

## AQuESTT Classification System

12/3/2015

The following business rules are used to calculate AQuESTT school/district classifications for accountability. The data used is collected from NeSA assessments and NSSRS data submitted by districts.

- i. Every eligible public school and district is included and held accountable. The same process is used to classify districts and schools into four rating levels: Excellent (4), Great (3), Good (2), or Needs Improvement (1).
  - a. A school or district's overall classification rating is a combination of ratings in six areas (Status, Improvement, Growth, Graduation, Non-Proficiency, and Participation). The rules for combining these areas into the overall ratings are defined throughout this document.
  - b. Starting with the list of all Nebraska schools for the current school year as collected in the NSSRS system, these school buildings will be excluded from eligibility:
    - i. All schools with a *District Type* other than Public; such as Interim, State Operated, ESU, Non-Public, etc.
    - ii. Schools that are wholly SPED or Prekindergarten programs (*Kind of School* codes 16 or 20, or *High Grade Level* code "PK")
    - iii. Schools that are wholly Alternative programs (*Type of School* code "NA")
    - iv. Note: any otherwise eligible school that contains any grade levels between Kindergarten and 3<sup>rd</sup>, and therefore may not have NeSA assessments, is still included in the Classification process as an elementary school. The school's Status rating is copied from their district's Status rating as detailed later in this document.
  - c. The list of eligible districts is defined by selecting all districts that contain at least one eligible school after taking into account the above rules.
  - d. School ratings will be set per school building and school type (elementary, middle, high), so a single school building may have two or three "schools" as defined in this process.
    - i. The school buildings have been split into schools according to their preference and these AYP rules. Please refer to NDE's internal Federal Accountability Adequate Yearly Progress (AYP) Manual – Version 17.0.0 – June 08, 2014 document.
    - ii. Accordingly, the grade levels that constitute the elementary, middle, or high schools are customized for each school building and school year. The resulting elementary/middle/high school divisions have been prepared before the Classification process begins.
    - iii. Whenever the Classification process references previous school years' data, the E/M/H division logic for the corresponding years will be used rather than only using the current year's logic.

- ii. **Status (Initial Rating of 4, 3, 2 or 1) – Current Year NeSA Performance:** For each eligible district and school as defined above, a Status rating will be determined based on the average NeSA score in the district/school for the current school year.
- a. Scores from all four NeSA subjects (reading, mathematics, science and writing) at the district/school will be combined.
- i. Reading, math and science assessments are scored on a 0-200 point scale, while Writing is scored from 0-70 points.
  - ii. In order to combine all four subjects into a single average, the Writing scores will be scaled up to a 200 point maximum by using a linear regression based on the NeSA Below/Exceeds Expectations cutoff scores for each grade level that takes the writing assessment.
    1. These cut scores are used in the regression formulas:  
 RMS cuts: 85, 135  
 Grade 4 writing cuts: 40, 57  
 Grade 8 writing cuts: 40, 55  
 Grade 11 writing cuts: 40, 53
    2. Example formula for 4<sup>th</sup> grade writing:  
 Scale Adjust =  $(135-85) / (57-40)$   
 Intercept Adjust =  $135 - (57 * \text{Scale Adjust})$   
 Adjusted Score =  $(\text{Score} * \text{Scale Adjust}) + \text{Intercept Adjust}$
    3. Any adjusted score that results in a negative number will be changed to zero instead.
- b. For reference, this chart shows which grade levels participate in NeSA assessments by subject, as well as in which school year each subject's assessments were first available for use in Classification:

Subject	Participating Grade Levels							First School Year Subject Available
	3	4	5	6	7	8	11	
Reading	x	x	x	x	x	x	x	2009-2010
Math	x	x	x	x	x	x	x	2010-2011
Science			x			x	x	2011-2012
Writing		x				x	x	2011-2012*

