

U.S. DEPARTMENT OF EDUCATION

EDFacts Business Rules Single Inventory User Guide

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February 2022

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February 2022

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DOCUMENT CONTROL

DOCUMENT INFORMATION

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DOCUMENT HISTORY

Version Number	Date	Summary of Change	
1.0	May 2019	This is a new User Guide for the ED Facts Business Rules Single Inventory.	
1.1	September 2019	 Section 2.1: Added new column to identify rules changed in a new version Section 3: Shortened question text; added FAQ regarding DMS 5-year edits Section 4: Shortened question text, sorted in order by most to least asked questions 	
1.2	January 2020	 Replaced OSHS Office of Safe and Healthy Students with OSSS Office of Safe and Supportive Schools Section 4.4: Generalized note to reflect that changes can occur in any column, not just the definition 	
1.3	February 2022	Revised to include additional school year columns	

PREFACE

The EDFacts Business Rules Single Inventory User Guide is intended to assist users of the EDFacts Business Rules Single Inventory (BRSI) spreadsheet. This guide addresses the basic mechanics of the spreadsheet and how to effectively locate various subgroups of rules. This guide will be updated if major modifications impact the use of the BRSI.

EDFacts is a U.S. Department of Education (ED) initiative to govern, acquire, validate, and use high-quality, pre-kindergarten through grade 12 (pre-K–12) performance data for education planning, policymaking, and management and budget decision-making to improve outcomes for students. EDFacts centralizes data provided by SEAs, LEAs and schools, and provides users with the ability to easily analyze and report data. This initiative has significantly reduced the reporting burden for state and local data producers, and has streamlined data collection, analysis and reporting functions at the federal, state and local levels. The BRSI was created to support the larger EDFacts Initiative effort.

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1.0 Introduction

The EDFacts Business Rules Single Inventory (BRSI) is an Excel spreadsheet containing rules applied to EDFacts data throughout the submission and post-submission lifecycle. Rules for the following systems and data quality processes are included:

Systems of Publication by Data Quality (DQ) phase

- Submission
 - EDFacts Submission System (ESS)
 - EDFacts Metadata and Process System (EMAPS)
 - EMAPS IDEA Part B Dispute Resolution Survey
 - EMAPS IDEA Part B MOE & CEIS Survey
 - EMAPS IDEA Part C Child Count and Setting Survey
 - EMAPS IDEA Part C Dispute Resolution Survey
 - EMAPS IDEA Part C Exiting Survey
- Post-Submission DQ Phase
 - Data Management System (DMS)
 - Common Core of Data (CCD) Schools
 - Directory
 - Dropouts
 - English Learner (EL)
 - Grades Offered
 - Graduates/Completers
 - Gun-Free Schools Act (GFSA)
 - IDEA
 - Lunch
 - Membership
 - Teacher/Staff
 - Individuals with Disabilities Education Act (IDEA) DQ
 - Part B:
 - Assessment
 - Child Count
 - Discipline
 - Dispute Resolution
 - Exiting
 - MOE CEIS
 - Personnel
 - Part C:
 - Child Count and Settings
 - Dispute Resolution
 - Exiting

- o Coordinated Data Quality Review (CDQR) Assessment
- December Elementary and Secondary Education Act (ESEA) Data Quality Review
 - Accountability
 - Chronic Absenteeism
 - English Learner
 - Homeless Enrolled
 - McKinney Vento Subgrant
 - Teachers
- CDQR Adjusted Cohort Graduation Rate (ACGR)
- February ESEA Data Quality Review
 - Economically disadvantaged students
 - HS graduates postsecondary enrollment
 - MEP Services
 - Neglected or Delinquent
 - Title I Part A Participation
 - Persistently dangerous status
 - School Improvement Funds 1003(a)
- CCD Ad Hoc
 - CCD School
 - Directory
 - Free/Reduced-Price Lunch
 - Membership
 - Staff

The BRSI describes each rule, including the error number, type, message, definition, rule logic, and the file specifications, to which the rules are applied.

The BRSI Excel spreadsheet format allows states to filter or sort by rule characteristics to identify specific rules in various rule subgroups.

