

Planning for the Future: Status of Enrollment

January 23, 2017



Discussion Points

Enrollment and Demographics Discussion (Part 1)

- Planning Areas
- Past Enrollment
- Baseline Data
- Sophisticated Forecast Model (SFM)
- Model Components
- Issues and Assumptions

Enrollment Projections Discussion (Part 2)

- District
- Elementary
- Middle
- Secondary
- Next Steps (Part 4)



Part I: Enrollment & Demographics Discussion

Making it Happen

Johnston Community School District

Administration

County, City & Others

- Polk County
- City of Des Moines
- City of Grimes
- City of Johnston
- City of Urbandale
- Census Bureau
- ESRI

Thank you!



Three Key Things About the District

Enrollment:

- K-12 enrollment is projected to increase approximately 700 students (10.5%) over the next five years from about 6,900 to nearly 7,600 students
- Future kindergarten student class size over the next five years will likely be closer to 600 students

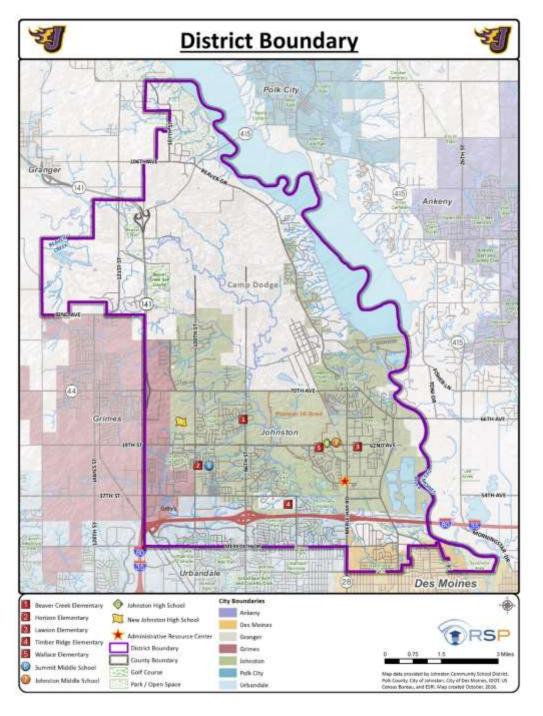
Capacity:

- Timber Ridge and Wallace elementary will have capacity challenges
- Summit MS and Johnston HS will be at the low capacity of the school

Development:

The district from a residential propensity perspective mature, but will in the short term see the remaining vacant land zoned for residential develop with great potential for some infill type developments in older areas of the community

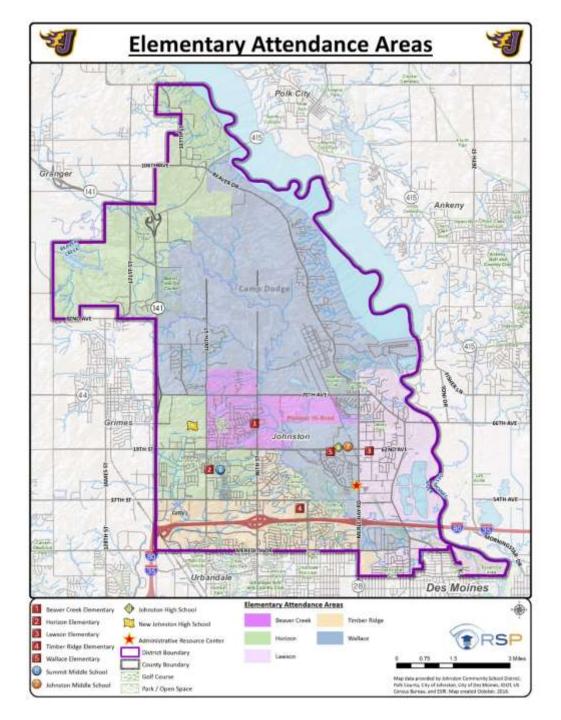




District Map

- District Boundary (Purple Line)
- Cities within district boundary
 - Des Moines (Orange)
 - Grimes (Pink)
 - Johnston (Green)
 - Urbandale (Blue)
- Cities in some cases in more than one school district
- Camp Dodge and Pioneer are major players in what the district looks like today

