



# Northwest Local School District, OH Fall 2022 Redistricting Study

**-Public Information Session 1-**

**November 17, 2022**

**Cropper GIS**



# *Welcome and Introductions*



# *Who We Are*

## Cropper GIS Consulting

K-12 school planning is our business and our passion. Our specialty is school realignment.

Cropper works with K-12 school districts to:

- develop redistricting plans,
- facilitate community engagement,
- research, map and write demographic studies,
- prepare long-range facility master plans,
- author site feasibility studies,
- conduct & publish housing impact and yield factor studies, and
- provide GIS implementation & training.

## Recent Projects:

- Cincinnati Public Schools, OH
- Columbus Public Schools, OH
- Groveport Madison Schools, OH
- Westerville City Schools, OH
- Worthington Schools, OH
- Huber Heights City Schools, OH
- Akron Public Schools, OH
- Concord Community Schools, IN
- Crown Point Community School Corp, IN
- Plymouth Community School Corp, IN
- Valparaiso Community Schools, IN
- MSD Washington Township, IN





# Matthew Cropper

- More than 20 years experience providing GIS mapping and analysis services to school districts and other clients.
- Manages and Facilitates K-12 redistricting and facility planning projects across the U.S.
- Expert consultant for U.S. Department of Justice, Civil Right's Division
- Published numerous papers about using GIS in master planning and educational planning.

*Who We Are*



# Project Objectives

With the support of the Board of Education, the Northwest Local School District is undertaking a redistricting study to address imbalances in school utilization and enrollment, and to pro-actively align with future facility plans. The Northwest Local School District has begun a redistricting study to meet the following key objectives:

**Primary Objective:** To relieve immediate overcrowding at elementary schools and balance school utilization, with boundary changes made effective Fall 2023. Middle and High School boundaries could also be adjusted to best align with feeder patterns.

**Secondary Objectives:** To make best efforts to ensure that Fall 2023 boundary changes align with long-term facilities and feeder patterns. Facility changes that have been identified include:

- New Colerain Elementary School
- New Colerain Middle School
- New Pleasant Run Middle School
- Discontinue use of White Oak Middle School

*Why We're Here*



# Redistricting Study

Cropper GIS Consulting was hired by Northwest Local School District to facilitate and manage the project. Our firm is tasked to:

- A. Develop supporting materials to help facilitate the study.
- B. Facilitate an expert-based process of developing a student redistricting plan.
- C. Empower the community throughout the process.
- D. Leverage expertise to develop logical, efficient, and effective student redistricting options with the planning team.
- E. Recommend a redistricting plan to the School Board.

Why We're Here



Cropper GIS has developed a body of criteria to guide this student redistricting study. The following criteria are not listed in any particular order of importance:

- **Balance school facility utilization**

Make every effort to have equitable utilization (where possible) across the district and in accordance with school capacities and funded allotment ratios in accordance with state law. Make efficient use of available space.

- **Account for future growth**

Allow for increasing attendance in high growth areas.

- **Close Proximity**

Students should be assigned to the school within the closest proximity to their homes where possible.

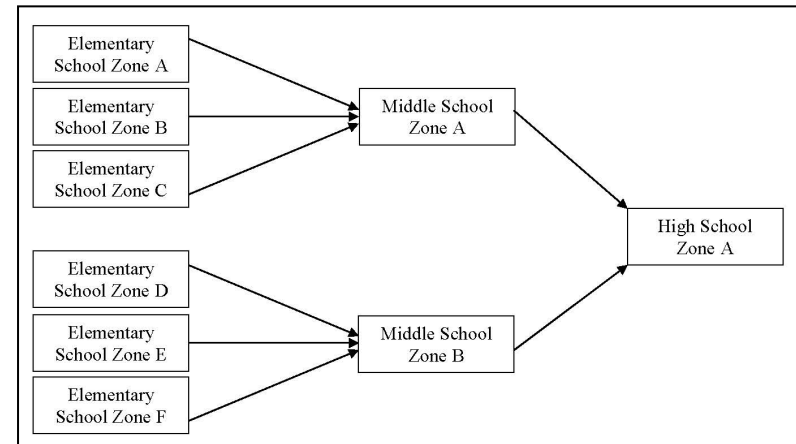
- **Maximize busing efficiencies in transportation of students**

Make every effort to account for transportation (school bus and car rider), parent commuting patterns, balance busing travel time, and costs.



- **Establish clear feeder patterns and continuity**

Make every effort to establish a clear feeder pattern system.



- **Allow for highest-grade at current school to legacy enroll**  
Allow for students who will be in the 5th, 8th, or 12th grades in the first school year of redistricting to stay at their current school. This provision does not extend to siblings and transportation will not be provided.
- **Minimize impact on students**  
Attempt to minimize the number of students impacted when making boundary adjustments.
- **Account for economic, cultural, and ethnic diversity**  
Ensure schools are inclusionary and not adversely affected by redistricting decisions.

- **Make every effort to establish contiguous zones**

Avoid creating zones that are not connected to the primary attendance zone, where possible

- **Use major roads and natural boundaries wherever feasible to define attendance zones**

Minimize the number of students who need to cross major roads and other barriers to maximize the safety and security of students and optimize transportation efficiency by containing bus routes within natural boundaries wherever possible to avoid traffic delays and late arrivals.

All criteria are in no particular order or priority, and the best plan is one that touches on all criteria but does not focus solely on one element of the criteria.



# *Stakeholders*

### Outline of Stakeholder Responsibilities

<p>Consultant</p>	<ul style="list-style-type: none"> <li>• Schedule and facilitate internal planning team meetings.</li> <li>• Communicate updates with planning team, including updated handout and meeting schedule logistics.</li> <li>• Conduct public meetings to solicit feedback related to draft options that are under consideration.</li> <li>• Support the district in providing materials such as presentations, handouts, and online interactive maps for the public’s consumption.</li> <li>• Coordinate and summarize online feedback received from general public and internal planning team.</li> </ul>
<p>Internal Planning Team</p>	<ul style="list-style-type: none"> <li>• Consists of key school district administrators including central office, transportation, planning, and school principals.</li> <li>• Group will work to review draft options that are being developed in preparation to share with the School Board and public.</li> <li>• Review input provided from the consultant and general public regarding draft options and continue to modify maps with a focus on the best solution for all students as a whole.</li> <li>• Share a redistricting plan with the School Board</li> </ul>
<p>General Public</p>	<ul style="list-style-type: none"> <li>• Informed through website.</li> <li>• Invited to submit comments and input throughout the entire process..</li> <li>• Invited to participate in public information sessions (both virtual and in-person), and to provide input via surveys and online general feedback form.</li> </ul>
<p>School Board</p>	<ul style="list-style-type: none"> <li>• Charge internal planning team with its responsibilities.</li> <li>• Identify questions the planning team is expected to answer.</li> <li>• Advise staff and the process regarding policy related considerations and other board-level decisions.</li> </ul>



