

The Funding of Pupil Transportation In North Carolina – March, 2001

North Carolina Department of Public Instruction
Division of School Support, Transportation Services



Three main components of pupil transportation in North Carolina have improved the efficiency of operations statewide and have generated savings of nearly 900 school buses and millions of miles traveled.

- The **State Vehicle Fleet Management System (SVFMS)** is a statewide computer system that assists school districts with the inspection and preventive maintenance of their school buses.
- The **Transportation Information Management System (TIMS)** is a computer-assisted system of routing and scheduling school buses that provides districts the tools to generate efficient transportation plans.
- The **Transportation Funding Formula** provides incentives for districts to be efficient in the use of buses and dollars.

This document focuses on the funding of pupil transportation in North Carolina and explains the status of each of the main components.

1. Funding Overview

The operation of school buses in North Carolina, to provide safe transportation for students to and from school, is funded primarily through state appropriations. The Department of Public Instruction (DPI), Transportation Services Section administers two distinct appropriations from the General Assembly:

- Transportation Operations - bus drivers, mechanics, fuel, tires, repair parts, etc.
- Capital – for the replacement of school buses

Additional state resources are provided for other components of state assistance to Local Education Agencies (LEAs):

- School Bus Driver Training – conducted by DMV School Bus and Traffic Safety driver education specialists
- Transportation Director Salaries – part of Central Office Administration allotment
- “Insurance” – appropriation to DPI for payment of Tort Claim settlements, through the office of the Attorney General.

In addition to receiving replacement school buses from the state and an allotment for operations (through PRC56), LEAs have additional (limited) sources of funding:

- Exceptional Children (EC) allotment – used only for safety assistants and equipment for transporting students with special needs
- Pre-K EC funding – for transporting or contracting for the transportation of pre-schoolers with special needs
- At-risk Funding – can be used for transportation of students to at-risk programs (e.g. summer school, after-school, etc.)
- Local funds for operations – can be used to supplement state funding
- Local capital funding – needed to purchase additional new school buses (not replacements)

2. Allocation of State Appropriation for Transportation Operations

Funding Formula

In 1980, the General Assembly authorized a study of pupil transportation in North Carolina and approved a new method of funding transportation operations. This new funding formula introduced the concepts of local control and accountability to LEA transportation operations. A block grant allotment replaced a system where line item funding was controlled from DPI. This flexibility is balanced by the budget rating process. It provides proper incentives to minimize expenses and to minimize the number of buses operated.

DPI Transportation Services allots funds from the state appropriation for transportation operations to each LEA using a formula based, in part, on a measure of efficiency of the operation. Each LEA is evaluated with respect to the number of buses operated, number of students transported and total expenditures. These parameters for each LEA are measured along with every other LEA in the state. Additional data are gathered in order to “level the playing field” which allows for an equitable county-by-county comparison. Site characteristics include: the average distance of students to school, the number of students transported per mile of road, elevation, and the magnitude of transportation of students with special needs, among others.

A budget rating is generated for each county by adding 10 points to the efficiency rating. An efficiency rating of 86%, for instance, yields a budget rating of 96%, which indicates that 96% of the LEA’s expenses will be covered by state funds. *The decision the LEA then faces is whether to contribute the additional 4% locally (which they may already be doing) or to make changes to generate savings.*