2.0 BRSI Excel Spreadsheet Layout

2.1 BR Single Inventory Tab

The **BR Single Inventory** tab contains all rules that are applicable to submission and post-submission of ED*Fact*s data.

Table 2.1-1: Column Definitions

Column Identifier	Column Name	Description	Values
A B C D E F	School Year	The six most recent school years	 Y = Yes, rule was active in that school year N = No, rule was not active in that school year Not Yet Enabled = Rule has not yet been enabled for that school year
G	Changes for Current SY	Type of change from the prior school year	 Changed – Rule changed from prior school year Discontinued – Rule that was active in the prior school year is no longer active in the current school year Documentation change only – No change to rule functionality; documentation for the rule was updated to reflect actual ESS system functionality; New – New rule for the current school year None – No change from prior year Previous – Rule as executed in school years prior to change
Н	DQ Phase	When the rule is applied	 Post-Submission – Rule is applied to data post-submission, after the data are submitted into the system (data quality reviews) Submission – Rule is applied to the data upon submission to a system (EMAPS and ESS)
I	System of Publication	The application or data quality review process that displays the rule	 CDQR ACGR – Warnings triggered during post-submission DQ review CDQR Assessment – Warnings triggered during post-submission DQ review December ESEA Review – Warnings triggered during post-submission DQ review DMS – Warnings triggered during post-submission DQ review EMAPS – Warnings and errors triggered as data is submitted to EMAPS ESS – Format, validation and submission errors and warnings triggered as data is submitted to ESS

Column Identifier	Column Name	Description	Values
			 February ESEA Review – Warnings triggered during post-submission DQ review IDEA DQ – Warnings triggered during post-submission DQ review
J	Scope	For systems of publication with multiple subcategories, the subcategory that uses the rule (e.g. for IDEA DQ, Part B Discipline or Part B Assessment); for other systems of publication, this column will be blank	See section 1.0 Introduction for list of subcategories for systems of publication with subcategories
K	Steward	Program office (PO) that stewards the data group for the rule Acronyms explained in Section 2.2 below	 EDFacts NCES NCES/GEO OCTAE OCR OESE OESE OESE/OME OESE/OSSS OESE/OSSS/Homeless OESE/OSSS/N or D OESE/OSS/Title I OESE/OSS/Title III OII-Charter OSERS/OSEP
L	Rule ID	ID assigned to the rule	 Vote: Rule IDs have not been assigned to EMAPS rules at this time. The error messages for these rules are unique within collection and can be used as a reference. Note: DMS rule IDs D.101, D.103, D.103A, D.106, D.106A, D.502, D.503, D.505, D.506, D.92, and D.93 are not unique. These rule IDs are used for two rules each, one for Dropouts and one for Graduates/Completers. Each of the rule

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Column Identifier	Column Name	Description	Values
			specs / data groups, have unique definitions and error messages, and display on different tabs in DMS for users to address them.
M	Rule Type	Type or category of rule to be executed	These vary among applications and post-submission DQ reviews
N	Failure Classification	Consequence of the rule failing: Error or Warning	Error – failure of this rule prevents data from being accepted by the system. Note: Some ESS rules of rule type Match and Submission rules, some CDQR ACGR rules, and all DMS rules are noted as Error. However, in these instances this is an indication that these are warnings that have a higher priority for resolution
			Warning - failure of this rule is indication of data quality issues/anomalies requiring either data resubmission or state explanation
0	Data / Format	Indicates whether the rule applies to the content or format of the data submitted	 Data – Rule applies to the content of the data submitted Format – Rule applies to the format of the data submitted
Р	SEA	Indicates whether the rule is applied to the SEA level file	 Y = Yes, rule is applied to the SEA level file N = No, rule is not applied to the SEA level file
Q	LEA	Indicates whether the rule is applied to the LEA level file	 Y = Yes, rule is applied to the LEA level file N = No, rule is not applied to the LEA level file
R	SCH	Indicates whether the rule is applied to the school level file	 Y = Yes, rule is applied to the school level file N = No, rule is not applied to the school level file
S	Other	Indicates whether the rule is applied to another level file (e.g., Charter Authorizers or Management Organizations)	 Y = Yes, rule is applied to another level file N = No, rule is not applied to another level file
Т	FS	Identifies the file specification used in the rule	File specification ID
U	DG	Identifies the data group used in the rule	Data group ID
V	Data Source - EMAPS Survey	Identifies the EMAPS survey used in the rule	Name of the EMAPS survey
W	Question Number (CSPR, EMAPS)	Identifies the EMAPS or CSPR question used in the rule	Number of the referenced EMAPS or CSPR question
Χ	Definition	Description of the rule	Definition of the rule
Υ	Rule Logic	Detailed explanation of why the rule passes or fails	Description of the logic used to determine if data passes or fails the rule

