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REPORT TO THE LEGISLATURE

# School Transportation Efficiency

December 2015

**Authorizing legislation:** RCW 28A.160.117

(<http://app.leg.wa.gov/rcw/default.aspx?cite=28A.160.117>)

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# TABLE OF CONTENTS

Executive Summary..... 3

Introduction ..... 4

Review Process and Findings ..... 4

Conclusion and Next Steps ..... 7

## Appendices

Appendix A: Legislation..... 8

Appendix B: Map of Efficiency Ratings ..... 9

## List of Tables

**Table 1:** Distribution of District Efficiency Ratings ..... 10

**Table 2:** Efficiency Quartiles by Combined AM + PM Count ..... 11

**Table 3:** 2011-12 School Year Key Performance Indicators by Efficiency Quartile ..... 11

**Table 4:** 2012-13 School Year Key Performance Indicators by Efficiency Quartile ..... 11

**Table 5:** 2013-14 School Year Key Performance Indicators by Efficiency Quartile ..... 11

## Executive Summary

In September 2011, Washington state adopted a new evaluation system for student transportation operations within each school district. The goal of the system, which is part of a new transportation funding system, is to encourage districts to operate in as efficient manner as possible.

A statistical process is used to determine relative efficiency ratings. The process sets targets for transportation expenditures and the number of buses operated. The results show that a majority of school districts are operating efficiently, with about two-thirds of districts rated at 100 percent.

This is the third year of the regional transportation coordinator (RTC) efficiency review process. A total of 73 districts rated less than 90 percent, the same number of districts below 90 percent as last year. Of these 73 districts, there were 27 new districts that were not reviewed last year. Of the 73 districts rated less than 90 percent last year, there were 27 districts that increased their efficiency rating to above 90 percent, including 16 districts that went from below 90 percent to an efficiency rating of 100 percent. Reviews were conducted for all of these districts for a total of 100 school district reviews.

Translating the statistical nature of the efficiency rating system into the real world remains a challenge. As a result of the difficulty of explaining system behavior, district analysis has been focused on year to year changes in each district's three Key Performance Indicators (KPI). The three KPI used are 1), basic student average load, 2), special education student average load and, 3), cost per student.

School districts are continuing to take steps to improve efficiency in response to the efficiency rating system. However, some districts that increased above 90 percent this year indicated that they had made no significant operational changes that would account for the increase in efficiency rating. Similarly, some districts reduced expenditures and eliminated bus routes but experienced a drop in their efficiency rating. It is in these cases where evaluation of the KPI is particularly helpful in showing districts the impact of the changes they have made.

Several large school districts are in the planning stages of restructuring school bell times. Some of these districts are attempting to provide substantial improvements in efficiency.

## Introduction

The 2009 Washington State Legislature adopted a new student transportation funding system. The new system, known as the Student Transportation Allocation Reporting System (STARS), was implemented on September 1, 2011. An efficiency evaluation system of school district transportation operations was included as an integral part of STARS. The Legislature intended the evaluation system to encourage school districts to operate their student transportation systems in a manner that makes efficient use of state resources. Regional transportation coordinators (RTC) are required to conduct efficiency reviews of those districts with ratings less than 90 percent.

The statistical system used to create the efficiency ratings is called the Target Resource Model (TRM) and was developed by Management Partnership Services, the consultant hired by the Office of Financial Management to provide options for a new student transportation funding methodology. For districts rated at less than 100 percent efficient, TRM creates a statistical “target district” from actual school districts across the state that have environmental features, size characteristics and workload requirements that are the same or more challenging and compares the district’s total transportation costs and the number of buses used with this “target.” The target district establishes the expected resource requirements (expenditures and number of buses) that would be needed to achieve a 100 percent efficiency score.

The calculation of the efficiency ratings requires district expenditure data, which is available in late December of each year. The efficiency ratings are released in early March and are available on the OSPI Student Transportation website at: <http://www.k12.wa.us/transportation/STARS/default.aspx> under the “STARS Efficiency Ratings” section. This same section provides an option to download the regional transportation coordinator efficiency reviews and the Key Performance Indicators (KPI) reports.

## Review Process and Findings

Three different review processes were used depending on the history of the school district rating. There was an initial review process, for those districts whose rating was below 90 percent for the first time. The second review process was for those districts whose prior year and current year efficiency ratings were below 90 percent. The third review process was used for those school districts whose prior year rating was below 90 percent, but the current year rating was above 90 percent.