# *Timeline*



## Process & Timeline for Redistricting

	Oct. '22	Nov. '22	Dec. '22	Jan. '23	Feb. '23
<i>Data Collection</i>					
<i>Data Analysis/ Assimilation</i>					
<i>Baseline Options Development</i>					
<i>Internal Planning Team Work (1-2 meetings per month)</i>		11/10, 11/29	12/7	1/10	
Public Information Session #1 : Present Project Process, Criteria, Timeline, and Redistricting Objectives to Community. Web-based meeting.		11/17			
Public Information Session #2: Present DRAFT Redistricting Options to General Public for Comment/Feedback. On-site meeting (or virtual if preferred) to review options and q/a at end of session.			12/13		
<i>Presentation of Final Recommendations to the Board of Education</i>					





# *Project Approach*



# Four Project Phases

Cropper has identified four phases of a community-driven redistricting study for NWLSD:

1. Data Collection
2. Data Analysis / Assimilation
3. Options Development
4. Internal Planning Team and Public Engagement

*Project Approach*



# Phase 1. Data Collection (October 2022)

Data availability and quality are central to this redistricting study. Fortunately, Northwest Local School District, and Cincinnati Area GIS will provide a comprehensive collection of data, including:



- School District- Official enrollment counts by school by grade, along with enrollment databases by address. Data/feedback regarding transportation, school locations, facility information. 2022-23 enrollment data is the basis for this study.



- City / County Sources- Base GIS data (address pts, municipalities, subdivisions, existing and planned road networks, etc.)

Data collection efforts have been underway through the Fall, and information will continue to be collected throughout the process if it is deemed useful.

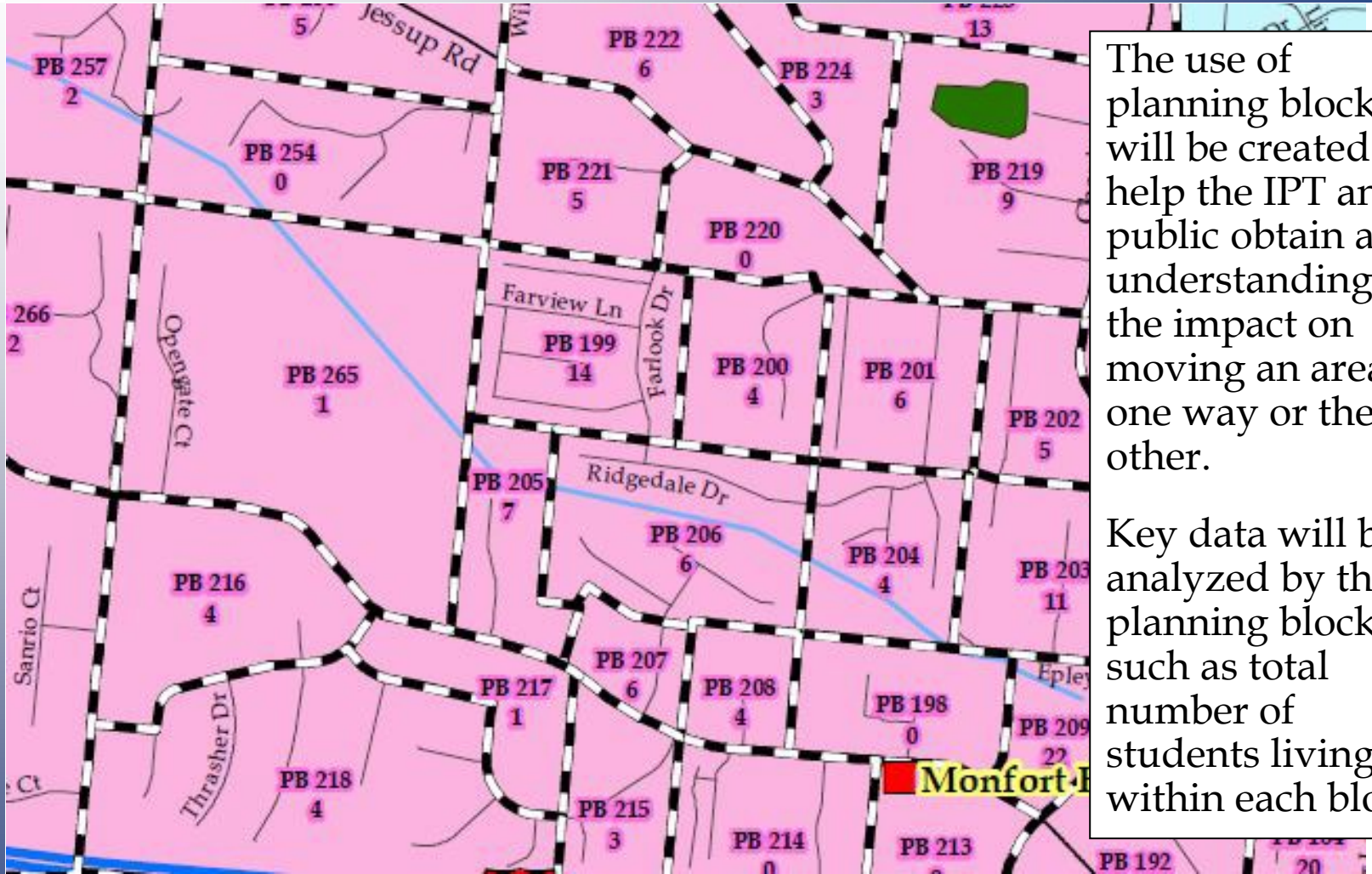


## Phase 2. Data Analysis & Assimilation (Oct – Nov 2022)

- Cropper is tasked to develop several key pieces of information to help facilitate the redistricting process.
- Once data is collected, it is necessary to integrate it into GIS to enable quick and efficient analysis and redistricting options development.

*Project Approach*

# Phase 2. Data Analysis & Assimilation (Oct - Nov 2022)



The use of planning blocks will be created to help the IPT and public obtain an understanding of the impact on moving an area one way or the other.

