

# Lake County Office of Education

## TRANSPORTATION STUDY

SEPTEMBER 16, 2011

Prepared By:

MICHELE HUNTOON, CPA  
ASSOCIATE VICE PRESIDENT

BUD BANKSTON  
TRANSPORTATION EXPERT/CONSULTANT

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September 16, 2011

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Mr. Wally Holbrook  
County Superintendent of Schools  
Lake County Office of Education  
1152 South Main Street  
Lakeport, CA 95453

Dear Mr. Holbrook:

Thank you for allowing School Services of California, Inc., (SSC) to assist the Lake County Office of Education in a review of its seven school districts and the County Office of Education in Lake County to identify ways for efficiency in providing transportation services to their communities. We are pleased to provide you with the following report.

The attached report contains information that will provide information to assist the District to ensure the transportation program is effectively managed. Please let us know if we can be of service in providing any additional clarification regarding our review. We thank you for the confidence you have placed in SSC.

Sincerely,

A handwritten signature in black ink that reads "Michele A. Huntoon".

MICHELE HUNTOON, CPA  
Associate Vice President

An Employee-Owned  
Company

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## Executive Summary

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At the request of the County Superintendent of Schools in Lake County, School Services of California, Inc., (SSC) entered into a contract to conduct a review of the efficiencies among seven school districts and the Lake County Office of Education (COE) in the areas of home-to-school and special education transportation. It is essential for the operation of an organization to be efficient and effective in support of the delivery of educational services to the current and future students attending district schools.

Interviews were held with each of the seven schools districts – Kelseyville Unified School District (USD), Konocti USD, Lakeport USD, Lucerne Union Elementary School District (UESD), Middletown USD, Upper Lake UESD, and Upper Lake Union High School District (UHSD). We conducted interviews with personnel in the Business and Transportation Departments, including cabinet, management, and support staff members. In addition, we reviewed documents provided by all of the organizations through the Lake COE.

We are pleased to provide the following constructive information critical to an effective organization:

### SHARED SERVICES OPTIONS

We provide three separate options for review and discussion among the school agencies within Lake County to determine a consensus for one of the options. All options are viable; it will be the collaborative discussion among the group that will determine the best fit. All of the options will provide efficiency and effectiveness related to transportation services for students in support of the academic programs provided throughout the county. A collaborative discussion among the districts will determine the option that will be the best fit for the group. The options include:

**Option No. 1: Lead Local Educational Agency** – This option would include the designation of one school agency within the county to manage regular education and special education needs pupil transportation services for all of the Lake County Schools in an effort to gain efficiency and economic savings that would be beneficial to the districts.

Upon evaluation of the transportation operations of all of the Lake County school districts, it is recommended that Kelseyville USD become the lead local educational agency (LEA) under this option. This recommendation is based upon their location and their vehicle maintenance facility.

**Option No. 2: Lead Agency in North and South County** – This option would be structured as two locations functioning as the lead agencies for transportation services; one at the north end of the county and one at the south end of the county to manage regular education and special needs

pupil transportation services to gain efficiency and economic savings that would be advantageous to the districts.

### South County

In the south end of Lake County, it is recommended that Lakeport USD, Kelseyville USD, Konocti USD, and Middletown USD join together to provide regular education and special education needs pupil transportation services under this option. It is recommended that Kelseyville USD become the lead LEA in the south county area. This recommendation is based upon their locations and vehicle maintenance facilities.

### North County

A combined north county operation is already in place between Upper Lake UESD and Upper Lake UHSD. Upper Lake UHSD manages the transportation operations for both the high school and the elementary school districts, and it is recommended that the high school district serve as the lead for the north county area. Transportation for students with special needs is provided by Kelseyville USD for both districts. It is recommended that this service remain with Kelseyville USD.

Additionally, it is recommended that Lucerne UESD combine their pupil transportation services with the Upper Lake UESD and high school districts.

**Option No. 3: Joint Powers Agency** – This option recommends creating a joint powers agency (JPA), which is the establishment of a separate legal entity. This structure is similar to Option No. 1 with a single lead LEA countywide, but with the formalization of a separate legal entity. Therefore, it would be one agency managing the transportation services throughout the county.

The formation of a JPA would include sharing capital, overhead, and operational expenses among JPA member districts. This move can reduce overall costs and increase the quality of service and safety.

As with other forms of cooperative transportation ventures, the attraction of the JPA exists only with a need for transportation improvement. Without the “desire” catalyst, trying to sell such a venture to the neighboring school districts is a wasted effort. However, if a need in a transportation system has been identified in one or more of several areas this form of shared operation might be attractive. Most areas of deficiency can be identified as:

- ✚ Overall costs too high
- ✚ Additional replacement buses needed, but not affordable
- ✚ Inadequate vehicle maintenance

- ✦ Inadequate facilities
- ✦ Need for driver training and evaluation
- ✦ Personnel difficulties
- ✦ Inability to maintain a roster of qualified regular/substitute bus drivers
- ✦ Less than suitable management

A joint powers transportation agency operates as a cooperative venture, having its own governing board, complete in-house administrative functions, comprehensive management organization, budgetary control, and the attractive feature of control by the participating districts.

### OPERATIONAL EFFICIENCIES

Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered, including policies, procedures, maintenance, and meeting industry standards:

- ✦ Develop a written preventive maintenance plan
- ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations
- ✦ Create staffing ratios that are commensurate with the volume of vehicle maintenance required to be performed
- ✦ Monitor fuel usage, inventory, purchases, and prepare monthly reconciliations of fuel usage
- ✦ Establish a regular physical parts inventory
  - Remove old or obsolete inventory and return unused parts to vendors for credit, and reduce the number of tires inventoried
- ✦ Replace older buses; utilizing the small school district bus replacement program (applicable to all of the districts except for the Konocti USD) and any funding available from the Lower Emission School Bus Replacement Program
- ✦ Explore options to modify bell schedules in order to provide transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services

- ✦ All buses should be used as efficiently as possible; utilizing them for multiple grade levels
- ✦ Implement a Department of Motor Vehicle (DMV) pull notice program for van drivers who are employed by the districts and require DMV H-6 reports for non-employees
- ✦ Review current inventory and utilization of white fleet vehicles to determine if all vehicles are necessary in completing tasks of the school districts

Key recommendations are included in this Executive Summary and were selected to indicate the scope of suggested changes. Each section of the report contains additional recommendations that will have an impact on the overall considerations as it relates to management decisions for the transportation services provided throughout the county.

## Purpose

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The purpose of this review is to assess the transportation efficiencies within Lake County among the seven school districts and the Lake COE in the areas of home-to-school and special education.

Lake COE is interested in exploring possible opportunities to reduce costs and secure greater efficiencies in the delivery of transportation services for seven districts and the COE.

To this end, we analyzed each district's past, current, and projected expenditures for transportation, which includes regular home-to-school and special education transportation. In addition, this analysis includes an examination of the percentage of transportation costs in relation to the overall budgets of the districts, a review of the trends in revenues/expenditures for the areas, and an assessment of all of the assumptions that underlie the districts' budget projections.

The feasibility study includes a review of various workload measures, where available, for home-to-school and special education transportation, such as the number of students transported, miles covered, and routes needed to provide services. These workload measures will provide information that will be used to determine the feasibility of combining or sharing responsibility for the delivery of these services.

The feasibility study will also identify factors that could pose barriers to collaborating on the delivery of services among the districts and the COE. These factors could include logistical barriers, organizational constraints, resource limitations, or various other factors.

## Scope and Methodology

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The scope of our review consisted of gathering information/data through site-level interviews and document reviews. The interviews were coordinated through the COE and included school district budget staff, program staff and managers, and district leadership.

To complete the analysis, various budget and program documents were reviewed. These documents reflected past expenditure and service levels, as well as projections of future service demands and resource requirements.

We reviewed the current methodologies used by the districts for the transportation program through an analysis of data from the districts and interviews with the business office, transportation department, and administration. To that end, we reviewed documents relating to the existing transportation methodologies used for bus routes, organizational structure, policies and procedures, and compared existing conditions with “best practices.” In addition, we have provided recommendations focused on implementation of these best practices.

