

## **Appendix A.**

### **Comparison of the NPEFS and the F-33 Surveys Should NCES Replace the NPEFS with State-Aggregated F-33 Data**

#### **Introduction and Purpose**

This paper is in response to a request from the Office of Management and Budget (OMB) that the National Center for Education Statistics (NCES) investigate the feasibility of replacing the Common Core of Data (CCD), National Public Education Financial Survey (NPEFS) with state-aggregated data from the Census Bureau's Survey of Local Government Finances: School Systems (F-33). Such a replacement theoretically could save the Government the annual cost of conducting the NPEFS and reduce the reporting burden on survey information providers. However, if the two surveys are very different, revising or expanding the F-33 might have the opposite effect, increasing the costs and effort needed to produce the required data.

This analysis begins with a description of both surveys and a general comparison of data items in the two collections. Data items common to both surveys are presented in a side-by-side comparison, or crosswalk, of aggregate and specific data items. State totals for these data items are then compared using fiscal year 2004 (FY 04) data to identify the magnitude of differences in reported data from both surveys and to begin to identify reasons for the differences. For further comparison, FY 04 survey data from both surveys are compared for four states together with state notes that identify state-specific issues related to the survey data. The same analysis was also done on FY03 data to identify any one-year anomalies. The analysis on the FY03 yielded nearly identical results to the FY04 analysis, and was therefore not included in this report. Conclusions and a discussion of costs for data collection changes are then presented.

#### **Overview of the NPEFS Data Collection**

The NPEFS is an NCES data collection, a state-level survey that includes all revenues and expenditures for public education (with the exception of revenues and expenditures for the state education agencies). It was implemented in 1990, collecting data on FY 89 (School Year 1988-89) in its first year of operation. This survey replaced a smaller state-level fiscal data collection that had been in operation since 1983. The NPEFS provides the official revenue and expenditure statistics for public elementary and secondary education in the United States. The data generate a State per Pupil Expenditure (SPPE) figure that is used by the Department of Education (ED) in allocating funds for the Title I program (\$13.9 billion for FY 08) and other ED programs.<sup>1</sup> Since the data are used in the allocation formula to distribute billions of dollars, specific data collection procedures are enforced. These include the 'Labor Tuesday' cut-off date (NPEFS reports must be

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<sup>1</sup>These include Impact Aid, Indian Education, Educational Technology State Grants program (Title II of the ESEA, Part D), the Education for Homeless Children and Youth Program under Title VII of the McKinney-Vento Homeless Assistance Act, the Teacher Quality State Grants program (Title II of the ESEA, Part A), and the Safe and Drug-Free Schools and Communities program (Title IV of the ESEA, Part A).

submitted by close of business on the Tuesday following Labor Day), the requirement for a sign-off by an official appointed by the chief state school officer, and documented approval by the state education agency of any edits and imputations performed by NCES.

The allocation formula for distributing these program funds is based primarily on the Census Bureau estimates of children living in poverty and the NPEFS SPPE data are used to weight these allocations. A change of \$1 of SPPE can affect a state's Title I allocation by more than one million dollars.

NCES provides "crosswalk" software that is custom-made for each state. The software crosswalks financial data from the state's chart of accounts to the NPEFS data items. Twenty-four states use the crosswalk software to report data.

### **Overview of the F-33 Collection**

The Survey of Local Government Finances: School Systems (usually called the F-33), is a Census Bureau collection, collecting finance data on each school district and local education agency. Data from the F-33 are used in the allocation of Federal Education Incentive grants (\$2.2 billion in FY 08). The Census Bureau has collected independent school district finance data since the 1950's. In the late 1970's the survey was expanded to include dependent school districts. Universe data were only collected every 5 years, with a sample collection in other years. In 1995 the Census Bureau collaborated with NCES to make the F-33 an annual universe survey of all public school districts and charter school agencies. NCES publishes a data file, distinguished as the School District Finance Survey (F-33), that is slightly different from the Census file. (The Census file excludes many charter schools that are found in the NCES F-33 file and has other minor differences in the data for a small number of states.)

F-33 data are collected from state education agencies, which can submit the data in two ways. One is to follow the Census format as requested on the survey form. The other way is to send a complete file of the school district data in the state's format and have the Census Bureau crosswalk the data to the F-33 data items. Approximately half of all states use each format.

