

**BEAUFORT COUNTY SCHOOLS
BOARD OF EDUCATION**

**SW SNOWDEN ELEMENTARY SCHOOL
CONSOLIDATION STUDY**

Presented to the Board by
Dr. Matthew Cheeseman
Superintendent

Background

SW Snowden Elementary School, located at 693 7th St, Aurora, serves students in kindergarten through 8th grade. Chocowinity Primary School, located at 606 Gray Road, Chocowinity, serves students in pre-kindergarten through 4th grade. Chocowinity Middle School, located at 3831 US-17, Chocowinity, serves students in 5th grade through 8th grade. Students are assigned to SW Snowden Elementary School as provided in Board Policy 4150, School Assignment, attached as Exhibit A.

SW Snowden Elementary School is recommended for closure as a possible future budget reduction and consolidation into Chocowinity Primary School and Chocowinity Middle School. Before closing SW Snowden Elementary School, a thorough study must be completed per North Carolina General Statute § 115C-72, attached as Exhibit B. Statutory factors are addressed in this study.

Welfare of Students to be Affected by Proposed Closing

Enrollment Trends

On September 13, 2023, Numerix LLC presented to the Beaufort County Board of Education historic 2-month Average Daily Membership (ADM) data and forecasted 2-month Average Daily Membership for all schools, attached as Exhibit C. As student enrollment has changed, coupled with changes in State PRC 001 allocations and the availability of qualified teachers and/or applicants, the prekindergarten class was closed prior to the school year 2024-2025 school year. The prekindergarten teacher was assigned to teach kindergarten.

SWS	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Forecasted	X	187	190	190	197	202
Actual	190	174	119	(< 107)	(<105)	(<100)

The Operations Research and Education Laboratory (ORED) conducted a 2018-2019 study that was funded by the Beaufort County Commissioners. This information was presented to the

Board of Education on May 9, 2019, at a joint meeting of the Board of Education and Beaufort County Commissioners. The first discussion point featured the recommendation to close SW Snowden Elementary School, attached as Exhibit D.

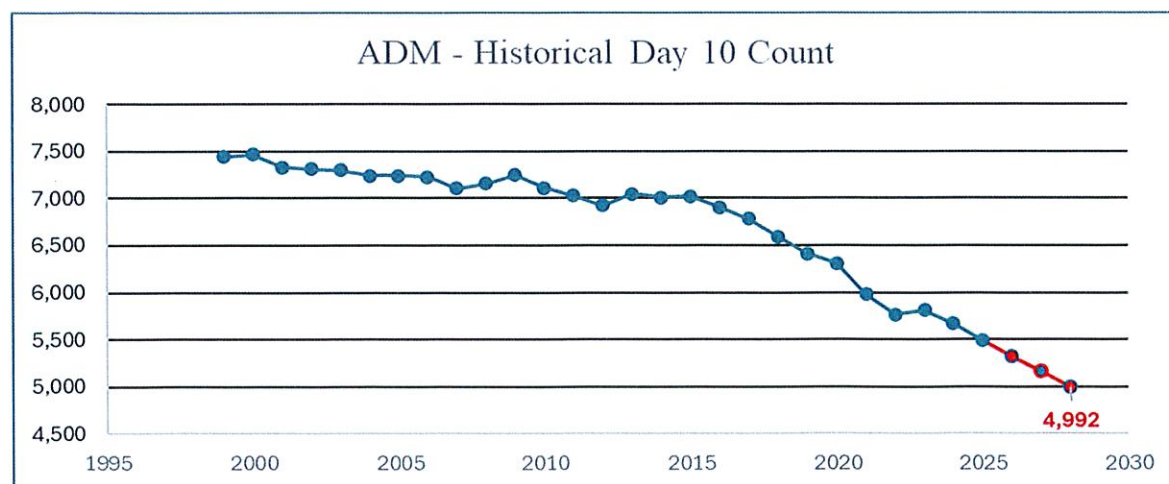
Geographic Conditions

Model	School	Average AM Time (minutes)	Average PM Time (minutes)	Maximum AM Ride Time (minutes)	Maximize PM Ride Time (minutes)
Current	SWS	18	35	Up to 60	Up to 75
Consolidated	CPS	49	52	Up to 78	Up to 79
Consolidated	CMS	56	56	Up to 78	Up to 79

SW Snowden Elementary School currently has 110 bus riders. The average bus ride time for AM and PM travel is 18 minutes and 35 minutes, respectively. Twelve students ride the morning bus route for up to 60 minutes and the afternoon bus route for up to 75 minutes. Additionally, 15 students ride the morning bus route for up to 34 minutes and the afternoon bus route for up to 65 minutes. The ride time for SWS students traveling to Chocowinity Primary School increases the average morning travel time from 18 minutes to 49 minutes and the average afternoon travel time from 35 minutes to 52 minutes. Specifically, seven students may experience morning and afternoon bus travel times up to 78 minutes and 79 minutes, respectively. The ride time for SWS students traveling to Chocowinity Middle School increases the average morning travel time from 18 minutes to 56 minutes and the average afternoon travel time from 35 minutes to 56 minutes. Nine students may experience morning and afternoon bus travel times up to 78 minutes and 79 minutes, respectively. See attached Exhibit E.

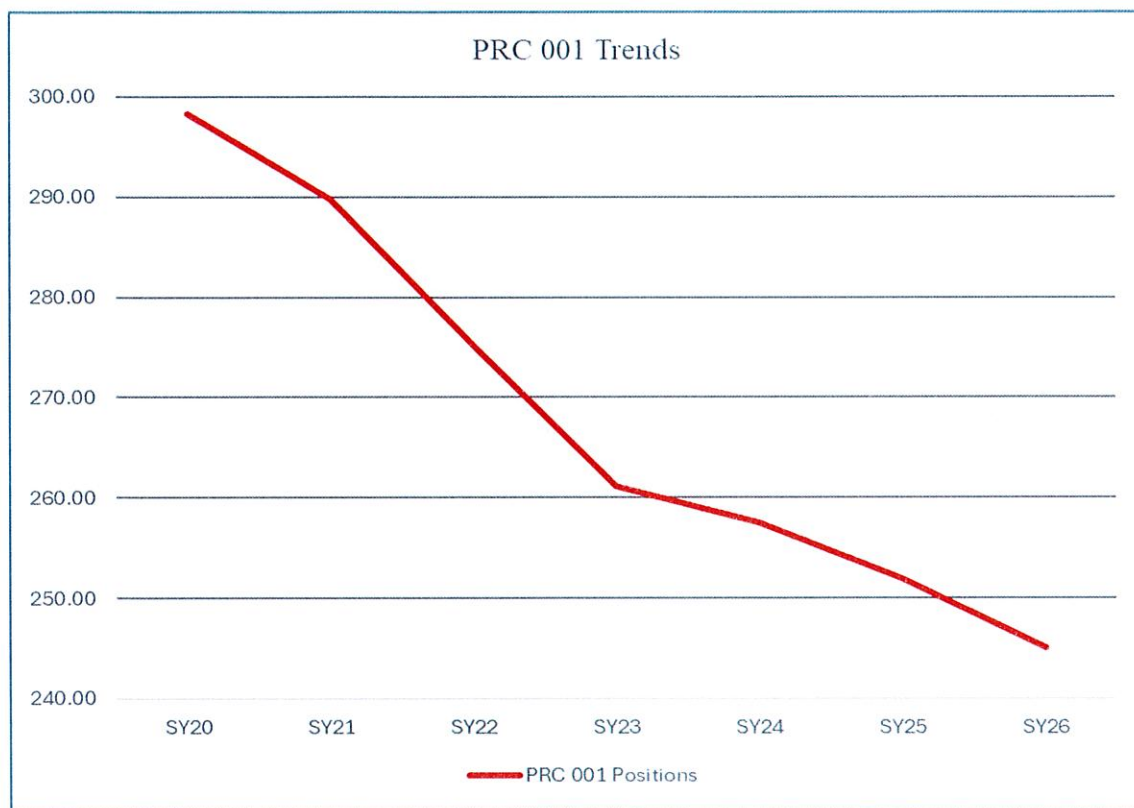
Anticipated Decrease in District Student Enrollment

In 2023, a membership forecast, and analysis was conducted by Mike Miller of Numerix LLC out of Charleston, South Carolina. The study projected Beaufort County Schools average daily membership to decrease to 5,611 students by school year 2032-2033. Unfortunately, the current average daily membership is 5,483 students, a decline that eclipsed the forecast by eight years. In 1998-1999, Beaufort County Schools had 7,438 students with projected enrollment to dip below 5,000 students by the school year 2027-2028.



Change in State Funded PRC 001 Allotments

The average daily membership (ADM) of Beaufort County Schools has declined over twenty five years. As a result, the State's funding for licensed teacher positions has also decreased. In the school year 2019-2020, Beaufort County Schools was allotted 298.29 teacher positions in PRC 001. The recent North Carolina Department of Public Instruction planning allotment confirms an additional loss of seven and one-half positions for the school year 2025-2026. In total, the upcoming PRC 001 allocation is 245 teacher positions resulting in a decrease of 53.90 state funded teacher positions over six years.



Local Funding Requests

The Beaufort County Commissioners have been generous in providing local funding for Beaufort County Schools over the years, which the Board of Education (Board) appreciates. However, the Board's requested local funding versus actual local funding received since school year 2020-2021 results in a \$6,525,010 shortfall. As a result, the Board cannot continue to locally fund lost PRC 001 teacher positions at the current pace state allocation reductions. Federal funds, such as Title I, are also used to fund teacher positions, in the absence of PRC 001 State funded positions, as determined by the School Improvement Team and principal at a particular school.

Local Funding Requests: Local Expenditures (Does Not Include Capital Outlay)

SY	Requested	Actual	Difference
SY21	\$15,154,280.00	\$14,587,140.00	-\$567,140.00
SY22	\$14,982,140.00	\$14,587,140.00	-\$395,000.00
SY23	\$16,643,008.00	\$14,587,140.00	-\$2,055,868.00
SY24	\$17,116,162.20	\$15,578,493.00	-\$1,537,669.20
SY25	\$18,108,653.00	\$16,139,320.00	-\$1,969,333.00
Total	\$82,004,243.20	\$75,479,233.00	-\$6,525,010.20

Cost of Renovating School Facility

There are currently no structural renovations required at Chocowinity Primary School (CPS) and Chocowinity Middle School (CMS) to account for greater student enrollment at each school site should SW Snowden Elementary School (SWS) close. The district currently has the funds to acquire additional seating, if needed, in some grade levels and/or classes.