We have presented pros and cons of various shared service models, including a JPA, a memorandum of understanding, an informal collaboration and other practices, and where practical, estimated potential savings from sharing services throughout the county and identified potential barriers to its implementation.

Additionally, we have included recommendations related to operational issues, which are intended to provide a basis for management decisions and actions to allow the organization to maximize talents of the leadership team members and enhance the efficiency and effectiveness of the organization.

## Transportation Study

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### BACKGROUND

Lake County is situated in the northern central portion of California north of Napa and Sonoma Counties with a population of approximately 65,000. Lake County is comprised of approximately 1,329 square miles, which includes the 68 square miles of Clear Lake (the largest freshwater lake situated entirely within the boundaries of California). The majority of the population resides in cities situated around the lake. A significant portion of the northern part of the county is comprised of the Mendocino National Forest, which is uninhabited. The population density of the county is 48 persons per square mile and approximately 24% of those residents are under the age of 18.

Current data indicates that the largest employers within the county are public; followed by retail, tourism, and casinos. School districts comprise the largest, employing almost 1,500; followed by Lake County, who employs approximately 850.

The seven school districts of Lake County operate more than 21 schools, including 16 that offer education through the eighth grade and five that offer education for grades nine through 12. Additionally, there are adult, alternative, community, court, and various alternative education facilities in each of the districts.

### SHARED SERVICES OPTIONS

#### **Option No. 1: Lead Agency**

Utilizing the option of a LEA to manage regular education and special education needs pupil transportation services for all of the Lake County schools would gain efficiency and economic savings that would be beneficial to the districts.

Upon evaluation of the transportation operations of all of the Lake County school districts, it is recommended that Kelseyville USD become the lead LEA under this scenario. This recommendation is based upon their location and vehicle maintenance facility.

The number of bus routes and bus drivers needed would be dependent on how flexible the school districts are with school calendars and consistent countywide bell schedules. By utilizing countywide bell schedules, it allows for all grade levels to be transported on the same buses. It provides an opportunity for districts to combine buses and routes, which, naturally, results in fewer buses and bus drivers. With the use of countywide bell schedules among the districts, a route evaluation would determine the exact cost savings for student transportation.

A route evaluation is a function of the supervisory and driver training staff to ensure that inefficiencies do not exist and that the buses are loaded to the maximum capacity allowed. Inefficiencies would include: duplication of bus service in the same areas (neighborhoods); idle time before, between, or after routes; and loading buses to capacity takes into account the geographical area, as well as the number of students who can be placed on the bus in a reasonable timeframe.

School calendars should remain consistent countywide in order to minimize costs. The calendar and bell schedule are inseparable in avoiding inefficiencies by maximizing equipment and personnel. Deviation from either will result in increased costs.





The buses would be housed at several locations throughout the county in order to reduce deadhead time and miles. The multiple park-outs would also assist with parking issues, since the number of buses owned by the school districts in Lake County exceeds the available parking at the Kelseyville USD transportation facility.

Kelseyville USD has the largest maintenance facility among the school districts in Lake County. The existing transportation building is very old and would be costly to remodel and modernize. After some house cleaning and organization, the existing facility would be adequate until a new facility could be built or a more modern building acquired.

After the fieldwork was completed, the notion of selling the property where the bus barn is located in Kelseyville USD has been discussed. In addition, the thought of leasing back the facility will be necessary in order for Kelseyville USD to maintain transportation services to the students. There seems to be no compelling motive to sell the property only for Kelseyville USD to become a tenant. This would have the appearance of adding additional costs (for rent) where none currently exist today. Either way, Kelseyville USD will still need a bus yard. Kelseyville USD has been recommended due to location, fleet size, staffing, and current available space.

A vehicle maintenance software program would be needed to track vehicle maintenance/inspection records, parts inventory, and vehicle operating cost. In order to track fuel usage, inventory, and cost, the implementation of a fuel monitoring system is recommended.

The recommended staffing for the combined operation is:

-  Director
-  Supervisor
-  Dispatcher/Router
-  Driver Instructor

- ✚ Lead Bus Driver
- ✚ Clerical Personnel

The vehicle maintenance staff would consist of the following positions:

- ✚ Lead Mechanic
- ✚ Mechanic
- ✚ Service Mechanic

The above referenced positions will be required in order to maintain:

- ✚ 50 buses
- ✚ 72 white fleet vehicles

Currently, there are 74 school buses assigned to 42 daily routes in Lake County.

The white fleet includes maintenance/grounds vehicles, other passenger vehicles, and district vehicles, which are not school buses.

Since Kelseyville USD has the largest transportation facility among all of the school districts in Lake County, it is recommended that the aforementioned staffing positions be housed at this location. The Lead Bus Driver would be housed at the Upper Lake UHSD's bus park-out area to assist in coordinating transportation services in the vicinity.

This option of a lead LEA to manage all pupil transportation services would require a Multilateral Interagency Agreement. There are several principal attributes that must be resolved between all of the school districts prior to any formal agreement being drafted, including:

- ✚ Ownership of the school bus fleet
- ✚ Labor agreements and restrictions
- ✚ Liability
- ✚ Method of accurately calculating and dividing the total cost of pupil transportation among the districts
- ✚ Reduction of the current school bus inventory from 74 to 50 and reducing the number of spare buses from 32 to eight

This particular option may be the most significant for two reasons.

First, a majority of any school district's budget consists of employee salary and benefits. Presently, among the seven school districts in Lake County there are four classified supervisory positions overseeing pupil transportation. Additionally, there are six mechanic positions and approximately nine hours of clerical support. The potential for cost savings with this option would be significant based on the reduction of supervisory and mechanical staff. The current allocated clerical time would be sufficient for a department of this size. Other recommended departmental positions such as Dispatcher/Router and Driver Instructor would be filled at salary placements that are at a lower level than the Supervisor and Mechanic salary schedules. This option would reduce the number of supervisory personnel from four to two and the number of mechanic positions from six to three; one of which would be a service mechanic position that would be placed lower on the salary schedule.

Second, fleet reduction alone is a compelling reason to explore this option. Currently, 33% of the school bus inventory could be sold for surplus; creating a cash flow that could help provide for adequate vehicle maintenance facilities and eliminate one-third of the current vehicle maintenance expenditures, including liability insurance.

A potential savings associated with this Option related to the salaries and benefits for management, dispatcher, driver instructor, clerical, and mechanics is included in Appendix A.

### **Option No. 2: Two Lead Agencies in the County**

Utilizing the option of having both a north and south county lead LEA to manage regular education and special needs pupil transportation services would be a gain in efficiency and economic savings that would be advantageous to the districts.

#### **South County**

Upon evaluation of the transportation operations for all of the Lake County school districts, it is recommended that Lakeport USD, Kelseyville USD, Konocti USD, and Middletown USD join together to provide home-to-school and students with special needs transportation services under this option. It is recommended that Kelseyville USD become the lead LEA in the south county area. This recommendation is based upon their locations and vehicle maintenance facilities.

The number of bus routes and bus drivers needed would be dependent on how flexible the school districts are with countywide consistent bell schedules. By utilizing countywide consistent bell schedules, it allows for all grade levels to be transported on the same buses. It provides an opportunity for districts to combine buses and routes, which on the natural, results in fewer buses and bus drivers. With consistent countywide bell schedules among the districts, a route evaluation would determine the exact cost savings for student transportation.

The buses would be housed at two locations – Kelseyville USD and Middletown USD transportation facilities. The maintenance of the buses and other district vehicles would be maintained at one centralized maintenance facility.

Kelseyville USD has the largest maintenance facility among school districts in Lake County. The existing transportation building is very old and would be costly to remodel and modernize. After some house cleaning and organization, the existing facility would be adequate until a new facility could be built or a more modern building acquired.

A vehicle maintenance software program would be required to track vehicle maintenance/inspection records, parts inventory, and vehicle operating cost.

In order to track fuel usage, inventory, and cost, the implementation of a fuel monitoring system is recommended.

A combined south county operation would be composed of the following positions:

- ✚ Director
- ✚ Dispatcher/Router
- ✚ Driver Instructor
- ✚ Clerical Personnel

The vehicle maintenance staff would consist of the following positions:

- ✚ Lead Mechanic
- ✚ Mechanic
- ✚ Service Mechanic

The above referenced positions will be required in order to maintain:

- ✚ 44 buses
- ✚ 64 white fleet vehicles

Currently, there are 64 school buses assigned to 37 daily routes in the southern portion of Lake County.

