

Chatham County Schools

2024-25 OREd Land Use Study

Planning for the Future

OPERATIONS RESEARCH AND EDUCATION LABORATORY
INSTITUTE FOR TRANSPORTATION RESEARCH AND EDUCATION
CENTENNIAL CAMPUS @ NORTH CAROLINA STATE UNIVERSITY
FEBRUARY 25TH, 2025



Institute for Transportation Research and Education (ITRE)

**Joint Meeting of the
Chatham County
Board of Education
and
County Commissioners**
February 25, 2025

- About ITRE and OREd
- Land Use Study
 - Process and Results
- Membership Forecast
 - Data and Assumptions
 - Results
- Out-of-Capacity Tables
- Discussion / Questions and Answers



About ITRE and OREd

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



About ITRE and OREd

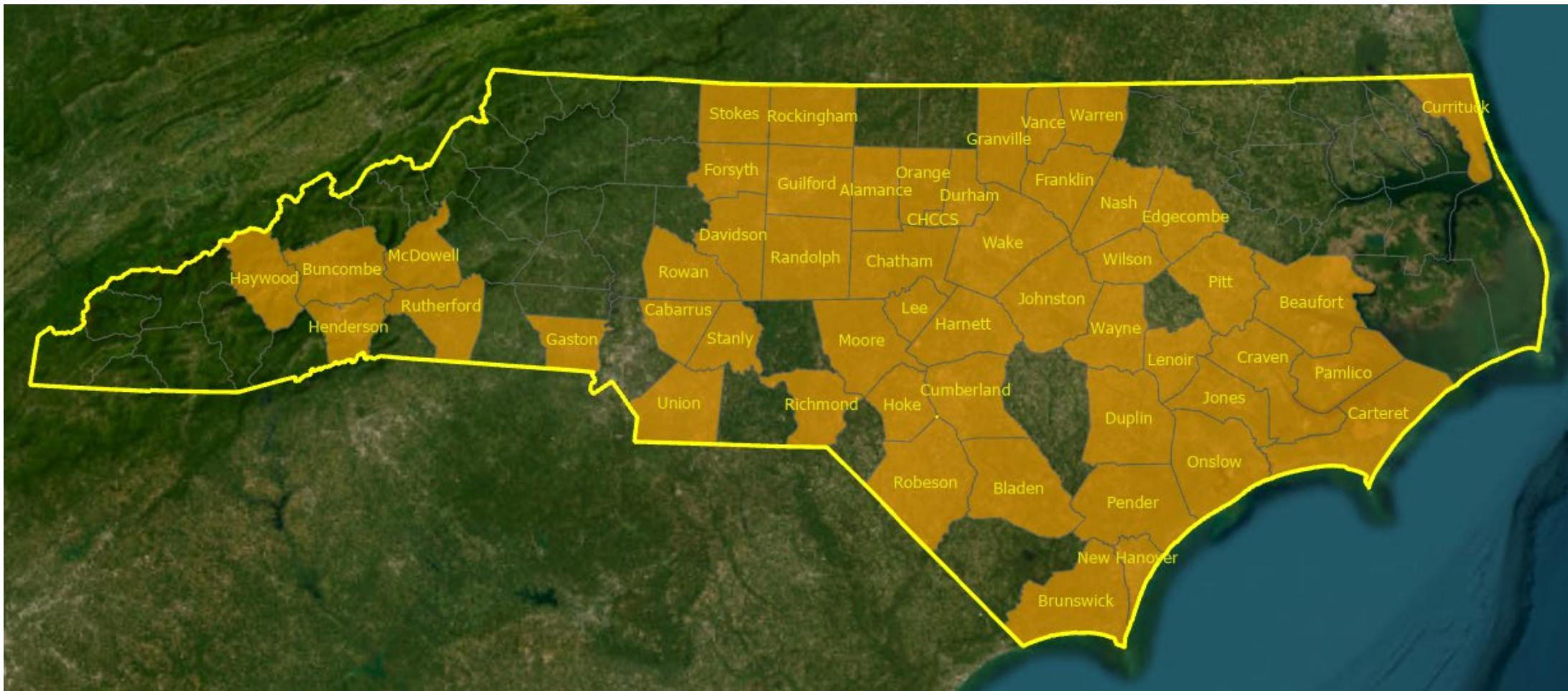


OREd guides districts through data-driven solutions and policies using **stakeholder interviews, GIS analysis, mathematical modeling, and applied decision science.**

OREd is an unbiased, third-party evaluation research group that helps to depoliticize the school planning process.

www.itre.ncsu.edu/OREd

Overview: Client List (1990-2025)



OREd and Chatham County Schools

OREd has been a partner in school planning for Chatham County Schools since 2003 and has assisted CCS staff in the opening of four new schools – Virginia Cross ES, Margaret B. Pollard MS, Chatham Grove ES, and Seaforth HS.