Inconvenience or Hardship

If SW Snowden Elementary School closes, it is expected to result not only in cost savings for Beaufort County Schools but is also expected to directly benefit the affected students. Due to the size of the school and the formula North Carolina Department of Public Instruction uses to allocate teaching positions, the school may have enough teachers to provide between 1 and 2 teachers per grade level when supplemented with federal funds. The assistant principal's position is locally funded, and the counselor's position is vacant. Currently, 35.7% of SWS teachers are fully licensed compared to 82.5% and 87.5% for CPS and CMS, respectively. Overall, students are expected to benefit academically and be afforded greater opportunity by way of additional access to enhancement programs and special area teachers.

Organization of the School System

The school system has four schools south of the Pamlico River which include SW Snowden Elementary School (K-8), Chocowinity Primary School (PK-4), Chocowinity Middle School (5-8), and Southside High School (9-12). Both Chocowinity Primary School and Chocowinity Middle School have the capacity to add SW Snowden Elementary School students if it closes.

Comparisons of K-8 schools per pupil expenditures are listed below.

School	Costs to Operate	ADM Average	Cost per Student
Bath Elementary	\$4,893,503.78	526	\$9,303.24
Northeast Elementary	\$4,299,722.04	320	\$13,436.63
SW Snowden Elementary School	\$2,615,728.54	122	\$21,440.40

Renovation or Consolidation

The recommendation for SW Snowden School closure is not based on the condition of the school facility. Therefore, there are no recommendations for renovating SW Snowden Elementary School.

Exhibit A: Policy Code: 4150 School Assignment

A. Assignment Areas

The superintendent shall recommend to the board school assignment areas for the schools in the system.

The assignment areas will be developed in accordance with applicable legal requirements, the need to serve all school-age children who live in the school system, and the effective use of each school facility. Assignments must be made in a non-discriminatory manner.

The superintendent shall review periodically the assignment areas and submit recommendations for revisions to the board when necessary.

B. Assignment of Students

The superintendent or designee shall assign students to particular schools in accordance with the following standards.

1. Students Admitted Based on Domicile

Except as otherwise provided in this policy, students admitted to the school system based on domicile will be assigned to the school of the appropriate grade span within the assignment area of the student's domicile (or residence location if the student is exempted from the domicile requirement, as described in policy [4120](#), Domicile or Residence Requirements).

2. Students Accepted for Discretionary Admission

Students who are accepted for discretionary admission under policy [4130](#), Discretionary Admission, will be assigned to a school that meets the best interest of the student and the orderly and efficient administration of the school system.

3. Homeless Students and Students in Foster Care

Notwithstanding any other provisions of this policy, the superintendent or designee shall (1) assign homeless students in a manner consistent with state and federal law and policy [4125](#), Homeless Students; and (2) assign students in foster care to their school of origin unless contrary to their best interest, as required by federal law.

4. Students Participating in the Address Confidentiality Program

Students who are participating in or whose parent is participating in the North Carolina Address Confidentiality Program established by [G.S. Chapter 15C](#) will be assigned on the basis of their actual address, but such address will remain confidential in accordance with law and policy [4250/5075/7316](#), North Carolina Address Confidentiality Program.

5. Students with Disabilities

Students with disabilities receiving services under an Individualized Education Program (IEP) or Section 504 plan will be assigned to schools in accordance with this policy unless the superintendent or designee determines the student needs a different assignment to provide access to a program or service required under the IEP or Section 504 plan, as determined by the student's IEP or Section 504 team.

6. Administrative Assignment

The superintendent or designee may administratively assign a student to a school other than the one to which the student would otherwise be assigned under this policy when deemed in the best interest of the student and/or the effective administration of the schools, such as for reasons related to student safety, discipline, or programmatic issues, or when required by law.

7. Assignment to Alternative Program or School

Students will be assigned to an alternative education program or school in accordance with policy [3470/4305](#), Alternative Learning Programs/Schools.

8. Admission to Magnet Schools or Other Schools of Choice

Students may apply for admission to one of the school system's magnet schools or other schools of choice. Unless otherwise established by the board for specific programs, admission decisions for magnet schools will take into account the following criteria:

- a. maintaining a socioeconomic, geographic, and student achievement diversity that is reasonably reflective of the school system as a whole;
- b. efficient use of school facilities and transportation resources;
- c. any program criteria that must be met by the student for admission to the particular school;
- d. enabling siblings to attend the same school; and
- e. hardship on the student or parent that has been documented by the parent.

C. Requests for Reassignment

A parent or guardian who is dissatisfied with a school assignment may request reassignment to a different school as provided below. The superintendent or designee shall have the authority to approve or deny requests for reassignment for satisfactory reasons as established by the superintendent and communicated to students and parents and guardians. A reassignment request denied by the superintendent or designee may be appealed to the board in accordance with subsection C.2, below.

1. Procedure for Requesting Reassignment

A request for reassignment must be submitted in writing to the superintendent or designee within the school system's established school reassignment window or within 10 days of receiving notice of the school assignment. The request must specify why reassignment is sought. An untimely request for reassignment will be treated as a transfer request under Section D.

The superintendent or designee shall consider the request for reassignment and make a determination based upon the best interest of the child, the orderly and efficient administration of the public schools, the proper administration of the school to which assignment is requested and the instruction, health, and safety of the pupils there enrolled. The parent will be notified via registered mail if the superintendent or designee denies the request. If the parent is dissatisfied with the superintendent's or designee's response, the parent may appeal the decision to the board as provided below.

2. Appeal to the Board When Reassignment Request Is Denied

Within five days of receiving notice that a request for reassignment was denied, the parent or guardian may request a hearing on the request. The board or a panel of the board will hear the appeal. If a panel hears the appeal, the panel's recommendation will be submitted to the full board for a final determination. At the hearing the board will consider and make a determination based upon the best interest of the child, the orderly and efficient administration of the public schools, the proper administration of the school to which reassignment is requested, and the instruction, health, and safety of the pupils there enrolled. The board will promptly render a decision, and notice of the decision will be given to the applicant by mail, telephone, telefax, e-mail, or any other method reasonably designed to achieve notice.

D. Transfer of Students During the School Year

1. Change of Residence

Students whose legal residence changes from one school assignment area to another within the school system during the same school year may choose to finish out that school year in the same school or attend school in the area to which they have moved. If they elect to remain in the first school in order to complete that year, they will be assigned to the school according to the area in which they live at the beginning of the next school year. Students whose legal residence has changed but who choose to complete the school year at their first school will be responsible for their own transportation to school.

2. Unsafe School Choice Transfer under the Elementary and Secondary Education Act

Transfers for students who are victims of violent criminal offenses at school or for students attending persistently dangerous schools as defined by State Board of Education policy will be made pursuant to policy [4152](#), Unsafe School Choice Transfer.

3. Transfer of Homeless Students

Students who become homeless between academic years or during an academic year may request to remain at the school of origin for the duration of their homelessness or may

request to be enrolled in any public school that other students living in the same attendance area are eligible to attend. Any decision about the transfer or reassignment of a homeless student will be consistent with legal requirements and based on the student's best interest. (See policy [4125](#), Homeless Students.)

4. Transfer of Students in Foster Care

Students who are assigned to foster care between academic years or during an academic year will remain in their school of origin unless remaining in the school of origin is not in the best interest of the student. The best interest of the student will be decided based on all relevant factors, including consideration of the appropriateness of the educational setting and proximity to the school in which the child is enrolled at the time of placement in foster care.

5. Other Transfers

The superintendent shall consider student requests for transfer to another school during the school year based upon space availability, the needs of the child, the effect on the school to which transfer is requested, principal recommendations, and other criteria established by the superintendent.

E. Conditions for Reassignment or Transfer

The following conditions apply in regard to any reassignments or transfers made in accordance with Sections C and D of this policy.

1. The parent or guardian is responsible for transportation (except for reassignments or transfers of homeless students or students in foster care based on the student's best interest, for which the system will provide transportation in a manner consistent with legal requirements and policy [4125](#)).
2. The transfer or reassignment is valid for no more than one school year (except for (a) unsafe school choice transfers, for which the length of assignment will be consistent with legal requirements and policy [4152](#); (b) homeless student transfers or reassignment for which the length of assignment will be consistent with legal requirements and policy [4125](#); and (c) transfers or reassignment of students in foster care, for which the length of assignment will be consistent with legal requirements).
3. Any transfer or reassignment request that is approved based upon false or misleading information will be declared void and will be rescinded.

Legal References: McKinney-Vento Homeless Assistance Act, [42 U.S.C. 11431](#) *et seq.*; Elementary and Secondary Education Act, [20 U.S.C. 6301](#) *et seq.*; *Non-Regulatory Guidance: Ensuring Educational Stability for Children in Foster Care*, U.S. Department of Education and U.S. Department of Health and Human Services (June 2016) and *Non-Regulatory Guidance on Education for Homeless Children and Youths Program*, U.S. Department of Education (July 2016), both available at <https://www2.ed.gov/policy/elsec/leg/essa/index.html>; *Unsafe School Choice Option Non-Regulatory Guidance*, U.S. Department of Education (May 2004), available

at <https://www2.ed.gov/policy/elsec/guid/edpicks.jhtml?src=ln>; G.S. 15C-8; 115C-36, -47(68), -366, -367, -369; State Board of Education Policy [SSCH-006](#)

Cross References: Alternative Learning Programs/Schools (policy [3470/4305](#)), Domicile or Residence Requirements (policy [4120](#)), Homeless Students (policy [4125](#)), Discretionary Admission (policy [4130](#)), Unsafe School Choice Transfer (policy [4152](#)), North Carolina Address Confidentiality Program (policy [4250/5075/7316](#))

Adopted: August 16, 2011

Revised: August 16, 2016; January 3, 2017; December 12, 2017; December 14, 2021; December 12, 2023 (Legal references only)

Exhibit B: North Carolina General Statute § 115C-72: Consolidation of districts and discontinuance of schools.

(a) Local boards of education shall have the power and authority to close or consolidate schools located in the same district, and with the approval of the State Board of Education, to consolidate school districts or other school areas over which the board has full control, whenever and wherever in its judgment the closing or consolidation will better serve the educational interest of the local school administrative unit or any part of it.

In determining whether two or more public schools shall be consolidated, or in determining whether or not a school shall be closed and the pupils transferred therefrom, local boards of education of the several counties shall observe and be bound by the following rules:

(1) In any question involving the closing or consolidation of any public school, the local board of education of the school administrative unit in which such school is located shall cause a thorough study of such school to be made, having in mind primarily the welfare of the students to be affected by a proposed closing or consolidation and including in such study, among other factors, geographic conditions, anticipated increase or decrease in school enrollment, the inconvenience or hardship that might result to the pupils to be affected by such closing or consolidation, the cost of providing additional school facilities in the event of such closing or consolidation, and such other factors as the board shall consider germane. Before the entry of any order of closing or consolidation, the local board of education shall provide for a public hearing in regard to such proposed closing or consolidation, at which hearing the public shall be afforded an opportunity to express their views. Upon the basis of the study so made and after such hearing, said board may, in the exercise of its discretion, approve the closing or consolidation proposed.