Since Kelseyville USD has the largest transportation facility among all of the school districts in Lake County, it is recommended that placement of the aforementioned staffing positions be made at this location.

This option of a lead LEA to manage all pupil transportation services in the southern part of the county would require a Multilateral Interagency Agreement. There are several principal attributes that must be resolved between all of the school districts prior to any formal agreement being drafted, including:

- ✦ Ownership of the school bus fleet
- ✦ Labor agreements and restrictions
- ✦ Liability
- ✦ Method of accurately calculating and dividing the total cost of pupil transportation amongst the districts
- ✦ Reduction of the current inventory of school buses from 64 to 44 and reducing the number of spare buses from 20 to seven in the south

### North County

A combined north county operation is already in place between Upper Lake UESD and Upper Lake UHSD. Both districts provide buses to transport the high school and elementary students. The Director of Transportation for the high school district manages the transportation operations for both the high school and the elementary school districts. The elementary school district reimburses the high school district 60% of the transportation costs to transport their students. Transportation for students with special needs is provided by Kelseyville USD for both districts. It is recommended that this service remain with Kelseyville USD.

The high school district owns and maintains the buses in their district-owned facility. The high school district's mechanic also maintains their white fleet vehicles. The elementary school district's white fleet vehicles are maintained by their lead building maintenance employee. Lucerne UESD owns two buses and provides their own transportation services. However, they do have an agreement with Upper Lake UHSD to provide maintenance for those two buses.

It is recommended that Lucerne UESD combine their pupil transportation services with the Upper Lake UESD and high school districts. It is also recommended that Upper Lake UHSD manage the north county area for transportation.

The use of countywide bell schedules among the three school districts would increase efficiency in bus routing. Consistent bell schedules would allow them to share buses and bus routes, resulting in transportation cost savings.

It is recommended that the buses from Upper Lake UESD and Lucerne UESD continue to be maintained at the Upper Lake UHSD's maintenance facility. This facility is adequate for the amount of equipment to be maintained. A vehicle maintenance software program would be needed to track vehicle maintenance/inspection records, parts inventory, and vehicle operating cost.

In order to track fuel usage, inventory, and cost, the acquisition of a fuel monitoring system is recommended.

The transportation staff should consist of a Supervisor/Mechanic in order to be able to maintain:

- ✚ Seven buses
- ✚ Eight white fleet vehicles

There are currently ten school buses assigned to five daily routes in the northern portion of Lake County.

This option of a lead LEA to manage all pupil transportation services would require a Multilateral Interagency Agreement. There are several principal attributes that must be resolved between all of the school districts prior to any formal agreement being drafted, including:

- ✚ Ownership of the school bus fleet
- ✚ Labor agreements and restrictions
- ✚ Liability
- ✚ Method of accurately calculating and dividing the total cost of pupil transportation between the districts
- ✚ Reduction of the current inventory of school buses from ten to seven and reducing the number of spare buses from five to two in the north

Other recommended departmental positions such as Dispatcher/Router and Driver Instructor would be filled at a salary placement that is at a lower level than the Supervisor and Mechanic salary schedules. The recommended position of Supervisor/Mechanic should also be required to obtain a California School Bus Driver Instructor Certificate and be responsible for the training of all North County school bus drivers.

This option is the most manageable due to the fact that there is a cooperation of services and staff that has already been established in the upper portion of the County. This option would only require minimal changes in these three school districts and the majority of the efforts could then be directed to the remaining districts.

A majority of any school district's budget consists of employee salary and benefits. Presently, among the seven school districts in Lake County there are four classified supervisory positions overseeing pupil transportation. Additionally, there are six mechanic positions and approximately nine hours of clerical support. The potential for cost savings with this option would be significant in the reduction of supervisory and mechanical staff. The current allocated clerical time would be sufficient for the southern districts. The northern districts could utilize one or two hours per day from a part-time driver position. Other recommended departmental positions such as Dispatcher/Router and Driver Instructor would be filled at a salary placement that is at a lower level than the Supervisor and Mechanic salary schedules. This option would reduce the number of supervisory personnel from four to two and the number of mechanic positions from six to three; one of which would be a service mechanic position and placed lower on the salary schedule.

Fleet reduction alone is a compelling reason to explore this option. Approximately 31% of the current school bus inventory could be sold for surplus; creating a cash flow that could help provide for adequate vehicle maintenance facilities and eliminate almost one-third of the current vehicle maintenance expenditures, including liability insurance.

A potential savings associated with this Option (North and South) related to the salaries and benefits for management, dispatcher, driver instructor, clerical, and mechanics is included in Appendix A.

### **Option No. 3: Joint Powers Agency**

This option recommends the creation of a JPA. A JPA is allowed and defined by the Joint Exercise of Powers Act, Title 1, Division 7, Chapter 5, Article 1 (Sections 6500, et al.) of California Government Code. This section allows common government agencies to form a separate public agency to provide a common service. The powers of a new agency formed are identical to the agencies that formed it, and they should be clearly defined in the JPA agreement. The JPA agreement is the document that defines the service(s) that the Agency will provide and outlines the powers and responsibilities of the newly established JPA.

Fleet reduction alone is a compelling reason to explore this option. Approximately 33% of the current school bus inventory could be sold for surplus; creating a cash flow that could help provide for adequate vehicle maintenance facilities and eliminate almost one-third of the current vehicle maintenance expenditures, including liability insurance.

Many school districts are facing tough decisions regarding student transportation and may be considering the formation of a JPA to share capital, overhead, and operational expenses with others. This move can reduce overall costs and increase the quality of service and safety.

As with other forms of cooperative transportation ventures, the attraction of the JPA exists only with a need for transportation improvement. Without the “desire” catalyst, trying to sell such a venture to the neighboring school districts is a wasted effort. However, if a need in a transportation system has been identified in one or more of several areas, this form of shared operation might be attractive. Most areas of deficiency can be identified as:

- ✚ Overall costs too high
- ✚ Additional replacement buses needed, but not affordable
- ✚ Inadequate vehicle maintenance
- ✚ Inadequate facilities
- ✚ Need for driver training and evaluation
- ✚ Personnel difficulties
- ✚ Inability to maintain a roster of qualified regular/substitute bus drivers
- ✚ Less than suitable management

A joint powers transportation agency operates as a cooperative venture, having its own governing board, complete in-house administrative functions, comprehensive management organization, budgetary control, and the attractive feature of control by the participating districts.

The prime ingredient of a successful JPA must be each participant’s individual dedication to the overall effectiveness of the venture. Compromises must be made by the individual districts to enhance the agency’s ability to provide services as needed in the most effective manner to all members. Selfish entry into such an arrangement (only to enhance a district’s own situation) may be fatal to the organization or would eventually lead to the eviction of the participant.

The strength of the agency is also very dependent upon the relationship between the board and the director. The director must oversee all functions of the agency, including, but not limited to: operations, vehicle maintenance, personnel, fiscal, policy, collective bargaining, and public relations matters. The board must allow the director to perform these tasks, meeting regularly to discuss major developments and administering much like a school board.

The selection of the director is a key aspect for success, and should be the first task completed, when organizing the JPA. This person should have administrative abilities very similar to those of a good business manager and superintendent. They will deal with complex operational and personnel issues, financial decisions, and public relations. Former experience in school transportation should not be made imperative when recruiting for this position. A good management person will be “up to speed” in school transportation matters in a short period of time and will choose a staff with the talents needed to operate the agency’s departments. In most instances, it would be preferable to convert a strong manager into a Director of Transportation; rather than attempt to place a transportation employee into a position that requires highly developed management skills.

The governing board is made up of representatives from the participant districts. Members may be selected by each participant from their trustees and/or administrators – one per district. An alternative method would reduce a large JPA’s board size by selection from representatives of a portion of the districts; alternating the representatives so that districts serve on the board an equal amount of time. All districts should be fairly represented without utilizing a cumbersome-sized board.