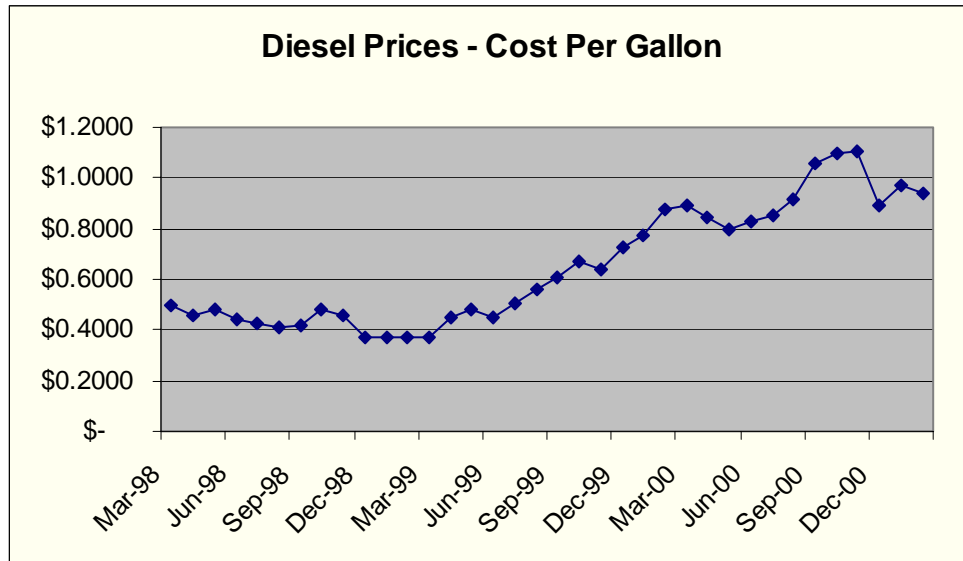
A block grant allotment for transportation is then generated based on the budget rating and the prior year’s expenditures for pupil transportation. This block grant is then increased for the current year based on any increases in average daily membership (ADM)

and any salary increases authorized by the General Assembly. An initial allotment is distributed to LEAs in July, followed by a final allotment in November of each year. DPI provides a budget rating simulator that LEAs may use to project their budget rating and, therefore, state funding each year.

Rising Diesel Fuel Prices

The funding formula described above bases current year allotments on previous year expenditures. Appropriation requests to the General Assembly are also based on these data. This works very well assuming the same operating environment from year to year. Unfortunately, the years 1999-2001 have seen sharply increased prices for diesel fuel.

During the 1998-99 school year, the average cost of diesel fuel statewide was \$0.42 per gallon. The following year, 1999-2000, the average cost rose over 70% to \$0.72 per gallon. This resulted in a situation where LEAs had an insufficient allotment to handle all of their expenses. Statewide the shortfall was \$5.8 million. Late in the 1999-2000 fiscal year, the Office of State Budget and Management approved \$5.8 million to be added to the transportation appropriation and additional allotments were made to LEAs as a result. Further, these additional funds remained in the continuation budget for the 2000-2001 school year.



As seen in the chart above, the cost of diesel fuel has *continued* to rise. The average cost per gallon as of the end of February, 2001, was \$0.95 per gallon – an increase of nearly a third over the previous year. Despite the additional funding allotted last year, the shortage of funds for FY2001 is projected to be \$3.5 million statewide.

DPI’s continuation budget request for the 2001-2003 considers the fuel price increases that have been experienced the past two years.

Contingency Fund

After issuing the allotments explained above, Transportation Services retains a small amount (about 0.1% of the appropriation) to be distributed to LEAs based on need resulting from unique situations that cannot be budgeted. This contingency fund is available to all LEAs upon application prior to April 15 of each year. At that time, requests are analyzed and prioritized, with preference going to major equipment needs for small LEAs. For instance, one “blown engine” can have a significant impact on a small county’s transportation budget. The contingency fund has also be used to compensate for unexpected expenses due to flood, tornado, and other needs that can’t be predicted or budgeted.

3. Replacement of School Buses

State Appropriation.

Through the capital appropriation, DPI Transportation Services purchases replacement school buses and issues them to counties each year. The buying power associated with the purchase of 500-1000 school buses at once has resulted in exceptionally good prices for the state over the years.

Since 1985, all replacement school buses have included two major improvements over prior year buses:

- Longer lasting diesel engines
- Eight light warning system (red and yellow lights, rather than just red lights)

Since 1993, heavy duty axles and other long lasting components have been added to the school buses purchased.

With the continued support of the General Assembly, the 1999-2000 appropriation resulted in the final replacement of all school buses older than and including model year 1985. The result is that all school buses operated on regular routes in North Carolina have an eight light warning system (which helps protect students by sending a consistent signal to motorists) and none are powered by less rugged, less fuel efficient gasoline engines.