- i. \*Due to a change in the NeSA writing assessment format, writing scores from before the 2011-2012 school year will be excluded. Similarly, the 4th grade writing scores in 2011-2012 will be excluded as well (other grade levels in that school year are valid).
  - ii. Due to formatting issues with the NeSA writing assessment, 8<sup>th</sup> and 11<sup>th</sup> grade writing scores from the 2012-2013 and 2013-2014 school years will be excluded.
- c. A NeSA assessment score will be excluded from counting towards a school's average if the student has not been enrolled at the school for the full academic

- year (enrolled continuously from the last day of September through their school's NeSA testing date in the spring).
- i. Similarly, a score will be excluded from a district's average if the student has not been enrolled within the district for the full academic year. However, the student may still count if they moved between schools within a district during the year.
- d. A NeSA assessment score will also be excluded from counting towards the average if it is marked with a valid *Reason Not Tested* in regards to Performance calculations, as defined by this SOSR guidance document:  
[http://www.education.ne.gov/assessment/pdfs/SOSR\\_Guidance-NeSA-RMSW\\_%20Calculations\\_%208.1.14.pdf](http://www.education.ne.gov/assessment/pdfs/SOSR_Guidance-NeSA-RMSW_%20Calculations_%208.1.14.pdf)
- i. Note that the rules for valid *Reason Not Tested* codes vary depending on the school year, NeSA subject, and whether you are calculating Performance scores or Participation rates.
  - ii. If an assessment has a *Reason Not Tested* value other than those on the approved list above, its score of 0 will count towards the school/district average.
  - iii. A school must have a minimum of 25 eligible assessment scores to calculate a Status rating. If a school doesn't have 25 assessments, or does not contain any grade levels that participate in NeSA assessments, their district's Status rating will be assigned as their school Status rating.
- e. A school's average NeSA score is calculated by finding the sum of the eligible assessment scores at the school, divided by the number of eligible assessments. This average is then compared against the cut scores for the corresponding school type in order to determine the school's initial Status rating:

#### **Elementary**

- Level 4: Average NeSA Score > 132
- Level 3: Average NeSA Score > 114 but ≤ 132
- Level 2: Average NeSA Score > 96.5 but ≤ 114
- Level 1: Average NeSA Score ≤ 96.5

#### **Middle School**

- Level 4: Average NeSA Score > 129.5
- Level 3: Average NeSA Score > 113.5 but ≤ 129.5
- Level 2: Average NeSA Score > 96.8 but ≤ 113.5
- Level 1: Average NeSA Score ≤ 96.8

#### **High School**

- Level 4: Average NeSA Score > 129
- Level 3: Average NeSA Score > 112 but ≤ 129
- Level 2: Average NeSA Score > 95 but ≤ 112
- Level 1: Average NeSA Score ≤ 95

- f. The district's average NeSA score is calculated by finding the sum of the applicable assessment scores at all eligible schools in the district, divided by the number of applicable assessments at those same schools. This district average is then compared against the district cut scores listed below to determine the district's Status rating of 4, 3, 2, or 1:

**District**

Level 4: Average NeSA Score  $> 130.1667$

Level 3: Average NeSA Score  $> 113.1667$  but  $\leq 130.1667$

Level 2: Average NeSA Score  $> 96.1$  but  $\leq 113.1667$

Level 1: Average NeSA Score  $\leq 96.1$

iii. **Improvement (+1 or 0 Rating Adjustment) – 3-Year NeSA Performance**

**Trend:** For each school/district an adjustment to the rating generated in the Status area may be made based on an upward trend in average NeSA scores in the school/district across all subjects for the last three school years. This adjustment can reward schools that are generally improving their NeSA scores across all students.