A JPA is entered into pursuant to the authority conferred by Education Code Section 11001 and the Joint Exercise of Powers Act (Government Code Section 6500 et seq.). The ingredient of a JPA must, at a minimum, include the following statements:

- ✦ Authority to form a JPA
- ✦ Purpose of the JPA
- ✦ Services that must be performed
- ✦ Participant district’s responsibilities
- ✦ Formulas for the participants’ reimbursement to the agency
- ✦ Ownership of buses and equipment
- ✦ Procedures for dissolution or withdrawal
- ✦ Steps to be taken for involuntary termination
- ✦ Method for modification of the agreement
- ✦ Establishment of the governing board and its bylaws
- ✦ Listing of participants and signatures entering into the agreement

The number of bus routes and bus drivers needed would be determined by the countywide bell schedules among the districts. In order to benefit from the maximum efficiency, districts would have to be open to combining pupil transportation services with other districts. This would reduce the number of buses and bus drivers needed. To assist in gaining those efficiencies on bus routes, the purchase of a bus routing software program is recommended.

The buses would be housed at several locations throughout the county to reduce deadhead time and miles. It would also assist with parking issues since the number of buses owned by Lake County school districts exceeds the amount of parking available at any one transportation facility within the county. The Kelseyville USD transportation facility is the largest in the county, but housing all buses in one location would not be cost effective or efficient.

The maintenance of buses and other district vehicles would be maintained at one centralized maintenance facility.

Kelseyville USD has the largest maintenance facility among the school districts in Lake County. The existing transportation facility building is very old and would be costly to remodel and modernize. After some house cleaning and organization, the existing facility would be adequate until a new facility could be built or a more modern building acquired.

A vehicle maintenance software program would be needed to track vehicle maintenance and inspection records, parts inventory, and vehicle operating cost. In order to track fuel usage, inventory, and cost, the implementation of a fuel monitoring system is recommended.

This cooperative transportation venture would be composed of the following positions:

- ✚ Manager
- ✚ Supervisor
- ✚ Dispatcher/Router
- ✚ Driver Instructor
- ✚ Lead Bus Driver
- ✚ Clerical Personnel

The vehicle maintenance staff would consist of the following positions:

- ✚ Lead Mechanic
- ✚ Mechanic

✚ Service Mechanic

The transportation staff should consist of a Supervisor/Mechanic in order to be able to maintain:

✚ 50 buses

✚ 72 white fleet vehicles

Currently, there are 74 school buses assigned to 42 daily routes in Lake County. A reduction of the current inventory of school buses from 74 to 50 would be seen by utilizing this option.

Since Kelseyville USD has the largest transportation facility among the school districts in Lake County, it is recommended that placement of the above-mentioned staffing positions be made at this location. The Lead Bus Driver would be placed at the Upper Lake UHSD's bus park-out area to assist in coordinating transportation services in that vicinity.

A potential savings associated with this Option related to the salaries and benefits for management, dispatcher, driver instructor, clerical, and mechanics is included in Appendix A.

### Bell Schedules

Bell schedules are a key component to efficiency as it relates to transporting students to and from school. In order to avoid routing and scheduling problems, efficient routes need to be constructed. In addition, scheduling buses to these routes in a manner that matches the specified timeframe is critical. This requires the determination of the starting and ending times of the schools, building partial vehicle routes, and outlining the daily bus schedules.

A three-tiered bell schedule is based on the number of buses used by each school, which can be accomplished through a manual process or through a software application. The current and proposed policies for walking distances, pick-up and delivery methods (i.e., door-to-door), etc. should be taken into consideration and discussed thoroughly in the process.

Additionally, the three-tiered methodology involves establishing bell schedules throughout all of the schools in the county that could be identified as elementary school (ES), middle school (MS), and high school (HS). This necessitates start and end times that are staggered in a manner that would decrease the number of buses and drivers leading to a well managed and efficient operation. The following is an example of a three-tiered schedule. This, of course, is purely for presentation purposes, and not recommended timeframes for the schools in Lake County.

Tier	School	Start Times	End Times
1	ES	7:50 – 8:10	2:30 – 2:50
2	HS	8:35 – 8:55	3:25 – 3:45
3	MS	9:20 – 9:40	4:10 – 4:30

## Operational Findings and Recommendations

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### LAKEPORT UNIFIED SCHOOL DISTRICT

Lakeport USD is staffed by one of the most knowledgeable transportation directors in Lake County. This position is also the managing employee for Information Technology (IT) and the Maintenance and Operations departments. The operation of the transportation program is viewed as highly efficient and productive by peers and superiors within the district. Lakeport USD was the lead agency for special needs transportation for a majority of the six other Lake County school districts until approximately 2003. After 2003, Kelseyville USD absorbed the special education function of transportation from Lakeport USD.

Previously, there was interest to “combine forces” with Middletown USD and Konocti USD. However, the opportunity was declined by Lakeport USD; the administration came to the conclusion that no clear benefit could result by this collaboration.

In March 2003, Fiscal Crisis and Management Assistance Team published a Transportation Review in Lake County at the request of the Special Education Local Plan Area (SELPA). During the time of this study, Lakeport USD was providing the majority of the special needs transportation services for the students of Lake County. It was noted that Lakeport USD was providing a quality service for a reasonable cost to local districts.

#### Driver Training:

Training services are provided by the Director of Transportation.

#### Staff:

- ✚ Maintenance, Operations, IT, and Transportation Director
- ✚ Mechanic
- ✚ Clerical Personnel (time allotted as: 15% transportation/ 15% maintenance/ 70% Cal-Pads)

- ✦ Four Bus Drivers (12-month district employees also working as custodians or instructional aides)

### Bus Routes:

The bus routes are established manually by the transportation staff. One bus route was eliminated for the 2010-11 year with a projected savings of \$20,000. Four bus routes transport all grade levels together in the morning, but have split afternoon routes due to bell schedules.

The current Board Policy (as per June 10, 2010 letter to parents) defines walk boundaries as:

- ✦ Grades K-6 – 2 miles
- ✦ Grades 7-12 – 2.25 miles

However, the walk boundaries are not enforced by the district and any student who would like to ride the bus is encouraged to do so.

### Vehicle Maintenance:

- ✦ All of the buses appear to be in mechanically sound condition, although they appear to be inspected at an accelerated rate when compared with state requirements and industry standards
- ✦ The mechanic is responsible for fueling all of the buses and preparing the field trip vans, which are driven by coaches and parents whose DMV records are not reviewed
- ✦ A parts inventory currently does not exist
- ✦ Industry standards would dictate a larger vehicle fleet to justify a full-time mechanic for nine school buses, four of which are used daily, and a white fleet of 20 vehicles

### Vehicle Fleet:

- ✦ Nine school buses
  - Four used on daily routes
  - Five used as spare buses
- ✦ 20 white vehicles (approximate number of vehicles)

### Facility:

- ✦ The facility is comprised of a single bay with a twin post hoist to lift buses. It appeared as though all of the buses were capable of parking under the cover of a building that is open on one side.
- ✦ Even though the facility is one of the best in Lake County, it is important to stress general housekeeping issues that require attention. For instance, there were items stored in front of and blocking access to electrical panels and other unused items left out of place.

### OPERATIONAL RECOMMENDATIONS

Based on the findings that we have identified to assist the district as an individual school agency related to transportation of students, we are recommending the following operational areas of transportation be considered; including policies, procedures, maintenance, and meeting industry standards:

- ✦ Develop a written preventive maintenance plan.
- ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
- ✦ Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
- ✦ Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.
- ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost.
- ✦ Establish a regular physical parts inventory.
  - Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
- ✦ Replace older buses; utilizing the small school district bus replacement program and any funding available from the Lower Emission School Bus Replacement Program.
- ✦ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.

- ✦ Consider reducing school bus inventory to a more reasonable “route bus-to-spare bus” ratio.
- ✦ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

### KELSEYVILLE UNIFIED SCHOOL DISTRICT

Kelseyville USD is the host provider of special needs transportation in Lake County. They provide services to the three school districts to the north, as well as transportation for its own special needs students and home-to-school transportation for regular education students within its boundaries.

Kelseyville USD’s current Transportation Director has been with the District for eight years. In the first five years, the Director was responsible for the Maintenance Department. In the last three years, the responsibilities increased to include the daily operation of the Transportation Department. The Director is well thought of by peers and superiors from within the district as well as other districts in the Lake County area.