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Column Identifier	Column Name	Description	Values
Z	Error Message	Error message or comment to the state	Error message displayed to the user on screen or comment displayed in DQ report when data fails the rule
AA	Rule Formula	Rule logic as a formula	Detailed description of the rule as a formula
AB	DQ Review 1	Indicates if the rule is evaluated during post-submission DQ Review 1	Indicates that the rule was applied to the data during post-submission data quality review 1 (after the due date)
AC	DQ Review 2	Indicates if the rule is evaluated during post-submission DQ Review 2	Indicates that the rule was applied to the data during post-submission data quality review 2 (after the resubmission window)
AD	Impacted in Version nn.nn	Indicates if the rule was changed in any way in the current published version	 X – impacted in current version Blank – not impacted in current version

2.2 List of Data Stewards

- EDFacts
- NCES National Center for Education Statistics
- NCES/GEO National Center for Education Statistics for geographic coding
- OCTAE Office of Career and Technical Adult Education (CTE)
- OCR Office of Civil Rights
- OESE Office of Elementary and Secondary Education
 - o OESE/OME Office of Migrant Education
 - OESE/OSSS Office of Safe and Supportive Schools
 - OESE/OSSS/Homeless Programs for Homeless Children and Youths
 - OESE/OSSS/N or D Programs for Neglected or Delinquent
 - o OESE/OSS Office of State Support
 - OESE/OSS/Title I Title I program under ESEA
 - OESE/OSS/Title III Title III program under ESEA
 - o OESE/OHSA
- Oll-Charter Office of Innovation and Improvement Charter Schools
- OSERS/OSEP Office of Special Education and Rehabilitative Services and Office of Special Education Programs

2.3 Discontinued Rules Tab

This tab contains rules that have been retired and the school year the rules were retired. Discontinued rules will remain in the BR Single Inventory Tab for one SY cycle and then will be moved to the Discontinued Rules Tab for future reference. This tab will be updated with each system release, as applicable.

2.4 Version History Tab

This tab contains a row for each published version of the BRSI, listing the version number (e.g. 2019.01), date of release, and a summary of updates made to the BRSI in that version.

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3.0 Frequently Asked Questions

3.1 How will I know when a new version of the BRSI is available?

As part of the release, for each included system, an updated BRSI will be published multiple times during the year. ED Facts users will be notified via PSC Support Update each time the BRSI is updated and published. The version number of the document posted on the ED Facts Initiative page will change.

3.2 What does "Not Yet Enabled" mean in the School Year columns?

The value **Not Yet Enabled** means that the Department has not yet determined if the rule will be included or changed for the school year noted in columns A, B and C.

3.3 Why is the Rule Logic column blank?

Not all rules have a rule logic or information to add to this column. If you need additional assistance with understanding how the rule was applied to the data, please contact PSC for assistance.

3.4 What are the DMS 5-year edits and how are they calculated?

The DMS executes a series of checks on data to identify changes in the variability of the data in the current year as compared to the four prior years (baseline). If these checks fail and an assignable cause cannot be found, the applicable data will be suppressed as unreliable in public dissemination.

Each 5-year edit is run against a pair of variables: one checks variability of the prior years and the other checks variability of the current year with respect to the prior years. The level of variability that triggers a failure is set each year for each type of data. A school or LEA gets flagged as an edit failure and gets a warning message when **BOTH** variables in each edit pair fail **BOTH** of two distinct tests.

