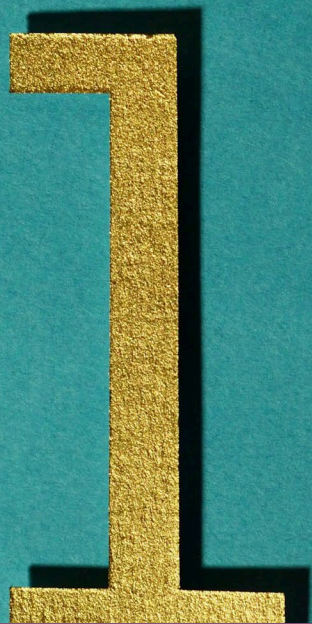**COLORADO**
Department of Education

September 9, 2025

Welcome to
Office Hours: Tools to
Validate Census Block Data

Agenda

- Intro
  - Census Block Data
  - Data Validation: Techniques & Tools
- Data Pipeline
  - General Information
  - Retrieve an Error Report
  - At-Risk Interchange Business Rules
  - Troubleshooting an Error Report
  - Demonstration
- Resources
  - Default Coding Patterns
  - School Auditing Office
  - Data Pipeline

Introduction

Census Block Data:
4 Components

1. State Code
2. County Code
3. Tract Code
4. Block Code

Using all **4 components** gives each household a **specific, unique coding pattern:**
- Piecemealing components together most likely will result in an inaccurate Census block data
- It's possible to have many combinations with the same tract and block codes within the same county code

Data Validation:
Techniques & Tools

- Validating Addresses
  - Step 4 of Census Geocoder Tool Instructions
    - Office Hours: Census Geocoder Deep Dive slide deck
    - Longitude/latitude coordinates
    - Geoapify
- Error Report
  - Data Pipeline
  - Business Rules

Instructions Document

All of the information from today's training can be found in the Instructions for Using the Census Geocoder Tool document located on the At-Risk Interchange website.

Additional Resources

- Instructions for Using the Census Geocoder Tool (PDF)
- Valid Census Block Data Combinations (XLS)

Data Pipeline Error Report

Data Pipeline Error Report Extract

- Navigate to the Data Pipeline Webpage and login
- Find "Pipeline Reports" on the lefthand menu
  - Click "Error Report"
    - **Dataset:** At Risk Measure Interchange
    - **File Type:** At Risk Measure Interchange
    - **School Year:** 2025-26
    - **Organization/LEA:** [Your district]
    - **Error Type:** Errors and Warnings
      - Errors must be corrected
      - Warnings need investigation but could be okay
  - Click "Search"
- Match error codes with those found on the At-Risk Interchange Business Rules to troubleshoot

Data Pipeline:
At-Risk Interchange Website, cont.

The first half of the At-Risk Interchange website has information related to Deadlines, File Layout, Business Rules, and File Template.

Deadlines

The At-Risk Interchange will open July 16th, 2025 and close on November 10th, 2025. This interchange will only be available during the Student October Collection.

- 2025-2026 At-Risk Interchange File Timeline (PDF)

File Layout and Definitions

- 2025-2026 At-Risk Interchange File Layout (PDF)

Business Rules

- 2025-2026 At-Risk Interchange Business Rules (XLSX)

Templates

- 2025-2026 At-Risk Interchange File Template (XLSX)

Business Rules:
Trigger an error if not followed

Data Element	Error Code	Error Type	Message
ARM_COUNTY_CODE	AR06	Error	County Code must be a 3 digit number and is required.
ARM_COUNTY_CODE	AR07	Error	If County Code = '000', then the Tract Code and Block Code must follow one of the Missing Census Block Data coding patterns described on the file layout.
BLOCK_CODE	AR09	Error	Block Code must be a 4 digit number and is required.
DISTRICT_CODE	AR01	Error	District Number is invalid.
DISTRICT_CODE	AR02	Error	District Code on file must match reporting district code on file upload screen. Please select the correct district code when uploading this file.
SASID	99999	Error	The SASID is invalid or name, birth date, or gender does not match what is in the RITS system for the entered SASID.
SASID	AR03	Error	SASID duplicates not allowed. *[Will cause significant issues with your Student October Snapshot]
SASID	AR04	Error	The SASID must be a 10 digit number.
SASID	AR10	Error	SASID is mandatory.
STATE_CODE	AR05	Error	State Code must be a 2 digit number ('08' only) and is required. Please refer to the At-Risk Interchange File Layout for out of state student coding.
TRACT_CODE	AR08	Error	Tract Code must be a 6 digit number and is required.
TRACT_CODE	AR11	Error	The submitted census block data (State Code, County Code, Tract Code, and Block Code) are not a valid combination. The submitted combination is not a valid census block location. Refer to the At-Risk Interchange Data Pipeline website for a list of valid census block data combinations.

AR01, AR04, AR05, AR06, AR08, AR09, AR10

- AR01: District number is invalid.
- AR04: The SASID must be a 10 digit number.
- AR05: State Code must be a 2 digit number ('08' only) and is required. Please refer to the At-Risk Interchange File Layout for out of state student coding.
- AR06: County Code must be a 3 digit number and is required.
- AR08: Tract Code must be a 6 digit number and is required.
- AR09: Block Code must be a 4 digit number and is required.
- AR10: SASID is mandatory.

AR02, AR03, 99999

- AR02: District Code on file must match reporting district code on file upload screen. Please select the correct district code when uploading this file.

- AR03: SASID duplicates not allowed. *[Will cause significant issues with your Student October Snapshot]

- 99999: The SASID is invalid or name, birth date, or gender does not match what is in the RITS system for the entered SASID.

AR07,

- AR07: If County Code = '000', then the Tract Code and Block Code must follow one of the Missing Census Block Data coding patterns described on the file layout.

AR11

- AR11: The submitted census block data (State Code, County Code, Tract Code, and Block Code) are not a valid combination. The submitted combination is not a valid census block location. Refer to the At-Risk Interchange Data Pipeline website for a list of valid census block data combinations.

Additional Resources

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Demonstration

Resources

Coding Patterns

Districts unable to obtain Census block data for a given address may use one of the following coding patterns:

Description	State Code	County Code	Track Code	Block Code
Address on File- Did Not Attempt to Obtain Census Block Data: The district has a primary physical address on file but did NOT attempt to obtain census block data using the geocode tool.	08	000	000001	0001
Address on File- No Census Block Data Returned: The district confirmed that the primary physical address is valid using USPS but the geocode tool did not return census block data.	08	000	000002	0002
Confidentiality Program: No census block data was provided because the district has confirmed the student is participating in a confidentiality program.	08	000	000003	0003
No Physical Primary Address on File- Identified Group: The district does not have a **valid** primary physical address on file and the student is confirmed homeless, migrant, foster child, or attending a detention center	08	000	000004	0004
No Physical Primary Address on File- No Identified Group: The district does not have a **valid** primary physical address on file and the student is not confirmed homeless, migrant, foster child, or attending a detention center.	08	000	000005	0005
Out of State codes: The district has a primary physical address on file that is not in Colorado	08	000	000006	0006

Resources: CDE & Others

CDE Resources

- Training
  - At-Risk Interchange webpage
    - **Office Hours: Questions from the Field: Live Q & A** 10/9 at 1pm
  - School Auditing Office Training webpage
- Geocoder Instructions
- School Auditing Office At-Risk Count webpage
- Contact: ARMeasure@cde.state.co.us

Other Resources

- Census Geocoder User Guide, FAQ, etc.
- Geoapify