#### Driver Training:

Training services are provided under a private vendor contract, School Bus Driver Instructor, at the rate of \$21.00 per hour. The instructor is employed by the Konocti USD.

#### Staff:

- ✦ Mechanic (eight hours/day)
- ✦ 11 – Bus Drivers (5.25 to 7.50 hours/day)
- ✦ Two Clerical Assistants (each at 3.50 hours/day in the p.m.)
- ✦ Substitute Bus Driver (contracted at five hours/day)
- ✦ Custodian (0.50 hours/day)

In the last 2½ years, service has been reduced by 2½ bus routes; primarily by increasing the walking distance.

#### Bus Routes:

Bus routes are established manually by the transportation staff.

### Vehicle Maintenance:

- ✦ Buses appear to be adequately maintained. Although, housekeeping issues in the transportation facility area desire an immediate need for improvement. For example, there was a lack of organization for the equipment, inventory, etc. within the transportation facility area.
- ✦ A parts inventory currently does not exist.

### Vehicle Fleet:

- ✦ 13 Type I district-owned school buses
  - Six used on daily routes
  - Five used as spare buses
  - Two buses were out of service and were not California Highway Patrol (CHP) certified
- ✦ Nine Type II Lake COE-owned school buses
  - Five used on daily routes
  - Two used as spare buses
  - Two buses were out of service and were not CHP certified
- ✦ 14 white vehicles
  - Nine vans, one assigned to transportation
  - Five pickup trucks

### Facility:

- ✦ Although the maintenance facility is the largest in Lake County, it is important to stress general housekeeping issues that require attention. For instance, the transportation facility and parts areas are in immediate need of cleaning and organization.
- ✦ Labor is not charged to any of the vehicles. Therefore, the department is lacking a method to determine accurate vehicle cost and labor to repair the district's other 14 vehicles and the nine Lake COE buses. This unrecovered cost and labor results in an expense against transportation services.

- ✦ On-site fueling consists of: two above-ground fuel tanks – a 1,000-gallon diesel tank and a 500-gallon unleaded gasoline tank. Fuel is not charged to individual buses or accounted for and balanced by purchase, tank inventory, and usage to assure that all fuel is tracked appropriately. Furthermore, any fuel utilized by departments other than transportation is not billed back to the end user; rather, it becomes an expense against transportation services.

### OPERATIONAL RECOMMENDATIONS

- ✦ Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered; including policies, procedures, maintenance, and meeting industry standards:
  - ✦ Develop a written preventive maintenance plan.
  - ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
  - ✦ Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
  - ✦ Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.
  - ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost.
  - ✦ Establish a regular physical parts inventory.
  - ✦ Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
  - ✦ Replace older buses; utilizing the small school district bus replacement program and any funding available from the Lower Emission School Bus Replacement Program.
  - ✦ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.
  - ✦ Consider reducing school bus inventory to a more reasonable "route bus-to-spare bus" ratio.
  - ✦ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

### UPPER LAKE UNION HIGH SCHOOL DISTRICT AND UPPER LAKE UNION ELEMENTARY SCHOOL DISTRICT

Upper Lake UESD is one of two elementary school districts that feeds into Upper Lake UHSD. These two districts are currently sharing transportation services. Upper Lake UHSD currently provides all transportation services to Upper Lake UESD. However, Upper Lake UESD retains ownership of four school buses. Upper Lake UHSD also owns four school buses.

#### Driver Training:

Training services are provided in-house by the current Director of Transportation.

#### Staff:

- ✦ Director of Transportation (also drives a four hour/day route)
- ✦ Mechanic (ten months, six hours/day, School Bus Certificate lapsed in May 2010)
- ✦ Lead Bus Driver (four hours/day, paid an additional 10% stipend for scheduling)
- ✦ Two Bus Drivers (four hours/day)

#### Bus Routes:

Bus routes are established manually by the transportation staff.

#### Vehicle Maintenance:

- ✦ Currently maintains ten school buses at this location (four Upper Lake UHSD, four Upper Lake ESD, and two Lucerne UESD). All of the buses appeared to be adequately maintained.
- ✦ Currently maintains a white fleet of eight vehicles (five vans; two pick-up trucks; one sedan) owned by Upper Lake UHSD.
- ✦ Maintenance software is a proprietary type of excel spreadsheet that was configured by the current mechanic. Access to the software is unavailable to other departmental employees as it is stored on a district desktop computer that is password protected and accessible by only the mechanic. The maintenance information is not backed up or stored on the district server. The information, as it relates to the Lucerne UESD school bus, is occasionally submitted to their personnel without the review of the Director.
- ✦ It appears that the staffing ratio exceeds the maintenance needs of the District, this merits review as it could be a possible source of potential savings. Parts are purchased without any oversight or authorization from the Director.

- ✦ Once parts are purchased, the invoices are submitted at the end of each month to the Director for approval. This process is exceedingly lengthy and has, on more than one occasion, caused the vendors to refuse parts and services to the District for nonpayment of invoices.
- ✦ The mechanic for Upper Lake UHSD picks up and drops off the Lucerne UESD school buses when they are due for preventive maintenance inspection or repairs.

### Vehicle Fleet:

- ✦ Ten school buses
  - Four Upper Lake UHSD
  - Four Upper Lake UESD
  - Two Lake COE

- ✦ Eight white fleet vehicles

### Facility:

- ✦ The facility is housed in an old building which, for the most part, is kept clean. The office area is small, but useable. It could be reorganized in a manner to provide for greater efficiency.
- ✦ On-site fueling is available from two above-ground fuel tanks. Fuel is not charged to individual buses or accounted for and balanced by purchase, tank inventory, and usage to assure that all fuel is tracked accordingly. Furthermore, any fuel utilized by departments other than transportation is not billed back to the end user; rather, it becomes an expense against transportation services.
- ✦ Fuel is purchased at the current rate of approximately 700 gallons of diesel every other week and 800 gallons of unleaded every eight weeks.
- ✦ Labor is not charged to any vehicles. Therefore, the Department is lacking a method to determine accurate vehicle and labor costs to repair the district's other vehicles. This unrecovered cost and labor then results in an expense against transportation services.

### OPERATIONAL RECOMMENDATIONS

Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered; including policies, procedures, maintenance, and meeting industry standards:

- ✦ Develop a written preventive maintenance plan.
- ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
- ✦ Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
- ✦ Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.
- ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost and ensure access by multiple personnel.
- ✦ Establish a regular physical parts inventory.
  - Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
- ✦ Replace older buses; utilizing the small school district bus replacement program and any funding available from the Lower Emission School Bus Replacement Program.
- ✦ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.
- ✦ Consider reducing school bus inventory to a more reasonable "route bus-to-spare bus" ratio.
- ✦ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

### LUCERNE ELEMENTARY SCHOOL DISTRICT

Lucerne UESD is one of two elementary school districts within the boundaries of Upper Lake UHSD. The maintenance of the Lucerne UESD school bus is provided at the Upper Lake UHSD transportation facility.

#### Driver Training:

Training services are provided by the current Director of Transportation at Upper Lake UHSD.

#### Staff:

- + Bus Driver
- + Custodian (currently being trained to serve as a Substitute Bus Driver)

#### Bus Routes:

The District establishes the bus routes manually

#### Vehicle Maintenance:

- + Located at Upper Lake UHSD facility

#### Vehicle Fleet:

- + Two school buses (one is used on a daily route; one is used as a spare bus)

### OPERATIONAL RECOMMENDATIONS

Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered; including policies, procedures, maintenance, and meeting industry standards:

- + Develop a written preventive maintenance plan.
- + Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
- + Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
- + Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.

- ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost.
- ✦ Establish a regular physical parts inventory.
  - Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
- ✦ Replace older buses; utilizing the small school district bus replacement program and any funding available from the Lower Emission School Bus Replacement Program.
- ✦ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.
- ✦ Consider reducing school bus inventory to a more reasonable “route bus-to-spare bus” ratio.
- ✦ Implement a DMV pull notice program for van drivers who are employed by the districts and require DMV H-6 reports for non-employees.
- ✦ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

### KONOCTI UNIFIED SCHOOL DISTRICT

Konocti USD has the largest student population of all the school districts in Lake County and the only district ineligible to participate in the California Department of Education Small School District Bus Replacement Program. Konocti USD also provides transportation to their own special needs students. They have been without a Director of Transportation for the entire 2010-2011 school year. During this time, there has been a sharing of staff between Konocti USD and Middletown USD. Konocti USD has provided a Director of Maintenance to Middletown USD and, in turn, Middletown USD has provided the services of their Director of Transportation. Although this arrangement appears to have merit, the situation has been stressed. During the 2010-2011 school year, the Director of Transportation has been assigned to drive a five-hour per day bus route in an effort to reduce costs at Middletown USD. The district staff at Konocti USD is very supportive of shared services in some manner to reduce the overall cost of transportation in Lake County.