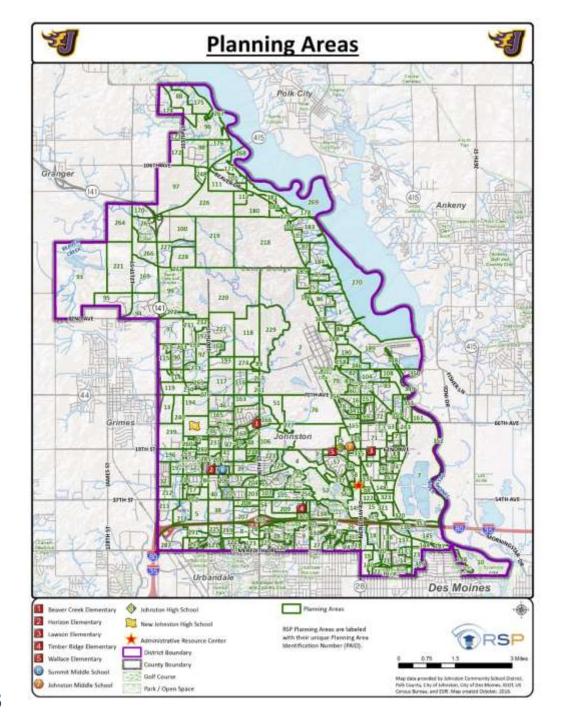




2016/17 Elementary Attendance Areas

- District Boundary (Purple Line)
- Elementary Attendance Areas
 - Beaver Creek (Pink)
 - Horizon (Green)
 - Lawson (Light Purple)
 - Timber Ridge (Tan/Yellow)
 - Wallace (Blue)
- School locations
- Major streets

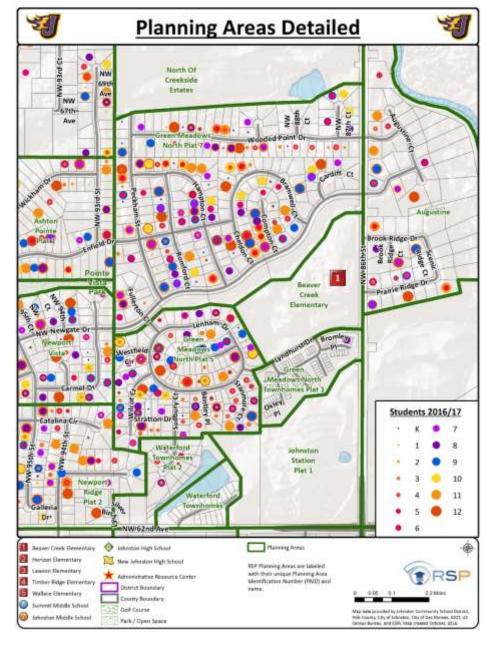




Planning Areas

- By Land Use (Residential, Commercial, Industrial)
- By Residential Density
 (single-family, mobile, home, duplex, apartments)
- By Natural Features
 (Rivers and Creeks)
- By Manmade Features (Railroad and Streets)
- By Attendance Area
- Over 100 planning areas added more this cycle





Planning Area Detail Map

- Show the power of GIS information – zoomed into area around Beaver Creek ES
- See where students are located in relation to streets, subdivisions, parcels
- Illustrates how the planning areas are tied to the parcel