Preventive Maintenance

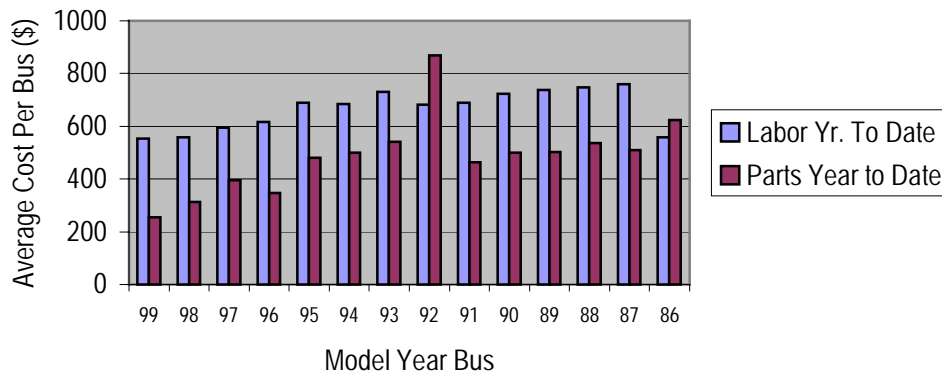
A rigorous preventive maintenance program for school buses has been in place since the mid 1980’s. A preventive maintenance manual is distributed to all LEAs and is available on the web as part of the State Board of Education policy.

In addition to a required mechanical inspection by LEA technicians every 30 days, preventive maintenance tasks are performed every 6,000 miles. The result has been

continually improved condition of the state's school bus fleet. The majority of maintenance activities being performed at the school bus garages are preventive maintenance activities. *As a result, the amount of money spent to maintain the oldest of our buses is not significantly more than the amount required to maintain our new buses* (with the exception that school bus components are warranted during the first 3-5 years)

Consider the chart below, which shows labor costs and parts costs for the state's school bus fleet from July 1, 2001 through March 13, 2001. Clearly, for all buses beyond the warranty period (95 model year and older) there is no significant difference in the labor or parts cost per bus among model years. (The only exception is the parts cost on 1992 models. There are only about 60 of this model year in the fleet, so the averages are more skewed by repairs made to individual buses.)

School Bus Labor and Parts Expense Yr. to Date



Replacement Schedule

For a long time, school buses were replaced every 12-13 years. Because of the strength of today's school buses and the maintenance activities that keep them safe for students, the school buses on the road today can easily run 160,000-200,000 miles before they must be replaced. A maximum allowable mileage is specified by DPI Transportation Services for each model year school bus. Any buses not reaching the mileage threshold in less than twenty years will be replaced regardless.

Impact on Appropriation Request

The replacement schedule described above ensures that LEAs will get the maximum usage from each new school bus and has allowed DPI to *decrease* its budget request. As a result, rather than a biennial request averaging \$45 million per year, the current (2001-03) request is \$29.8 million per year. Very simply, there are better buses on the road now than ever and they are going to last longer than ever. By changing the specifications and working toward a superior school bus, DPI has reached the point where it can request less capital money than in previous years.

4. Inventories

School bus garages stock four major categories of inventory:

- Fuel - diesel (some gasoline, for service trucks, etc)
- Oil
- Tires
- Repair Parts (alternators, seat covers, windshield wipers, stop signs, crossing arms, filters, etc.)

On June 30, 2000, the percentages of statewide inventory were reported as follows:

Total Inventory	Fuel	Oil	Tires	Repair Parts
\$ 12,829,167	\$1,763,453	\$277,758	\$3,089,127	\$7,698,829
On-Hand Inventory as a % of Annual Usage 1999-00:	9.0%	36.6%	49.4%	71.8%

