

## **Technical Specifications for the Conduct of Below-State NAEP**

**National Center for Education Statistics  
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### **I. Introduction**

The *Technical Specifications for the Conduct of Below-State NAEP* provides technical information and instructions for participation in the National Assessment of Educational Progress (NAEP) by districts that choose to do so.

#### Definition

By definition, Below-State NAEP is the augmentation or enlargement of national and/or state samples for the purpose of reporting NAEP results below the state level. The objective of this document is to describe the conduct of NAEP assessments to produce below-state results for districts that desire such results and agree to the policies and standards governing the production of NAEP results.

For purposes of clarification, the definition of the term “district” includes the following:

- (1) A state education agency;
- (2) A local education agency;
- (3) A consortium of local education agencies; or
- (4) A group of schools that have a common purpose or mission, such as a group of private or parochial schools, charter schools, or other public schools, without regard to geographic proximity.

### **II. Background**

The National Assessment Governing Board has a policy allowing districts to use NAEP, at the districts’ discretion and cost, according to NAEP requirements and subject to federal oversight, to obtain district-specific results. This Governing Board policy is guided by the following three principles:

- (1) The National Assessment is developed with public funds and, thus, should be available to the public for appropriate uses;
- (2) Such uses of the National Assessment should be subject to requirements that safeguard its quality, credibility, and integrity; and
- (3) Such uses of the National Assessment should be considered a service to the public and, as such, operated apart from the official NAEP program and reporting mechanisms.

Prior to 1994, Below-State NAEP was prohibited under the NAEP legislation. However, the reauthorization of NAEP in 1994 under Public Law (PL) 103-382 – the Improving America’s Schools Act of 1994 – removed the language prohibiting the use of NAEP results below the state level. In 1995, the Governing Board adopted a policy supporting “below-state use of NAEP.” The current NAEP legislation continues to permit the use of NAEP below the state level.

Since the 1995 policy was first adopted, there have been two major developments that bear on this policy. First has been the evolution of NAEP to a mandatory assessment in reading and mathematics at grades 4 and 8 under the No Child Left Behind Act of 2001. Mandatory participation has raised general awareness of NAEP and the widespread use of NAEP state-level results has fostered knowledge of its high quality and applicability. As a result, there is growing interest among districts to obtain NAEP results.

The second development is the emergence of the Trial Urban District Assessment (TUDA) feasibility study. As a part of the FY 2002 budget, Congress appropriated funds to support a study to determine the feasibility of conducting urban district assessments as a regular component of the National Assessment, in addition to the national and state assessments specifically authorized under the NAEP legislation. Since 2002, TUDA has been conducted in selected large urban districts concurrently with state NAEP. Please refer to the NAEP website at <http://nces.ed.gov/nationsreportcard/about/#tuda> to find the latest information about TUDA, including a list of the participating trial urban districts.

#### Differences between Below-State NAEP and TUDA

The TUDA study has introduced the need for policies that clarify the differences between “below-state use of NAEP” and TUDA. The major differences between Below-State NAEP and TUDA are highlighted below:

- (1) Districts participate in Below-State NAEP because they choose to do so, while TUDA districts are invited by the Governing Board to participate in the TUDA program.
- (2) Funding for Below-State NAEP is the responsibility of the district, while funding for TUDA is provided by the federal government.
- (3) The dissemination of Below-State NAEP results to the general public is the responsibility of the district, while the federal government disseminates initial TUDA results.
- (4) Like TUDA, Below-State NAEP data contribute to the overall national and state scores but unlike TUDA, the below-state results will not be reported by the federal government.

### **III. Technical Specifications**

There are two options for district participation in Below-State NAEP. Both of these options require administrative and technical conditions identical to the national and state-level NAEP procedures and will yield NAEP-comparable scores.

- (1) *Below-State NAEP participation by districts selected for the NAEP sample*  
A district that is included in the national or state NAEP sample in a particular year may submit a request to the National Center for Education Statistics (NCES) to augment, at the district's cost, the state or national NAEP sample, in one or more of the subjects and/or grades assessed by NAEP in that year, in order to obtain district-level results. In order to generate results that are representative of the particular district, the sample may be augmented to include additional schools, as well as additional students in those schools that are already selected as part of the national or state sample.
- (2) *Below-State NAEP participation by districts **not** selected for the NAEP sample*  
A district that is *not* included in the national or state NAEP sample in a particular year may also submit a request to NCES to obtain, at the district's cost, district-level results in one or more of the subjects and/or grades assessed by NAEP in that year. A representative sample of schools will be selected to generate reliable and valid results for the district.