(2) The provisions of this section shall not deprive any local board of education of the authority to assign or enroll any and all pupils in schools in accordance with the provisions of G.S. 115C-366(b) and 115C-367 to 115C-370.

(b) This section does not govern merger of a city school administrative unit with another school administrative unit. Such merger is governed by G.S. 115C-67. (1955, c. 1372, art. 8, s. 3; 1981, c. 423, s. 1; 1983, c. 308; c. 752; 2009-570, s. 27.)



Beaufort County Schools

2022-23 MEMBERSHIP FORECAST

SEPTEMBER 19, 2023

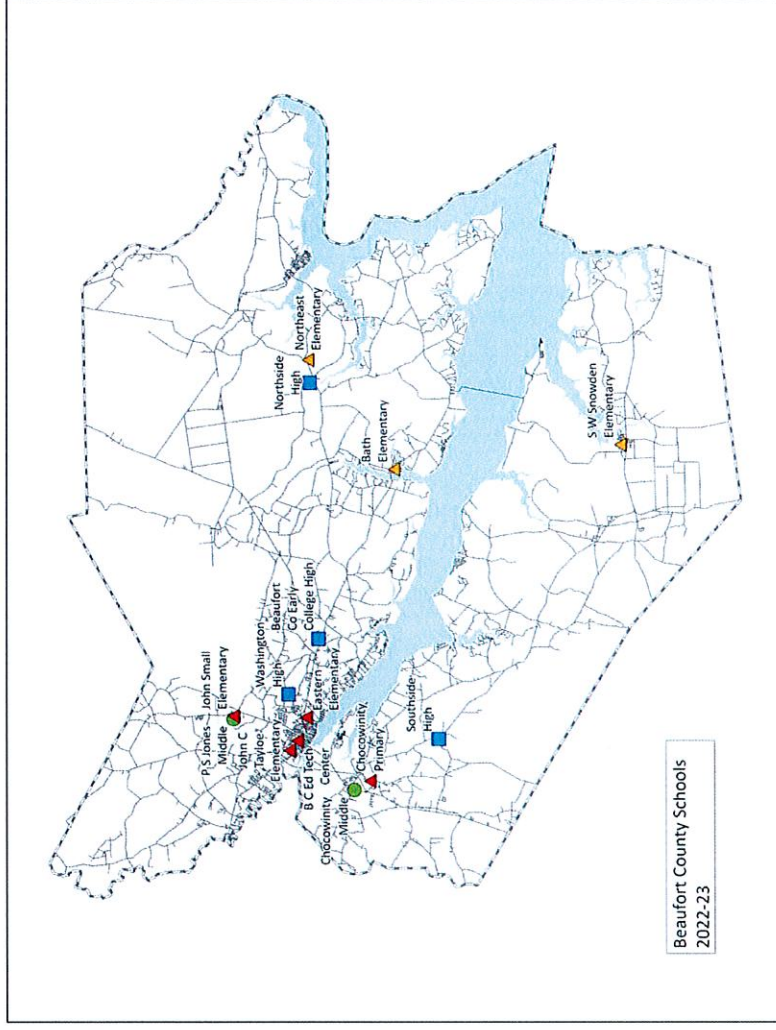
MICHAEL MILLER, NUMERIX LLC

numerix_ysolutions



Overview

- Methodology and Data
- 2022-23 Membership Forecast
- Appendix



Methodology

In building the 2022-23 Beaufort County Schools Membership Forecast, primary focus was given to the demographic trends of the school and general populations of Beaufort County. The forecasting process combines analysis of historical demographic trends with GIS (Geographic Information Systems) analysis of potential growth from planned developments.

- Based on cohort-survival techniques
- Tracking membership through feeder systems
- GIS database of school boundaries and locations, parcels and other relevant data

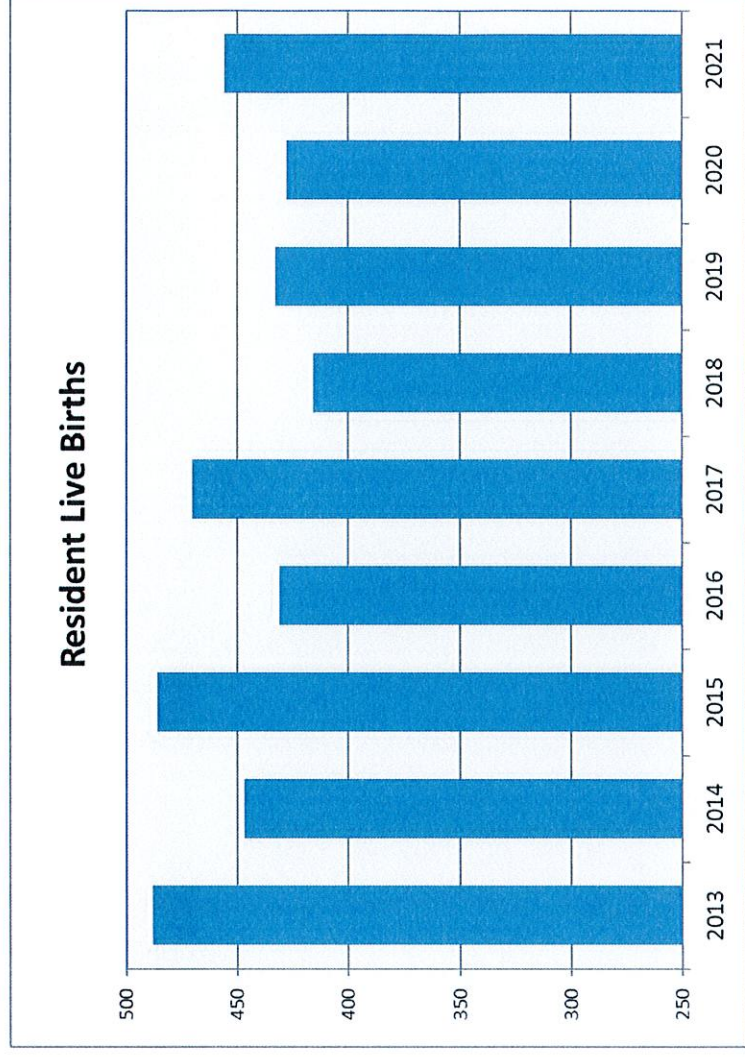
Data: Beaufort County Population

- US Census estimates a total county population of 44,272 for July 1, 2022. This represents a decrease of 0.37% over the 2021 estimate.
- The NC Office of State Budget and Management (OSBM) estimates the county population has decreased by 3,115 from April 1, 2010 to July 1, 2022 (about -6.5% over ten years).

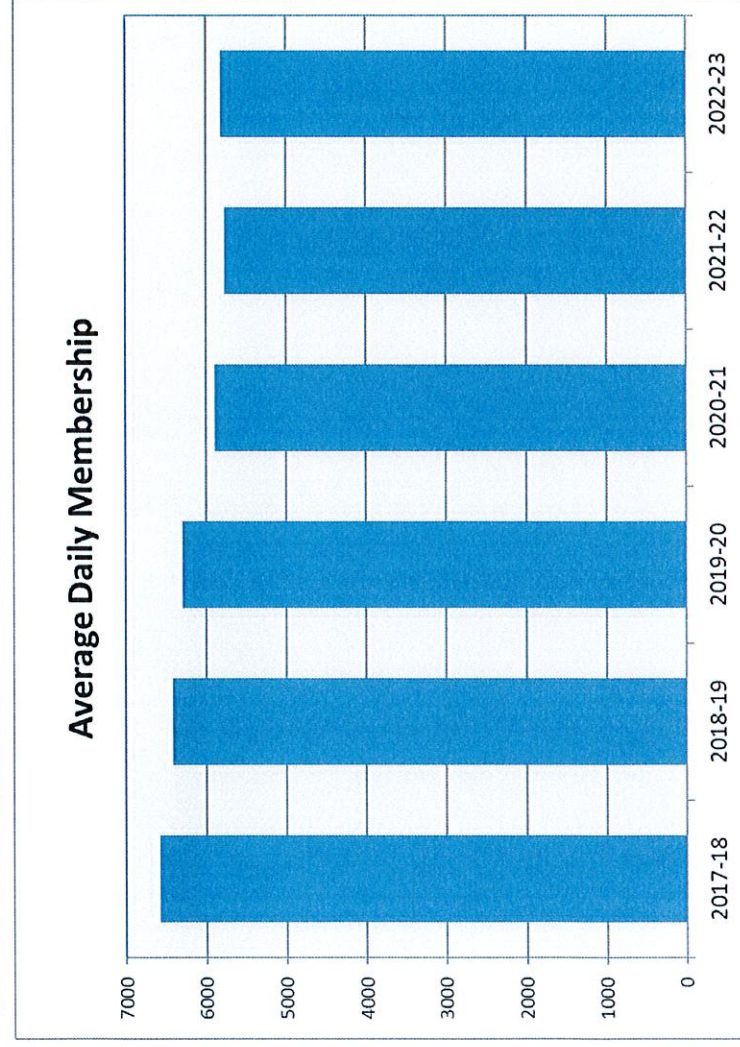
Data: Resident Live Births

Beaufort County Resident Live Births (RLB) have seen an average decrease of 0.50% per year for 2013 – 2021.

2021 RLB were up by 28 (7%) from 2020.



Data: Historic Membership



For 2017-18 – 2022-23, the Month-2 Average Daily Membership (ADM) has decreased by an average of 152 students (2.40%) per year.

2022-23 K-13 Month2 ADM = 5,819

2022-23 PreK: 164 at four elementary schools

Data: Historic Membership*

- 2022-23 ADM reports an increase of 55 students over 2021-22
- From 2017-18 to 2022-23, average annual growth:
 - Grade 1: -4.12%
 - Grade 2: -5.19%
 - Grade 3: -4.06%
 - Grade 4: -3.08%

* NC DPI Month-2 ADM

Data: Non-BCS School Systems

The North Carolina's Department of Public Instruction and Department of Administration track membership of charter, private and home schools by county.

School Type	2018-19	2019-20	2020-21	2021-22	2022-23
Charter	439	588	733	742	755
Private	411	399	499	532	552
Home	386	642	761	704	598

Data: Other Area LEAs

From NC DPI, Month-2 membership for counties surrounding Beaufort County

LEA	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Avg Rate
Beaufort	6581	6428	6302	5887	5764	5819	-2.4%
Craven	13787	13536	13272	12460	12415	12547	-1.8%
Hyde	578	580	536	514	323	448	-2.0%
Jones	1079	1025	1023	950	983	1008	-1.3%
Martin	3053	2912	2354	2636	2554	2512	-3.3%
Pamlico	1238	1315	1246	1160	1163	1196	-0.6%
Pitt	23461	23358	23520	22838	23212	23467	0.0%
Washington	1416	1287	1169	1014	1031	1056	-5.5%

Data: GIS and Residential Developments

The Numerix forecast model combines historical demographic trends with GIS data to estimate growth trends of existing and anticipated residential developments.

