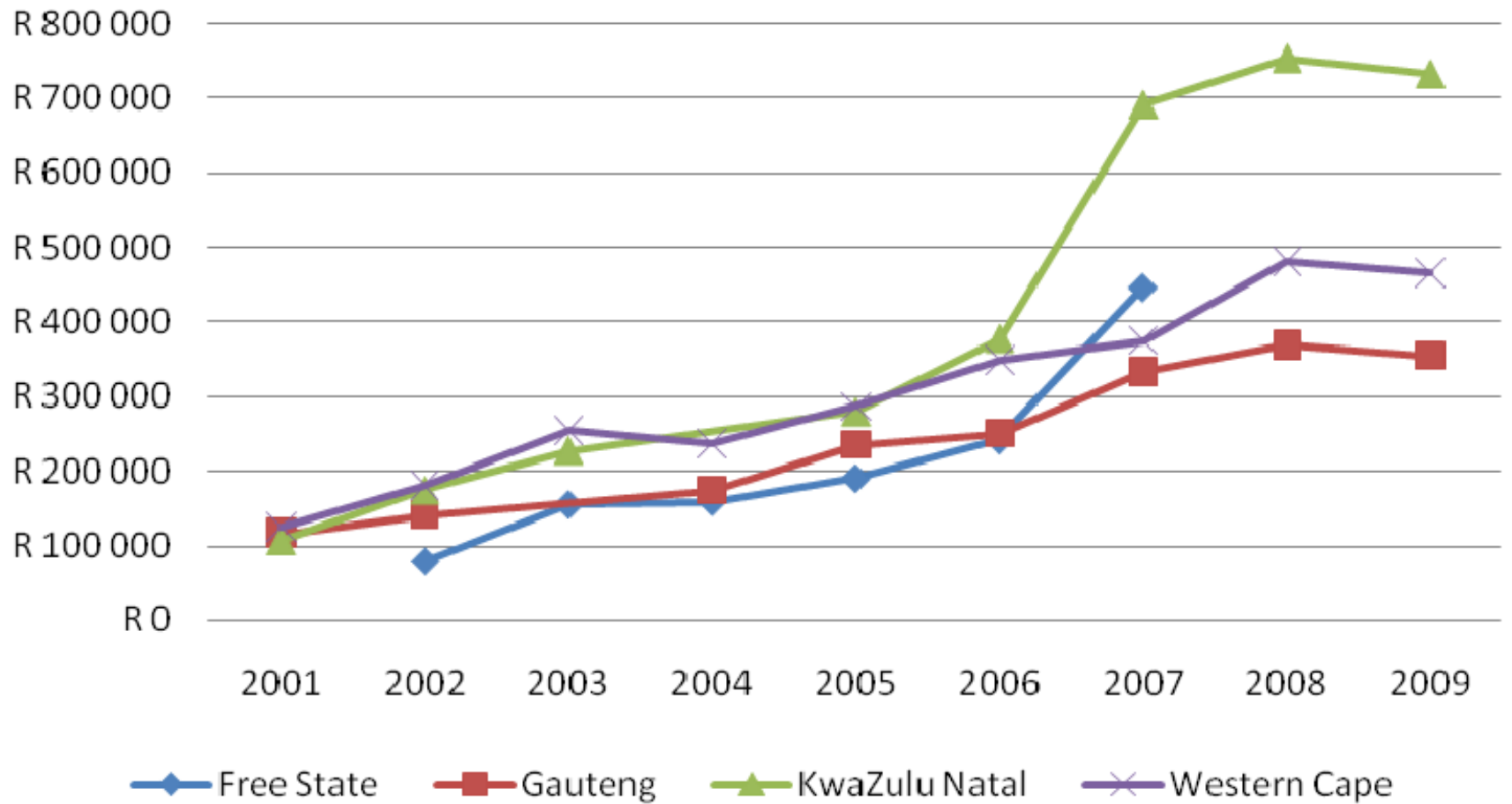
# Average Number of Permits per Month



# Average Number of Mass Permits per Month



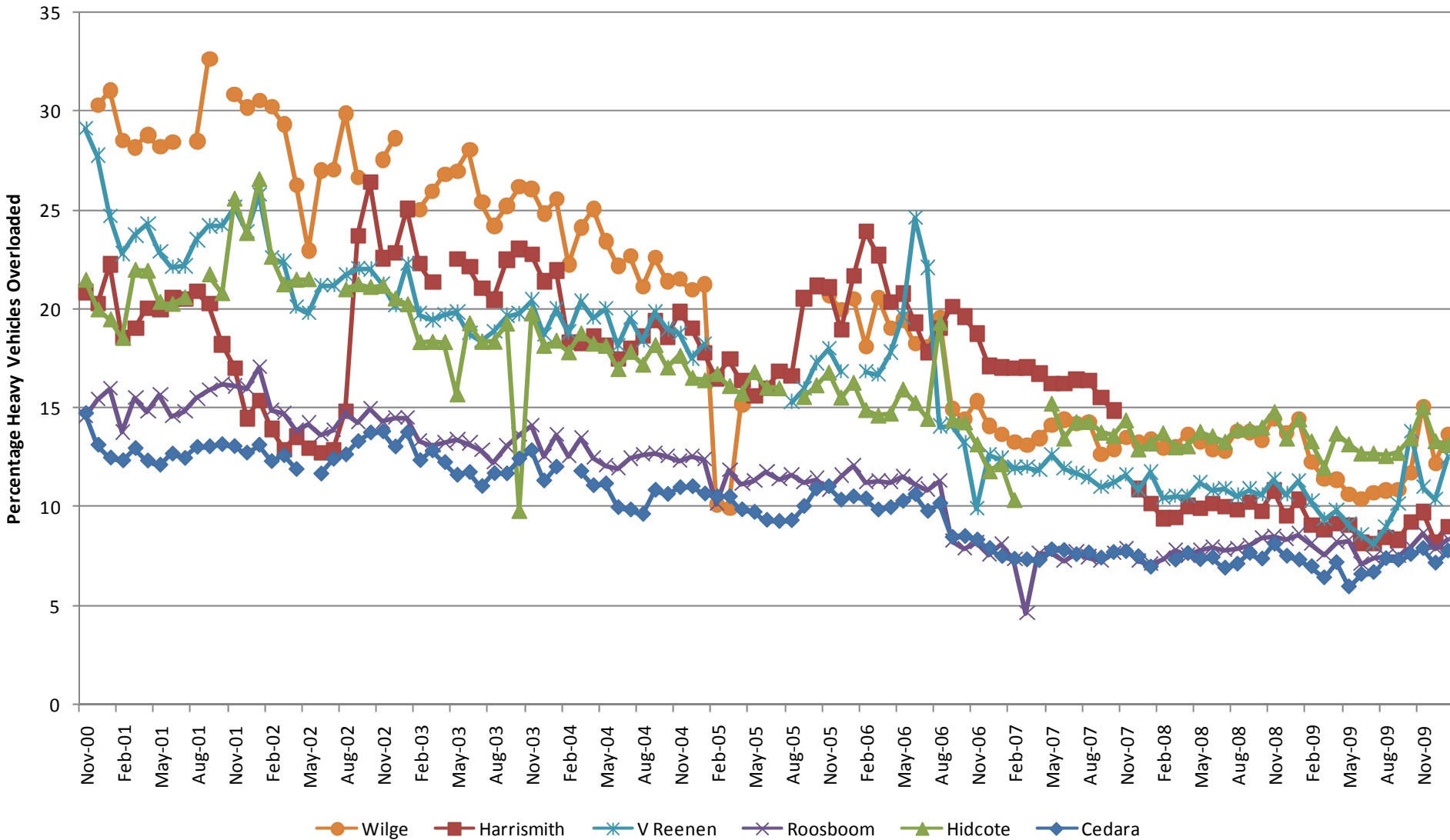