2024-25 Month-1 K-12 PMR = 8,775

2024-25 K-12 Membership Forecast
(2023-24 IPSAC Update, 1/17/2024) = 8,826 (error: 0.58%)

2024-25 Principal's Monthly Report data provided by CCS (12/2024)



Land Use Study: Interview Roster

	Name	Title
County Leadership and Planning		
Chatham County	Jason Sullivan	Planning Director
	Chance Mullis	Assistant Planning Director
	Hunter Glenn	Planner II /(Goldston)
Municipal Leadership and Planning		
Town of Pittsboro	Randy Cahoon-Tingle	Planning Director
Town of Siler City	Timothy Mack	Director of Planning & Community Development
Town of Cary	Maika Arnold	Senior Planner
Town of Cary	Justin Oliver	GIS Specialist
Community Stakeholders		
Central Pines Rural Planning Organization	Karyl Fuller	Principal Planner / RPO Director
Capital Area Metropolitan Planning Organization (CAMPO)	Gerald Daniel	Transportation Modeling Engineer
Chatham County Economic Development Corporation	Michael Smith	President
TriRiver Water	Nick Fortune	Civil Engineer – Asset Manager
Preston Development – Chatham Park	Vanessa Jenkins	Senior Executive Vice President
Preston Development – Chatham Park	Chuck Smith	Vice President of Planning

Land Use Study: Factors

■ Residential Development

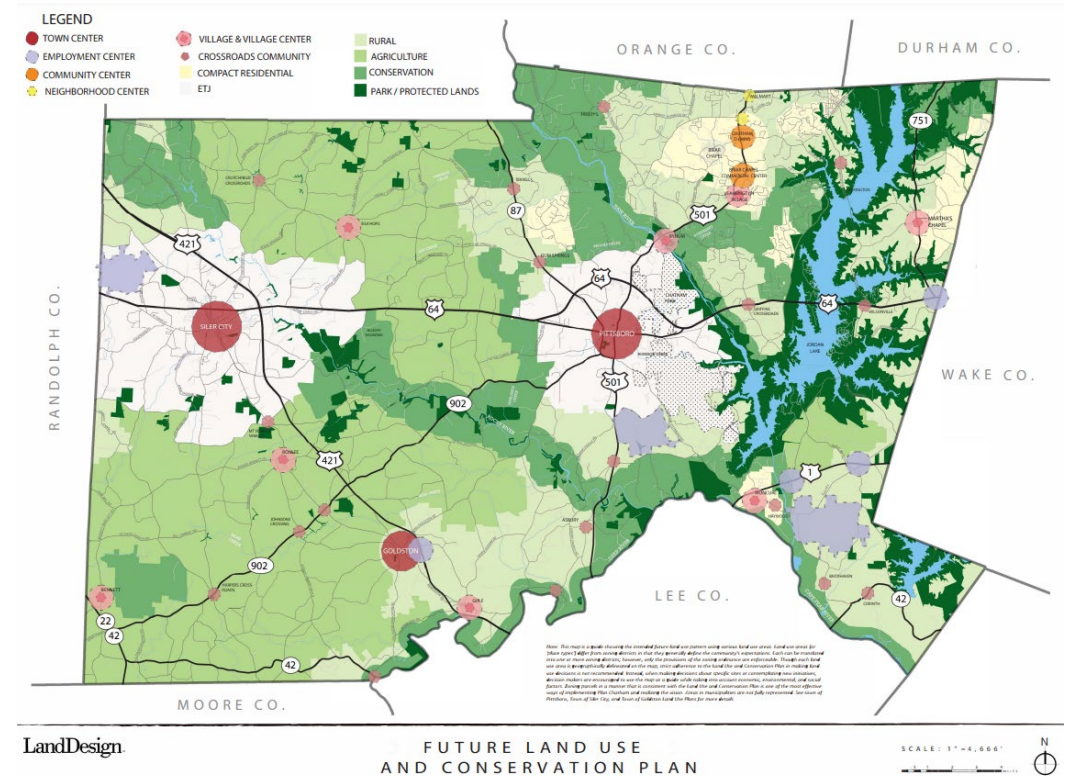
- Significant pace of development, despite sewer constraints
- New developments continue to be proposed & planned
- Expect significant growth upon completion of sewer improvements in 2027