Key data will be analyzed by these planning blocks, such as total number of students living within each block.

Northwest Local School District, OH  
Monfort Heights Elementary School  
2022-23 Live-Attend Analysis

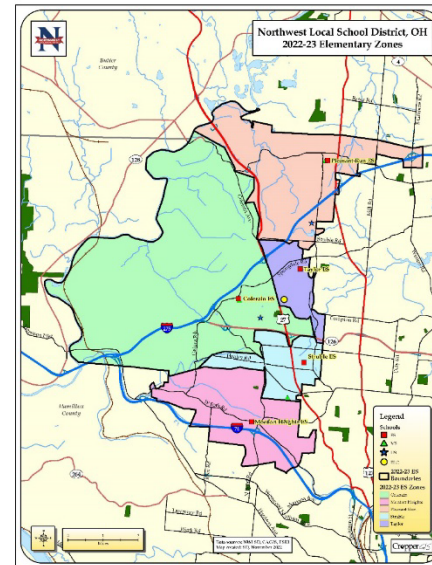
# 2. Data Analysis / Assimilation: Background Report

- Background Report Purpose:
  - To expand the knowledge of each IPT member
  - To help IPT members share a message that is consistent and accurate



## Northwest Local School District, OH Fall 2022 Redistricting Study

### Background Report



Cropper GIS

# 2. Data Analysis / Assimilation: Background Report

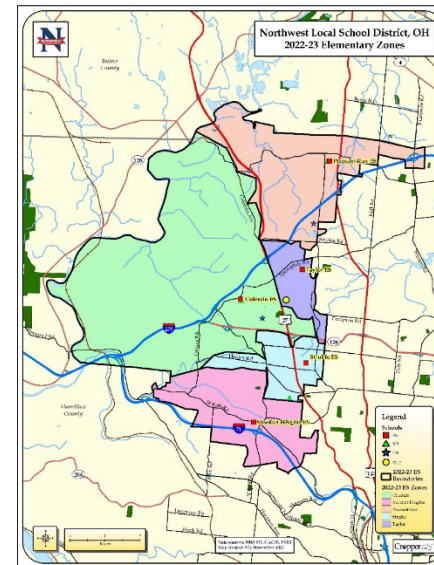
Please be familiar with the entire report, and note some key sections:

- Key Objectives (p.1)
- Redistricting Criteria (p.1)
- Stakeholder Roles and Responsibilities (p.3)
- Timeline (p.4)
- Live-Attend Analysis (Appendix A)
- Maps (Appendix B)
- Enrollment and Utilization Tables (Appendix C)



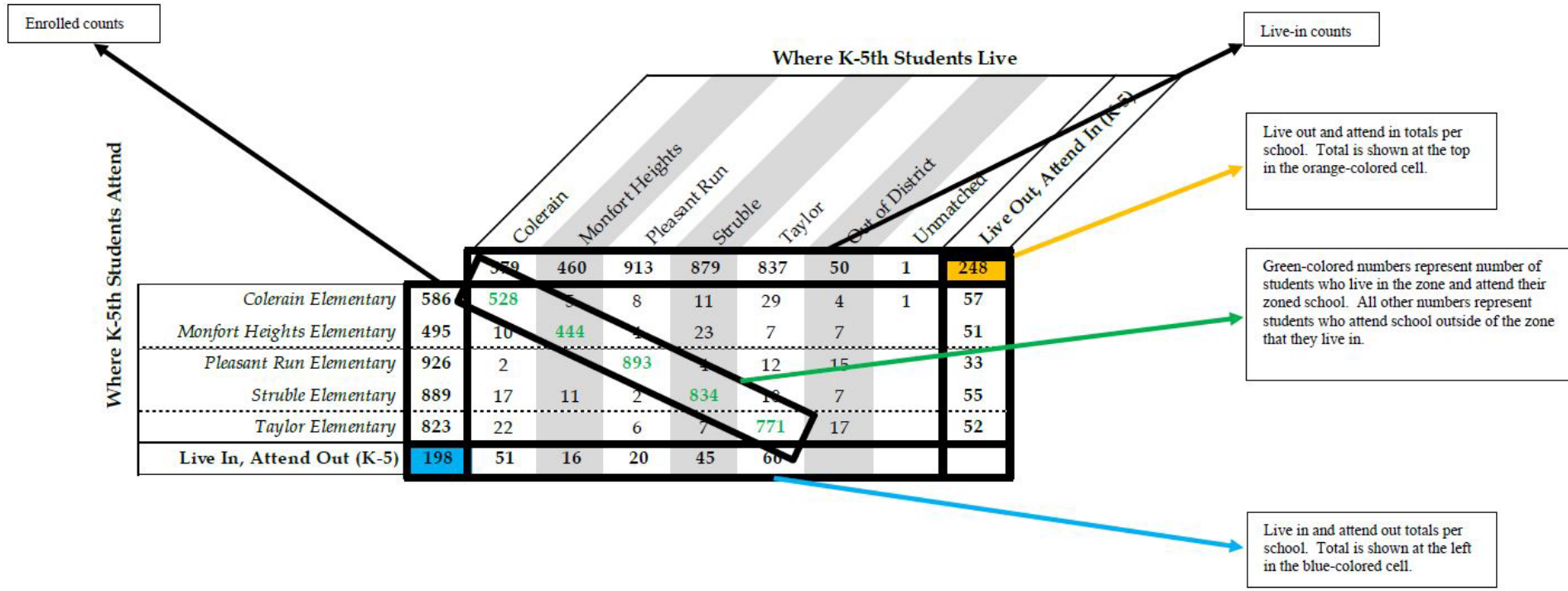
## Northwest Local School District, OH Fall 2022 Redistricting Study