Past School Enrollment

Enrollment By Grade

Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total
2000/01	291	316	344	334	314	340	343	319	323	290	328	300	286	4,128
2001/02	335	313	326	351	362	329	376	346	321	319	316	346	310	4,350
2002/03	367	345	323	335	364	374	348	384	345	319	328	307	314	4,453
2003/04	351	394	353	335	333	398	379	361	389	363	329	323	260	4,568
2004/05	398	392	410	379	347	355	421	395	368	409	357	316	325	4,872
2005/06	385	414	404	433	390	368	392	432	397	385	408	363	332	5,103
2006/07	423	427	435	417	456	407	391	401	438	401	384	402	374	5 <i>,</i> 356
2007/08	436	449	454	453	442	472	427	404	407	436	413	395	435	5,623
2008/09	481	458	458	467	472	451	470	439	393	418	441	419	424	5,791
2009/10	480	492	472	468	488	487	460	483	446	411	424	441	437	5,989
2010/11	460	473	489	489	487	509	497	472	497	445	411	427	445	6,101
2011/12	452	466	479	495	492	492	491	506	483	483	453	403	448	6,143
2012/13	485	460	497	491	519	492	508	507	512	484	494	444	416	6,309
2013/14	496	473	472	491	492	521	506	519	499	529	490	490	471	6,449
2014/15	550	451	477	489	498	509	539	511	523	509	520	500	523	6,599
2015/16	528	525	484	502	504	521	537	554	513	536	517	530	522	6,773
2016/17	560	480	555	507	520	513	560	554	567	510	538	521	535	6,920

Source: Iowa Department of Education (2000/01 to 2009/10) & Johnston Community School District (2010/11 to 2016/17)

Pig in the Snake Effect

- Largest class in 2016/17 8th grade (567)
- Smallest class in 2016/17 1st grade (480)
- Graduating senior class similar to smaller than the next year incoming Kindergarten class



Does not include Home School, Private School, or Parochial School

Past School Enrollment Change

Enrollment Grade Change

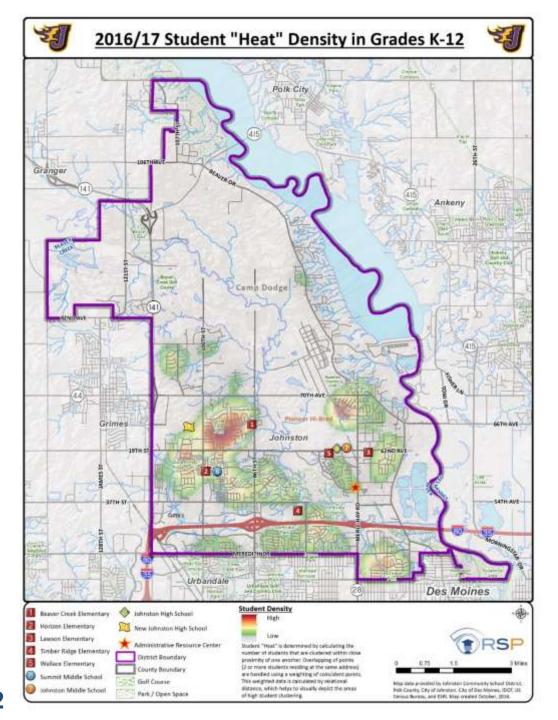
			К	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
From	То	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
2000/01	2001/02	44	22	10	7	28	15	36	3	2	-4	26	18	10
2001/02	2002/03	32	10	10	9	13	12	19	8	-1	-2	9	-9	-32
2002/03	2003/04	-16	27	8	12	-2	34	5	13	5	18	10	-5	-47
2003/04	2004/05	47	41	16	26	12	22	23	16	7	20	-6	-13	2
2004/05	2005/06	-13	16	12	23	11	21	37	11	2	17	-1	6	16
2005/06	2006/07	38	42	21	13	23	17	23	9	6	4	-1	-6	11
2006/07	2007/08	13	26	27	18	25	16	20	13	6	-2	12	11	33
2007/08	2008/09	45	22	9	13	19	9	-2	12	-11	11	5	6	29
2008/09	2009/10	-1	11	14	10	21	15	9	13	7	18	6	0	18
2009/10	2010/11	-20	-7	-3	17	19	21	10	12	14	-1	0	3	4
2010/11	2011/12	-8	6	6	6	3	5	-18	9	11	-14	8	-8	21
2011/12	2012/13	33	8	31	12	24	0	16	16	6	1	11	-9	13
2012/13	2013/14	11	-12	12	-6	1	2	14	11	-8	17	6	-4	27
2013/14	2014/15	54	-45	4	17	7	17	18	5	4	10	-9	10	33
2014/15	2015/16	-22	-25	33	25	15	23	28	15	2	13	8	10	22
2015/16	2016/17	32	-48	30	23	18	9	39	17	13	-3	2	4	5
3-Yr Avg		21.3	-39.3	22.3	21.7	13.3	16.3	28.3	12.3	6.3	6.7	0.3	8.0	20.0
3-Yr Wavg		17.7	-39.8	26.7	22.7	15.2	15.0	31.8	14.3	7.8	4.5	2.2	7.0	15.3