■ Commercial & Industrial Development

- WolfSpeed
- VinFast
- FedEx, Innovative Construction Group, MetOx

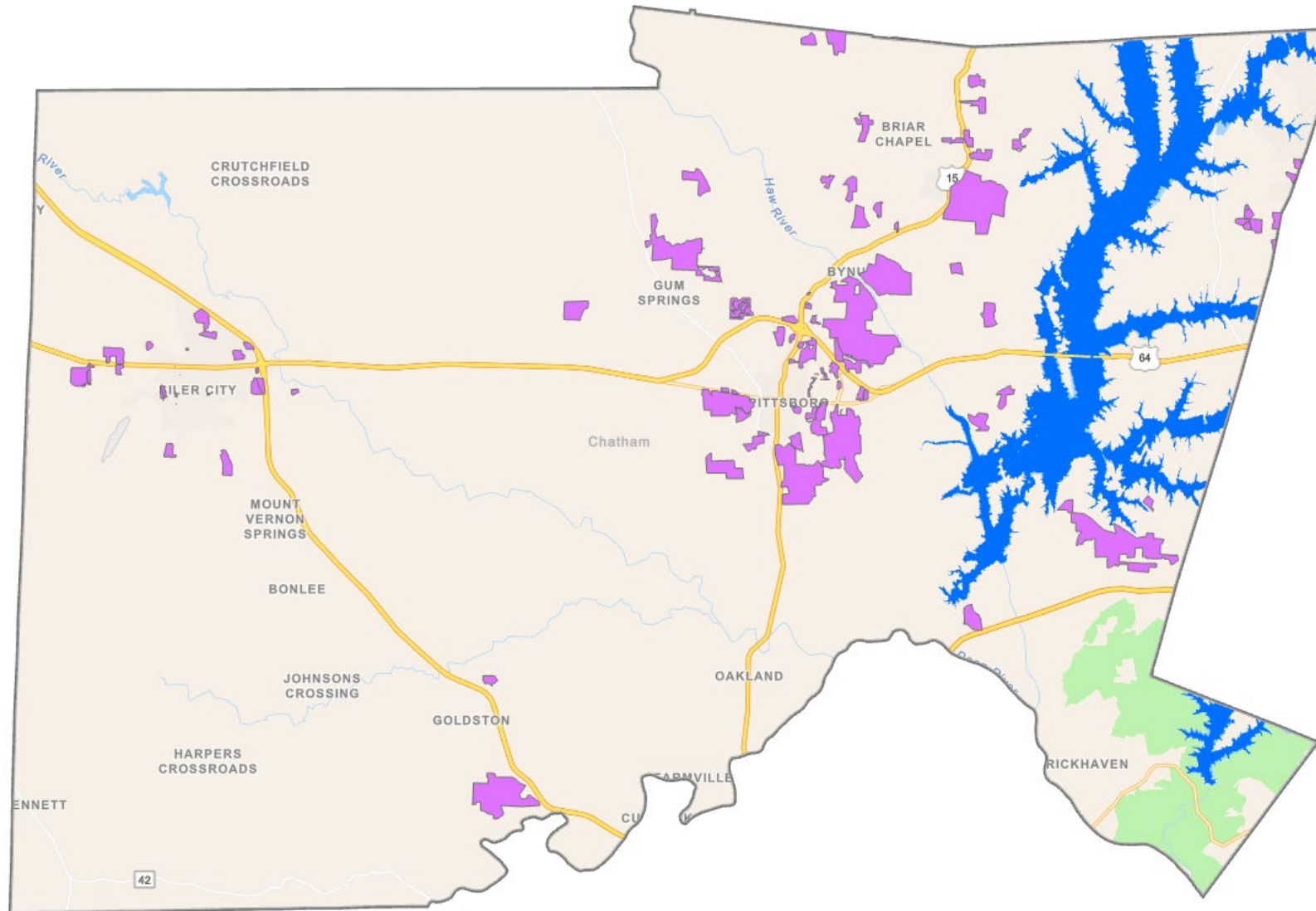
■ Infrastructure

- TriRiver Water
- Sewer Improvements (2027)