### Driver Training:

Training services are provided by a School Bus Driver Instructor on staff

### Staff:

#### + Two Mechanics (full-time)

- First shift: 4:00 a.m. to 12:00 p.m.
- Second shift: 9:00 a.m. to 5:00 p.m.
  - Unless there are extenuating circumstances that have not been disclosed, the start time of 4:00 a.m. for the first shift of the mechanic position is not reasonable and should be modified to begin later in the day; possibly at 6:00 a.m.
  - A portion of the mechanic's job is to fuel buses. It would be more cost effective to have someone other than the highest paid employee in the department perform this task.

#### + 19 Bus Drivers

- 19 listed for 2010-11
- 23 listed for 2009-10

+ CHP documents for both years place the number of drivers at 20 (includes one Substitute School Bus Driver contracted at five hours/day). There are 16 buses driven daily.

+ Clerical Personnel (11 months, five hours/day and 12 months, three hours/day).

+ Staff receives a paid ½ hour lunch break and two paid ¼ hour breaks, as per contract.

### Bus Routes:

+ Bus routes are established manually by the transportation staff

+ Walk zones are not enforced and an effort should be made to review, modify, and implement reasonable walk zones to assist in controlling costs

+ Bus stops are extremely close together and efforts should be made to place bus stops at reasonable distances in an effort to reduce costs

- ✦ Beginning in the 2010-2011 school year, two bus routes were cut with an expected annual savings of \$110,000 to \$130,000

### Vehicle Maintenance:

- ✦ As per the District, buses are inspected every 2,000 miles or every 45 calendar days. CHP regulations require that school buses be inspected every 3,000 miles or 45 calendar days.
- ✦ Engine oil and filters are replaced at 10,000-mile intervals.
- ✦ Engine air filters are replaced at 10,000-mile intervals (air filters should last much longer than 10,000 miles). It could not be determined when transmissions and differentials had been serviced, but “possibly annually” as provided by staff.
- ✦ There is no method of chargeback for parts or fuel for non-transportation vehicles.
- ✦ Time is not logged to a vehicle for individual repairs.
- ✦ Parts inventory (filters and small parts) are replaced daily when installed on a bus. However, it was noted that a parts inventory does not exist.
- ✦ Buses are fueled by the mechanics and no charge is made to individual vehicles for the fuel dispensed.
- ✦ Fuel is not reconciled at the end of each month to ensure that there is no product loss.
- ✦ Fuel dispensers are installed on the top of vaulted fuel tanks at approximately seven feet above the ground.

### Vehicle Fleet:

- ✦ 24 school buses
  - 21 Type I, seven cannot be retrofitted to California Air Resources Board standards
  - One bus is out of service due to a catastrophic engine failure
  - There are two Type I and one Type II, owned by LCOE
- ✦ The bus inventory list indicates 24 buses. During our interviews, it was noted that there were 26 buses
  - Two of which were out of service.

- CHP records (Form 343 dated March 16, 2010), indicated that there are 23 Type I and one Type II buses in the fleet. However, this would not take into account the buses placed out of service for mechanical issues.
- ✚ There are 24 white fleet vehicles
  - 20 trucks (one may be surplus equipment)
  - 14 vans (two are assigned to transportation)
    - We noted during our April 11, 2011 interview, that there were four vans in the fleet and that of the four, two were out of service.

### Facility:

- ✚ The current transportation facility being used by the District has been sold, and the District will be moving to a new 2.7 acre site, which will need to be remodeled in order to use it as a bus maintenance and parking facility. Current budget for this project is \$325,000.
- ✚ The current facility consists of three buildings:
  - One modular building, which has been converted to an office and driver ready room.
  - There are two buildings for repairing buses, both are single bays. The first building has an office for the mechanics, is older and constructed of steel. It is organized and clean. Although the space is limited, it has been utilized in an efficient manner for its purpose. The second structure is a wood 2x4 construction and had been utilized to paint buses. There was no sign of current painting being performed in the building as it was not adequately equipped to comply with regulations related to vehicle painting.
  - The area for the new facility is not adequately fenced and has a small metal building that is not a size suitable for the repair of large vehicles. The parking lot was overgrown with brush, making it difficult to determine if the parking surface area was just dirt, gravel, or decaying blacktop. In order to bring this new facility to fruition, it will be necessary to pave the parking lot and increase the size of the current building. It should be determined if it is more cost effective to remove the current building and erect a new one rather than enlarging the current building. Additionally, a building of some type will need to be provided for the transportation staff. Offices, restrooms, and a suitable location for the bus drivers to ready for routes and receive training in would also be beneficial. It is critical that the analysis be completed sooner than later to determine what funds are necessary to support such an endeavor.

### OPERATIONAL RECOMMENDATIONS

Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered; including policies, procedures, maintenance, and meeting industry standards:

- ✦ Develop a written preventive maintenance plan.
- ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
- ✦ Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
- ✦ Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.
- ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost.
- ✦ Establish a regular physical parts inventory.
  - Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
- ✦ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.
- ✦ Consider reducing school bus inventory to a more reasonable "route bus-to-spare bus" ratio.
- ✦ Implement a DMV pull notice program for van drivers who are employed by the districts and require DMV H-6 reports for non-employees.
- ✦ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

### MIDDLETOWN UNIFIED SCHOOL DISTRICT

For the 2010-2011 school year, Middletown USD utilizes the services of Konocti USD's Maintenance Director. Konocti USD utilizes the services of Middletown USD's Director of Transportation. This relationship does not include the sharing of salaries, only personnel.

Between bus routes, there are travels to Konocti USD on Monday, Tuesday and Thursday of each week.

There are changes in store for the 2011-2012 school year:

- ✦ The Director of Transportation position will be eliminated at the District and the Director will bump back to a Mechanic position
- ✦ The Department will be led by a driver/foreman position
- ✦ Services/personnel will no longer be shared with Konocti USD
- ✦ Possible reduction in route times

The District currently includes a student population that is 40% free and reduced meals. Prior to the recession, this percentage was significantly less, 28% of the students met eligibility for free and reduced meals.

The District's current funding level indicates that there is more than a 100% encroachment level for both home-to-school and special education programs.

- ✦ \$174,000 – Home-to-school encroachment
- ✦ \$119,000 – State revenue
- ✦ \$31,000 – Special Education encroachment
- ✦ \$20,000 – Special Education State revenue

### Driver Training:

The current staff philosophy regarding daily transportation functions includes a requirement to observe each driver prior to their operation of a school bus, and the Director of Transportation performs this function personally.

According to current procedures, the drug and alcohol records were required to be inside a locked file cabinet in the transportation office. We observed the records on a shelf in an unlocked office. There were also unopened envelopes from the testing lab present on the desk and on the same shelf where the binder was found.

### Staff:

#### ✚ Director of Transportation

- Driving a five-hour/day route in the 2010-2011 school year (assignment will be eliminated in the 2011-2012 school year). This position will be replaced by either a Lead Bus Driver or Scheduler position. That determination has not yet been made.

#### ✚ Mechanic (260-day, eight hours/day)

- In the 2011-2012 school year, the Director of Transportation will bump back into this position.
- Currently, the Mechanic does not transport students on a daily basis and will only drive in cases of emergency while in an overtime pay status.

#### ✚ Bus Driver (181-day, eight hours/day – special education)

#### ✚ Bus Driver (181-day, eight hours/day – regular education)

#### ✚ Three Bus Drivers (181-day, five hours/day – regular education)

### Bus Routes:

#### ✚ Two morning bus routes (each site)

#### ✚ Three after school bus routes (each site)

Walking distances are currently almost nonexistent and bus stops are, in some cases, extremely close together.