- a. The trend for Improvement at a school/district is determined by calculating a linear regression for available average NeSA scores across three years using all available subjects and grade levels, this being equivalent to the score used in the Status rating.
- i. Details about the linear regression formula used can be found in this document – [AQuESTT Linear Regression Calculations.pdf](#):



AQuESTT Linear  
Regression Calculatio

- ii. As in the Status area, for each school year used in the trend calculation: assessment scores from students that weren't enrolled for the full academic year in the corresponding school year(s) will be excluded from this calculation as well as the previously mentioned writing assessment scores.
- iii. Unlike Status, all assessments with a score of 0 will be excluded from Improvement calculations, regardless of the *Reason Not Tested*.
- b. A minimum of 25 eligible assessment scores are required for any of the three school years included in the calculation. A school year may be available to be used in the trend line calculation independently of the other two school years.
- i. If a school/district has only two years of score data the equivalent of the linear regression slope calculation can still be performed.
- ii. If a school/district has only a single year for score data, then the slope will be 0 and the Improvement rating adjustment will be 0.
- c. If the slope of the trend line (representing the change in average NeSA scores per year) is greater than or equal to the calculated cut score for the

corresponding school/district, then the school/district overall rating is increased by one, otherwise it is unchanged.

- i. The cut scores for the Improvement rating adjustment use a formula that is based on the number of eligible assessments available for each school/district. The cut score is not represented by a single value, but by slope and intercept values that describe a cut score line for each school type. For each school/district: the count of all Improvement-eligible assessments in the current year, across all four subjects, is multiplied by the given slope value and the result is added to the intercept value to create this school/district's specific Improvement cut score.

#### **Elementary**

Cut score line slope: -0.003164845

Cut score line intercept: 10.57234

#### **Middle School**

Cut score line slope: -0.001393162

Cut score line intercept: 9.768585

#### **High School**

Cut score line slope: -0.001646391

Cut score line intercept: 11.91494

#### **District**

Cut score line slope: 0

Cut score line intercept: 9.778745

- iv. **Growth (+1 or 0 Rating Adjustment) – Rate of Individual Student NeSA Improvements:** For each district/school an adjustment to the rating may be made based on the percent of NeSA assessment scores that showed improvement compared to the same individuals' performance in the previous year.
  - a. Only reading and math scores will be used in Growth rate calculations, since science and writing assessments are not taken in consecutive grades.
    - i. Each individual student may be counted up to two times in the Growth percentage, one for math and one for reading.
  - b. Each district/school will calculate a Growth rate, which is the percentage of Growth-eligible assessment scores that showed an improvement (as defined in the table below) compared to the performance level/score in the previous year for that same student and subject area.
    - i. Since the Growth calculation uses data from individual students across multiple years, it will attempt to match the current Student ID against any retired IDs for the same student.

- ii. Any scores from students that were not enrolled for the full academic year in the current school year are excluded from the Growth rate calculation. This is not checked for in the previous year however.
  - 1. School Growth scores require a full academic year at that particular school, while district Growth scores only require a full academic year in the district. Students that move between schools within the same district during the school year are still eligible for district Growth.
- iii. Unlike Status calculations, an assessment will be excluded from the Growth rate if it has a score of 0 in the current year, regardless of the *Reason Not Tested*.
- iv. Any student that didn't have an assessment score in the previous year for the corresponding NeSA subject areas, or that had a score of 0 for any reason, is excluded from the Growth rate.
  - 1. Because of this rule and the grade levels that participate in NeSA assessments, all 3<sup>rd</sup> and 11<sup>th</sup> graders are excluded. This also means that all high schools are excluded from receiving an adjustment for Growth.
- v. For both school and district Growth calculations, if a student's NeSA assessments were not located at a school within the same district in the previous year, any school scores for that student are excluded.
- vi. A school/district must have a minimum of 25 growth-eligible assessment scores to take part in the growth calculation.
- c. For all Growth-eligible NeSA assessments, the following table is used to determine whether or not that assessment is assigned a Growth point by comparing the current year NeSA performance level and score against the previous year for the same subject area. An "X" indicates when an assessment qualifies for a Growth point:

		Current Year				
		Performance Levels	Exceeds	Met		Not Met
Previous Year	Exceeds	X	-		-	
	Met	X	Score Gain < 0	Score Gain ≥ 0	-	
			-	X		
	Not Met	X	X		Score Gain ≤ 0	Score Gain > 0
-					X	

- d. The Growth is determined by finding the percentage of eligible assessments that qualify for a Growth point at each school/district. If that percentage is greater

than or equal to the calculated cut score, the school/district overall rating is increased by one, otherwise it is unchanged.