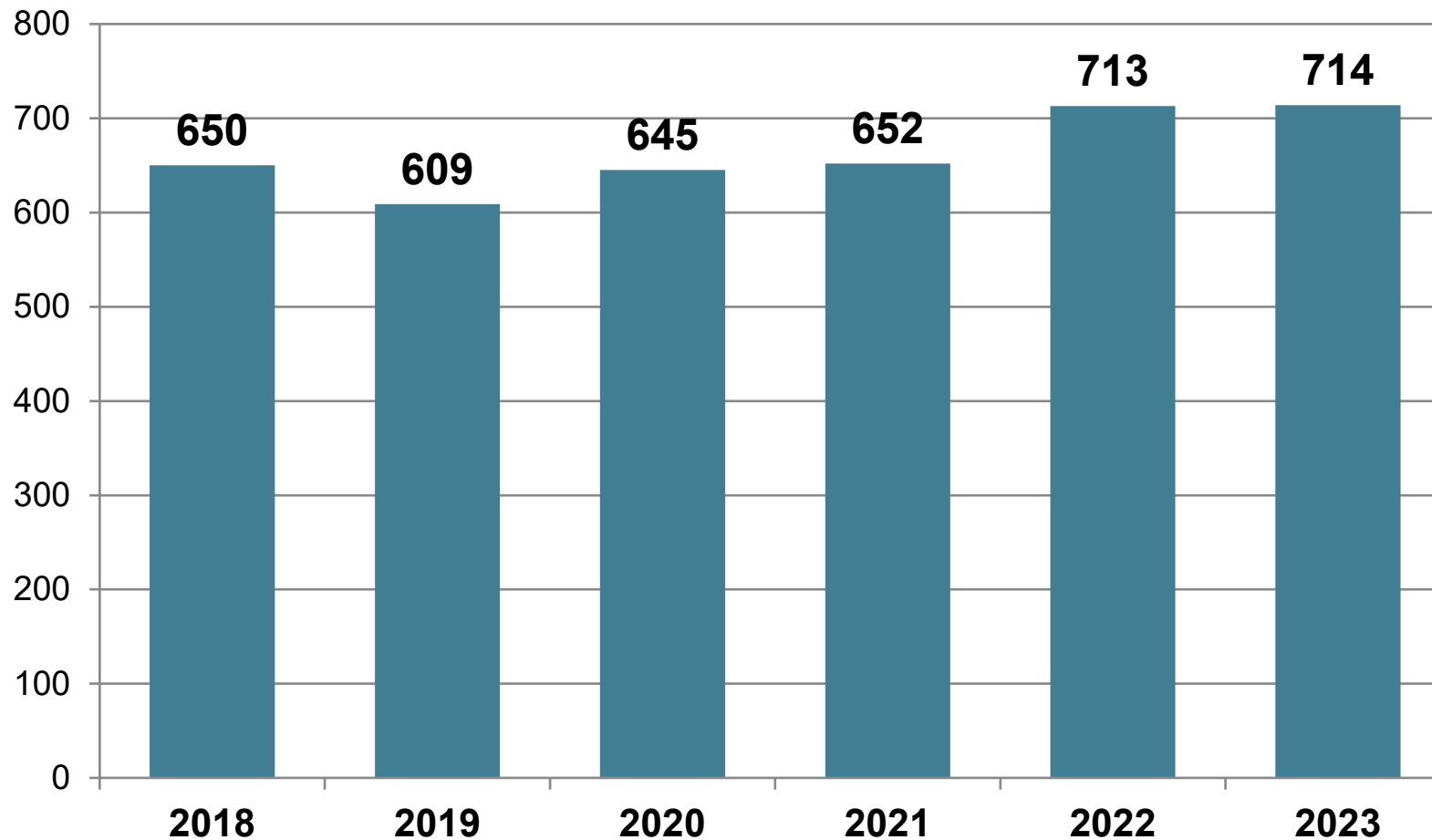


Chatham County Future Land Use and Conservation Plan

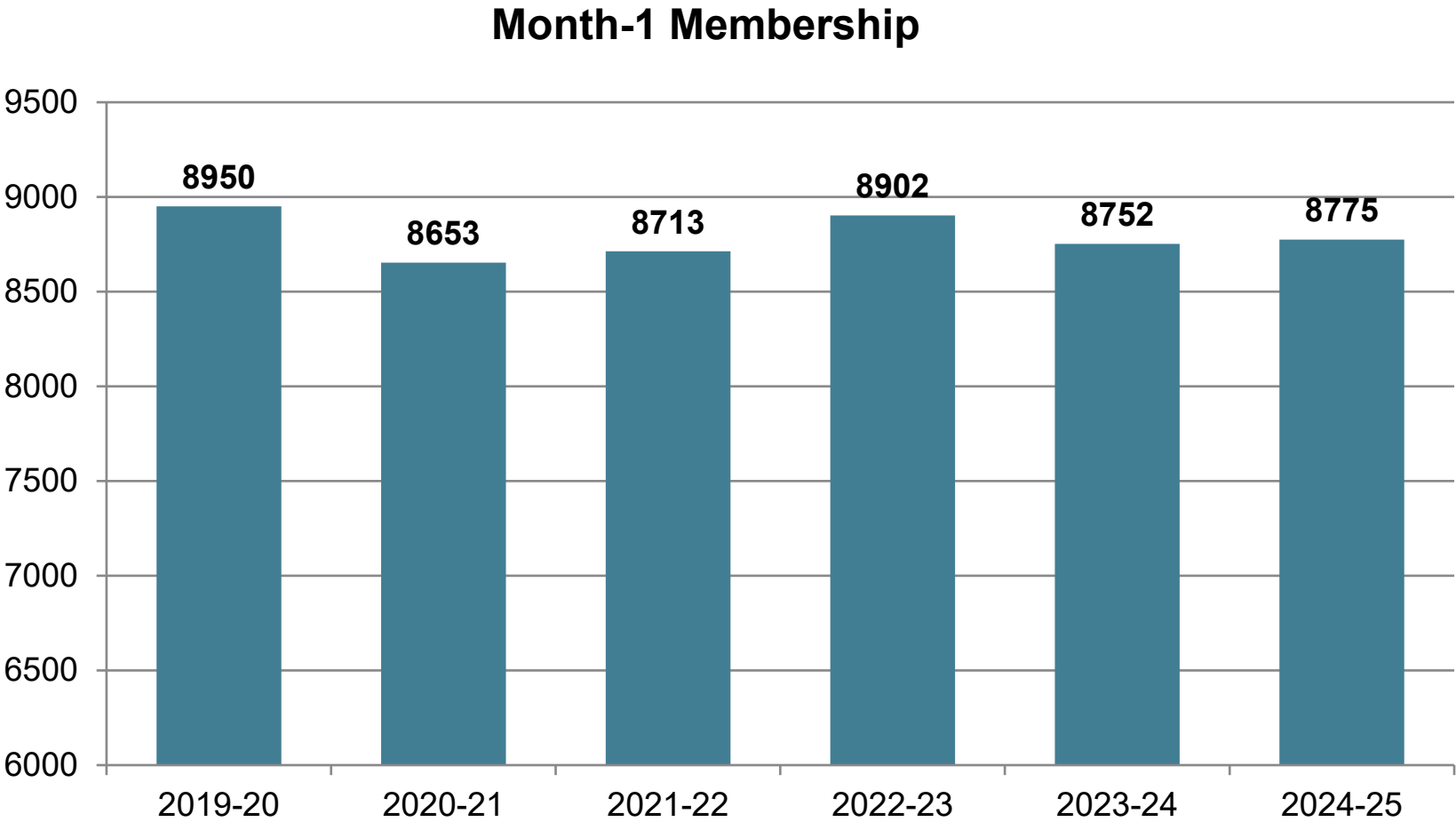
Land Use Study: Development Inventory



Membership Forecast: Resident Live Births



Membership Forecast: Membership History



Membership Forecast: Chatham Park Case Study

OREd has conducted an enrollment forecast based on:

1. Development timing information obtained directly from Chatham Park. Lot counts for each year broken down by lot widths for each of seven development phases through 2040.
2. Students per developed lot estimates were modeled from an in-depth case study of Briar Chapel over its development timeline.

Brick-and-Mortar Out-of-Capacity Table

Elementary Schools (K-5 / K-8)

Bennett School
Bonlee School
Chatham Grove Elementary
J S Waters School
Moncure School
North Chatham Elementary
Perry W Harrison Elementary
Pittsboro Elementary
Siler City Elementary
Silk Hope School
Virginia Cross Elementary

Totals

Capacities		Month-1	Forecasted Month-1 ADM									
2025-26	Pre-K Adj.	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
212	190	177	180	189	188	183	177	180	190	191	192	195
344	344	290	294	279	291	285	276	277	275	265	275	278
750	728	667	651	651	646	653	660	680	695	696	686	693
403	403	222	221	228	234	233	234	246	247	241	248	253
444	444	176	172	168	171	179	184	201	225	251	273	297
548	548	554	547	549	552	562	580	607	623	639	648	661
614	574	243	246	262	268	271	274	271	281	283	280	283
654	594	463	461	470	473	478	503	533	561	599	634	664
587	587	560	555	546	543	530	538	563	600	633	669	698