Numerix GIS analysis focuses on these areas:

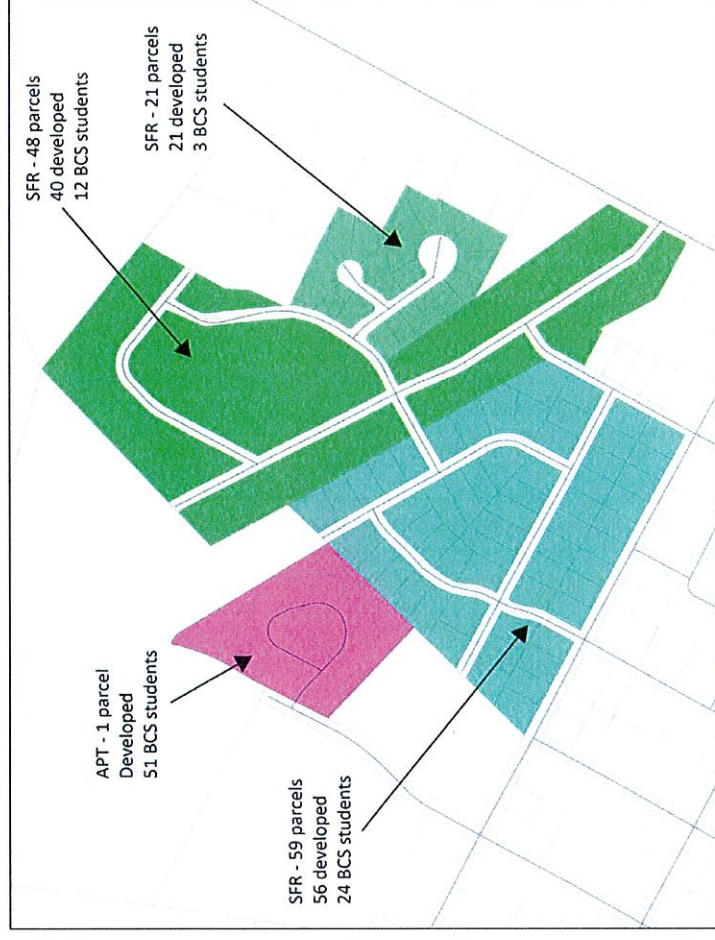
- Identifying/classifying residential developments,
- Quantifying student impact from existing residential developments and
- Estimating student impact from anticipated developments.

Data: GIS Residential Developments

Various types of developments are identified (including multiple phases/sections): single-family subdivisions and multi-family developments.

Tracked developments are investigated for these attributes (dependent on data limitations):

- Number of BCS students (based on the 2022-23 student geocode)
- Number of developed parcels or units
- Total number of existing parcels or units



Data: GIS Residential Developments

GIS analysis indicates a county-wide average Student Generating Potential (SGP) of:

- **0.30 students per developed residential lot, or**
- **0.15 students per developed residential acre.**

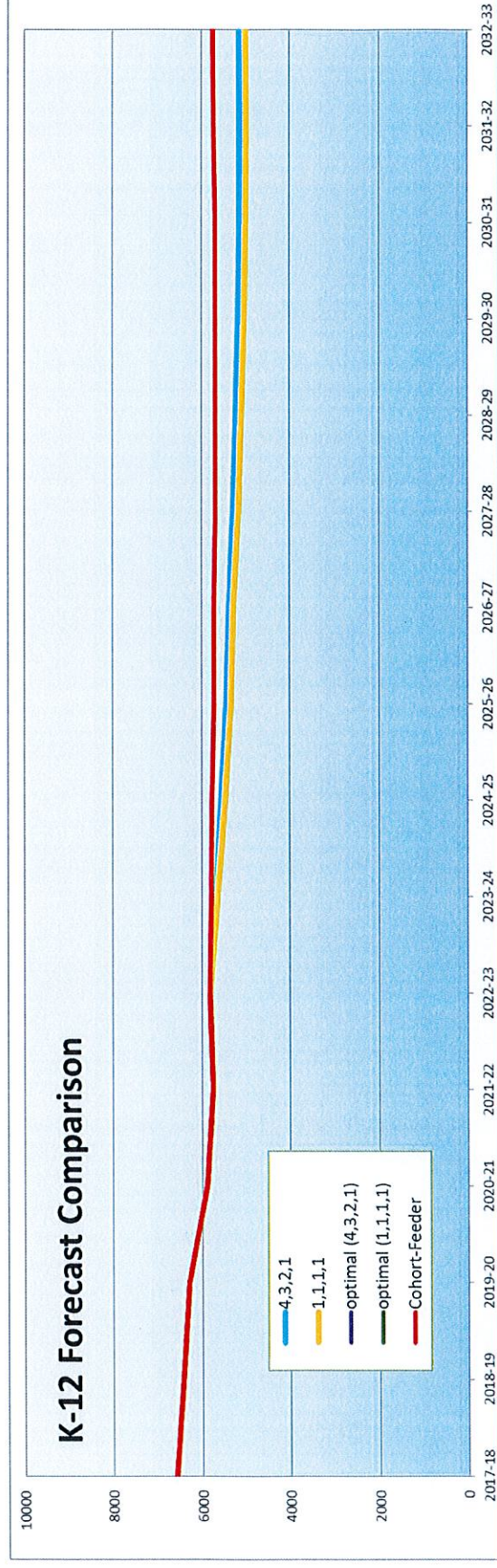
Residential building and manufactured home permits for June 2022 to June 2023 show the strongest growth indicators in Washington and Chocowinity.

2022-23 BCS Membership Forecast

- Forecast Assumptions
- 2022-23 Membership Forecasts

Forecast Assumptions

- Numerix Cohort-Feeder Forecast Model
- County Resident Live Births projected at 1.00% per year – 2022 through 2027
- Flat/slightly increasing development/growth trends



Forecast Assumptions

- Forecast models are built from historic demographic trends and future development potentials
- The 2022-23 Membership Forecast is built on historic Month-2 Average Daily Membership (ADM) for 2017-18 – 2022-23 from NC DPI
- Forecast is intended for medium- to long-range planning (3-10 years)
- “Next-year” short-range membership forecasts are best aligned with current/on-going student data captures

2022-23 Membership Forecast

Two versions of the Membership Forecast (*final: 9/17/2023*) are presented here using capacity supplied by BCS:

- By Level
- By Area

All versions are available as separate, printable documents

Beaufort County Schools Membership Forecast

1. Month-2 K-12 Average Daily Membership (ADM) supplied by NC DPI. 2022-23 PreK counts supplied by BCS, 5/8/2023.
2. Building capacities supplied by BCS, June 2023. Portable classrooms are not included in capacity.
3. Forecast generated by Numerix Cohort-Feeder model. Projected RLB annual gain = 1.0%, 2022 to 2027. K-12 average annual gain = -0.12%, 2023-24 to 2032-33.

Grades	Capacities	PreK	Historic Month-2 ADM (No PreK)					M-2 ADM	Forecasted Month-2 Average Daily Membership										
			2022-23	2017-18	2018-19	2019-20	2020-21		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Elementary	K-1	704	77	527	502	476	414	380	474	477	469	475	486	501	505	509	513	518	522
	Eastern Elementary																		
	K-8	614	0	574	577	605	521	509	527	504	497	485	476	478	481	490	502	497	505
	Bath Elementary																		
	K-4	656	33	498	496	472	435	445	496	481	489	484	472	469	479	486	495	500	505
	Chocowinity Primary																		
	2-3	520	0	516	524	501	461	438	398	365	397	401	393	399	409	424	429	433	437
	John C Tayloe Elementary																		
	4-5	652	0	534	500	511	496	464	455	452	420	385	420	414	421	420	431	447	452
	John Small Elementary																		
K-8	684	36	438	429	409	374	344	398	387	382	368	366	367	370	373	367	374	380	
Northeast Elementary																			
K-8	428	18	152	163	149	150	166	190	190	187	190	190	197	202	206	198	200	203	
S.W. Snowden Elementary																			
SubTotal	4258	164	3239	3191	3123	2851	2746	2938	2853	2845	2787	2809	2839	2865	2902	2936	2969	3004	
Middle	5-8	482		412	407	413	388	360	366	367	361	367	385	382	387	383	365	360	370
	Chocowinity Middle																		
	P.S. Jones Middle	940		763	779	779	732	748	728	745	734	748	694	672	656	676	689	677	698
	SubTotal	1422		1175	1186	1192	1120	1108	1094	1112	1094	1114	1079	1054	1043	1059	1053	1037	1068
High	9-12	842		434	405	402	380	359	376	384	377	381	377	352	342	317	307	313	309
	Northside High																		
	Southside High	853		440	412	405	399	398	419	426	418	401	394	392	385	400	423	426	428
	Washington High	1326		1001	893	868	819	828	834	850	871	876	900	897	902	863	827	831	803
SubTotal	3021		1875	1710	1675	1598	1585	1629	1660	1666	1658	1670	1640	1629	1581	1558	1570	1539	
Special/Alternative	B.C. Ed Tech Center	130		46	67	50	51	45	41	41	41	41	41	41	41	41	41	41	41
	Beaufort Co. Early College High	n/a		277	320	298	298	305	281	289	297	280	286	278	278	270	266	267	260
System Total (excluding Spec/Alt)	8701	164	6289	6087	5990	5569	5439	5661	5626	5605	5560	5559	5533	5537	5541	5548	5577	5611	
	8831	164	6612	6474	6338	5918	5789	5983	5956	5943	5881	5886	5853	5855	5853	5854	5885	5912	

Capacity Legend

< 60%

60% - 75%

75% - 90%

> 90%

Forecast generated by Numerix LLC

FINAL: 9/17/2023

Beaufort County Schools Membership Forecast

1. Month-2 K-12 Average Daily Membership (ADM) supplied by NC DPI. 2022-23 PreK counts supplied by BCS. 5/8/2023.
2. Building capacities supplied by BCS. June 2023. Portable classrooms are not included in capacity.
3. Forecast generated by Numerix Cohort-Feeder model. Projected RLB annual gain = 1.0%, 2022 to 2027. K-12 average annual gain = -0.12%, 2023-24 to 2032-33.