# Average Monthly Permit Fee Income



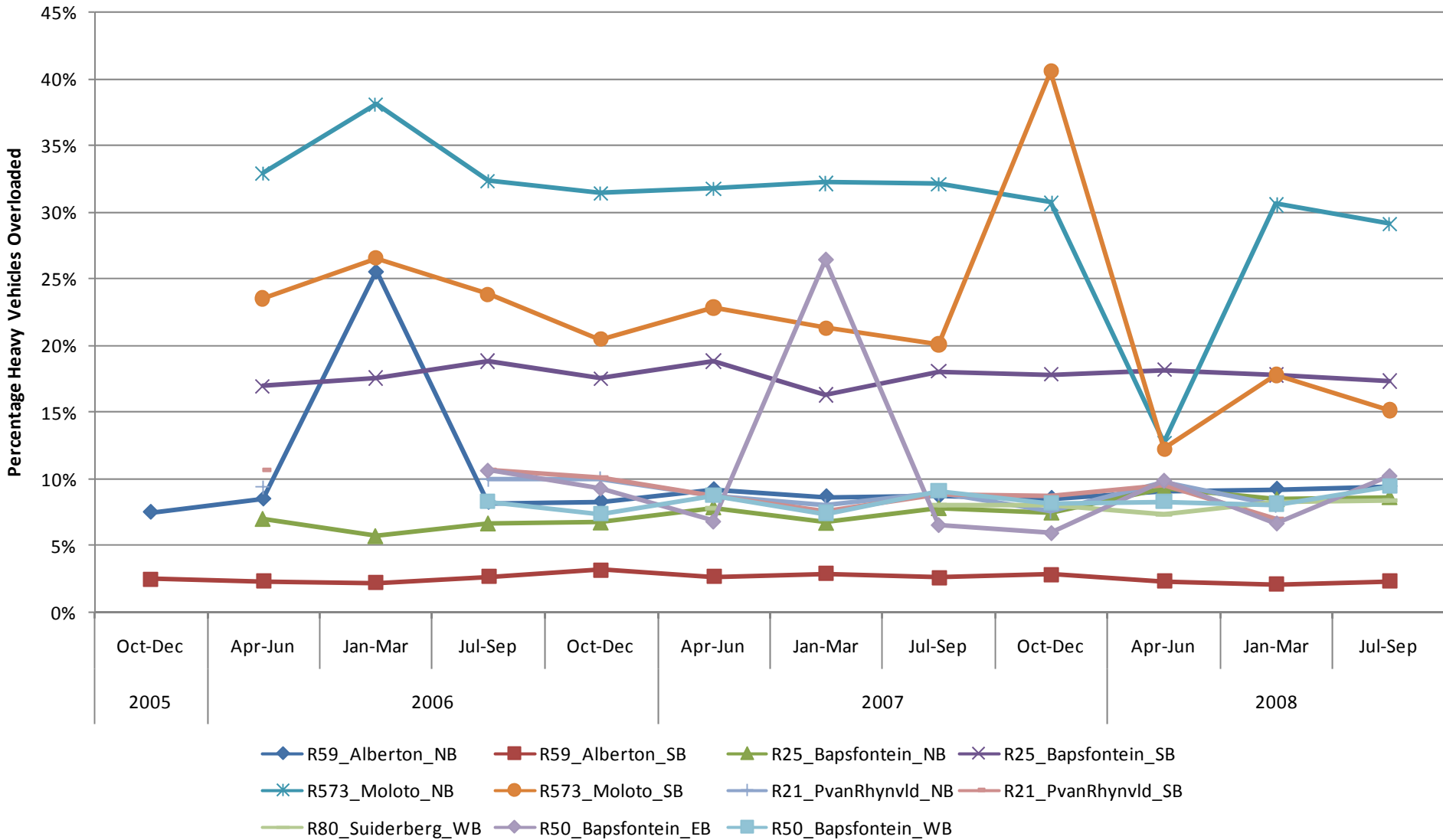
# Overload Monitoring Using Weigh-in-motion Equipment



# Percentage of heavy vehicles overloaded on the N3 North Bound as measured at six N3TC WIM sites



## Percentage of heavy vehicles overloaded as measured at six Gauteng HSWIM sites



**Thank you**