### Background Report



Cropper GIS

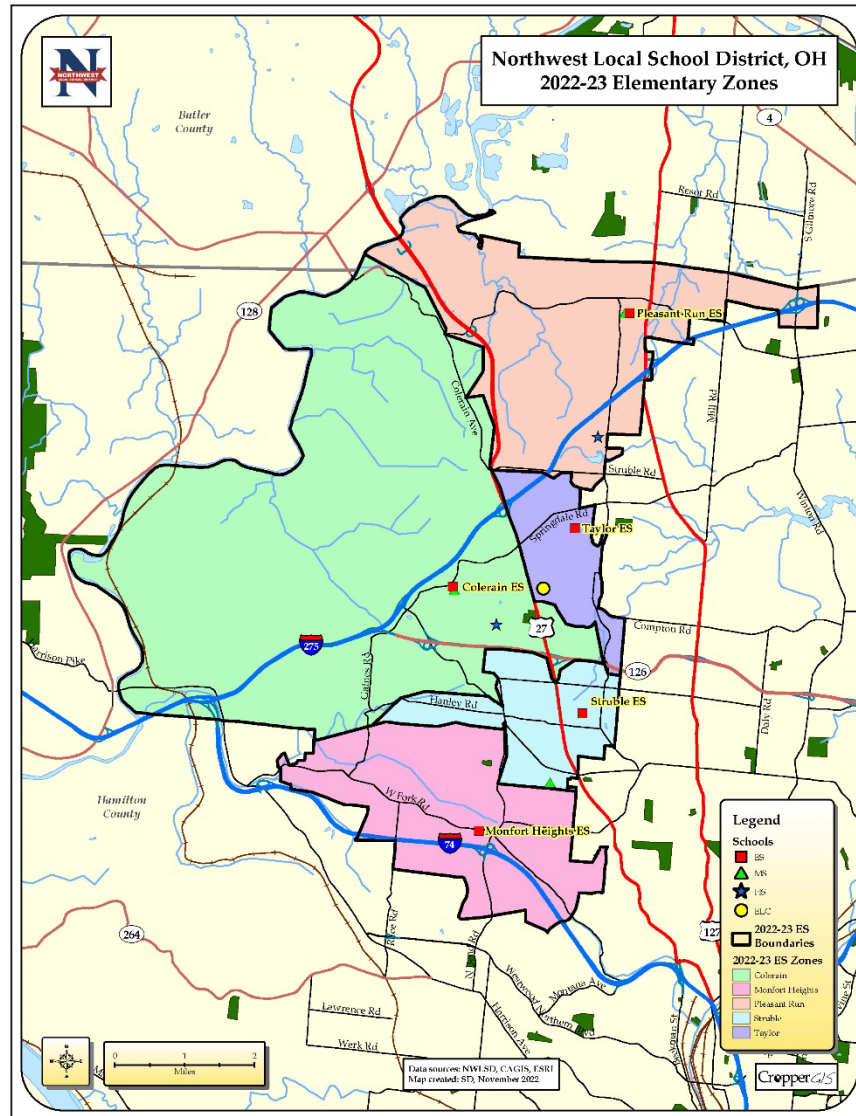
## Interpreting Live/Attend Matrices (p. 9)





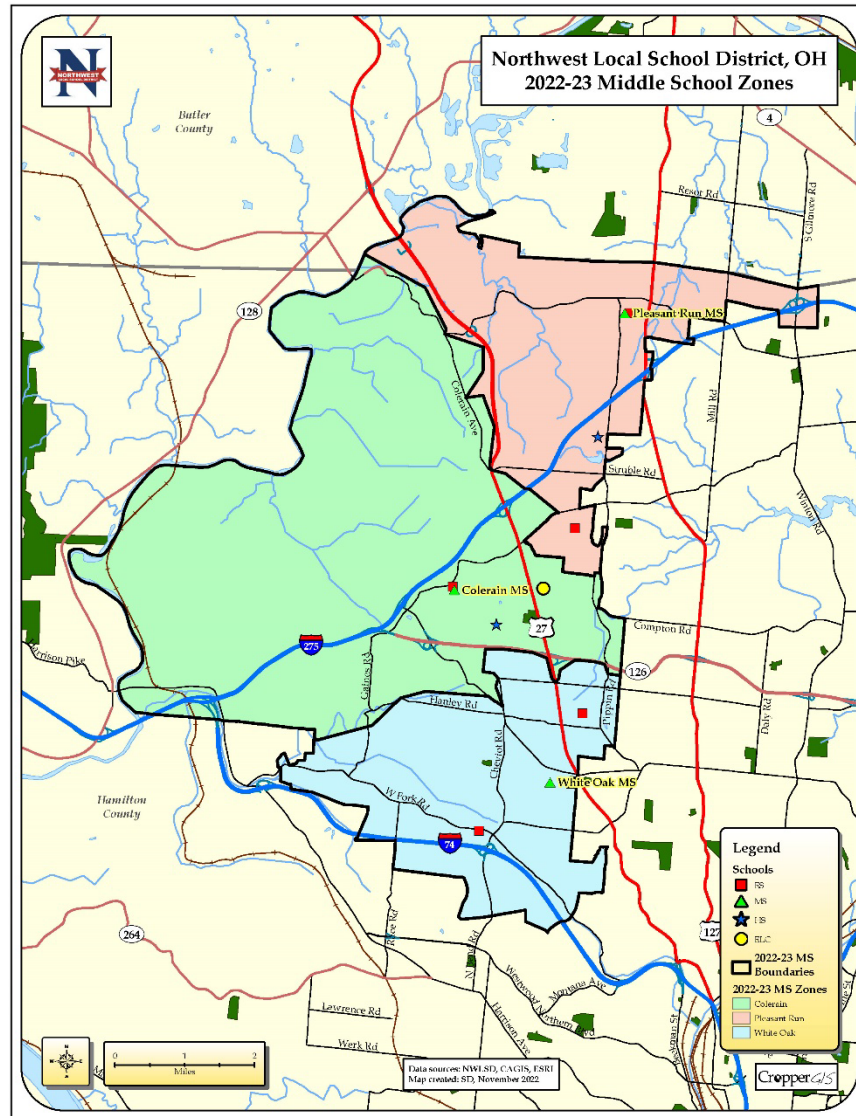
## Map review : Attendance Zone Maps

- Maps showing attendance zones for all county schools, including Elementary, Middle, and High Schools