First check - Variability of prior years

VARIABLEYtdifYEAR = mean(all | VARIABLE Y_i – VARIABLE Y_j |) for all years i and j prior to the current year

Note: This formula takes the mean of the absolute differences between each of the *prior* years of data for that data field; or the mean of six difference. For example, to compare data for years 1 through 4, the formula compares years 1 to 2, 1 to 3, 1 to 4, 2 to 3, 2 to 4, and 3 to 4, summing up the absolute differences, and then dividing by six.

Second check - Variability of current year to prior years

VARIABLEYdifsYEAR = mean($|VARIABLEY_{jear} - VARIABLEY_{j}|$) for all years j to the current year

Note: This formula takes the mean of the absolute differences between the *current* year and each of the prior years. For four years prior data, that's the mean of four differences, i.e., add up the absolute difference between the current year and each of prior years 1 through 4, then divide by four.

Since VARIABLEYdifsYEAR is the measure that includes the current year, it is the one that indicate if the current year's changes are statistical outliers, e.g., unusual based on past rates of change. The two tests involve comparing VARIABLEYdifsYEAR against either a hard threshold, the MINDIF, or against the VARIABLEYtdifYEAR measure of the variability in prior years, with a ratio adjustment called the LIMITS.

Test 1 is failed if variability exceeds a threshold.

Fail when VARIABLEYdifsYEAR ≥ MINDIF

Test 2 is failed if variability exceeds prior year variability

Fail when VARIABLEYtdifYEAR ≤ VARIABLEYdifsYEAR/LIMITS

The thresholds in place for MINDIF and LIMITS are included in the Rule Logic column for each 5-year edit business rule.

4.0 Commonly Used Filters

4.1 How do I find all the active rules?

To view all rules active in a specific school year, select Y from the dropdown in the column of the school year in which you are interested.

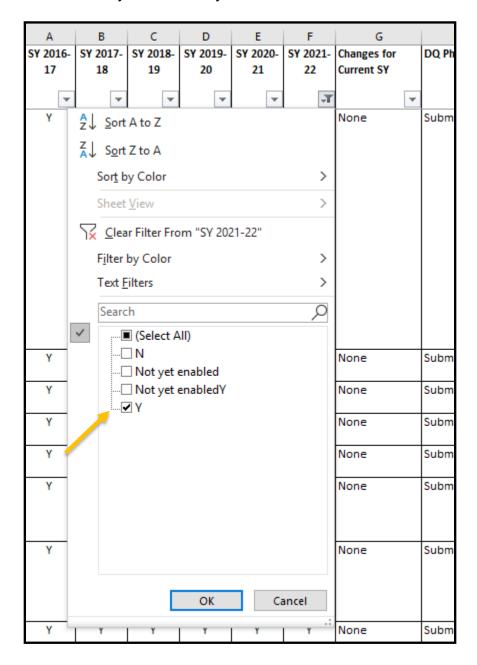


Fig. 4.1 - Filter on School Year (column A, B, C, D, E or F)

4.2 How do I find all the new rules?

To view all rules that are New, filter "Changes for Current SY" column to only include the **New** status. To narrow your search from here, for example, also filter on "System of publication" or "DQ Phase."

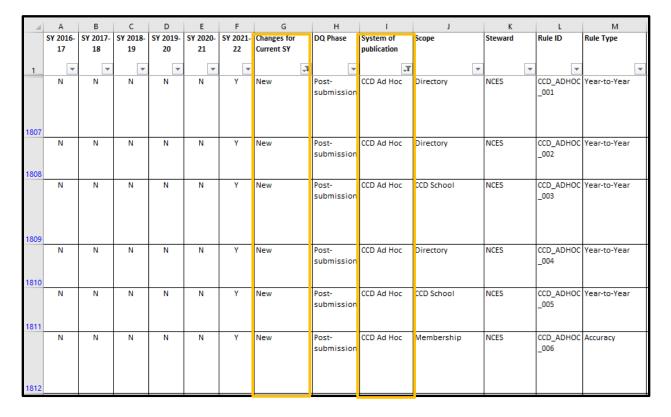


Fig. 4.2 - Filter on Changes for Current SY and System of publication (columns G and I)

4.3 How do I find all rules with changes?

To view all rules with changes, filter on the "Changes for Current SY" column (column G) to only include Previous and Changed statuses.