### Vehicle Maintenance:

- ✚ The District is currently using an Abacas vehicle maintenance software, which appeared to be a DOS-based program. It is extremely old and, therefore, not being utilized very well as there is no charge back for parts or labor to non-transportation equipment nor accounting for labor on transportation equipment.

- ✚ Bus maintenance is performed on 3,000-mile/45-day intervals.

- ✚ Oil changes are performed every 6,000 miles. Staff acknowledged the fact that “you can go to longer oil change intervals, but oil is cheap and engines are expensive”.

- ✚ Differential oil and transmission oil/filters are changed on an annual basis.

- ✦ Parts inventory seemed excessive in some cases. For instance, there were six tie rod ends and seven complete sets of roadside reflectors for a fleet of nine buses.
- ✦ A parts inventory currently does not exist.
- ✦ There is an informal agreement between the County Public Works Department and the District that provides minor maintenance to county vehicles in exchange for snow removal at Cobb Mountain Elementary School.

### Vehicle Fleet:

- ✦ Nine school buses—two of which are being replaced under the Lower Emission School Bus Program (LESBP)-San Joaquin
- ✦ Six vans that are driven by staff and volunteers
  - The vans were purchased new as a 12-passenger. The second bench seat was removed and replaced by a single passenger seat to transform them into nine-passenger vans. The single seat installed appeared to be a driver seat from a school bus.
- ✦ When questioned about route placement for the new “seat belt” buses and the extremely high number of students transported, staff indicated that there is currently no plan in place to assign the buses to routes. Staff mentioned that the routes with the fewest students were in the hills and these routes *must* be serviced by the Crown (mid ship engine) buses due to traction and large brakes on the rear axle. However, highway tires were used on all of the buses. Staff stated there was no need for traction-type tires due to the impressive traction of the Crown Bus.
- ✦ Overall the buses did not appear to be well-maintained.
  - For example, a Crown Bus parked in front of the transportation facility and used daily had two tires on the left rear that were below the legal tread depth limits. In addition, most of the buses were in need of a paint job and several others needed minor repairs from collisions. The interior of the buses were generally clean, but most seats were torn, tattered, and in need of repair or replacement.

### Facility:

- ✦ The facility was comprised of a large wood structure building.
- ✦ The Director of Transportation was located in a trailer-type building utilized as an office and a ready room for the drivers inside the transportation facility.

- ✦ The transportation facility required the buses to enter diagonally in order to fit inside it.
- ✦ Several partially covered parking spots were also used by senior drivers.
- ✦ Several older buses were parked in an area over grown with weeds that covered a dirt area, which is not currently certified.
- ✦ The facility was old and ill-equipped for the needs of the department. Tires of various sizes and age were being stored in a loft area of the facility. Most of the tires that were visible had significant dust on them, indicating they had been there for an extended period of time. Some of the tires appeared to be of a size that would not fit on currently inventoried buses. Also, it appears that the staffing ratio to vehicles is generous and merits review.
- ✦ On-site fueling is available from two 2,000-gallon above-ground vaulted fuel tanks. One contained dyed diesel and the other was a split 1,000-gallon for each tank; both currently contained 87 octane unleaded gasoline. During the interviews, staff indicated that the tank was purchased for the purpose of having higher octane fuel for the vehicles, since the buses lasted longer while running on Supreme. Fuel is purchased on a county school contract, which is three years old. Outside of those particulars, no one could explain how the contract or pricing worked. Tanks were filled on a schedule dictated by the fuel supplier.

### OPERATIONAL RECOMMENDATIONS

Based on the findings that we have identified to assist the districts as individual school agencies related to transportation of students, we are recommending the following operational areas of transportation be considered, including policies, procedures, maintenance, and meeting industry standards:

- ✦ Develop a written preventive maintenance plan.
- ✦ Ensure that all buses are systematically inspected and maintained based upon industry standards and the vehicle/component manufacturer's recommendations.
- ✦ Allocate vehicle repair staff to a level commensurate with the amount of work required to be performed.
- ✦ Monitor fuel usage, inventory, and purchases closer, including a reconciliation of fuel usage on a monthly basis.
- ✦ Purchase a vehicle maintenance software program to track maintenance/inspections records, parts inventory, and vehicle operating cost.
- ✦ Establish a regular physical parts inventory.

- Remove old inventory and return to vendors for a parts credit, including the reduction of the number of tires inventoried.
- ✚ Replace older buses; utilizing the small school district bus replacement program and any funding available from the Lower Emission School Bus Replacement Program.
- ✚ Explore options to modify bell schedules in order to utilize transportation services in a more efficient manner among the schools within each district or for those school agencies sharing transportation services. All of the buses should be used as efficiently as possible; utilizing them for multiple grade levels.
- ✚ Consider reducing school bus inventory to a more reasonable “route bus-to-spare bus” ratio.
- ✚ Implement a DMV pull notice program for van drivers who are employed by the districts and require DMV H-6 reports for non-employees.
- ✚ Review current inventory of white fleet vehicles and determine if all vehicles are required to perform the necessary tasks of the school districts.

## Conclusion

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We realize that this report contains several options for the school agencies to consider and numerous recommendations. Some of the recommendations require lengthy planning and implementation time, while others may require the allocation of funds to implement. We encourage the Agencies to utilize this report as a tool for planning for future goals county-wide. We encourage the districts to consider all of the recommendations and develop a priority list with an implementation target date and the funding source identified where appropriate.

## Appendix A

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This provides an estimate of the income potential and future budgetary savings associated with the personnel and fleet reduction recommendations related to the Transportation Study.

The savings realized by the change in how the management of the transportation program countywide would be provided, may vary depending upon the timing of the implementation and any changes that have occurred since the fieldwork had been completed. The total expenditures were based on the data available by the school agencies, which could change once the 2010-11 Unaudited Actuals are finalized.

The table below utilized the data available from the Lake County school agencies and the proposed positions included in the report for each of the options to be discussed among the county school districts. It is important to note that the numbers used are not exact and will change as the financial statements are finalized for the 2010-11 fiscal year. In addition, the elements of an option chosen could impact the savings based on timing and any changes that have been implemented since the fieldwork was completed. This provides a good estimate given the current data available.

	<b>Option 1 Lead LEA</b>	<b>Option 2 North/South</b>	<b>Option 3 JPA</b>
2010-11 Total Expenditures Per Lake County School Agencies	\$ 992,970.00	\$ 992,970.00	\$ 992,970.00
Total Estimated Expenditures	300,000.00	441,000.00	300,000.00
Potential Savings	<u>\$ 692,970.00</u>	<u>\$ 551,970.00</u>	<u>\$ 692,970.00</u>

The table above does not include the one-time revenues that could be realized from the sale of buses or efficiency from maintenance and repairs as discussed below.

### **INCOME**

Income can be generated by the sale of non-essential school buses. In order to ascertain detailed income potential, a thorough inspection of each bus would need to be conducted by a professional with the ability, knowledge, and experience to assess current market value. Some buses are not in an operational state with defective power train components, including engines and transmissions. These buses would generate significantly less revenue than their counterparts, which are currently in running condition and certified to transport students by the California Highway Patrol.

## **BUDGETARY SAVINGS**

Savings can be generated by the future lack of expenditures associated with the care, maintenance, storage, and vandalism of non-essential buses, as well as the elimination of the relevant portion of the liability insurance associated with these vehicles.

Additional savings will be realized for each bus sold by not incurring expenditures to install exhaust retrofits, engine replacement, or in worst case scenarios, complete bus replacement to comply with California Air Resources Board Truck and Bus Regulations.

## **CALIFORNIA AIR RESOURCES BOARD REGULATIONS (CARB)**

A relevant factor, which cannot be overlooked is the pending CARB (see fact sheet attached). The regulation requires one of the following:

- 1) Installation of an exhaust particulate trap, which is defined as the “Best Available Control Technology” (\$15,000 - \$18,000).
- 2) Retrofit of an engine with an emissions system that is compliant with CARB regulations (estimate unknown, as it would require approval from the bus manufacturer).
- 3) Replacement of the vehicle if neither of the above two options are possible (\$150,000).