- i. The cut scores for the Growth rating adjustment use a formula that is based on the number of eligible assessments available for each school/district. The cut score is not represented by a single value, but by slope and intercept values that describe a cut score line for each school type. For each school/district: the count of all Growth-eligible assessments in the current year is multiplied by the given slope value and the result is added to the intercept value to create this school/district's specific Growth cut score.

**Elementary**

Cut score line slope: -0.003292874

Cut score line intercept: 85.63568

**Middle School**

Cut score line slope: 0.0003376768

Cut score line intercept: 76.97569

**High School: N/A**

**District**

Cut score line slope: 0

Cut score line intercept: 82.17609

- v. **Graduation (*Rating Limitation*) – Cohort Graduation Rates:** For each district/high school their four or seven year cohort graduation rate in the previous year (the school year used for Graduation data lags one year behind the NeSA data) defines the maximum possible overall classification rating.
  - a. The cohort graduation rates are the percentage of members in a cohort who graduated with a diploma. The preexisting rules that define a cohort can be reviewed here:  
[http://www.education.ne.gov/nssrs/docs/Guidance for Graduation Cohort 4 0 0.pdf](http://www.education.ne.gov/nssrs/docs/Guidance%20for%20Graduation%20Cohort%204%200.pdf)
  - b. The graduation rate will be determined using the set of district-corrected data that is used for AYP calculations.
  - c. Only high schools are eligible, other schools will not have their overall rating affected. All districts are eligible.
  - d. A school or district cohort must have at least 25 members for it to be used in the Graduation rating.
    - i. If a cohort doesn't have 25 members, the previous year's counts for the matching cohort year (four or seven) can be added – i.e. for the 2013-2014 classification rating, if the 2012-2013 seven year cohort only has 18 members, the 2011-2012 seven year cohort can be added to it.

- ii. If either cohort is still lacking enough members, the 2<sup>nd</sup> prior year can be added as well, but no more than that.
- e. The greater of the eligible four or seven year cohort rate in the current year will be used for determining the Graduation rating limitation.
  - i. If neither cohort at a school/district has at least 25 members, then the school/district will not have a Graduation limit placed on it.
- f. The Graduation rating limitation is determined by comparing the highest cohort rate against these cut rates, which will limit the school/district overall classification rating:

No limitation: graduation rate  $\geq 90\%$   
 Limit rating to 3: graduation rate  $< 90\%$  and  $\geq 80\%$   
 Limit rating to 2: graduation rate  $< 80\%$  and  $\geq 70\%$   
 Limit rating to 1: graduation rate  $< 70\%$

- vi. **Non-Proficiency (+1, 0, or -1 Rating Adjustment) – 3-Year NeSA Non-Proficiency Trend:** For each district/school an adjustment to the overall classification rating may be made based on a decreasing or increasing three year trend of the percentage of NeSA assessment scores that are defined as non-proficient according to the yearly NeSA score cutoffs determined by the assessments team.
  - a. The non-proficiency rate uses only reading and math scores from the set of assessments used in the Status calculation earlier.
    - i. As in the Status area, for each school year used in the trend calculation: assessment scores from students that weren't enrolled for the full academic year in the corresponding school year(s) will be excluded from this calculation as well as the previously mentioned writing assessment scores.
    - ii. Unlike Status, all assessments with a score of 0 will be excluded from Non-Proficiency calculations, regardless of the *Reason Not Tested*.
  - b. The non-proficient rate is calculated by dividing the number of reading/math assessments with scores in the Below Expectations range by the total number of reading/math assessments. This rate is calculated for the current year as well as the two previous years for each school/district, and this data will be combined into non-proficiency trend lines using linear regressions.
    - i. The linear regression will be performed using the same formula detailed in the Improvement area above.
    - ii. A minimum of 25 eligible assessment scores are required for any of the three school years included in the calculation. A school year may be available to be used in the trend line calculation independently of the other two school years.
    - iii. If a school/district has only two years of score data, the equivalent of the linear regression can still be performed.