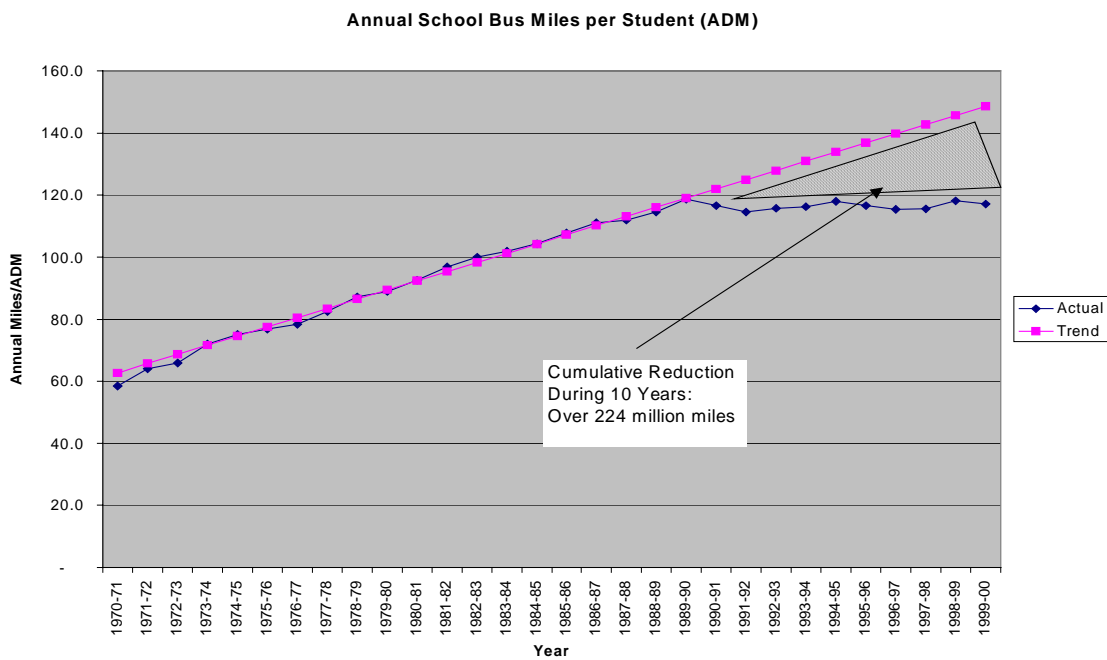
Obviously, the bulk of the inventory is in repair parts. And while, to an certain extent a county could choose to work out of its inventory rather than ordering new parts, most bus garages cannot stock all parts that they are going to need. There are school bus chassis manufactured by Ford, Freightliner, International and Chevrolet. Each has different engines and component parts.

Given the current \$3.5 million shortfall due to the price of diesel fuel, most bus garages have already cut back on stocking any excess inventory in order to make ends meet.