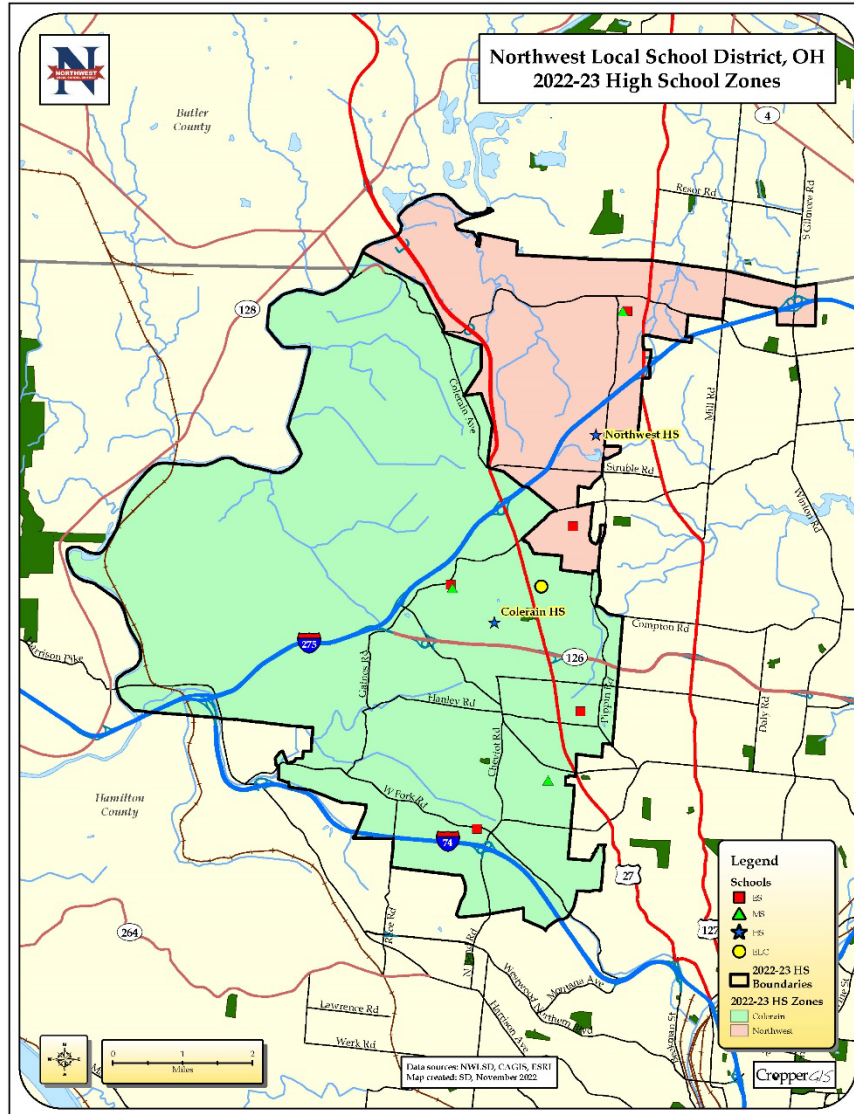
## Map review : Attendance Zone Maps

- Maps showing attendance zones for all county schools, including Elementary, Middle, and High Schools



## Map review : Attendance Zone Maps

- Maps showing attendance zones for all county schools, including Elementary, Middle, and High Schools



# Online Map

- An online map has been developed to further inform all stakeholders on the work of the internal planning team.
- Current zones and options can be viewed on the map.
- Other features can be turned on/off on the map, including planning blocks.
- Map is customizable, and can/will be updated during the process to show new options along with other information requested by the internal planning team.
- Site can be viewed on any device, including mobile devices and tablets (with internet connection).
- Site address is:

[www.croppermap.com/nwlsd](http://www.croppermap.com/nwlsd)



# 2. Data Analysis / Assimilation

## Online Map

Northwest Local School District, OH

Help

View School Zones

- Planning Blocks
- Current ES Boundaries
- Current MS Boundaries
- Current HS Boundaries

Zoom To Current School Zones

Select Current School Zones:

Clear Result

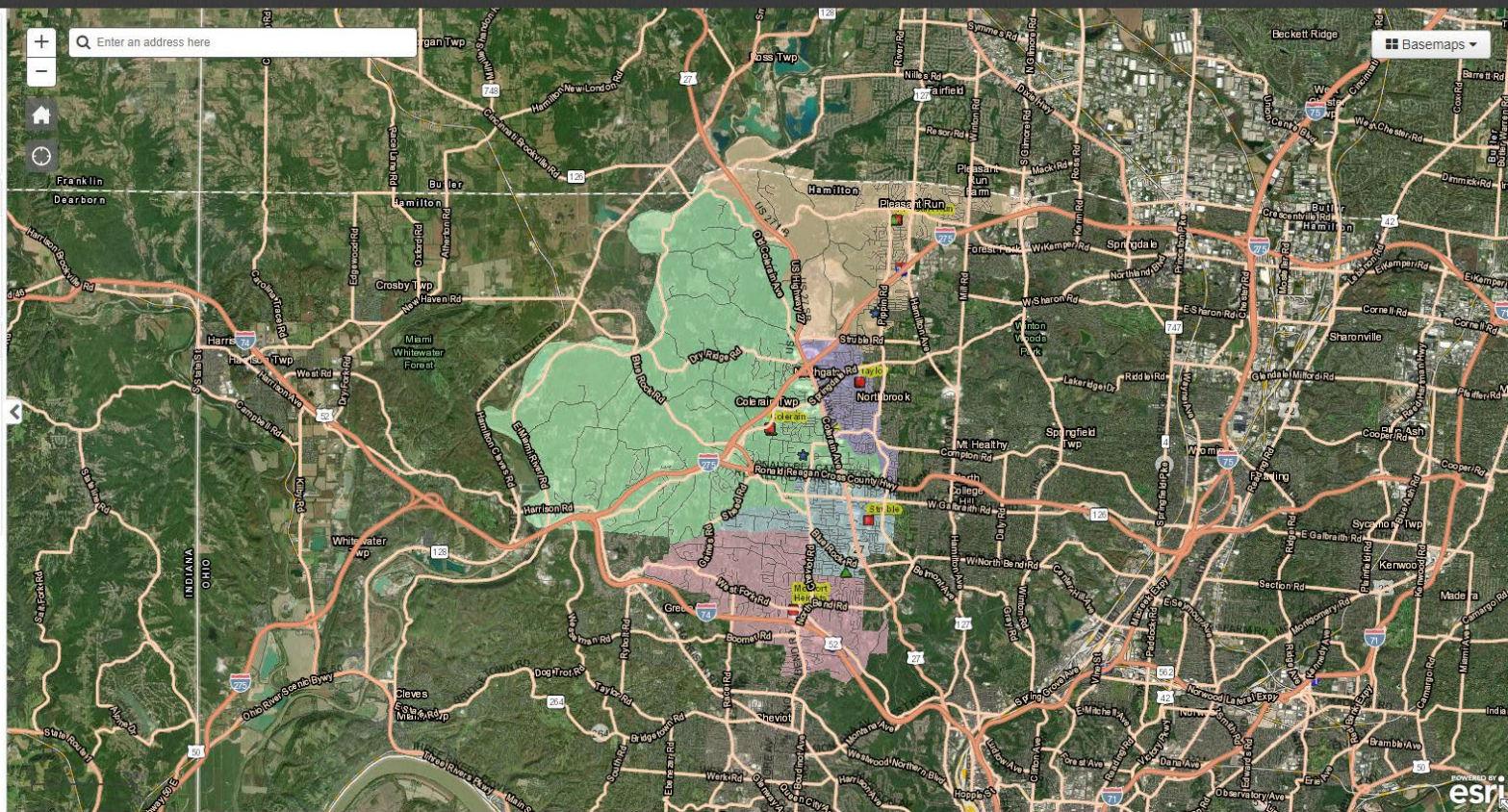
Print

Title:

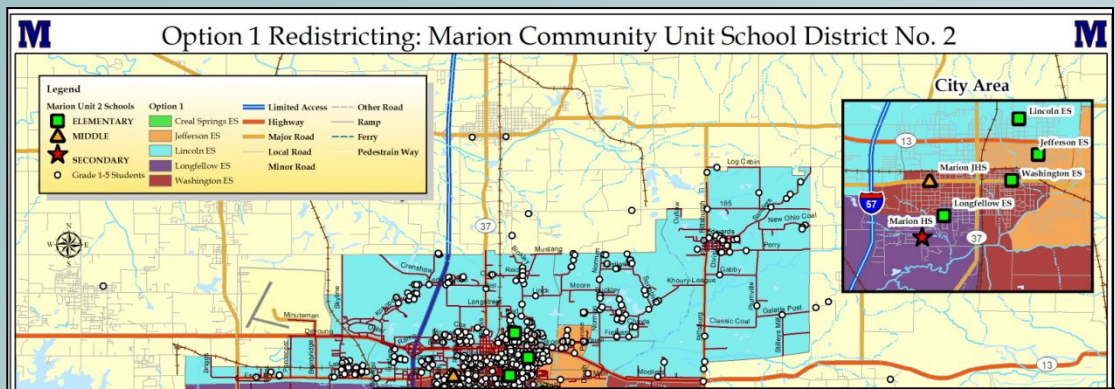
Format: PDF

Layout: NWLSD Print Template

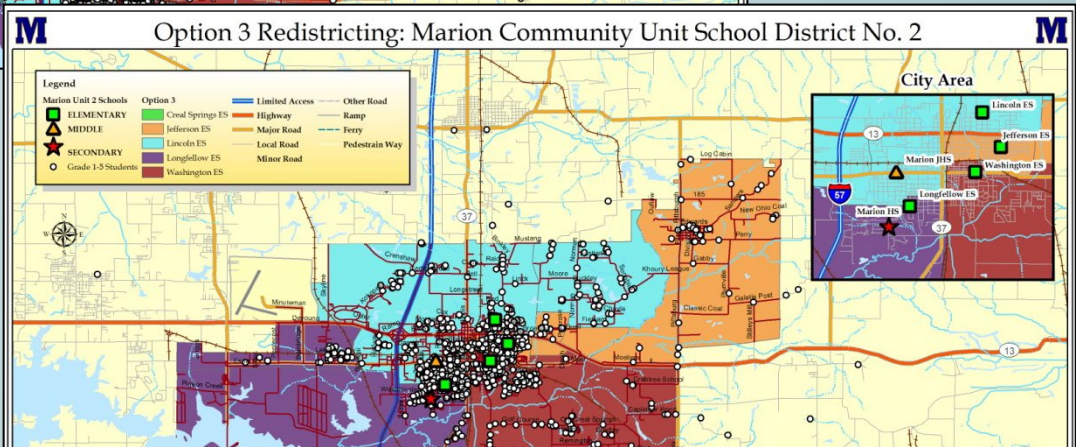
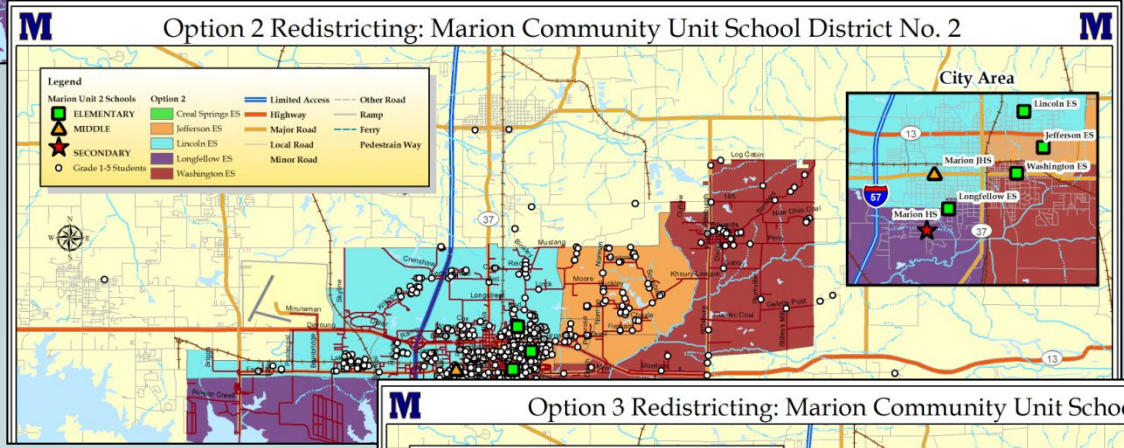
Settings Print