- iv. If a school/district has only the current year for score data, then the slope will be 0 and the Non-Proficiency rating adjustment will be 0.
- c. The slope of the Non-Proficiency rate trend line is compared against the calculated cut scores as describe below. This determines the school/district Non-Proficient rating adjustment.
  - i. The cut scores for the Non-Proficiency rating adjustment use a formula that is based on the number of eligible assessments available for each school/district. The cut score is not represented by individual values, but by slope and intercept values that describe two cut score lines for each school type. For each school/district: the count of all Non-Proficiency-eligible assessments in the current year is multiplied by the given slope value and the result is added to the intercept value to create this school/district's specific Non-Proficiency cut scores.

**Elementary**

+1 adjustment: cut score line slope: 0.004615919  
 +1 adjustment: cut score line intercept: -11.5498

-1 adjustment: cut score line slope: -0.004971438  
 -1 adjustment: cut score line intercept: 8.073698

**Middle School**

+1 adjustment: cut score line slope: 0.0004769387  
 +1 adjustment: cut score line intercept: -8.284611

-1 adjustment: cut score line slope: -0.002725164  
 -1 adjustment: cut score line intercept: 8.591097

**High School**

+1 adjustment: cut score line slope: 0.004569985  
 +1 adjustment: cut score line intercept: -11.64624

-1 adjustment: cut score line slope: -0.00787609  
 -1 adjustment: cut score line intercept: 9.396319

**District**

+1 adjustment: cut score line slope: 0  
 +1 adjustment: cut score line intercept: -9.782147

-1 adjustment: cut score line slope: 0  
 -1 adjustment: cut score line intercept: 7.182314

- vii. **Participation (0, -1, or -2 Rating Adjustment/Rating Limitation) – Current Year NeSA Participation Rate:** For each school/district an adjustment or limitation

to the overall classification rating may be made based on the NeSA assessment participation rate.

- a. For all subjects and grade levels, the participation rate is defined as the percentage of eligible assessments with scores (completed assessments) compared to the total number of eligible assessments.
  - i. A score will be excluded from the participation rate if it is marked with a valid *Reason Not Tested* for the current school year in regards to Participation calculations. Note that this is a different set of reasons than those used for performance calculations, again refer to this document for details: [http://www.education.ne.gov/assessment/pdfs/SOSR\\_Guidance-NeSA-RMSW\\_%20Calculations\\_%208.1.14.pdf](http://www.education.ne.gov/assessment/pdfs/SOSR_Guidance-NeSA-RMSW_%20Calculations_%208.1.14.pdf)
  - ii. If a writing assessment does not have an excused *Reason Not Tested* but has a *Not Scorable Code* of “B” or “R” (indicating that the student left the test blank or indicated they would not create a response) then that assessment will be marked as non-participating.
  - iii. A student does not have to be enrolled for a full academic year to be counted in the participation rate.
  - iv. Due to a change in the NeSA writing assessment format, writing scores from before the 2011-2012 school year will be excluded. Similarly, the 4<sup>th</sup> grade writing scores in 2011-2012 will be excluded as well (other grade levels in that school year are valid).
  - v. Due to formatting issues with the NeSA writing assessment, 8<sup>th</sup> and 11<sup>th</sup> grade writing scores from the 2012-2013 and 2013-2014 school years will be excluded.
  - vi. A school/district must have a minimum of 25 eligible assessment scores to take part in the growth calculation.
- b. The current year’s participation rate is compared to these cut rates to determine if the school/district receives a rating adjustment or a rating limitation:

-1 rating adjustment: Participation rate < 95%

-2 rating adjustment: Participation rate < 90%

Limit rating to 1: Participation rate < 85%

viii. **Raw Classification (4, 3, 2, or 1):** Each district and school receives a raw rating.