Grades	Capacities	PreK	Historic Month-2 ADM (No PreK)					M-2 ADM	Forecasted Month-2 Average Daily Membership									
			2022-23	2017-18	2018-19	2019-20	2020-21		2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Northside	K-8	0	574	577	605	521	509	527	504	497	485	476	478	481	490	502	497	505
	Bath Elementary	684	438	429	409	374	344	398	387	382	368	366	367	370	373	367	374	380
	Northeast Elementary	842	434	405	402	380	359	376	384	377	381	377	352	342	317	307	313	309
	Northside High																	
	SubTotal	2140	1446	1411	1416	1275	1212	1301	1275	1275	1256	1234	1220	1197	1194	1181	1177	1184
Southside	K-4	33	498	496	472	435	445	496	481	489	484	472	469	479	486	495	500	505
	Chocowinity Primary	482	412	407	413	388	360	366	367	361	367	385	382	387	383	365	360	370
	Chocowinity Middle	428	152	163	149	150	166	190	187	190	190	197	202	206	198	198	200	203
	S W Snowden Elementary	853	440	412	405	399	398	419	426	418	401	394	392	385	400	423	426	428
	Southside High																	
SubTotal	2419	1502	1478	1439	1372	1369	1471	1462	1462	1457	1442	1448	1445	1457	1467	1482	1486	1505
Washington	K-1	77	527	502	476	414	380	474	477	469	475	486	501	505	509	513	518	522
	Eastern Elementary	520	516	524	501	461	438	398	365	397	401	393	399	409	424	429	433	437
	John C Tayloe Elementary	652	534	500	511	496	464	455	452	420	385	419	423	414	420	431	447	452
	John Small Elementary	940	763	779	779	732	748	728	745	734	748	694	672	656	676	689	677	698
	P S Jones Middle	1326	1001	893	868	819	828	834	834	850	871	876	900	897	902	863	827	831
Washington High																		
SubTotal	4142	3341	3198	3135	2922	2858	2889	2889	2889	2892	2885	2891	2891	2886	2893	2889	2906	2912
Special/Alternative	B C Ed Tech Center	130	46	67	50	51	45	41	41	41	41	41	41	41	41	41	41	41
	Beaufort Co Early College High	n/a	277	320	298	298	305	281	289	297	280	286	278	278	270	266	267	260
System Total (excluding Spec/Alt)		8701	6289	6087	5990	5569	5439	5661	5626	5605	5560	5559	5533	5537	5541	5548	5577	5611
	System Total (including Spec/Alt)	8831	6612	6474	6338	5918	5789	5983	5956	5943	5881	5886	5853	5855	5853	5854	5885	5912



Forecast Summary: Growth

- Average annual K-13 growth: -7 over the next ten years
- Average annual K-13 growth rate: -0.12% over the next ten years
- Month-2 K-13 Average Daily Membership by level *:

Level	2022-23	2027-28	2032-33
Elementary (K-5)	2464	2436	2599
Middle (6-8)	1407	1296	1312
High (9-13)	1948	1957	1837

* PreK remains constant throughout forecast at 164

Forecast Error

Early 2023-24 numbers suggest the 2022-23 Membership Forecast over-projected by about 100 students (1.65%) district wide. Most of the errors occurred in the Washington High School feeder system.

The final 2022-23 Membership Forecast included in this report was not altered. However, the first draft of the Forecast (dated 7/21/2023) is closer to the early 2023-24 numbers and so will be included in the accompanying documents.

Please note although the early numbers can provide some useful information, care should be exercised when comparing data. The Forecast is based on Month-2 ADM; early 2023-24 numbers are a “headcount” from Day 10. Typically, membership will rise between the start of the school year and Month-2.

Additional Information

The 2022-23 Membership Forecast Report (final: 9/17/2023) contains additional data and detail, including general population forecasts in the Appendix.

All Forecast tables are available as separate documents.

Questions/Discussion

Appendix

- Data Sources
- About Numerix LLC



Data Sources

- BCS: 2022-23 BCS student geocode – Approximate 97% match rate
- NC DPI: Month-2 K-12 Average Daily Membership – 2017-18 through 2022-23
- BCS: 2022-23 PreK Membership
- NC State Center for Health Statistics: Beaufort County Resident Live Births for 2013 through 2021
- BCS: Building capacities; mobile classrooms are not included
- Beaufort County GIS: Tax parcels, schools, attendance areas, streets, address points and other features. Data download: Spring 2023.
- Beaufort County Building Inspections Department: Permit activity June 2022 – June 2023
- Mid-East Commission: 2022 Comprehensive Economic Development Strategy

Numerix LLC

numerix solutions

Numerix LLC – GIS-based Demographics and Planning Solutions for Schools

- Membership forecasts
- GIS analysis
- Mathematical modeling
- Demographic analysis
- 20 years of school planning experience in 50 districts in SC, NC and VA
- **Michael Miller – Founder and Managing Member, Numerix LLC**
 - Since 2016: Numerix LLC, Charleston SC
 - 2003 – 2016: Operations Research and Education Laboratory, ITRE @ NCSU Centennial Campus

Beaufort County Schools
IPSAC: Integrated Planning for School & Community

**OPERATIONS RESEARCH AND EDUCATION LABORATORY
INSTITUTE FOR TRANSPORTATION RESEARCH AND EDUCATION
CENTENNIAL CAMPUS @ NORTH CAROLINA STATE UNIVERSITY
MAY 2019**



Title, then "what we strive for": IPSAC

For those unfamiliar, Extension, function as NP

About ITRE and OREd



The Institute for Transportation Research and Education (ITRE) conducts transportation research and provides professional training, education and technical assistance.

... Who has benefited from, who believes there is value

Introduction: OREd Team



Mathew Palmer -
Program Manager,
School Planning and
Transportation Group



Thomas Dudley -
Program Manager,
OREd



Elizabeth Daniel -
GIS Analyst

Note time for discussion / questions

Counties & Schools: Why Are We Here?

Schools Matter (A Lot)

Counties and School Districts rely on one another to succeed & grow

Gaps in Planning

Spectrum of Communication, Collaboration and Coordination

The Role of OREd

Integrated Planning for Schools and Communities

Counties & Schools: Interdependence

Counties and School Districts rely on one another to Succeed and Grow

- Workforce Development (Modernizing the 21st Workforce)
- Recruitment and Retention of Jobs (Values in Concrete)
- School Quality and Proximity Impact Land Value / Tax Revenue (20%)

Counties & Schools: Facilities

The Physical School Building impacts Students and the Community:

- Health Outcomes (46% schools are measured to have poor air quality)
- Education Outcomes (School quality associated with achievement)
- Job Generator (School construction generates 17,000 / \$1B)

Counties & Schools: Working Together

Spectrum of Communication, Collaboration and Coordination

- Variability in Communities and Schools working together on Facility Condition, Capacities and Neighborhood Development
- ITRE/OREd bridges this divide
- We take out the guesswork and help counties and school systems forecast needs for capital planning moving forward

Counties & Schools: The Role of OREd

Integrated Planning for Schools and Communities

- Reflect on Historic Enrollment Data (Enrollment Forecasting)
- Account for Current and Future Growth (Land Use Studies)
- Compare Projected Needs w. School Capacities (Capacity Table)

Approach and Services: IPSAC

Integrated Planning for School and Community (IPSAC)

- *Land Use Studies / GIS Analysis*
- *Enrollment Forecasts*
- *Out-of-Capacity Analysis*

- *Optimization*
 - *School Site Configuration*
 - *Attendance Zones*

Answers with, "this is what we do"

Name for suite of services we provide, all related to SA and LRFP.

"Membership forecast" – often this is enough, from indep. source. , need 3 mil renovation

Approach and Services: Land Use Study

There are several ways of knowing...

History: Looking to historic enrollment numbers and data from district and county

Local Knowledge: Looking to the future to understand the time, location and size of development patterns

Learning about the future through talking with key development actors

- County and Municipal Neighborhood Planning and Zoning Departments
- Transportation Engineers at the Local and State levels
- Water and Sewer Administrators
- Leaders in Economic Development and Business Leaders

mention few examples

JCS: "in addition to larger demographic, GIS, trends, res dev also essential"

Beaufort County Land Use Study

Interview Topics	Anticipated Materials & Results
County and City/Town Planning Departments	
Residential development in progress and/or planned for the future	<ul style="list-style-type: none">• Zoning ordinance• Comprehensive plan• Summary of subdivision permits
Development trends	
Status of development currently in progress (% of approved units that are now built)	
Price range of units in subdivisions currently under development	
Mobile home parks	
Building moratoria in existence or planned	
Impact fees (if any)	
Economic Development Commission	
Industrial and commercial development in progress and/or planned for the future	<ul style="list-style-type: none">• County/local municipal economic development information• Largest employers• Employers that have recently located to/moved from the county, etc.
Economic bases of the county/city	
Development trends and locations	
Economic development policies	
Employment trends	
Infrastructure available/required for future needs	
Water / Sewer / Electric / Other Utilities	
Current location of water/sewer, and utility lines	<ul style="list-style-type: none">• Maps of current water/sewer and other utility lines
Current capacities of water and sewer treatment plants and planned expansions	
NCDOT District Engineers:	
Planned highway expansion/construction in the county, and information on other transportation modes as appropriate	<ul style="list-style-type: none">• Current and anticipated TP projects, projects not included in the TIP that NCDOT believes are high priorities for action

The land use study is comprised of interviews with local practitioners and stakeholders that can help contextualize the numerical data available to the OREd lab staff. Moreover, while OREd's capabilities with historic/archived school enrollment data have been consistently precise in their estimations over the past twenty years, future-oriented information is critical to ensuring the accuracy of the school enrollment projections. This can only be achieved through conversations with local practitioners and stakeholders.