### **General Comparison of NPEFS and F-33 Data Items**

The NPEFS is a state-level survey that includes state-run and federal-run schools. The F-33 survey is a district-level survey of local government agencies providing education at the elementary and secondary levels. The F-33 excludes the state and federal education agencies that operate schools. Both surveys exclude the central state education agency of each state government.

Both surveys include state expenditures on behalf of districts in their data collections, however the F-33 survey often relies on the NPEFS collection for these data. These are expenditures by the state government for specific programs such as teacher and staff retirement programs, student transportation, or textbooks. Census allocates the 'on-

behalf' totals to the school district level and specific items based on information from the states.

Table 1, in the back of this section, provides a side-by-side comparison of the NPEFS and state aggregated F-33 data items.

Each NPEFS item is matched with the most closely corresponding F-33 item or combination of items. For some NPEFS data, there is no corresponding F-33 item, or the F-33 item captures only a portion of the corresponding NPEFS item. In some other cases, a single F-33 item corresponds to two or more component items on the NPEFS.

Several Title I-related and research-related data items collected by the NPEFS have no counterpart in the F-33, i.e.:

Title I related

- Expenditures from Title I grants (and Carryover)
- Expenditures from Title V, Part A grants (and Carryover)
- Average Daily Attendance

Research related

- Breakout of property tax revenue from non-property tax revenue for dependent school districts
- Purchased services and supplies expenditures
- Salary expenditures for enterprise operations
- Property (equipment) expenditures by function

Conversely, while the NPEFS includes data on interest payments on debt, it does not include the detailed debt items collected on the F-33. The F-33 also breaks out data on revenues from state and federal sources by program, while the NPEFS does not include state and federal revenue data with this detail. These programs include specific federal programs such as Title I and Free Lunch Program, and general state revenue programs such as General Formula Assistance, Special Education and Capital Outlays.

Some education entities included in the NPEFS are not included in the F-33 survey. State- and Federally-operated education agencies are excluded from the F-33 but included in the NPEFS. Table 2, in the back, identifies the states that have these types of school districts and indicates the number of districts, and the numbers of schools, teachers, and students they represented for each state in FY 04.

While charter schools report data on both surveys, 17 states have at least some charter schools that report data on NPEFS but do not report data on F-33. Charter schools that are part of regular school districts are included on both files. However, some charter schools that are not associated with a regular school district are not reported on the F-33, but are included in the data reported on NPEFS. Table 3, in the back, identifies the states and the number of charter schools and associated teachers and students for each state in which charter school data were reported on the NPEFS but not the F-33 in FY 04.

**Variation Comparing State Totals**

Table 4, in the back, shows the results from a comparison of NPEFS data to state totals from the F-33, using the data items from Table 1. The counts of states for which the data from the two files agree (differ by no more than 10 percent) are shown, as well as counts of states for which the differences are greater than 10 percent. Since not all data items are exactly comparable across the two collections, some differences are expected. Instances in which the value reported through one survey item is consistently or substantially larger than the value reported in the other may indicate the degree of difference in the definitions of the data item. The differences for the revenue, capital outlay and non-elementary/secondary programs data items are greater than those for the current expenditure items. (The same analysis using FY 2003 data yielded similar results.)

## Revenues

Table 5, below, lists the revenue data items that showed substantial differences across surveys: that is, items for which 26 or more states reported an absolute difference greater than 10 percent between the NPEFS and F-33. Most of these identified data items have a single F-33 item that was matched to 2 or more NPEFS items.

Table 5. Revenue data items with large variation between NPEFS and F-33

Data item	Variation between surveys
Total Local Taxes (Dependent)	18 states reported substantial values in one survey but 0 in the other.
Tuition from Pupils and Parents	10 states reported NPEFS revenues greater than F-33 by more than 10 percent, 18 states reported NPEFS revenues less than F-33 by more than 10 percent.
Local Revenues From Other School Systems	24 states reported NPEFS revenues less than F-33 by more than 10 percent.
Local Revenues – Other	18 states reported NPEFS revenues greater than F-33 by more than 10 percent, 16 states reported NPEFS revenues less than F-33 by more than 10 percent.
All Other Local Revenues	15 states reported NPEFS revenues greater than F-33 by more than 10 percent, 15 states reported NPEFS revenues less than F-33 by more than 10 percent.
Intermediate Revenues	18 states reported 0 value in NPEFS but positive values in F-33.
Federal Revenue Direct	32 states reported NPEFS revenues greater than F-33 by more than 10 percent.
Long-Term Debt Issued During Fiscal Year	20 states reported NPEFS revenues greater than F-33 by more than 10 percent, 16 states reported NPEFS revenues less than F-33 by more than 10 percent.