344	344	274	281	287	295	301	306	305	316	315	321	327
801	721	461	451	453	442	449	449	473	498	527	547	571
5701	5477	4087	4060	4083	4103	4124	4183	4337	4509	4639	4775	4919

Middle Schools (6-8 / 5-8)

Chatham Middle
George Moses Horton Middle
Margaret B. Pollard Middle

Totals

582	582	513	531	537	537	519	510	504	528	550	572	603
816	816	414	424	421	429	439	425	437	436	451	495	536
748	748	736	776	793	807	790	804	787	791	804	830	839
2146	2146	1663	1730	1751	1773	1749	1739	1728	1755	1805	1897	1978

High Schools (9-12)

Chatham Central High
Jordan Matthews High
Northwood High
Seaforth High
Chatham Center For Innovation

Totals

715	715	319	285	299	297	323	342	328	344	360	335	339
924	924	837	755	722	718	714	744	773	820	870	934	980
1025	1025	628	640	648	675	691	713	720	739	782	796	811
1200	1200	1086	1085	1067	1056	1086	1089	1088	1081	1092	1079	1076
264	264	146	146	146	146	146	146	146	146	146	146	146
4128	4128	3016	2911	2882	2892	2959	3034	3056	3130	3249	3290	3353
11975	11751	8766	8701	8716	8768	8832	8955	9120	9395	9693	9962	10250

System Total

Utilization

< 95%

95% - 100%

100% - 105%

> 105%

1. 2024-25 Month-1 PMR provided by CCS.
2. Capacities provided by Chatham County Schools (1/2024), mobile units not included.
3. Pre-K impact included. Each classroom dedicated to Pre-K or other non-school use reduces school capacity by 20 at elementary schools, by 22 at Pre-K to 8th schools, and by 26 at Middle and High schools.

Note: Modular classrooms add school capacity by 20 at elementary schools, by 22 at Pre-K to 8th schools, and by 26 at Middle and High schools.