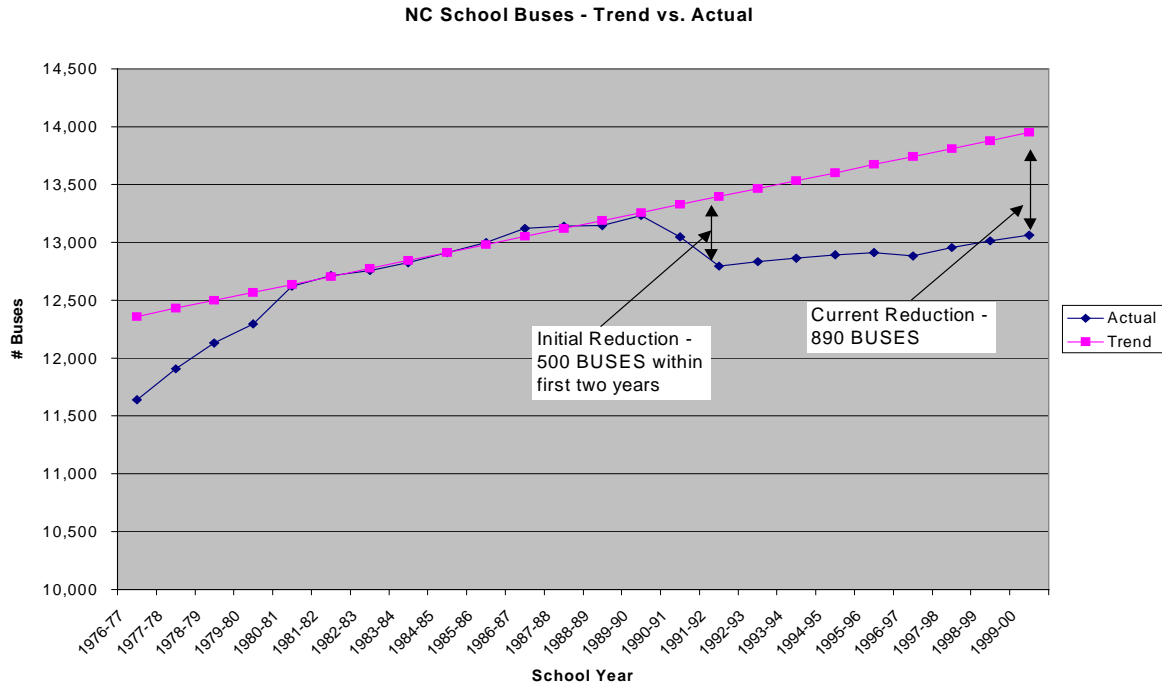
5. Economies and Efficiencies

During the past ten years since the current funding formula has been used, significant strides have been made when contrasted to the spending course that pupil transportation was on prior to this formula. Within two years of the implementation of the new formula, the statewide bus fleet was reduced by over 500 buses and the current fleet is nearly 900 buses less than the course the state was on prior to 1990. (See Chart.) Even with the onset of additional magnet schools, year round schools and other special programs, the number of miles traveled per ADM has held steady and the savings are obvious when contrasted to the projected course prior to the current method of funding. (See Chart) The funding formula authorized by the General Assembly has, indeed, achieved its goal of introducing accountability for efficiency of operation into pupil transportation in North Carolina.

The chart below shows the ratio of the Annual School Bus Miles Traveled to the Average Daily Membership (ADM). Looking at MILES alone can be misleading, because miles will necessarily increase when ADM increases because there are more students to transport. From 1970 until 1989 the Miles/ADM increased at a very steady rate as shown. Beginning in 1990 the funding formula provided an incentive to be more efficient. Thereafter, miles/ADM has remained relatively constant. During the past ten years, accumulated reductions have amounted to over 224 million miles. During 1999-2000, total expenses per mile operated – not including depreciation or bus replacement – was \$1.47 per mile. This mileage savings, then amounts to a savings in today’s dollars of \$329 million over the past 10 years.



The following chart shows the number of school buses being used statewide since 1976. There was clearly an upward trend in the number of buses until the funding formula was implemented in 1990. Within two years there were 500 fewer buses being used than the prior trend. Currently there are nearly 900 fewer buses being used (and thus 900 fewer buses that must be replaced) than the prior trend.



As evidenced by these data, the savings resulting from the initiatives described herein have been significant and produced an efficient funding structure for student transportation.

6. Summary

Pupil transportation in North Carolina is a critical part of the state's education system. And, providing safe transportation for students is a costly venture. The following statistics from the 1999-2000 school year:

- 13,062 School Buses Operated Daily
- 148,315,938 Miles Traveled To and From School
- 696,802 Students Transported Daily
- (that's over 500 million times per year a student boards or exits the bus!)
- \$204,385,495 State Funds Expended for Transportation Operations
- \$ 14,794,834 Local Funds Expended for Transportation Operations

The savings in buses and dollars over the past ten years have come as a result of an efficiency-based funding formula, supported by information systems that allow LEAs to be efficient in the maintenance and routing of buses. The state of North Carolina is realizing *today* the following benefits from ten years of hard work by school district transportation staff. Nearly 900 fewer buses are being operated statewide, that do not have to be replaced and buses are running 30+ million fewer miles, compared with the course being followed prior to 1990.

LEA staff take the responsibility to provide safe and efficient transportation very seriously. The improvements in routing and maintenance and the incentives to save buses and dollars have helped them fulfill this responsibility.