Districts participating in Below-State NAEP will be subject to all NAEP procedures and technical requirements. These practices will help to ensure that data collected and reported to the district are consistent with and comparable to all NAEP assessments in terms of providing statistically reliable and valid results.

The technical specifications around sampling, assessment administration, and reporting are addressed in the following sections.

## **A. Sampling**

Each school participating in NAEP and each student assessed represent a portion of the population of interest. The samples drawn for national and state assessments are designed to be representative of the nation and the respective state. The portion of the national and/or state samples that is within the district boundaries may not be representative of the district. To ensure that accurate results are provided at the district level, either samples of schools and students selected for national and state NAEP must be augmented or a new sample of schools and students must be selected to be representative of the district.

### Sampling Design

The sampling design for Below-State NAEP includes the selection of schools within the district and selection of students within those schools. Schools are stratified hierarchically by the level of urbanization of the schools' location, minority enrollment, and student achievement scores in order to generate representative samples. Students within each selected school will be identified to participate either through a random sampling procedure or a census of all students to minimize non-sampling bias. If more than one subject is

assessed, the sampling design will also include the assignment of students to each subject area. All subject area assessments will be in a single spiral<sup>1</sup> and administered together.

To determine the needed sample size, the following is assumed:

- (1) Reporting will be done at the district level; and
- (2) Each assessed student will receive only a subset of the full set of questions.

### Sample Size

The size of the sample required is a function of the level of disaggregation on which a district may want to report. The more levels of disaggregation desired by the district, the larger the sample. The sample can be drawn to allow for reliable reporting of performance by subgroups, such as gender, race/ethnicity, low income, students with disabilities, and English language learners, provided a large enough sample is drawn. The results from the assessed students are combined to provide accurate estimates of overall district performance though no individual school or student results are provided.

As such, the district, in most cases, will require a minimum of 1,500 students per subject and grade (which is half of the standard state NAEP sample size) from approximately 25-50 schools or all of its schools to participate in Below-State NAEP. This is to allow the district to report mean proficiencies for the subgroups and district as a whole in order to make reliable comparison of NAEP results to the nation, respective state and other districts.

Before the data are analyzed, responses from the groups of students assessed are assigned sampling weights to ensure that their representation in Below-State NAEP results matches their actual percentage of the school population in the grades assessed.

### NAEP Inclusion

Students are included in NAEP school samples according to widely accepted random sampling methodology, without regard to their performance in school, socioeconomic status, disability, status as an English language learner, or any other factors.

## **B. Assessment Administration**

Below-State NAEP assessment administration will be conducted by NAEP contractors as designated by NCES according to the same procedures, policies and standards applicable to NAEP at the national, state and TUDA level. For districts that are included in national or state NAEP samples, schools and students within those districts will need to participate in field tests that are conducted as a component of the NAEP administration. They may also be subject to other components of the NAEP assessment, such as pilot and special studies, for a particular year. For districts that are not included in the national or state NAEP sample, there are no such requirements.

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<sup>1</sup> Spiraling is the systematic interleaving of assessment booklets so that any group of students will receive approximately equal proportions of different types of booklets.

In the area of assessment administration, the following specifies basic requirements:

- (1) Assessment preparations and administrations for Below-State NAEP will be identical to those specified in the NAEP administration manual for the national, state and TUDA assessments. The scheduling of the assessment sessions must be spread across the standard 6-week NAEP assessment period;
- (2) Assessment sessions will be monitored on a random basis by an independent organization;
- (3) Students identified as English language learners and students with disabilities will be accommodated according to NAEP assessment administration guidelines; and
- (4) If more than one subject is selected for Below-State NAEP, the selected subject area assessments will be administered together in the form of a single spiral so that each student will be assessed in the same classroom at the same time.

#### District NAEP Coordinator

Participating districts must provide a staff member (i.e., a District NAEP Coordinator) to coordinate all aspects of the administration with the NAEP contractors, specifically the NAEP State Service Center (NSSC) and the Sampling and Data Collection (SDC) Contractor. These activities include reviewing school sample frames and school samples, conducting quality assurance checks of demographic data, recruiting schools to participate, coordinating the submission of student lists, ensuring parental notification, and working with field staff in preparation for and administering the assessment.

#### **C. Reporting**

Below-State NAEP results generated for the district will be subject to the analytical procedures and statistical standards used for NAEP. Before the data are scored and analyzed, responses from the groups of students assessed in NAEP are assigned sampling weights to ensure that their representation in NAEP results matches their school population in the grades assessed. After the data have been scored and analyzed, results for student performance are generated for groups defined by gender, race/ethnicity, and low income.