Sellers of vehicles that do not meet this standard are required to notify potential buyers of the pending regulations. It is also important to remember that each bus in the district's fleet must meet the CARB regulations by the deadlines found in the attached CARB Fact Sheet.

### **Option 1**

#### **One Lead Local Educational Agency**

Reduction of Fleet by 24 buses from 74 to 50 buses

- 1) This assumes an average sales price of \$5,000 per bus. The sale of buses would generate approximately \$120,000.
- 2) Liability insurance savings would be 33% of current expenditures.
- 3) Repair and maintenance savings should be calculated at a smaller percentage, as the buses currently considered in the recommended reductions, travel less than 33% of the miles. Therefore, a conservative estimate would place the budgetary savings at 15% of the previous year's repair and maintenance expenditures.

## **Option 2**

### A Lead Agency in the North and the South End of the County

#### South County

Reduction of Fleet by 20 buses from 64 to 44 buses

- 1) This assumes a sales price of \$5,000 per bus. The sale of buses would generate approximately \$100,000.
- 2) Liability insurance savings would be 31% of current expenditures.
- 3) Repair and maintenance savings should be calculated at a smaller percentage, as the buses currently considered in the recommended reductions, travel less than 31% of the miles. Therefore, a conservative estimate would place the budgetary savings at 13% of the previous year's repair and maintenance expenditures.

#### North County

Reduction of Fleet by three buses from ten to seven buses

- 1) This assumes a sales price of \$5,000 per bus. The sale of buses would generate approximately \$15,000.
- 2) Liability insurance savings would be 30% of current expenditures.
- 3) Repair and maintenance savings should be calculated at a smaller percentage, as the buses currently considered in the recommended reduction travel less than 30% of the miles. Therefore, a conservative estimate would place the budgetary savings at 12% of the previous year's repair and maintenance expenditures.

## **Option 3**

### Joint Powers Agency

Reduction of Fleet by 24 buses from 74 to 50 buses

- 1) This assumes an average sales price of \$5,000 per bus. The sale of buses would generate approximately \$120,000.
- 2) Liability insurance savings would be 33% of current expenditures.
- 3) Repair and maintenance savings should be calculated at a smaller percentage, as the buses currently considered in the recommended reductions, travel less than 33% of the miles. Therefore, a conservative estimate would place the budgetary savings at 15% of the previous year's repair and maintenance expenditures.

# **CARB FACT SHEET**

## **Truck and Bus Regulation School Bus Provisions**

On December 12, 2008, the California Air Resources Board approved the Truck and Bus regulation to significantly reduce particulate matter and oxides of nitrogen emissions from existing diesel vehicles operating in California. This fact sheet describes the regulatory requirements for school bus PM reductions consistent with the amendments considered by the Board in December 2010.

For general information about the diesel regulation, see the Truck and Bus Regulation Compliance Requirements Summary fact sheet.

### **What does the regulation require?**

Diesel-fueled school buses with a Gross Vehicle Weight Rating over 14,000 pounds are subject to the regulation. Owners must retire school buses manufactured before April 1, 1977, by January 1, 2012. Remaining school buses must have particulate filters (that reduce diesel PM emissions by 85 percent) installed according to the schedule shown below in Table 1.

2012	33%
2013	66%
2014	100%

### **What relief did the Board grant at the December 17, 2010, hearing?**

The Board delayed the initial compliance date by one year and provided an optional three year delay until 2014 for school buses with engine model years 1988-1993. Additionally, the board added credits for electric, hybrid, alternative fuel, and pilot ignition engine school buses and they also reduced the reporting requirements.

### **How does the regulation define a school bus?**

School buses are vehicles providing transportation of any school pupil at or below the 12th-grade level to or from a public or private school or, to or from public or private school activities.

### **What school buses are already in compliance with this regulation?**

School buses with ARB-verified Level 3 (85 percent reduction of PM) particulate filters installed or engines meeting a 0.01 grams/brake horse power-hour PM emission standard and school buses with ARB-verified Level 2 (50 percent reduction of PM) particulate filters installed on or before December 31, 2005, if that was the highest level device available at the time.

### **What school buses are exempt from the regulation?**

School buses with a GVWR less than or equal to 14,000 pounds, school buses registered as historic vehicles and non diesel-fueled school buses such as compressed natural gas fueled school buses are exempt.

### **Is there a provision for low use school buses?**

Yes. School buses operating less than 1,000 miles in a 12-month period are exempt from the performance requirements of the regulation; however, these vehicles are subject to recordkeeping requirements.

### **What is required if a school bus cannot be retrofitted?**

A delayed compliance date of January 1, 2018, is provided for school buses that cannot be retrofitted (e.g., 2-stroke engine buses and some pre-1987 model year school buses). By January 1, 2018, these buses must be replaced if no particulate filter is available or repowered with an engine on which a particulate filter can be installed. Recordkeeping and reporting requirements apply until the school bus is brought into compliance.

### **What are the reporting requirements?**

Reporting is required when the owner of the fleet chooses to use the “Extension of Deadline for Unavailability of Verified Diesel Emission Control Strategy,” which applies to buses on which a PM filter cannot be installed. The reporting requirements apply on January 31 of each compliance year through January 31, 2017. These buses are also subject to recordkeeping requirements.

### **Are there credits for fleets that have downsized?**

Yes, there are credits for downsized fleets until January 1, 2014. A fleet that decreases their number of regulated school buses may reduce the percent requirement in Table 1 by the same percentage that the fleet has downsized since 2006. For example, a fleet that is 20 percent smaller than it was in 2006 would subtract 20 percent from the annual compliance requirement. If the compliance requirement for the year is 33 percent, the fleet would need to demonstrate that it had PM filters on 13 percent of the existing fleet (33 percent - 20 percent = 13 percent). All school buses in the 2006 baseline fleet and in the fleet on January 1st of the compliance year are subject to the recordkeeping requirements.

### **Are there credits for fleets with alternative-fuel vehicles?**

Yes. Fleets with electric, hybrid, alternative fuel or pilot ignition engine school buses with a GVWR greater than 14,000 pounds shall receive a credit to treat a diesel school bus as compliant until January 1, 2014.

## **When is a California Highway Patrol safety inspection required?**

The CHP safety inspection is required after a PM filter is installed and before the school bus returns to service.

## **How have retrofits on school buses performed?**

Retrofit PM filters have proven to be a cost-effective option for school buses. Thousands of filters have already been installed on school buses throughout the state, with fewer than one percent exhibiting issues. When issues have arisen, PM filter manufacturers have worked with fleets to resolve them.

## **How are retrofits a cost-effective approach for reducing PM emissions?**

Approximately seven school buses can be retrofitted for the same amount of money as one new school bus replacement. A PM filter costs less than a new bus even when considering the added cost of infrastructure and electricity. Also, fleets will incur maintenance costs regardless of whether an aftermarket filter or an original engine manufacturer filter is installed on the school bus.

## **Is incentive money available?**

The Lower-Emission School Bus Program provides limited financial incentives of up to \$20,000 per bus to install diesel PM filters and up to \$140,000 per bus to help replace high-emitting pre-1987 model year buses (match funding is required to replace 1977-1986 model year buses) to reduce toxic PM emissions. The use of fully-funded diesel PM filters substantially reduces school children's exposure to toxic diesel PM and is the least expensive compliance option.

This funding does not cover the cost of a typical hybrid school bus. The Hybrid Truck and Bus Voucher Incentive program permits combining funds from the Lower-Emission School Bus Program to finance up to the full cost of a new hybrid school bus. Additionally, many local air districts collect motor vehicle registration fees and other funds which may be used to replace or retrofit school buses. Information about the LESB program is located at [www.arb.ca.gov/bonds/schoolbus/schoolbus.htm](http://www.arb.ca.gov/bonds/schoolbus/schoolbus.htm).

## **For More Information**

Fact sheets, compliance tools and regulatory documents are available at [www.arb.ca.gov/dieseltruck](http://www.arb.ca.gov/dieseltruck) or by calling ARB's diesel hotline at (866) 6DIESEL (634-3735). To obtain this document in an alternative format or language please contact the ARB's Helpline at (800) 242-4450 or at [helpline@arb.ca.gov](mailto:helpline@arb.ca.gov). TTY/TDD/ Speech to Speech users may dial 711 for the California Relay Service.