

OFFICE OF CHIEF INFORMATION OFFICER
Summary of State Board of Education Agenda Items
Consent Item
September 24, 2020

OFFICE OF TECHNOLOGY AND STRATEGIC SERVICES

G. Approval of the methodology for the distribution of \$50 million in House Bill 1788

Background and Purpose: The Mississippi Legislature enacted the "Mississippi Pandemic Response Broadband Availability Act" (HB1788) to provide grants to eligible School Districts and Schools for the purpose of expanding broadband access in the unserved areas of the State.

Eligibility: Public Schools, Independent Schools and Native American Schools with students living in households with limited broadband providers and in low-income households are eligible to participate in the Mississippi Pandemic Response Broadband Availability Grant Program.

Funding Source: Federal Funds – from HB1788 "Mississippi Pandemic Response Broadband Availability Act"

Basis for Awarding the Grants: Needs-based

This item references Goals 1, 2, 3, 4, 5 and 6 of the *Mississippi Board of Education 2018-2022 Strategic Plan*.

Recommendation: Approval

Back-up material attached

HB 1788 Allocation Methodology Summary

Objectives

The Mississippi Pandemic Response Broadband Availability Act (HB 1788) provides \$50 million to the Mississippi Department of Education (MDE) for the purpose of granting funds to support broadband access in public school districts, independent schools, and Native American tribal schools. MDE seeks to equitably allocate funding across entities based on need.

Summary

Mississippi students lack reliable access to high speed internet as a result of structural barriers in primarily rural geographic areas with limited broadband providers and due to the prohibitive cost for many low-income households. Therefore, the proposed distribution of funds takes into account each district's:

1. Census designation (rural, town, suburb, or city);
2. Number of households without access to broadband services; and
3. Number of low-income households.

The proposed HB 1788 allocation prioritizes school systems located in lower population density areas and with the largest share of households in need, placing equal weight on both broadband access and family income.

Component Definitions

The following definitions provide additional detail for the components of the allocation methodology:

- *Households*
 - Because internet access is determined at the household level, the allocation model is based on the number of households rather than a student count.
 - A household is defined as a single unique address. Multiple students may be included in a single household. The number of students per household for each school type is as follows:
 - 1.6 students across independent schools;
 - Ranging from 1 to 1.9 students across public school districts; and
 - 3.1 students for the Native American tribal schools.
 - To account for invalid address data (representing approximately 15% of public school students), the total number of households in each district is estimated by calculating the ratio between students to households with valid addresses and applying that ratio to the actual enrollment count.
 - Student addresses were not available for students in independent schools. Therefore, the number of households for these schools is determined by applying the above ratio from the district where the independent school is located, using the surrounding county district where appropriate, to the actual school enrollment count as provided by the Mississippi Association of Independent Schools (MAIS).
- *Low-Income Households*
 - The number of low-income households is determined by multiplying the school district's 2019-2020 free- and reduced-price lunch (FRL) rate by the count of households for both public schools and independent schools.
 - Tribal schools are assumed to be 100% low-income.
- *Number of Households with Zero or One Broadband Provider*

- The [FCC Broadband Map](#) reports residential broadband service providers by Census block. Broadband providers are included in the allocation model if they reported speeds of ≥ 25 Mbps/3 Mbps. Satellite providers are excluded due to latency.
- Household addresses for public and tribal school students are linked to the FCC data using Census blocks to determine the number of broadband providers available to each household.
- Invalid addresses and independent school households are each proportionally counted based on the overall district proportion of households with 0 or 1 provider.
- *Locale Rating*
 - The National Center for Education Statistics (NCES) uses [locale codes](#) to describe a school's location ranging from "large city" to "rural." The codes are based on the physical location represented by an address that is matched against a geographic database maintained by the Census Bureau.
 - [Locale ratings](#) from 1-7 are assigned based on the NCES locale type, with 1 representing the most densely populated areas and 7 representing the least densely populated areas.

Methodology

In order to equitably distribute the HB 1788 funds across entities, MDE applied the calculations described below.

1. Within each school district, determine the following for each entity (public schools, independent schools and Native American tribal schools):
 - a. Locale rating;
 - b. Total number of low-income households; and,
 - c. Total number of households with access to 0 or 1 broadband provider.
2. Apply a multiplier to the household count to calculate a weighted household total for each entity.
 - a. Add the number of households with 0 broadband providers and 0-1 broadband providers.
 - b. Multiply the number of 0-1 provider households above by the locale rating and by the ratio of the weighted provider households to the low-income households in order to determine the provider weight.
 - c. Add the provider weight to the number of low-income households to determine the weighted household total.
3. Proportionally distribute \$50 million based on each entity's weighted household total.
 - a. Divide \$50,000,000 by the statewide sum weighted household total (482,906) to determine the allocation per weighted household of \$103.54.
 - b. Multiply each entity's weighted total by \$103.54 to determine its total allocation.

Allocation Results

In total, MDE proposes to allocate an average of \$156 per household, or \$100 per student, across public schools, independent schools, and tribal schools. As the table below illustrates, the distribution of funds across public school districts reflects their varying needs.

Per Household Allocation Rank*	Avg. Per Household Allocation	% Rural	% Suburb or City	Avg. % with ≤ 1 Internet Provider	Avg. % Low Income
Top 10% of School Districts	\$457.07	100%	0%	49%	82%
Top 25% of School Districts	\$373.11	100%	0%	38%	82%
State Average (All Entities)	\$156.19	69%	24%	13%	75%
Bottom 25% of School Districts	\$82.02	48%	52%	3%	66%
Bottom 10% of School Districts	\$68.23	45%	55%	3%	54%

* Top districts are those with the largest Avg. Per Household Allocation, bottom the smallest Avg. Per Household Allocation. The larger the Avg. Per Household Allocation aligns with more rural and poorer, while the smaller Avg. Per Household Allocation aligns with more Suburb/City and less poor.