- a. The first step to determining the raw rating is to add or subtract any rating adjustments (Improvement, Growth, Non-Proficiency, Participation) from the initial Status rating.
  - i. During the adjustment calculations it is acceptable to go above the highest rating of 4. If a school/district is above 4 at the end of the formula then it will be reset to 4. For example: if a school has a Status rating of 4, has an Improvement adjustment of +1, and a Participation adjustment of -2, their overall rating will be 3.
  - ii. If the adjustments result in a rating less than 1, it will be reset to 1.

- b. After all adjustments have been calculated for each school/district, the lower of the two possible rating limitations (Graduation, Participation) will be applied when applicable.

ix. **Final Classification (4, 3, 2, or 1):** Each district and school receives an overall final classification.

- a. The final classification is based on the school/district's raw classification described above. The final classification can then be raised one level above the raw classification if the school or district receives an Evidence-Based Analysis (EBA) adjustment. Refer to the Resources page on [AQuESTT.com](http://AQuESTT.com) for examples of the school and district EBA contents.
  - i. EBA adjustments do not apply to District classifications.
  - ii. The EBA adjustment does not apply to schools that are already classified as Excellent (4) in the raw classification.
  - iii. Each school/district is assigned a total EBA response score that combines the responses of the 5 "policies, practices, and procedures" questions in each of the 6 tenets. A response of "Never" is worth 0 points, "Seldom" is worth 1 point, "Sometimes" is worth 2 points, and "Usually" is worth 3 points. This results in a maximum score of 90 points for each school/district.
    - 1. If a school/district were to not submit an EBA, their score would be 0.
  - iv. For a school to receive an EBA adjustment, their total response score must be in the top percentile amongst the other schools that share their raw classification. The percentiles needed to be considered for an EBA adjustment for each raw classification level are:

Great (3): EBA score at the 95<sup>th</sup> percentile (88 points) or higher amongst schools classified as Great

Good (2): EBA score at the 90<sup>th</sup> percentile (84 points) or higher amongst schools classified as Good

Needs Improvement (1): EBA score at the 80<sup>th</sup> percentile (83 points) or higher amongst schools classified as Needs Improvement

- 1. Once the schools that have reached these target percentiles are identified, their EBA responses may be subject to audit and confirmation before an EBA Adjustment is assigned to them.

## Revision Summary

8/17/2015

- ii.c. and ii.c.i. was changed to specify that district status ratings only require a full academic year in the district, no change for schools. This change also affects Improvement (iii.a.ii.) and Non-Proficiency (vi.a.i.) but no change to the text was required.
- A new section vii.a.ii. was added to indicate Not Scored codes that will include or exclude a Writing assessment in the Participation rate.

10/6/2015

- i.b.iv. was modified to clarify that all eligible schools with K-2 grade levels will receive an elementary school rating.
- iii.a.ii. was modified and iii.a.iii. was added to indicate that all NeSA assessments with a score of 0 are excluded from Improvement calculations, regardless of the *Reason Not Tested*.
- iv.b.iii. was modified to indicate that all NeSA assessments with a score of 0 in the current year are excluded from Growth calculations, regardless of the *Reason Not Tested*.
- vi.a.i. was modified and vi.a.ii. was added to indicate that all NeSA assessments with a score of 0 are excluded from Non-Proficiency calculations, regardless of the *Reason Not Tested*.

10/13/2015

- ii.e. and ii.f. were modified with new Status cut scores due to the adjustment to the distribution of schools and districts across the classification levels.
- iii.c. was modified to describe the new size-based cut score lines for Improvement rating adjustments.
- iv.d. was modified to describe the new size-based cut score lines for Growth rating adjustments.
- vi.c. was modified to describe the new size-based cut score lines for Non-Proficiency rating adjustments.

10/27/2015

- ii.e., ii.f., iii.c., iv.d., and vi.c. were modified with new District cut scores.

11/25/2015

- ix. was added to describe the final classification process.

12/3/2015

- ix.a.iv. was updated to include the specific 2015 cut scores