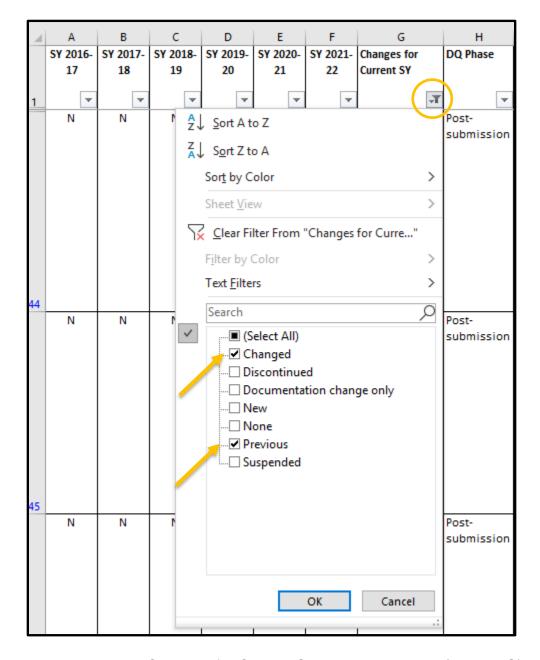


Fig 4.3 - Filter on Changes for Current School Year column (column G)

4.4 How do I identify the changes to a rule?

To view changes between the current SY and previous SY for a specific rule, select the rule number from the "Rule ID" column. The "School Year" column will display a "Y" in the year the rule was added, revised, or retired.

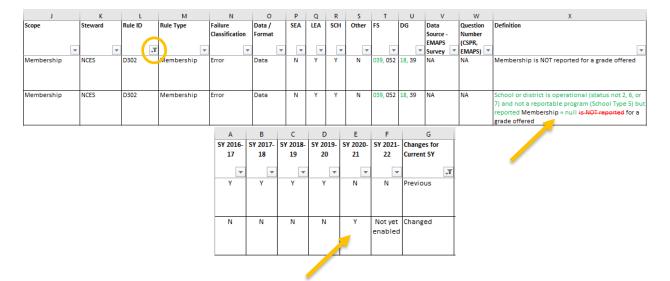


Fig 4.4 - Filter on Rule ID column (column L)

Note! Rules that have changes from the prior year will have the updated information shown in "tracked changes". The red/strikethrough indicates text that was removed, and the green text indicates text was added or revised.

4.5 How do I know if a rule is discontinued?

Discontinued rules will be included for one school year on the BR Single Inventory tab and noted as "Discontinued" in the "Changes for Current SY" column. The following school year, those rules will be listed on the Discontinued Rules tab and removed from the BR Single Inventory tab.

4.6 How do I find all the rules associated with an ED Facts file?

To view all rules associated with a specific EDFacts data file, enter the file specification number in the Filter search option of the "FS" column as shown below.

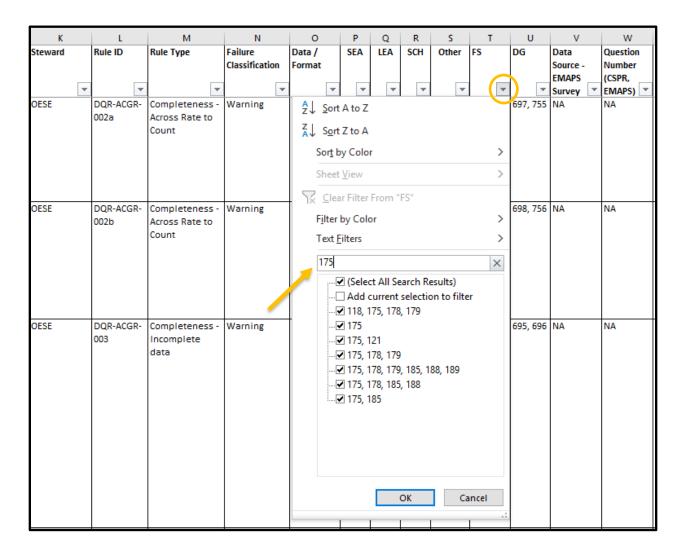


Fig 4.6 - Filter on File Specification (column T)

Tip! Filtering by the file specification number will display all rules associated with that data file from all systems and data quality processes. To further refine your search, after you filter on the specific file specification number or data group ID filter the "System of Publication" column to only view rules applied in ESS or one of the Coordinated Data Quality Review (CDQR) and IDEA data quality reviews.