Beaufort County Residential Development

Development Name	Number of Lots Approved	Number of Lots Recorded
Beaufort County		
Ellis Cove Road (Bath)	14	
Alger Lane (Washington Twp)	3	
NC 32 Hwy (Plymouth Twp)	2	
Godley Road (Chocowinity Twp)	3	
Hickory Point Road (Aurora Twp)	2	
Travel Trailer Park - Miller Road (Washington Twp)	10	
Travel Trailer Park (Chocowinity Twp)	14	
City of Washington		
Northgate (Ph. 1)	100 Units Avail	
Northgate (Ph. 2)	100 Units Potential	
Iron Creek	25 Units Potential	
Town of Aurora Town of Bath Town of Belhaven Town of Chocowinity Town of Pantego Town of Washington Park		

Beaufort County Economic Development



Visualization + Reinvestment Strategy

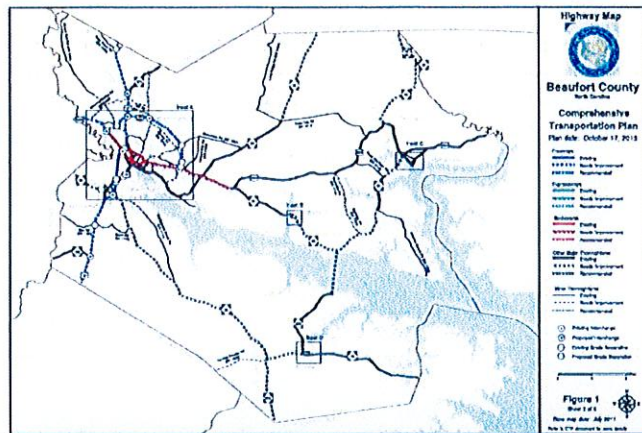
Beaufort County Employment Statistics

Indicator	Beaufort County	North Carolina
Estimated Percent Population Change 2010-2017 (U.S. Census)	(0.4%)	5.42%
Unemployment Rate - January 2019 (NC Dept. of Commerce - "Local Area Unemployment Statistics")	4.9%	3.8%
Median Household Income - 2017 (NC Dept. of Commerce - "Income")	\$43,497	\$53,797
Persons in Poverty - 2017 (U.S. Census)	22.0%	16.1%
Cost of Living (Best Places)	86.8 [Housing]	96.2
Living Wage (MIT Living Wage Calculator)	\$11.14 (Hourly)	\$11.79 (Hourly)

Beaufort County Largest Employers (100+)

Rank	Company	Industry	Employment
1	Beaufort County Schools	Education & Health Services	1000+
2	Pcs Phosphate Company Inc	Manufacturing	500-999
3	Vidant Medical Center	Education & Health Services	250-499
4	Flanders Airpure Nc Division	Manufacturing	250-499
5	Wal-Mart Associates Inc	Trade, Transportation, & Utilities	250-499
6	Austin Maintenance And Construction	Professional & Business Services	250-499
7	County Of Beaufort	Public Administration	250-499
8	Beaufort County Community College	Education & Health Services	250-499
9	City Of Washington	Public Administration	250-499
10	Executive Personnel Group Utc	Professional & Business Services	100-249
11	Food Lion	Trade, Transportation, & Utilities	100-249
12	The Mega Force Staffing Group Inc	Professional & Business Services	100-249
13	Clarcor Engine Mobile Solutions Utc	Manufacturing	100-249
14	Flanders Solutions Utc	Manufacturing	100-249
15	Principle Long Term Care Inc	Education & Health Services	100-249
16	Hackney Kidron	Manufacturing	100-249
17	Lowes Home Centers Inc	Trade, Transportation, & Utilities	100-249
18	New South Bank	Financial Activities	100-249
19	Idx Impressions Utc	Manufacturing	100-249
20	Camfil Farr Inc	Manufacturing	100-249
21	Ridgewood Rehabilitation And Living	Education & Health Services	100-249
22	Home Life Care Inc	Education & Health Services	100-249
23	Innosource Inc	Professional & Business Services	100-249
24	Sovereign Healthcare Utc	Education & Health Services	100-249

Beaufort County Transportation Projects



Beaufort County Transportation

Passenger Air

Warren Field is a general aviation, full-service airport operated by the City of Washington. It proudly serves corporate and recreational aviation flying in and out of Beaufort County.

Pitt-Greenville Airport is located less than 30 minutes from Beaufort County and offers flights via American Airlines to Charlotte Douglas International Airport.

Highways

Supporting the movement of people and things.

Highway US 264 East/West is a four-lane divided highway that connects Beaufort County to Greenville and beyond to I-95 and I-40.

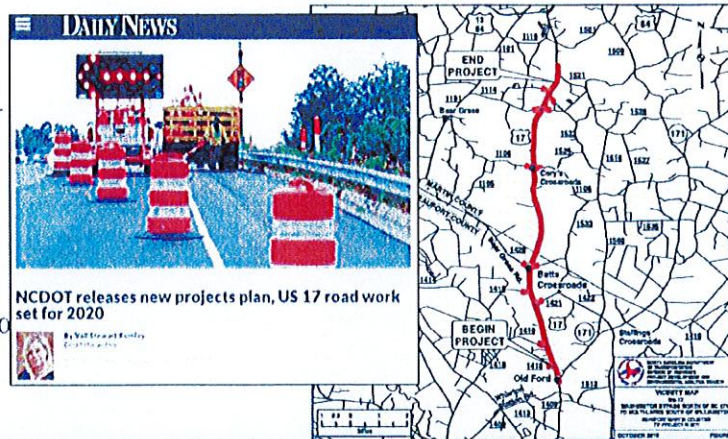
US 17 North/South is a four lane divided highway through Beaufort County and partially four-lane to parts of Norfolk, VA and Morehead City, NC.

Beaufort County Transportation Projects: R-2510/1

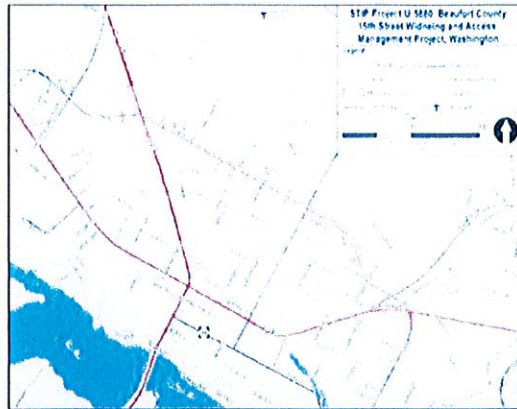
- Project includes expanding a 10-mile section of road that runs through Beaufort and Martin counties to four lanes.
- \$74 million project will improve travel and safety for commuters.

Timeline

- Buying ROW: 2018-19
- Project let: Summer of 2020
- Construction: Fall 2020

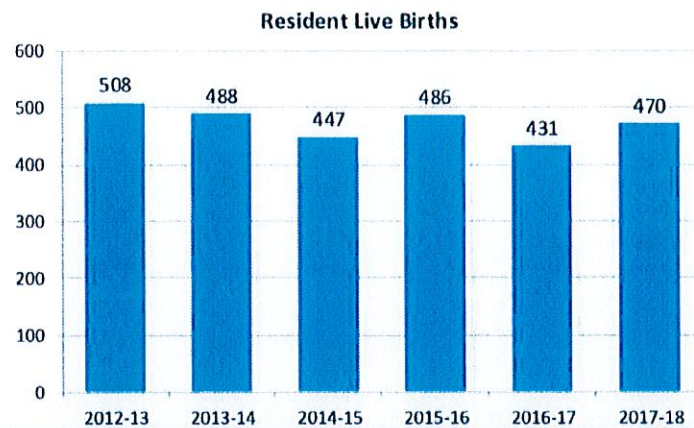


Beaufort County Transportation Projects: U-5860



- Project upgrades 1.8 miles of 15th Street in Washington – from west of U.S. 17 Business (Carolina Avenue) heading east to U.S. 264
- Includes a median and left-turn lanes
- Will increase safety and reduce congestion caused by vehicles waiting to turn left
- Total Project Cost: \$16.2M
- Constructed Estimated: 2019

Enrollment Forecast: Resident Live Births



With the objective in mind of working toward a K-12 10 year forecast and school-level 10 year forecast.

There are factors in addition to LUS that we need to fold into the forecast. Principally mean RLBs, historical ADM trends. Briefly examine these.

RLBs: No real pattern or discernable trend, but if looking farther back more of decline in last 10 years.

Enrollment Forecast: Membership History



Here membership history

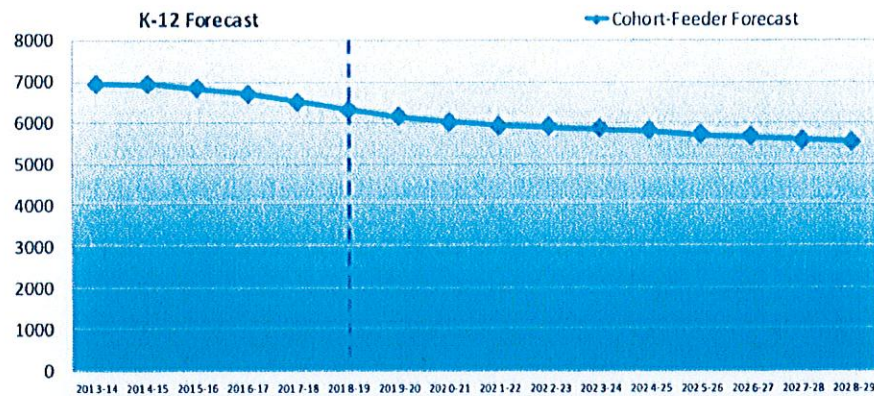
Steady decline over the past 5-6 years. Nearly 100 students per year.

Historically like many primarily rural districts in NC declining enrollment over this time period.

Question we consistently get, what about Charters? Not all charter growth, Wash Mont. 130 gain to 430. Not nearly enough to account for the general student population decline.

By combining all of these factors we are able to establish a 10-year enrollment forecast. The results of that analysis are shown here.

Enrollment Forecast: Membership Forecast



"We expect continued declines in membership over the next 10 years." Roughly 5500 by the tail end of the forecast.

Also have the capability to break that down at the school level.

Here's what it looks like when broken down at the school level.

Enrollment Forecast: Utilization Table

	Capacity	Month 1	Forecasted Month 2 ADM									
	2019-20	2019-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Elementary Schools												
Eastern Elementary (K-1)	704	650	650	650	650	650	650	650	650	650	650	650
Bain Elementary (K-8)	614	572	572	572	572	572	572	572	572	572	572	572
Chocomaity Primary (K-8)	656	572	572	572	572	572	572	572	572	572	572	572
John C. Taylor Elementary (2-3)	620	572	572	572	572	572	572	572	572	572	572	572
John Small Elementary (4-5)	652	572	572	572	572	572	572	572	572	572	572	572
Northeast Elementary (K-8)	684	572	572	572	572	572	572	572	572	572	572	572
S.W. Snowden Elementary (K-8)	428	150	150	150	150	150	150	150	150	150	150	150
Totals	4258	3181	3181	3181	3181	3181	3181	3181	3181	3181	3181	3181
Middle Schools												
Chocomaity Middle (5-8)	482	475	475	475	475	475	475	475	475	475	475	475
P.S. Jones Middle	910	820	820	820	820	820	820	820	820	820	820	820
Totals	1422	1295	1295	1295	1295	1295	1295	1295	1295	1295	1295	1295
High Schools												
Reaumur Co. Early College High	300	150	150	150	150	150	150	150	150	150	150	150
Northeast High	842	400	400	400	400	400	400	400	400	400	400	400
Southside High	853	400	400	400	400	400	400	400	400	400	400	400
Washington High	1325	600	600	600	600	600	600	600	600	600	600	600
Totals	3321	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
System Total	9001	6135	6135	6135	6135	6135	6135	6135	6135	6135	6135	6135

Utilization

Below 80%
Between 80% and 95%
Between 95% and 100%
Between 100% and 105%
Above 105%

1. 2018-19 Month 1 ADM provided by NCDEP
2. Capacities provided by Reaumur County Schools (8/2018)
3. Month 1, 2019

Created from Research and Education Technology
provided by Transportation Research and Education
North Carolina State University

Utilization table or sometimes OOC. Working left to right here... Coloring based on utilization at the given school. Dark green signifies moderate to severe underutilization.