# Phase 3. Options Development (Nov. 2022)



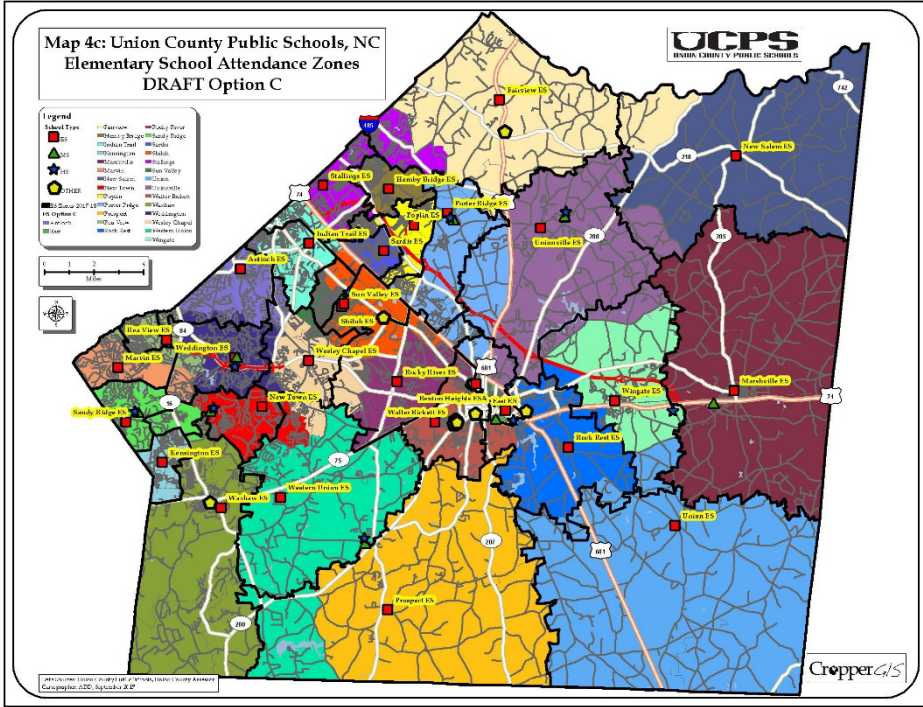
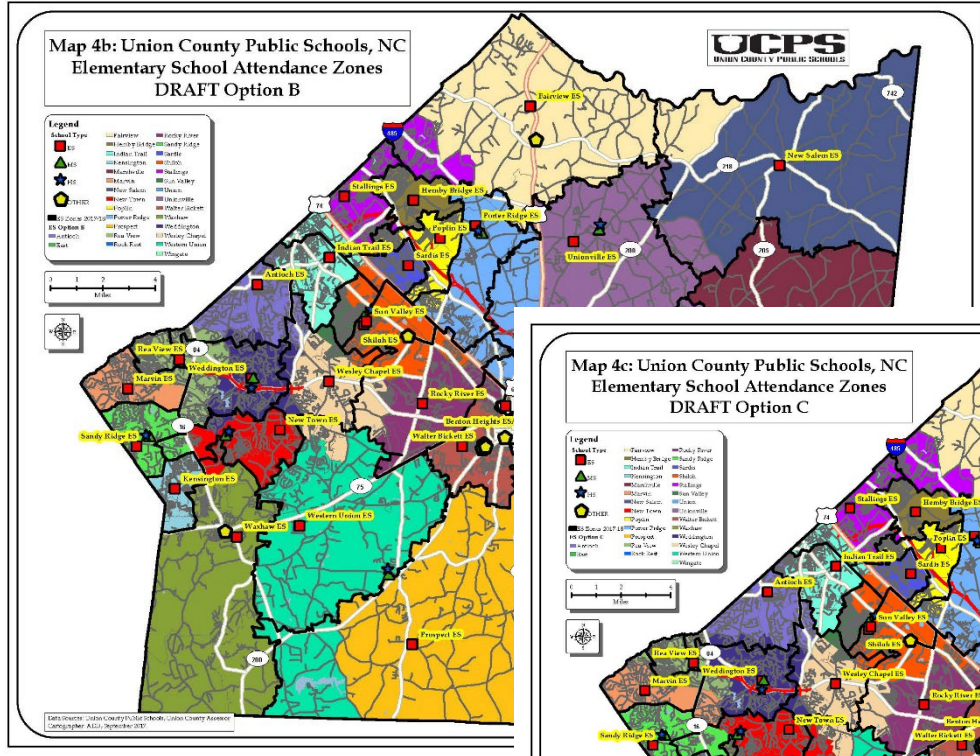
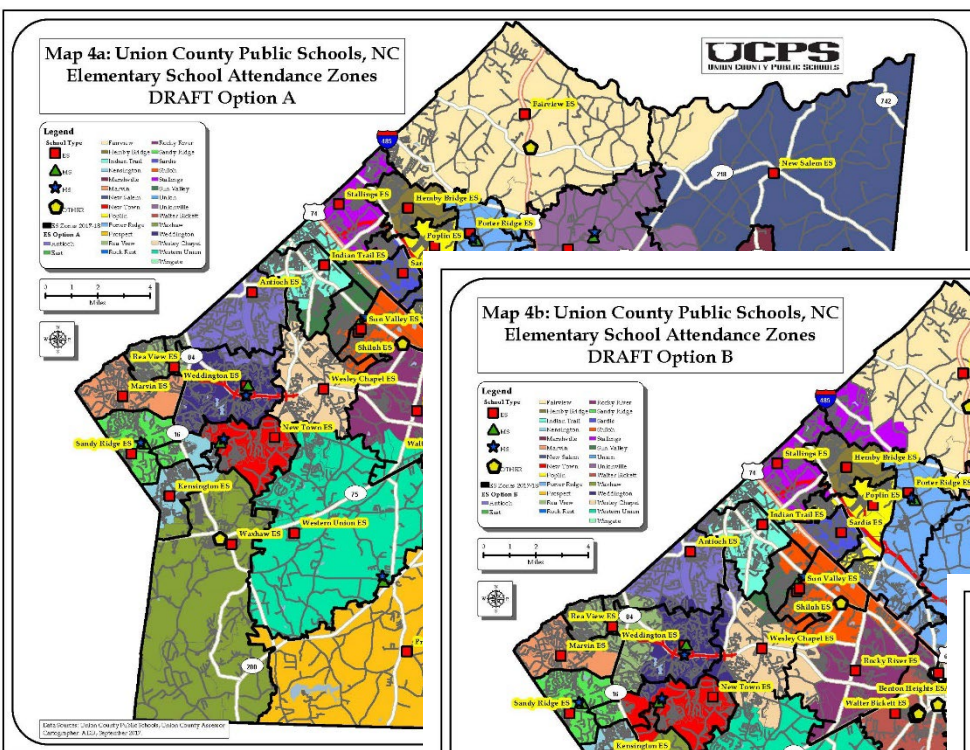
To expedite the process and empower the community, it is best to begin with a series of baseline realignment options.



Baseline options will be shared with the internal planning team at their 2<sup>nd</sup> meeting.

# Phase 3. Options Development (Nov. 2022)

To expedite the process and empower the community, the best approach is to begin with a series of baseline realignment options. These options will be developed with the NWLSD redistricting criteria in mind.