4.7 How do I find format or validation rules used in ESS?

For more information on a rule that is firing in ESS, filter on the "System of publication" column (column I) to ESS, then filter on the specific rule in the "Rule ID" column to view the definition and the rule logic of how the validation of the data took place in ESS upon submission.

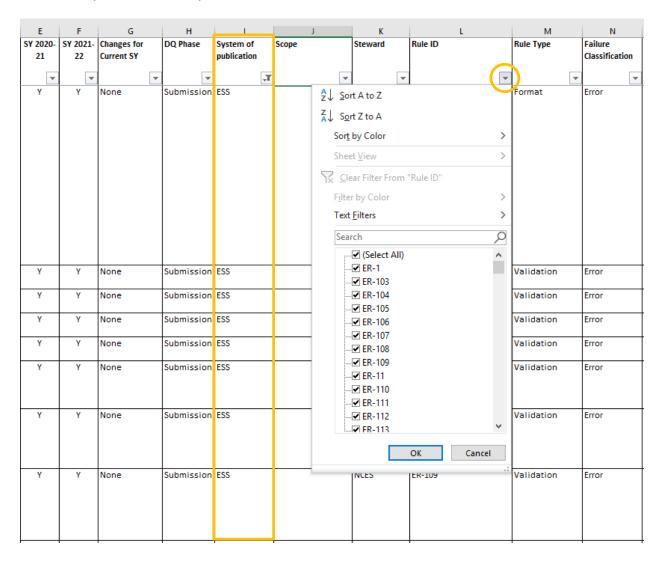


Fig 4.7 - Filter on System of publication (column I) and Rule ID (column L)

4.8 How do I find rules used in EMAPS?

For more information on an error that is firing for data entered into a specific EMAPS survey, filter on the "System of Publication" column (column I) to EMAPS, then filter on the Scope column (column J) for the desired survey. EMAPS edits do not have rule IDs. Look for the rule in question by filtering on the Error Message column.

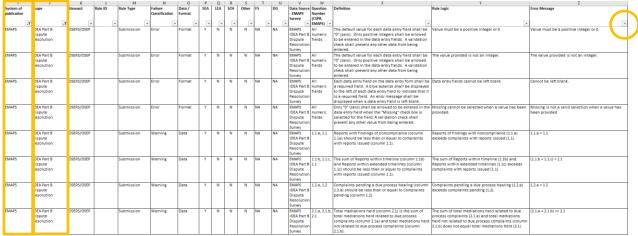


Fig 4.8 - Filter on System of Publication, Scope columns (column I and J)

4.9 How do I find rules used in DMS?

For more information on a rule that is firing in the DMS, filter on the "System of publication" column (column I) followed by the "Rule ID" column to view the definition of a DMS rule applied to ED Facts data.

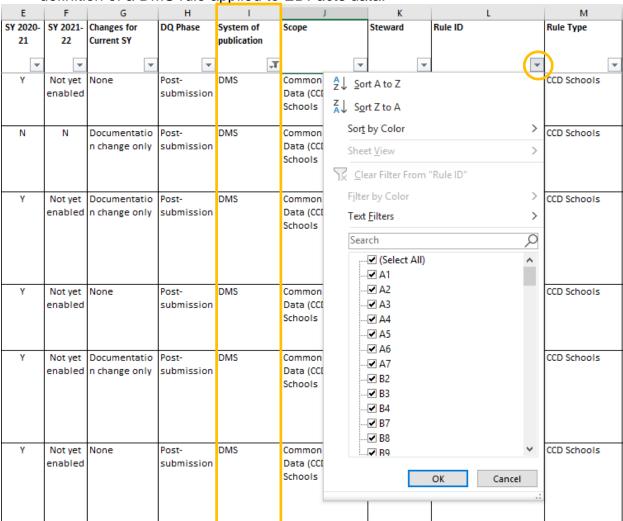


Fig 4.9 - Filter on System of publication, DMS, (column I) and Rule ID (column L)