Brick-and-Mortar Out-of-Capacity Table (with Chatham Park)

Elementary Schools (K-5 / K-8)

Bennett School
Bonlee School
Chatham Grove Elementary
J S Waters School
Moncure School
North Chatham Elementary
Perry W Harrison Elementary
Pittsboro Elementary
Siler City Elementary
Silk Hope School
Virginia Cross Elementary

Totals

Middle Schools (6-8 / 5-8)

Chatham Middle
George Moses Horton Middle
Margaret B. Pollard Middle

Totals

High Schools (9-12)

Chatham Central High
Jordan Matthews High
Northwood High
Seaforth High
Chatham Center For Innovation

Totals

System Total

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2025-26	Pre-K Adj.	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
212	190	177	180	189	188	183	177	180	190	191	192	195
344	344	290	294	279	291	285	276	277	275	265	275	278
750	728	667	651	651	646	653	660	680	695	696	686	693
403	403	222	221	228	234	233	234	246	247	241	248	253
444	444	176	193	216	297	401	506	704	905	1159	1377	1601
548	548	554	547	549	552	562	580	607	623	639	648	661
614	574	243	293	410	584	671	860	1009	1152	1310	1392	1520
654	594	463	461	470	473	478	503	533	561	599	634	664
587	587	560	555	546	543	530	538	563	600	633	669	698
344	344	274	281	287	295	301	306	305	316	315	321	327
801	721	461	451	453	442	449	449	473	498	527	547	571
5701	5477	4087	4129	4279	4545	4747	5090	5578	6060	6575	6990	7460

582	582	513	531	537	537	519	510	504	528	550	572	603
816	816	414	437	475	545	586	639	707	755	827	902	989
748	748	736	776	793	807	790	804	787	791	804	830	839
2146	2146	1663	1744	1805	1889	1895	1953	1998	2074	2181	2304	2431

715	715	319	285	299	297	323	342	328	344	360	335	339
924	924	837	755	722	718	714	744	773	820	870	934	980
1025	1025	628	648	688	766	806	884	937	995	1085	1125	1178
1200	1200	1086	1089	1078	1084	1135	1159	1198	1230	1291	1321	1362
264	264	146	146	146	146	146	146	146	146	146	146	146
4128	4128	3016	2923	2933	3010	3123	3275	3383	3535	3752	3861	4006

11975	11751	8766	8796	9017	9444	9765	10319	10959	11670	12508	13155	13896
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Utilization

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Serviceable Out-of-Capacity Table

Elementary Schools (K-5 / K-8)

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Bonlee School
Chatham Grove Elementary
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Moncure School
North Chatham Elementary
Perry W Harrison Elementary
Pittsboro Elementary
Siler City Elementary
Silk Hope School
Virginia Cross Elementary

Totals

Middle Schools (6-8 / 5-8)

Chatham Middle
George Moses Horton Middle
Margaret B. Pollard Middle

Totals

High Schools (9-12)

Chatham Central High
Jordan Matthews High
Northwood High
Seaforth High
Chatham Center For Innovation

Totals

System Total

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2025-26	Pre-K Adj.	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
256	234	177	180	189	188	183	177	180	190	191	192	195
432	432	290	294	279	291	285	276	277	275	265	275	278
750	728	667	651	651	646	653	660	680	695	696	686	693
425	425	222	221	228	234	233	234	246	247	241	248	253
444	444	176	172	168	171	179	184	201	225	251	273	297
808	748	554	547	549	552	562	580	607	623	639	648	661
734	694	243	246	262	268	271	274	271	281	283	280	283
674	614	463	461	470	473	478	503	533	561	599	634	664
807	767	560	555	546	543	530	538	563	600	633	669	698
432	432	274	281	287	295	301	306	305	316	315	321	327
801	721	461	451	453	442	449	449	473	498	527	547	571
6563	6239	4087	4060	4083	4103	4124	4183	4337	4509	4639	4775	4919

686	686	513	531	537	537	519	510	504	528	550	572	603
842	842	414	424	421	429	439	425	437	436	451	495	536
904	904	736	776	793	807	790	804	787	791	804	830	839
2432	2432	1663	1730	1751	1773	1749	1739	1728	1755	1805	1897	1978

715	715	319	285	299	297	323	342	328	344	360	335	339
1080	1080	837	755	722	718	714	744	773	820	870	934	980
1389	1389	628	640	648	675	691	713	720	739	782	796	811
1200	1200	1086	1085	1067	1056	1086	1089	1088	1081	1092	1079	1076
264	264	146	146	146	146	146	146	146	146	146	146	146
4648	4648	3016	2911	2882	2892	2959	3034	3056	3130	3249	3290	3353

13643	13319	8766	8701	8716	8768	8832	8955	9120	9395	9693	9962	10250
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Moncure School
North Chatham Elementary
Perry W Harrison Elementary
Pittsboro Elementary
Siler City Elementary
Silk Hope School
Virginia Cross Elementary

Totals

Middle Schools (6-8 / 5-8)

Chatham Middle
George Moses Horton Middle
Margaret B. Pollard Middle

Totals

High Schools (9-12)

Chatham Central High
Jordan Matthews High
Northwood High
Seaforth High
Chatham Center For Innovation

Totals

System Total

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444	444	176	193	216	297	401	506	704	905	1159	1377	1601
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734	694	243	293	410	584	671	860	1009	1152	1310	1392	1520
674	614	463	461	470	473	478	503	533	561	599	634	664
807	767	560	555	546	543	530	538	563	600	633	669	698
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801	721	461	451	453	442	449	449	473	498	527	547	571
6563	6239	4087	4129	4279	4545	4747	5090	5578	6060	6575	6990	7460