While the values reported for these items exhibit substantial variation between surveys, aggregate revenue figures (such as total state revenues and total revenues) show less variation on a state-by-state basis. This indicates that the same revenue is captured in both surveys, although specific revenue items include different components in the NPEFS and F-33.

The NPEFS and F-33 surveys collect data on long-term debt differently. The NPEFS data item used in this comparison consists of revenues received from bond sales, other borrowing, and the sale of fixed assets. The F-33 survey collects data on long-term debt

in four data items detailing the debt at the beginning and end of the year, as well as the debt issued during the year and the debt retired during the year. The comparison of long-term debt in table 5 is between the NPEFS Other Sources of Revenue and the F-33 Long-term Debt Retired During the Year. The definitions did not match and the data therefore show that 30 states reported differences of greater than 10 percent between the two surveys.

## Expenditures

Most expenditure data item differences range between 0 and 1 percent. However, where there are differences, many of them suggest that NPEFS items include some expenditure components that the F-33 items do not. In most of these cases, the differences in reported values can be explained by the fact the F-33 excludes state-run and certain charter schools.

As with revenues, when expenditure data are aggregated the differences between the two surveys become smaller in magnitude. Aggregated expenditure data items with small variation across the surveys include total instruction, total school administration, salaries for school administration, total operations and maintenance, salaries for all support services, total of all support services, total current expenditures, net current expenditures, and state per-pupil expenditures (SPPE).

Table 6, below, lists the expenditure items that have relatively large variation in reported values across the two surveys. The table includes all items for which a difference of more than 10 percent between the NPEFS and F-33 was reported by at least 26 states (including the District of Columbia). For long-term debt service, the variation can be attributed to definitional differences that could not be completely reconciled in crosswalking the items between the two surveys.

Table 6. Expenditure data items with large variation between NPEFS and F-33

Data item	Variation between surveys
Facilities Acquisition - Land and Buildings	18 states reported NPEFS expenditures greater than F-33 by more than 10 percent, 15 states reported NPEFS expenditures less than F-33 by more than 10 percent.
Long-Term Debt Service	10 states reported NPEFS expenditures greater than F-33 by more than 10 percent, 20 states reported NPEFS expenditures less than F-33 by more than 10 percent.

The NPEFS and F-33 data items for expenditures for land and buildings have the same definition, which includes expenditures on existing buildings and land. A few states do not provide the breakout needed to differentiate between purchasing a building, which falls within Facilities Acquisition – Land and Buildings, and constructing a building, which falls within Facilities Acquisition—NonProperty (Construction). After discussion with state data providers, NCES redistributes the data for NPEFS items Facilities Acquisition—NonProperty, and Land and Buildings. This is done to make the facilities acquisition data more comparable across states. The change is not made on the F-33 because it is too difficult to identify misreporting at the district level. This increases differences between the two surveys for the facility acquisition data items. For example, 33 states reported data for land and buildings that varied by more than 10 percent

between the two surveys. When the data for all capital outlay data items are combined in each survey the variation between the two surveys becomes smaller. In this case, only 9 states reported capital outlay data that differed by more than 10 percent. Table 7, in the back, provides additional information for this analysis.

The NPEFS item for long-term debt, Redemption of Principal, (E7A2) is closest in definition to the F-33 item Debt retired During the Fiscal Year (\_31F). However, there are differences. The F-33 includes refunded debt, which is a Census classified debt item, whereas the NPEFS data item does not include refunded debt. Also, the F-33 may be more inclusive of debt instruments. The NPEFS specifies bonds and long-term loans. The F-33 specifies general obligation bonds, revenue bonds, refunding bonds, and certificates of participation.

Comparing the same items in FY 03 and FY 04 data indicates that virtually all the revenue and expenditure differences are similar in both years. This indicates that there are consistent differences between the two surveys.

### **Specific State Variation**

Table 8, in the back, provides a more in-depth view of data item comparisons across four states. These states were selected because they exhibited some of the greatest (Kansas and Kentucky) and least (Colorado and Iowa) variation when comparing the NPEFS and F-33 surveys. The size of the difference is based on the absolute percent differences for each data item. The findings for these four states are consistent with the general findings discussed earlier.

First, specific revenue data items, such as Local Revenue from Other School Systems and the federal revenue data items, tend to exhibit substantial variation between the surveys regardless of the state's overall variation across all data items.