4.10 How do I find all the rules for a specific data quality review?

To view all rules applied to data during a specific post-submission data quality review (e.g., CDQR ACGR, February ESEA Review), filter on the "System of publication" column. If the selected system has multiple subcategories, further narrow your selection by filtering on the "Scope" column and the desired subcategory.

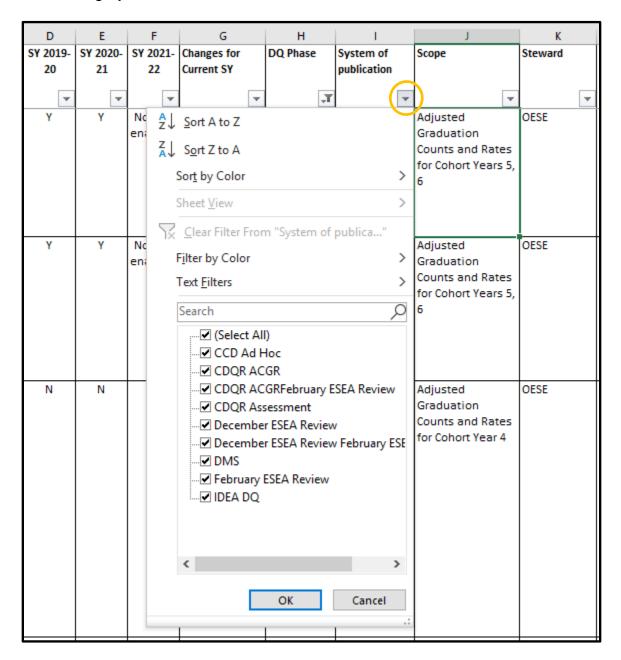


Fig. 4.10 - Filter on System of publication (Column I)

4.11 How do I find more information about a finding in a data quality review?

To view the definition or rule logic of a specific rule, filter on the "Rule ID" column to view all information for that specific rule or filter on the "System of Publication" column to view all data quality review rules for a system.

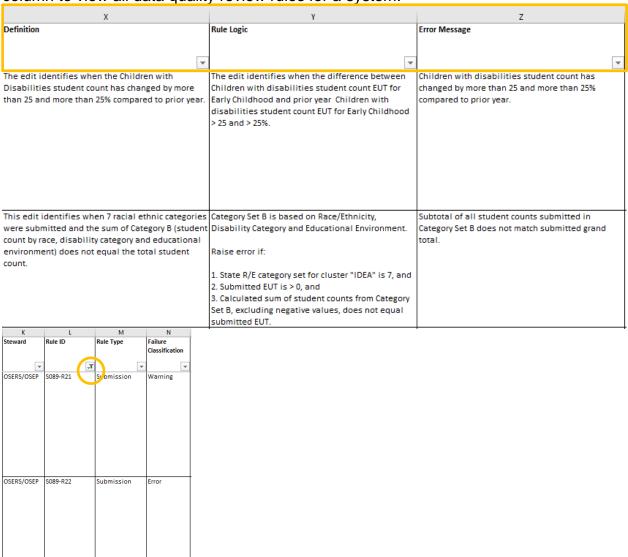


Fig 4.11 - Filter on Rule ID (Column L) to View Details of Rule

5.0 Improvement Suggestions or Feedback?

Do you have suggestions on how to improve the BRSI, this User Guide, or feedback about how you are using the BRSI? Please contact the EDFacts Partner Support Center:

Phone: (877) 457-3336 E-mail: <u>EDFacts@ed.gov</u>

Federal Relay Service: 800-877-0996 (Voice/TTY) / federalrelay@sprint.com

The PSC is open from 8:00 a.m. to 6:00 p.m. ET, Monday through Friday, excluding Federal Holidays



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