686	686	513	531	537	537	519	510	504	528	550	572	603
842	842	414	437	475	545	586	639	707	755	827	902	989
904	904	736	776	793	807	790	804	787	791	804	830	839
2432	2432	1663	1744	1805	1889	1895	1953	1998	2074	2181	2304	2431

715	715	319	285	299	297	323	342	328	344	360	335	339
1080	1080	837	755	722	718	714	744	773	820	870	934	980
1389	1389	628	648	688	766	806	884	937	995	1085	1125	1178
1200	1200	1086	1089	1078	1084	1135	1159	1198	1230	1291	1321	1362
264	264	146	146	146	146	146	146	146	146	146	146	146
4648	4648	3016	2923	2933	3010	3123	3275	3383	3535	3752	3861	4006

13643	13319	8766	8796	9017	9444	9765	10319	10959	11670	12508	13155	13896
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Brick-and-Mortar Out-of-Capacity Table (with Chatham Park) by Zone

Chatham Central Zone

Bennett School
Bonlee School
J S Waters School
Chatham Central High

Totals

Capacities		Month-1	Forecasted Month-1 ADM									
2025-26	Pre-K Adj.	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
212	190	177	180	189	188	183	177	180	190	191	192	195
344	344	290	294	279	291	285	276	277	275	265	275	278
403	403	222	221	228	234	233	234	246	247	241	248	253
715	715	319	285	299	297	323	342	328	344	360	335	339
1674	1652	1008	980	996	1010	1024	1029	1032	1056	1057	1051	1065

Jordan Matthews Zone

Siler City Elementary
Virginia Cross Elementary
Silk Hope School
Chatham Middle
Jordan Matthews High

Totals

587	587	560	555	546	543	530	538	563	600	633	669	698
801	721	461	451	453	442	449	449	473	498	527	547	571
344	344	274	281	287	295	301	306	305	316	315	321	327
582	582	513	531	537	537	519	510	504	528	550	572	603
924	924	837	755	722	718	714	744	773	820	870	934	980
3238	3158	2645	2574	2545	2535	2512	2547	2618	2761	2894	3043	3179

Northwood/Seaforth Zone

Perry W Harrison Elementary
Chatham Grove Elementary
North Chatham Elementary
Pittsboro Elementary
Moncure School
George Moses Horton Middle
Margaret B. Pollard Middle
Northwood High
Seaforth High

Totals

System Total

614	574	243	293	410	584	671	860	1009	1152	1310	1392	1520
750	728	667	651	651	646	653	660	680	695	696	686	693
548	548	554	547	549	552	562	580	607	623	639	648	661
654	594	463	461	470	473	478	503	533	561	599	634	664
444	444	176	193	216	297	401	506	704	905	1159	1377	1601
816	816	414	437	475	545	586	639	707	755	827	902	989
748	748	736	776	793	807	790	804	787	791	804	830	839
1025	1025	628	648	688	766	806	884	937	995	1085	1125	1178
1200	1200	1086	1089	1078	1084	1135	1159	1198	1230	1291	1321	1362
6799	6677	4967	5097	5330	5753	6083	6597	7163	7707	8411	8915	9506
11711	11487	8620	8650	8871	9298	9619	10173	10813	11524	12362	13009	13750

Utilization

< 95%

95% - 100%

100% - 105%

> 105%

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Serviceable Out-of-Capacity Table (with Chatham Park) by Zone

Chatham Central Zone

Bennett School
Bonlee School
J S Waters School
Chatham Central High

Totals

Capacities		Month-1	Forecasted Month-1 ADM									
2025-26	Pre-K Adj.	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
256	234	177	180	189	188	183	177	180	190	191	192	195
432	432	290	294	279	291	285	276	277	275	265	275	278
425	425	222	221	228	234	233	234	246	247	241	248	253
715	715	319	285	299	297	323	342	328	344	360	335	339
1828	1806	1008	980	996	1010	1024	1029	1032	1056	1057	1051	1065

Jordan Matthews Zone

Siler City Elementary
Virginia Cross Elementary
Silk Hope School
Chatham Middle
Jordan Matthews High

Totals

807	767	560	555	546	543	530	538	563	600	633	669	698
801	721	461	451	453	442	449	449	473	498	527	547	571
432	432	274	281	287	295	301	306	305	316	315	321	327
686	686	513	531	537	537	519	510	504	528	550	572	603
1080	1080	837	755	722	718	714	744	773	820	870	934	980
3806	3686	2645	2574	2545	2535	2512	2547	2618	2761	2894	3043	3179

Northwood/Seaforth Zone

Perry W Harrison Elementary
Chatham Grove Elementary
North Chatham Elementary
Pittsboro Elementary
Moncure School
George Moses Horton Middle
Margaret B. Pollard Middle
Northwood High
Seaforth High