Here numbers to dig into if you'd like. I would like to point your attention to the level totals which show.

By checking the bottom numbers only, only filling 2/3 of capacity. Specifically at high school 58% percentage, will be below 50% by end of forecast. In other words at the HS level you will have twice the space you'll actually need.

To look at one row, one school here, let's look at Snowden at under 40% utilization.

That's your information, like to take a step back and talk some about what we do.

Approach and Services: Optimization

- Optimal school sites and attendance zone scenarios are generated using Operations Research optimization algorithms.
- Model parameters such as building capacity and demographic balance indices may be adjusted to meet specific policy-defined criteria.
- New school siting and the feasibility of alternative building configurations can also be evaluated mathematically using Optimization. Facility configuration scenarios can be generated including examining consolidation possibilities.

In addition to the utilization table we offer other services in general. Here specifically related to optimization.

Typically that's if take one school offline how do the 3-4 around it compensate to absorb the AZ of the closing school. From a technical standpoint your results are similar than that.

Student Assignment Priorities

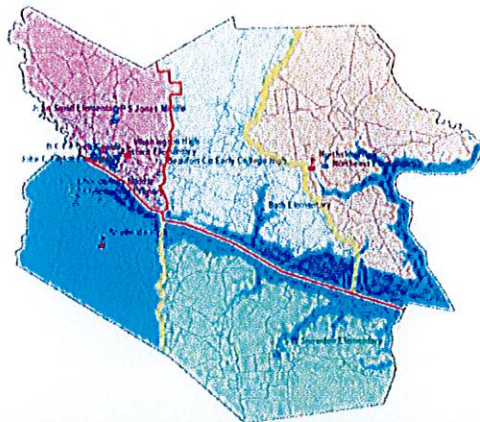
Typical assignment priorities:

- Balancing utilization
- Maximizing student proximity to schools
- Demographic balancing
- Maintaining feeder patterns
- Respecting neighborhoods
- Minimizing reassignment impact
- Facility age, condition, and security
- Access to programs
- Financial impact
- Mindfulness of family input
- Busing efficiency and logistics

If you as a collective get into redistricting, you will get into these assignment planning considerations and community concerns.

Optimization only one piece, can address some, really Priorities set by BoE

Current Attendance Boundaries 2018-19



Take a moment to acclimate, north of river... south of river

Starting with ES

Three to east are all K-8s.

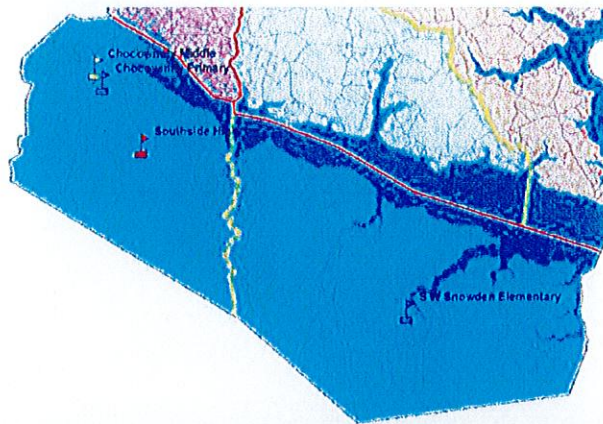
HS

Know distances from north to south 30, from east to west 30 miles

Looking at things geographically/spatially there were 3 options that became apparent.

That's what they are OPTIONS. Elaboration based on discussion.

Preliminary Assignment Scenario A



**Closure or repurposing
of Snowden (K-8)**

Division of Research and Educational Technology
institute for Learning and the Learning Environment
North Carolina State University

The first, preliminary scenario A. Closure of Snowden.

Very underutilized

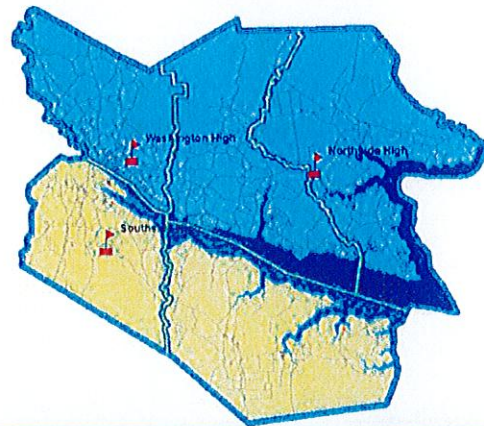
Remember it's a K-8 so split, some to Choc ES, some to Choc MS (5-8)

Reassign 160 students, still 70 seats to spare split between two Choc schools.

Other side of the coin, increased travel times.

Know distances, 20 miles between schools.

Preliminary Assignment Scenario B



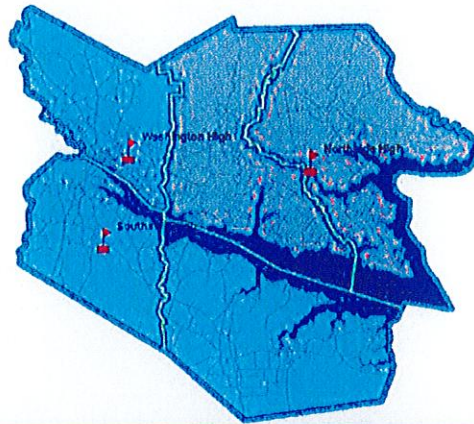
**Closure or repurposing
of Northside HS**

For reference, there are 16 miles between schools.

Reassign 400 students. After doing so there would be 50 seats to spare. Close to full utilization at Washington HS.

In some respects this works out well because you have one HS north, one south of the river.

Preliminary Assignment Scenario C



**Closure or repurposing
of Southside HS**

Operations Research and Education Laboratory
Institute for Transportation Research and Education
North Carolina State University

Similar to previous scenario 400 students, distances.

10 miles between schools. Some students up to 39 mile one-way travel.

Note utilization percentages

Shy away from this scenario due to LT growth potential from spillover from Pitt County.

Questions / Discussion

Beaufort County Schools IPSAC: Integrated Planning for School & Community

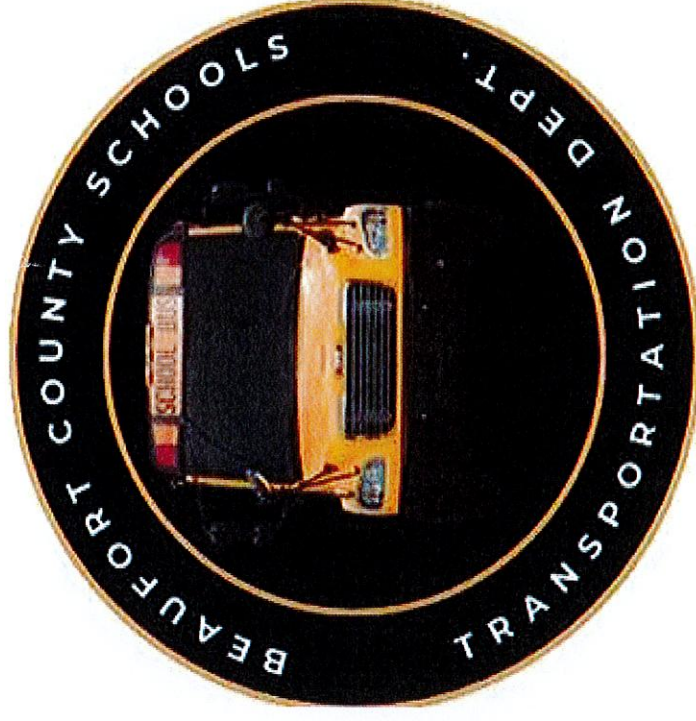
**OPERATIONS RESEARCH AND EDUCATION LABORATORY
INSTITUTE FOR TRANSPORTATION RESEARCH AND EDUCATION
CENTENNIAL CAMPUS @ NORTH CAROLINA STATE UNIVERSITY
MAY 2019**



Beaufort County Schools Transportation

CURRENT & FUTURE ROUTES
FOR SWS-SNOWDEN

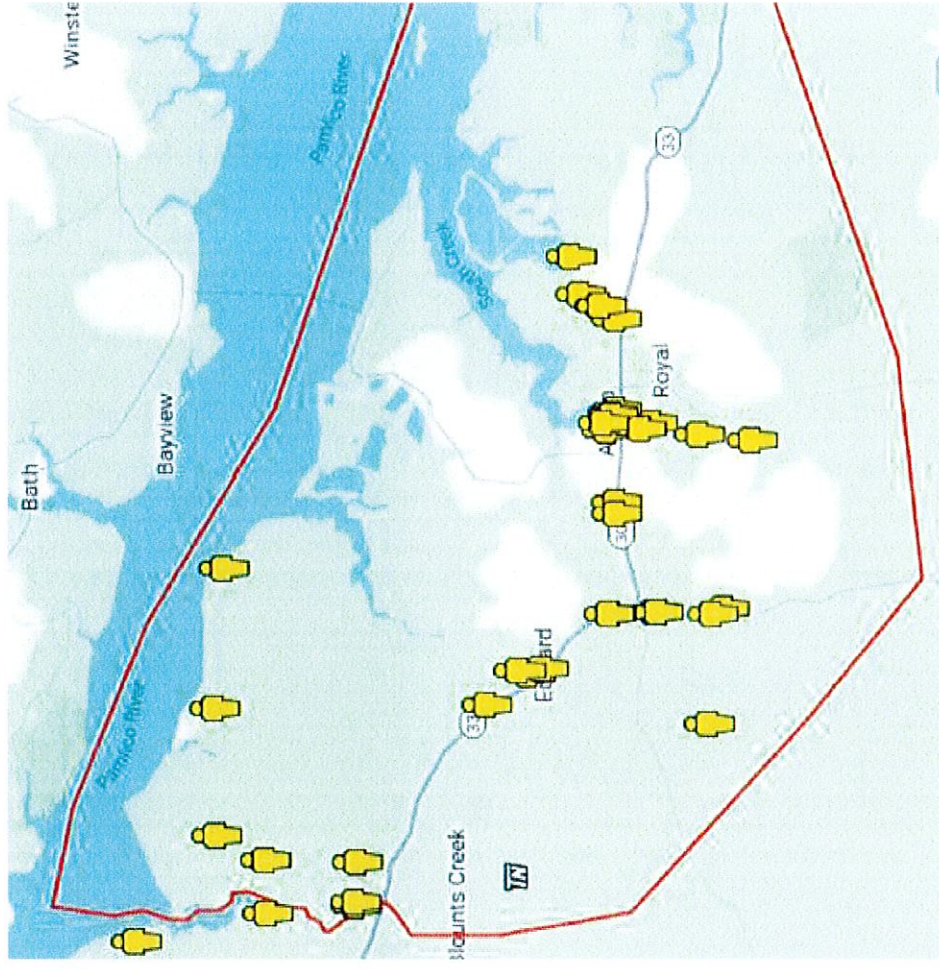
Exhibit E: Transportation



CURRENT SHS RIDE TIMES BUS 144 & 194

Students(45 Bus Riders)	AM	PM
Average Ride Time	53 Minutes	55 Minutes
12 Students	34 Minutes	33 Minutes
21 Students	52 Minutes	61 Minutes
9 Students	Up To 78 Minutes	78 Minutes
3 Students	Up To 82 Minutes	82 Minutes
Current Early\Late Stops	6:43 AM	4:56 PM