#### Scale Score and Achievement Levels

NAEP results are reported as scale scores and by achievement levels<sup>2</sup>. NAEP scale score results provide information about the distribution of student achievement by groups and subgroups. NAEP scale scores are reported on either a 0-300<sup>3</sup> or 0-500<sup>4</sup> scale for each grade, depending on the subject. Achievement levels categorize student achievement as *Basic*, *Proficient*, and *Advanced*, using ranges of performance established for each grade. The achievement levels are based on collective judgments about what students should

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<sup>2</sup> The Governing Board sets specific achievement levels for each subject area and grade based on recommendations from policymakers, educators, and members of the general public.

<sup>3</sup> For science, writing, and civics

<sup>4</sup> For reading, mathematics, history, and geography

know and be able to do relative to the body of content reflected in each subject-area assessment. Policy definitions of the three levels are:

- (1) *Basic* - denotes partial mastery of knowledge and skills that are fundamental for proficient work at each grade;
- (2) *Proficient* - represents solid academic performance. Students reaching this level have demonstrated competency over challenging subject matter; and
- (3) *Advanced* - signifies superior performance.

NAEP scales are developed independently for each subject, so scale score and achievement level results cannot be compared across subjects.

### Subgroup Reporting

Scale score and achievement level results are also reported for groups of students. The number of students in some of these groups may not be sufficiently large enough to permit accurate estimation of achievement data. As a result, data are not provided for groups with students from very few schools or with very small sample sizes. A minimum sample size of 62 assessed students, from five different schools, within a specified subgroup is required for the reporting of achievement results for any group of students. The data for all students, regardless of whether their groups are reported separately, are included in computing overall results.

### Participation Rate Standards

Each district must achieve a participation rate of at least 85 percent of the schools drawn in the original sample, before substitution, in order to have a report of performance data. Each district must also achieve a participation rate of at least 85 percent for students in each subject and grade. If the school and/or student participation rates do not meet these standards, a nonresponse bias analysis will be conducted at the school and/or student levels. If the results from the analysis continue to show bias in the school and/or student samples, the district may only receive an electronic data file of raw, un-weighted student records.

### Reporting Format<sup>5</sup>

Each district<sup>6</sup> will receive a package consisting of the following:

- (1) Snapshot report - Produce a single page "snapshot" report that includes summary results for each grade/subject for the district with comparisons to its state, large-central city, and the nation. Report will be delivered as PDF files.
- (2) Full District Report - Produce a full report that includes results for each grade/subject for the district, with comparisons to its state, large-central city, and the nation. Report will be delivered as PDF files.

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<sup>5</sup> Customized reporting options may be negotiated as part of the Below-State NAEP contract.

<sup>6</sup> The district must meet the reporting requirement of 85 percent participation rate in order to receive these reports.

- (3) Initial District Comparison Tables – Produce a limited set of tables at the time of the release providing comparisons between the district and the participating TUDA districts. The initial set of tables (at the time of release) will include overall means for total, gender, and race/ethnicity.
- (4) Full set of District Comparison Tables – Approximately one month after the release date, produce a set of tables for major reporting variables (up to 15) providing comparisons between the district and the participating TUDA districts. Tables will be produced for means and percentages at or above achievement-level cut points.
- (5) A raw data file – All districts will receive an electronic file of raw, un-weighted student records.

Because some of the reports described above include detailed comparative data, they are made available to the district approximately one month after the national and state results have been released.

#### **IV. Process for Participating in Below-State NAEP**

The process associated with participating in Below-State NAEP involves four phases.

##### Phase 1: Submit request form

The district must submit the Below-State NAEP Request Form to NCES by January 15<sup>7</sup> of the school year prior to the assessment. For example, in the 2010-2011 school year, districts will be applying to conduct Below-State NAEP for the 2011 assessment administered in school year 2011-2012. Each request can only be made for the upcoming assessment cycle. Regardless of the source for funding, the request for participation in Below-State NAEP must be submitted by the district. The district should refer to the *Instructions for the Below-State NAEP Request Form* for assistance with filling out the form.

##### Phase 2: Receive sample size and cost estimates

Within 10 business days of receipt by NCES of the request form, the district will receive school and student sample size<sup>8</sup> estimates for each grade as well as estimated costs for participating in Below-State NAEP. The costs associated with conducting the assessment will also be provided.

The cost estimates for Below-State NAEP will be dependent upon factors such as the number of grade levels, schools, and students to be included in the assessment as well as the number and types of subjects to be assessed. Below are some of the factors that will be used in the computation of costs for Below-State NAEP:

- 1) Average cost per school for sampling and data collection;

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<sup>7</sup> If January 15 should fall on a weekend or a national holiday, the submission due date will be the next work day.

<sup>8</sup> Sample sizes are based on historical national and state data.