Totals

System Total

734	694	243	293	410	584	671	860	1009	1152	1310	1392	1520
750	728	667	651	651	646	653	660	680	695	696	686	693
808	748	554	547	549	552	562	580	607	623	639	648	661
674	614	463	461	470	473	478	503	533	561	599	634	664
444	444	176	193	216	297	401	506	704	905	1159	1377	1601
842	842	414	437	475	545	586	639	707	755	827	902	989
904	904	736	776	793	807	790	804	787	791	804	830	839
1389	1389	628	648	688	766	806	884	937	995	1085	1125	1178
1200	1200	1086	1089	1078	1084	1135	1159	1198	1230	1291	1321	1362
7745	7563	4967	5097	5330	5753	6083	6597	7163	7707	8411	8915	9506
13379	13055	8620	8650	8871	9298	9619	10173	10813	11524	12362	13009	13750

Utilization

< 95%

95% - 100%

100% - 105%

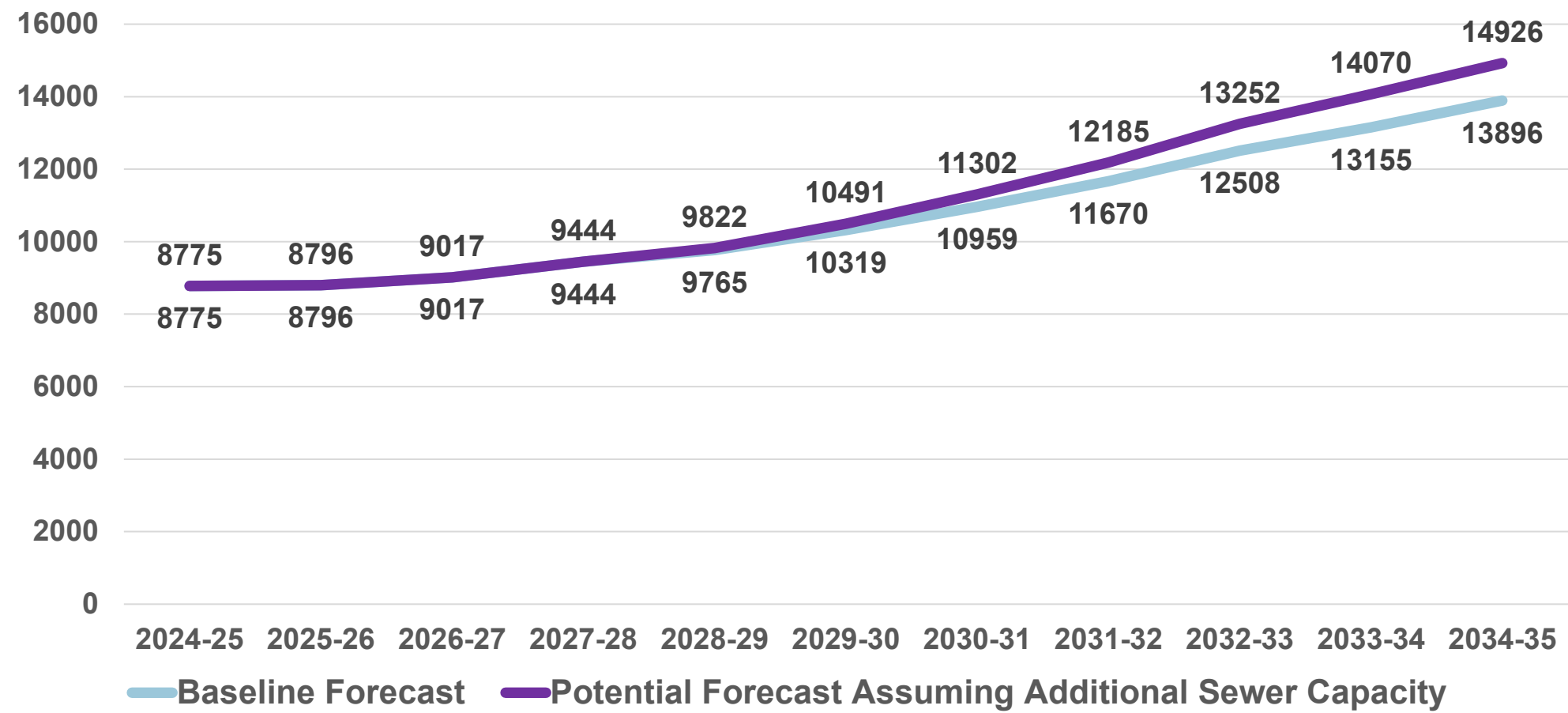
> 105%

1. 2024-25 Month-1 PMR provided by CCS.
2. Capacities provided by Chatham County Schools (1/2024), mobile units not included.
3. Includes the forecasted impact of Chatham Park.
4. Pre-K impact included. Each classroom dedicated to Pre-K or other non-school use reduces school capacity by 20 at elementary schools, by 22 at Pre-K to 8th schools, and by 26 at Middle and High schools.

Note: Modular classrooms add school capacity by 20 at elementary schools, by 22 at Pre-K to 8th schools, and by 26 at Middle and High schools.



Chatham County Water and Sewer Capacity Effects



Questions and Answers / Further Board Discussion