- Once the options are presented the IPT may:
- A. Use or disregard baseline options.
  - B. Improve upon the baseline options.
  - C. Develop new options from scratch.



# Phase 4. Internal Planning Team and Public Engagement (Nov. 2022 – Feb. 2023)

The most important factor when working on a redistricting study is to keep all lines of communication open.

*Project Approach*







## Phase 4. Internal Planning Team and Public Engagement (Nov. 2022 – Feb. 2023)

### *Project Approach*

The Internal Planning Team will meet from November 2022 through February 2023 to analyze data, review attendance zones, and develop redistricting options.

At two public information sessions, the work of the team will be shared, and community members will have an opportunity to discuss planning team work with staff and planning team members.

Valuable information will also be gathered via a community survey that will take place after the information session.

The consultant on behalf of the work by the Internal Planning Team and Public input will recommend a redistricting plan to the School Board in February 2023.



# *Communication Logistics*

## Questions

- Direct questions you are unable to answer to either NWLSD or Cropper.
- **NWLSD redistricting process website!**
  - Helps to refer inquiring community to this website to answer questions about the student redistricting process, schedule and a quantity of data and maps.
  - <http://www.nwlsdredistricting.com/>
  - An [online feedback form](#) is on this page where any member of the public can provide ongoing input.
  - Materials for the meetings will be posted on the website, either shortly prior to the meeting or the day of.
    - We will attempt to provide materials in advance of the meeting as best as we can.



## Cropper GIS Contact Info:

Matthew Cropper

info@croppergis.com

614.451.1242

## Northwest Local School District Contact:

Christopher McKee

cmckee@nwlsd.org

(513) 923-1000

Members of the public, please use the online comment form for general comments and questions.



# *Statistical Analysis*



# 2022-23 Statistical Analysis

We will now review a series of tables that depict statistics for current schools and boundaries that are being evaluated.

This information will help inform all stakeholders on how schools could be potentially impacted as a result of potential redistricting adjustments.

All calculations were derived from the district's 2022-23 Enrollment student database dated October 4, 2022.

## Glossary of Terms

Capacity -the number of students that an individual school has the physical capacity to enroll and can be reasonably accommodated in a facility.

Utilization - Utilization is the total enrollment divided by the capacity, described as a percentage.

Live-in students - Students residing inside of a school attendance boundary, regardless of where that student attends school.

Live and Attend - Students who attend the assigned schools for the zones where they live.

Live Out Attend In - Students that live outside of their attending school's boundary but reside within the Northwest Local School District's boundary.

Out of District students - Students that live outside of the Northwest Local School District's boundary.

Unmatched students - Students whose address was not able to be located by the GIS.

Feeder Pattern - The number of students living within the attendance boundary of both a lower grade cohort (ex. Elementary schools) and a higher-grade cohort (i.e., Middle School). This is given as both the number of Live-In students and described as a percentage.



# 2022-23 Elementary School Enrollment Statistics

ES Current (2022-23)															
Elementary School	2022-23 Capacity	Enrollment and Utilization									Enrolled Live-Attend				
		Grade Config.	KG	01	02	03	04	05	Current Enrollment	Current Utilization	Live-In	Live and Attend-In	Live-Out and Attend-In	Out of District	Unmatched
Colerain Elementary	760	K-5	93	99	96	96	88	114	586	77%	579	528	57	4	1
Monfort Heights Elementary	695	K-5	80	80	65	77	95	98	495	71%	460	444	51	7	
Pleasant Run Elementary	834	K-5	136	174	156	159	158	143	926	111%	913	893	33	15	
Struble Elementary	834	K-5	143	155	146	130	155	160	889	107%	879	834	55	7	
Taylor Elementary	834	K-5	141	146	135	139	141	121	823	99%	837	771	52	17	
<b>Total</b>	<b>3,957</b>		<b>593</b>	<b>654</b>	<b>598</b>	<b>601</b>	<b>637</b>	<b>636</b>	<b>3,719</b>	<b>94%</b>	<b>3,668</b>	<b>3,470</b>	<b>248</b>	<b>50</b>	<b>1</b>



# 2022-23 Middle School Enrollment Statistics

		MS Current (2022-23)										
		Enrollment and Utilization						Enrolled Live-Attend				
Middle School	2022-23 Capacity	Grade Config.	06	07	08	Current Enrollment	Current Utilization	Live-In	Live and Attend-In	Live-Out and Attend-In	Out of District	Unmatched
Colerain Middle School	449	6-8	191	199	196	586	131%	566	538	48	6	
Pleasant Run Middle School	692	6-8	206	233	266	705	102%	698	672	33	15	
White Oak Middle School	587	6-8	236	228	265	729	124%	727	700	29	8	
<b>Total</b>	<b>1,728</b>		<b>633</b>	<b>660</b>	<b>727</b>	<b>2,020</b>	<b>117%</b>	<b>1,991</b>	<b>1,910</b>	<b>110</b>	<b>29</b>	<b>0</b>





# 2022-23 High School Enrollment Statistics

		HS Current (2022-23)											
		Enrollment and Utilization							Enrolled Live-Attend				
High School	2022-23 Capacity	Grade Config.	09	10	11	12	Current Enrollment	Current Utilization	Live-In	Live and Attend-In	Live-Out and Attend-In	Out of District	Unmatched
Colerain High School	1,750	9-12	434	497	462	464	1,857	106%	1,803	1,777	80	20	
Northwest High School	1,173	9-12	260	259	208	240	967	82%	982	922	44	18	1
<b>Total</b>	<b>2,923</b>		<b>694</b>	<b>756</b>	<b>670</b>	<b>704</b>	<b>2,824</b>	<b>97%</b>	<b>2,785</b>	<b>2,699</b>	<b>124</b>	<b>38</b>	<b>1</b>



# 2022-23 Feeder Patterns

	ES to MS Splits	MS to HS Splits
<b>Current</b>	1	0

2022-23 ES Zone	2022-23 MS Zone	Total PK-5th Live In	ES Attendance
Colerain	Colerain	579	100%
Monfort Heights	White Oak	460	100%
Pleasant Run	Pleasant Run	913	100%
Struble	White Oak	879	100%
Taylor	Colerain	408	49%
Taylor	Pleasant Run	429	51%

2022-23 MS Zone	2022-23 HS Zone	Total 6th-8th Live In	MS Attendance
Colerain	Colerain	566	100%
Pleasant Run	Northwest	698	100%
White Oak	Colerain	727	100%



**Questions?**