The initial review process for those districts whose efficiency rating was below 90 percent for the first time includes a written survey of transportation operations, an onsite RTC visit discussing the results of the survey and review of the final RTC report. The survey allows

districts to provide information regarding their transportation operations prior to the initial meeting between the regional coordinator and district staff. As a result, meetings are able to focus on substance, instead of gathering background information.

After the in-person meeting, additional contact is primarily through email. The regional coordinator drafts descriptions and comments regarding district operations and possibilities for improving efficiency. This is then emailed to district staff for response.

For districts remaining below 90 percent for multiple years the process of the review was modified as necessary to maximize the effective use of staff time. Many small school districts will never be able to achieve a rating above 90 percent. For example, where the district's single school is located in the middle of a stretch of highway, the efficiency system target may be to only use a single bus for providing the transportation. However, using a single bus would result in excessive ride times for students. For these districts, the review process typically consisted of a phone call or email exchange to identify any changes in operations. For larger school districts with more complex transportation operations, on-site visits were more productive.

Some districts had efficiency ratings below 90 percent in March 2013, had increased their efficiency rating to above 90 percent in March 2014 and were again below 90 percent in 2015. For these districts, the review process reflected that used when a district remained below 90 percent, as explained in the preceding paragraph.

An abbreviated review process was used for those districts whose prior year efficiency ratings were below 90 percent, but whose March 2015 year rating was above 90 percent. These reviews consisted of attempting to determine any changes made in transportation operations that resulted in the increased efficiency rating in order to identify best practices.

The primary audience for the efficiency reports is school district administrative staff, local school boards and interested members of the community. OSPI and RTCs generate KPI to compare district transportation operations in three categories:

- 1) the number of basic program students per basic program bus,
- 2) the number of special education students per special education bus, and
- 3) the cost per student transported.

While KPI have some of the same weaknesses of the statistical rating process, they provide a comparison of a district's operational performance using everyday concepts. The last three annual statewide KPI are provided in Tables 3, 4 and 5 and show the expected ability of larger districts to take advantage of efficiencies of scale not available to small districts. A customized KPI report was generated for all school districts regardless of efficiency rating to encourage districts with efficiency ratings of 100 percent to evaluate how they compare

to similar size districts. These reports are available on the OSPI website at the link above under “KPI Reports.”

Due to several school districts operating transportation services for neighboring districts or operating as transportation cooperatives, there were a total of 285 districts included in the efficiency rating process.

The March 2015 rating resulted in 180 districts (63.2 percent) rated at 100 percent and 73 districts rated less than 90 percent. For a year-to-year comparison of the distribution of school district efficiency ratings, see Table 1 in Appendix B. There was a reduction in the number of districts rated 100 percent and an increase in the number of districts rated between 100 percent and 90 percent. Part of this drop can be attributed to the elimination of one data element (the collection of kindergarten route data was eliminated in 2013). Reducing the number of data elements used in the analysis results in fewer districts being outliers and being rated at 100 percent by default.

Washington State has a substantial variation in size of school districts when measured either by enrollment, land area, roadway or other characteristics. “Why are we being compared to district X?” was a frequent question in the review process. In many cases, districts are used to comparing themselves to neighboring districts, regardless of disparity in size or other characteristics. Districts were evaluated by the number of student riders to ensure that comparisons were made between similar size districts. For the break points in the student count quartiles, see Table 2.

Many districts reported changes in operations to increase efficiency. These changes ranged from consolidation of school bus routes to changing bell times. A number of larger districts indicated they are in the process of implementing future bell time changes to provide multi-tiered routing of school buses. For large districts, restructuring bell times is typically a multi-year process.

Perhaps the most difficult circumstances to explain are when a district increases the average student load and cut costs by consolidating bus routes, but its latest rating shows a decrease in the efficiency. The reverse has also occurred, in which a district increases costs and the efficiency rating increases. It is in cases such as these where referring to the KPI is particularly useful.

Tables 3, 4 and 5 provide the statewide Key Performance Indicators for the 2011-12, 2012-13, and 2013-14 school years. There were only slight changes in any of the values. The comparison of year to year values is more productive at the individual school district level.

Appendix B provides a statewide map of efficiency ratings. While there are minor variations from prior year maps, the overall pattern is unchanged. The highest concentration of low ratings is found in rural SW Washington and scattered across the rural areas of Eastern Washington.