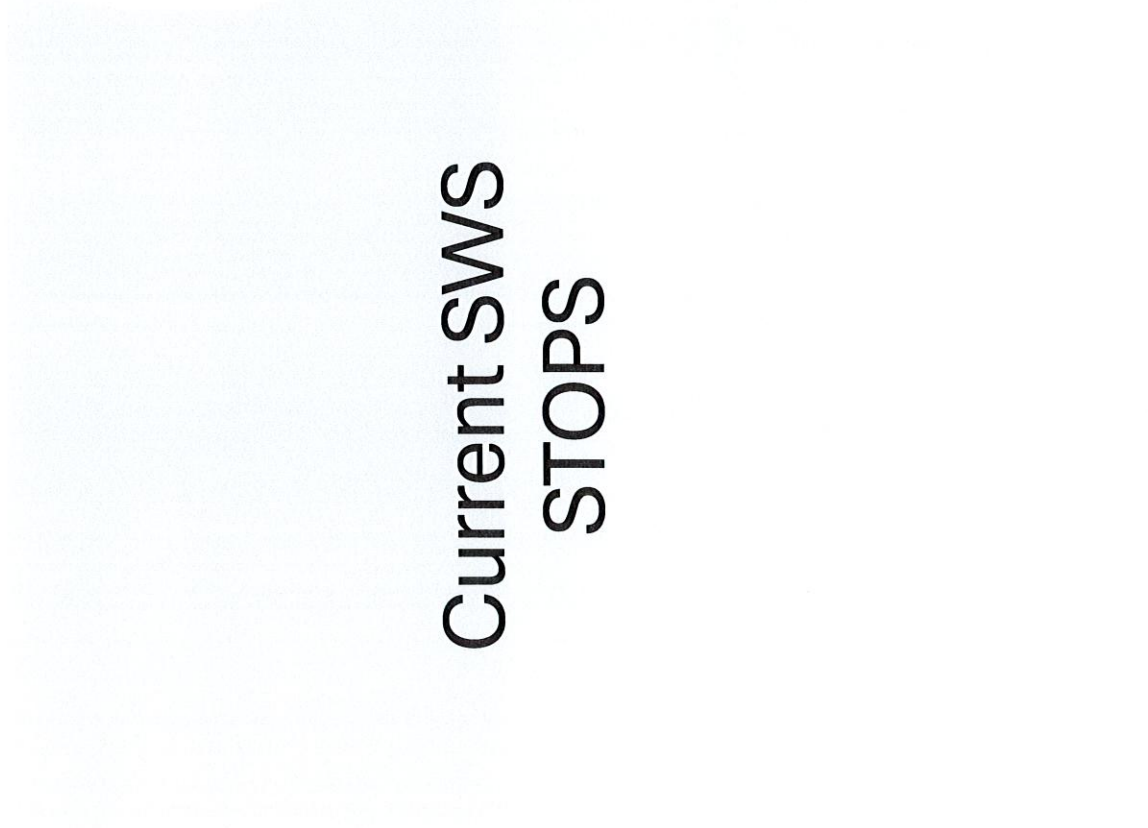
SHS BUS STOPS IN SWS DISTRICT



CURRENT SWS RIDE TIME

Students (110 Bus Riders)	AM	PM
Avg Ride Time	18 Minutes	35 Minutes
27 Students	5 Minutes	9.5 Minutes
56 Students	15 Minutes	33 Minutes
15 Students	Up To 34 Minutes	65 Minutes
12 Students	Up To 60 Minutes	75 Minutes
Current Early\Late Stops	6:43 AM	4:15 PM

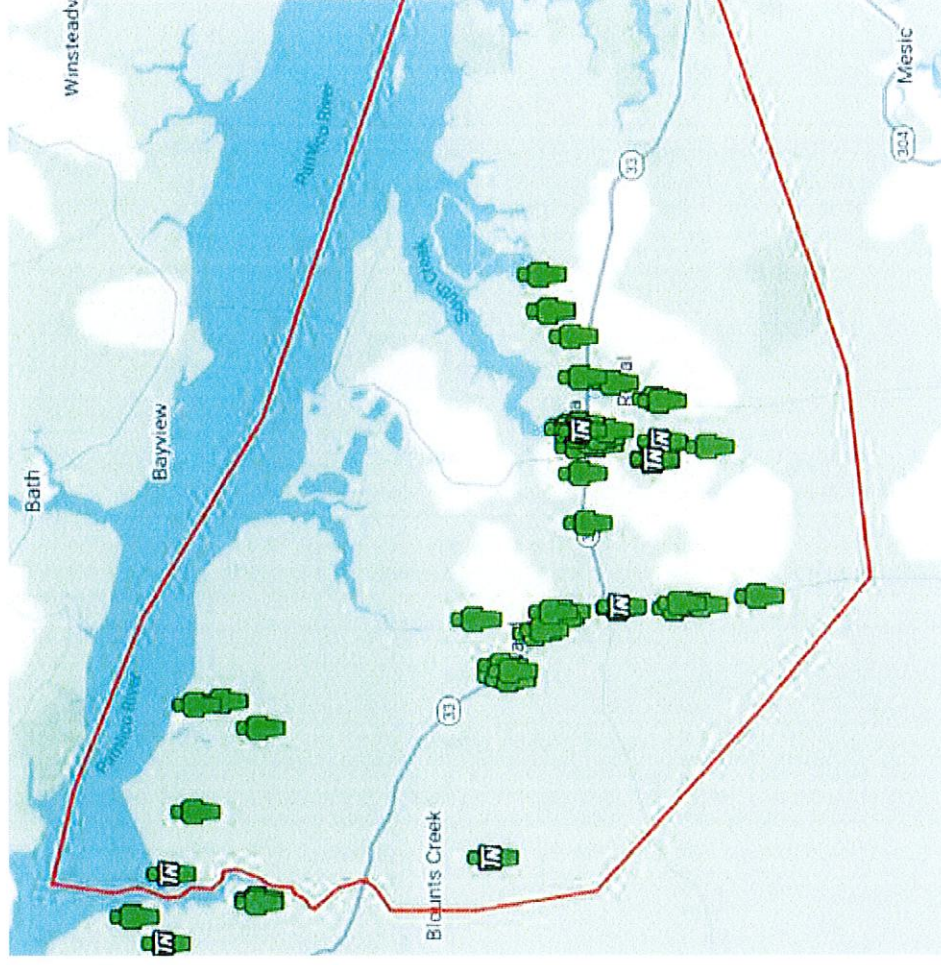
Current SWS STOPS



NEW CPS RIDE TIMES INCLUDING SWS STUDENTS

Students (60 Bus Riders)	AM	PM
Avg Ride Time	49 Minutes	52 Minutes
28 Students	42 Minutes	41 Minutes
13 Students	55 Minutes	56 Minutes
12 Students	Up To 63 Minutes	65 Minutes
7 Students	Up To 78 Minutes	79 Minutes
Current Early\Late Stops	6:06 AM	4:23 PM

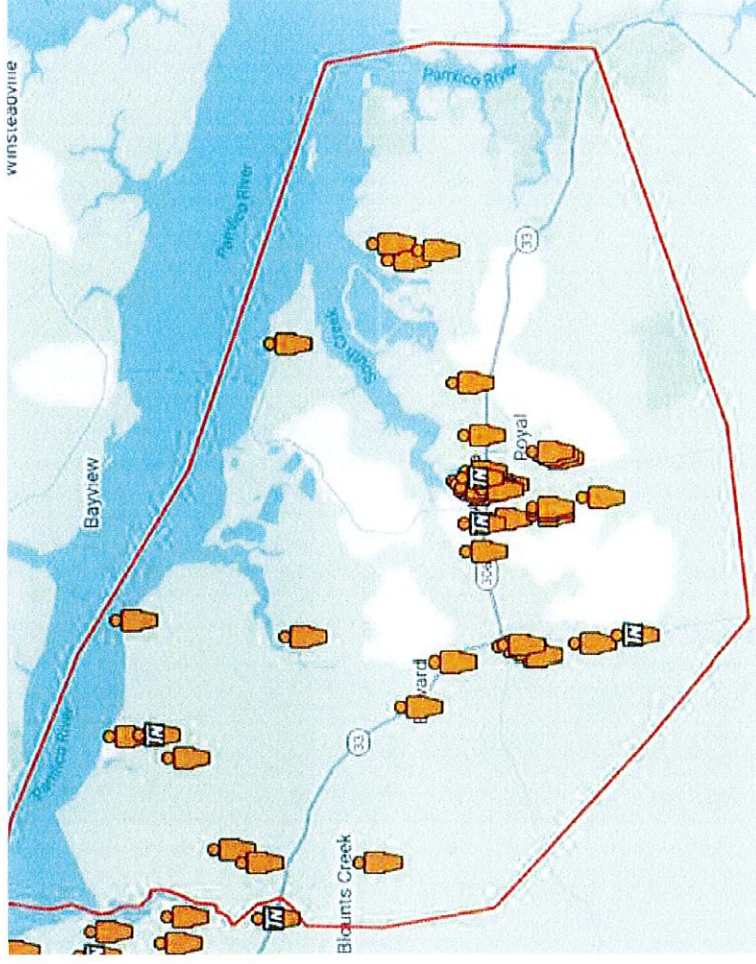
CPS STOPS IN SWS DISTRICT



NEW CMS RIDE TIMES INCLUDING SWS STUDENTS

Students (50 Bus Riders)		AM	PM
Avg Ride Time		56 Minutes	56 Minutes
9 Students		42 Minutes	41 Minutes
26 Students		55 Minutes	56 Minutes
6 Students	Up To	63 Minutes	65 Minutes
9 Students	Up To	78 Minutes	79 Minutes
Current Early\Late Stops		6:06 AM	4:23 PM

CMS STOPS IN SWS DISTRICT



RIDE TIME DIFFERENCE

Students (110)	AM	PM	
Avg %	34 Minutes	19 Minutes	Avg Ride Time Increase of 34min AM and 19min PM
25%	22 Minutes	-1 Minute	25% of students see an AM Increase of 22min or Less
50%	44 Minutes	22 Minutes	50% of student see AM Increase of 44min or Less
75%	51 Minutes	52 Minutes	75% increase of 51min or Less
Max	60 Minutes	60 Minutes	Max Increase of 60min

Questions??

Thank you!!