Second, while there is substantial variation among specific revenue data items, when data are aggregated to subtotals (for example, Total Local Revenues), the variation becomes minimal, ranging between -1.1 percent and 3.9 percent across the four states.

Third, the variation in expenditure data items is relatively small when compared to differences in revenue data items. Within the expenditure items variations in aggregated expenditures such as total instruction, total current expenditures, net current expenditures, and state per-pupil expenditures are smaller than variations in many of the specific data items.

Some of the largest differences in expenditures occur in the reporting of the capital and debt-related data items that were previously discussed. Additionally, employee benefits for pupil support, benefits for operations and maintenance, and benefits for student transportation exhibit relatively large variations between Kansas and Kentucky (the two states with overall greater variation between data items). This variation on employee

benefits does not hold for Colorado and Iowa, the states with relatively fewer differences between the NPEFS and F-33.

More extensive state-by-state comparisons would be necessary to further identify and understand differences between the surveys. This would likely involve interviews and correspondence with the state data providers for both surveys as well as with the SEAs' chief financial officers.

## **Conclusions**

**Grant allocations.** For grant allocation uses, replacing the NPEFS collection with state aggregates from the F-33 would require either adding data items identified in this report (page 2) to the F-33 survey or adding these data items to the existing CCD State Nonfiscal Survey.

In order to maintain the current NPEFS coverage, the F-33 would have to be expanded to include state and federal education agencies, which are not included in the current survey. Since data for these agencies have never been collected at the agency level, it is unclear what problems might be associated with this expansion. Another option might be to collect the state and federal agency data, aggregated by state, in a separate data collection. In FY 04, some 37 states had state and federal education agencies providing education services to students. In addition, charter school data from 17 states that are not currently reported in the F-33 survey would need to be collected.

The F-33 would also have to be expanded, or a new data collection created, to collect data for other jurisdictions that are included in the NPEFS: American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico and the U.S. Virgin Islands. SPPE data for these jurisdictions are required to provide data that produces an SPPE for Title I and other program for allocations.

Conversations with state data providers indicated that a major portion of the work and time it takes to complete the NPEFS survey lies in creating an unduplicated count for average daily attendance and getting official approval for submitting the data. Many states calculate a state average daily attendance only for reporting on NPEFS. States would still have to calculate ADA if state aggregated data from the F-33 data were used to replace the NPEFS.

If the NPEFS survey were eliminated, Census would have to collect direct support for and on behalf of school district data through other means than the F-33. This would require expanding the F-33 collection to include items to which state data providers must respond.

Public education is a local endeavor and each state is unique in how it raises education funds and distributes them to school districts. More than \$8 billion were transferred from one school district to another in FY 2004. These payments between school districts make it difficult to calculate state totals without double-counting dollars. NPEFS data

providers are usually familiar with these arrangements in their states, and can calculate state aggregated totals without double-counting the revenues or expenditures. If the F-33 survey is used to replace the NPEFS survey, more detailed information on these arrangements may be needed from the state data providers to ensure integrity of the collected data.

**Loss of data continuity for research purposes.** Education researchers rely on longitudinal data provided by NCES through both of these surveys. The NPEFS and F-33 do not provide interchangeable data. NCES maintains standards to ensure that data provided is as comparable over time as possible. Replacing the NPEFS data with aggregated F-33 data would weaken the continuity of the data

Data from both surveys are used in the review and editing process of each fiscal data collection. Using aggregated data from the F-33 and comprising those data to the NPEFS has led to the discovery of errors in one survey or the other. Eliminating the NPEFS survey will eliminate the ability to perform this data check.

**Costs.** Initially, we don't think that there would be any significant savings for NCES if the NPEFS survey were eliminated. The money currently spent on NPEFS would go to devising ways to collect the necessary data currently missing from the F-33 survey, and testing the data collected from the alternative data collections. Perhaps savings would be realized after a period of time.

It is even harder to gauge the potential savings to SEAs if the NPEFS were eliminated. Whereas we have estimates regarding the time it takes for state officials to complete the NPEFS survey, we do not know how much of that work would have to be continued in order to meet the requirements for grant allocation and data comparability over time issues. The savings in time and money would not be uniform for all states. About half of the states (23 in the FY 2005 collection) report F-33 data by sending in files using their own chart of accounts. These states do very little of the work required to put their data in the format required for the F-33. These states would have to spend a considerable amount of time validating their data for approval for use in the Title I allocations.