School districts remain susceptible to having their efficiency ratings drop due to one-time costs such as rebuilding a diesel engine (for a small district) or implementing a technology system. Ideally, districts should make these implementation decisions based on the impact on student safety and long range efficiencies, not the impact of the expenditure on their efficiency rating.

## **Conclusion and Next Steps**

School districts are working to improve efficiency as a result of the implementation of the STARS efficiency rating system. This is clearly a success. The use of Key Performance Indicators has provided a useful tool that is easier to comprehend and can indicate relative efficiency, including those districts with efficiency ratings of 100 percent.

# APPENDICES

## Appendix A: Legislation

RCW 28A.160.117 Transportation efficiency reviews — Reports.

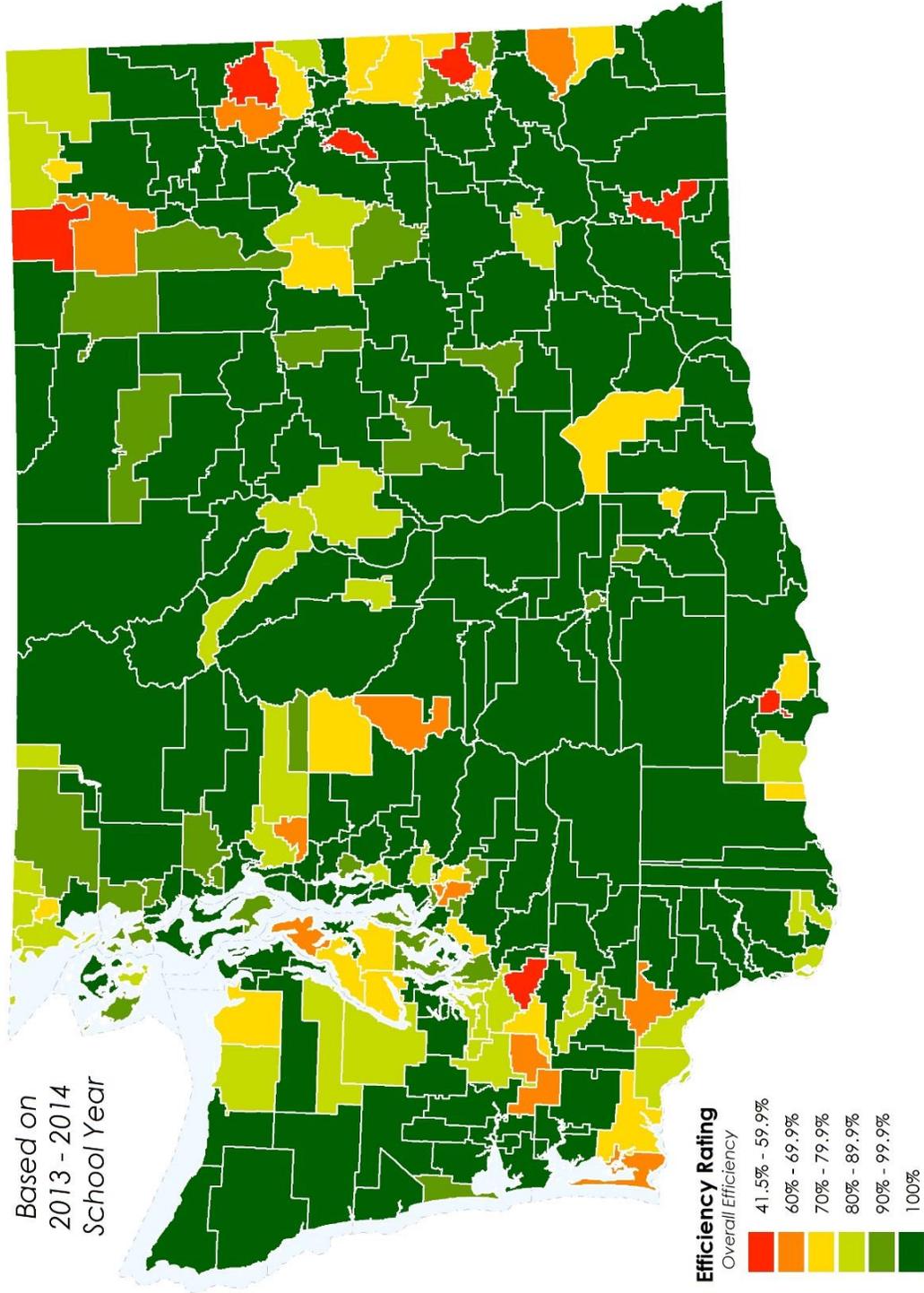
(1) The superintendent of public instruction shall encourage efficient use of state resources by providing a linear programming process that compares school district transportation operations. If a school district's operation is calculated to be less than ninety percent efficient, the regional transportation coordinators shall provide an individual review to determine what measures are available to the school district to improve efficiency. The evaluation shall include such measures as:

- (a) Efficient routing of buses;
- (b) Efficient use of vehicle capacity; and
- (c) Reasonable controls on compensation costs.

(2) The superintendent shall submit to the fiscal and education committees of the legislature no later than December 1st of each year a report summarizing the efficiency reviews and the resulting changes implemented by school districts in response to the recommendations of the regional transportation coordinators.

# Appendix B:

## School Transportation Efficiency Ratings - March 2015



# LIST OF TABLES

**Table 1: Distribution of District Efficiency Ratings**

| <b>Efficiency Rating</b> | <b>2013 Rating</b> | <b>2014 Rating</b> | <b>2015 Rating</b> |
|--------------------------|--------------------|--------------------|--------------------|
| 100%                     | 203                | 200                | 180                |
| 90% to 99.9%             | 22                 | 15                 | 32                 |
| 80% to 89.9%             | 21                 | 28                 | 33                 |
| 70% to 79.9%             | 20                 | 19                 | 20                 |
| 60% to 69.9%             | 12                 | 16                 | 13                 |
| Less than 60%            | 10                 | 10                 | 7                  |

**Table 2: Efficiency Quartiles by Combined AM + PM Student Count**

|                          | Minimum Student Count | Maximum Student Count |
|--------------------------|-----------------------|-----------------------|
| 1 <sup>st</sup> Quartile | 11                    | 241                   |
| 2 <sup>nd</sup> Quartile | 242                   | 785                   |
| 3 <sup>rd</sup> Quartile | 786                   | 3123                  |
| 4 <sup>th</sup> Quartile | 3124                  | 27,321                |

**Table 3: 2011-12 Key Performance Indicators by Efficiency Quartiles  
(riders per bus is one half of combined AM + PM Student Count)**

|                          | KPI: Basic Program<br>Riders per Basic<br>Program Bus | KPI: Special Program<br>Riders per Special<br>Program Bus | KPI: Cost per<br>Student |
|--------------------------|---|---|--------------------------|
| 1 <sup>st</sup> Quartile | 18  | 1   | \$2,723.33               |
| 2 <sup>nd</sup> Quartile | 36  | 5   | \$1,505.09               |
| 3 <sup>rd</sup> Quartile | 58  | 9   | \$1,066.14               |
| 4 <sup>th</sup> Quartile | 84  | 9   | \$1,001.00               |

**Table 4: 2012-13 Key Performance Indicators by Efficiency Quartiles  
(riders per bus is one half of combined AM + PM Student Count)**

|                          | KPI: Basic Program<br>Riders per Basic<br>Program Bus | KPI: Special Program<br>Riders per Special<br>Program Bus | KPI: Cost per<br>Student |
|--------------------------|---|---|--------------------------|
| 1 <sup>st</sup> Quartile | 19  | 1   | \$2,649.31               |
| 2 <sup>nd</sup> Quartile | 36  | 3   | \$1,567.67               |
| 3 <sup>rd</sup> Quartile | 59  | 8   | \$1,060.61               |
| 4 <sup>th</sup> Quartile | 85  | 8   | \$1,018.78               |

**Table 5: 2013-14 Key Performance Indicators by Efficiency Quartiles  
(riders per bus is one half of combined AM + PM Student Count)**

|                          | KPI: Basic Program<br>Riders per Basic<br>Program Bus | KPI: Special Program<br>Riders per Special<br>Program Bus | KPI: Cost per<br>Student |
|--------------------------|---|---|--------------------------|
| 1 <sup>st</sup> Quartile | 19  | 1   | \$2,766.32               |
| 2 <sup>nd</sup> Quartile | 39  | 3   | \$1,362.16               |
| 3 <sup>rd</sup> Quartile | 60  | 8   | \$1,079.24               |
| 4 <sup>th</sup> Quartile | 83  | 8   | \$1,059.85               |

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