- 2) Average cost per student for materials preparation, distribution and scoring<sup>9</sup>;
- 3) Analysis and reporting cost; and
- 4) Quality assurance cost.

*Differential Costs.* Please note that there are differential costs associated with assessing one, two and three subjects and it cannot be assumed that the fewer the number of subjects, the lower the cost of conducting Below-State NAEP. Certain subjects, such as science and writing, will require additional fees for materials and scoring activities.

### Phase 3: Provide letter of intent

After receiving the sample size and cost estimates, the district must provide NCES with a letter of intent to participate in Below-State NAEP. The letter of intent must acknowledge the following:

- The district is responsible for all payments arising from its participation in Below-State NAEP;
- The district is responsible for all incurred costs even if fewer than 85<sup>10</sup> percent of schools and students participate; and
- The district is responsible for gaining the cooperation of the sampled schools and students.

For any given NAEP assessment cycle, NCES reserves the right to limit the number of participants in Below-State NAEP. Districts will be immediately notified of their selection to participate. The letter of intent to participate in Below-State NAEP must be signed by the district official authorized to obligate the entity to the Below-State NAEP contract. The letter of intent must be received by NCES no later than February 15<sup>11</sup> of the school year prior to the assessment.

At any time after the letter of intent has been submitted, if the district intends to withdraw from participation, it must provide NCES with written notification of its decision.

### Phase 4: Enter contract

The Below-State NAEP contract will be established between the district and NAEP contractors responsible for i) sampling and data collection; ii) materials distribution, processing and scoring; and iii) analysis and reporting. The negotiation and drawing up of the contract will take place in March of the school year prior to the assessment. At this time, a non-refundable fee will be charged to the district. Contract negotiations between

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<sup>9</sup> Alaska, Hawaii, and Puerto Rico can expect a modest additional transportation fee of 5-10% of the total price for materials, ordering, processing and scoring. International schools that are part of the Department of Defense Education Activity can expect a premium of up to 25% as an additional fee.

<sup>10</sup> The participation rate requirement may differ among subjects and between public and nonpublic schools. For example, the participation rate is lower for history compared with reading or math. The participation rate is also lower for nonpublic schools compared with public schools.

<sup>11</sup> If February 15 should fall on a weekend or a national holiday, the submission due date will be the next work day.

contractors and the district must conclude by the 1<sup>st</sup> of April. School samples will be forwarded to the district contact person and respective state on or around the 1<sup>st</sup> of May.

Although the contract will be established between the district and NAEP contractors, NCES will designate a prime contractor to negotiate with the district. The prime contractor will serve as a liaison between the district and NAEP contractors and will be responsible for any operational issues that may arise from the conduct of Below-State NAEP. If the district should encounter any programmatic issues, it will need to contact NCES.

Payment for participating in Below-State NAEP will coincide with the timing of the following activities: i) sampling and data collection (submission of non-refundable fee); ii) materials production and distribution and administration (middle of the year preceding the assessment); and iii) reporting (at time of delivery of the first reporting product). The district may not withdraw after the 1<sup>st</sup> of July without paying all costs incurred by the contractors.

To view the assessment schedule for national and state NAEP from 2006 through 2017, please go to <http://www.nces.ed.gov/nationsreportcard/about/assessmentsched.asp>.

The following page is a checklist of the milestones for participating in Below-State NAEP.

## Checklist of Milestones for Participating in Below-State NAEP

### Phase 1: Submit Request Form

- Complete the Below-State NAEP Request Form.  
(See *Instructions for the Below-State NAEP Request Form*)
- Submit the request form to NCES by January 15<sup>12</sup> of the school year prior to the assessment.

### Phase 2: Receive Sample and Cost Estimates from NCES

- Receive school and student sample size estimates and estimated costs from NCES within 10 business days of receipt of the request form.

### Phase 3: Provide Letter of Intent to NCES

- Send letter of intent to participate in Below-State NAEP to NCES to be received no later than February 15<sup>12</sup> of the school year prior to the assessment.

### Phase 4: Enter Contract with NCES and NAEP Contractors

- Upon notification of selection, enter into negotiation and drawing up of contract with NAEP contractors in March of the school year prior to the assessment, after the district has been notified of being selected. Conclude negotiations by the 1<sup>st</sup> of April and submit non-refundable fee.
- Receipt of school samples for Below-State NAEP by the district contact person and respective state on or around the 1<sup>st</sup> of May.
- If the district wants to withdraw from participating in Below-State NAEP after the letter of intent has been submitted, it must provide NCES with written notification of its decision. The district may not withdraw after the 1<sup>st</sup> of July without paying all costs incurred by the contractors.

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<sup>12</sup> If January 15 or February 15 should fall on a weekend or a national holiday, the submission due date will be the next work day.