Source: Iowa Department of Education (2000/01 to 2009/10) & Johnston Community School District (2010/11 to 2016/17)

Changing Cohort

- Largest average class increase 5th to 6th grade (+28)
- Largest average class decrease Kdg to 1st grade (-39)
- Propensity to have each cohort increase students from year to year in most grades

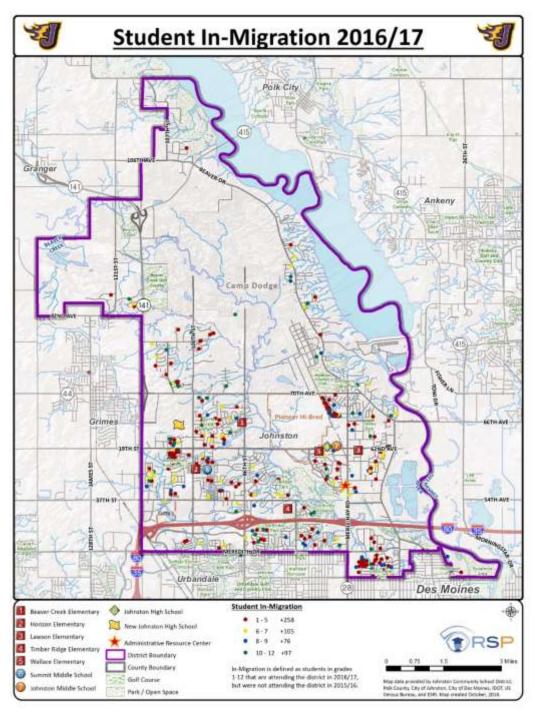




2016/17 Student "Heat" Density

- Shows the number of students in each Planning Area, normalized by land area
- Red areas are most dense
- Gray areas least dense
- New developments are evident when comparing 2012/13 to 2016/17
- Hottest area just west of Beaver Creek ES

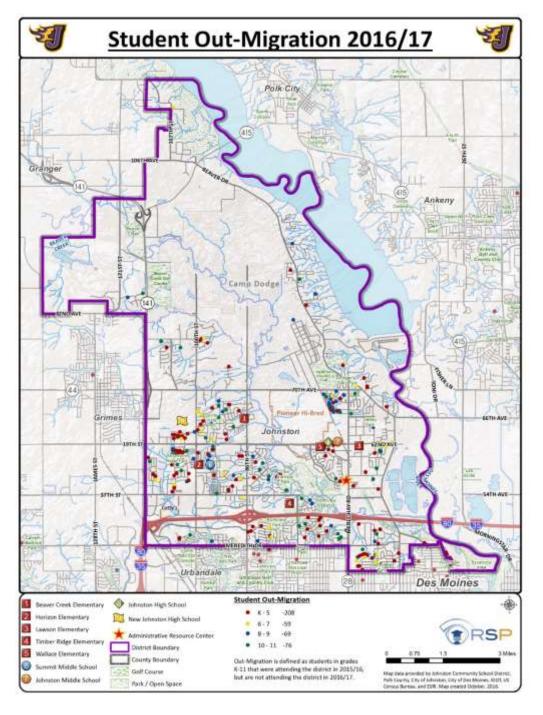




In-Migration Map

- 2016/17 students who are in 1st through 12th grade that were not attending the district in 2015/16 as Kindergarten through 11th grade
- Who is new to the District that was not attending the previous year?
- Is it related to a particular type of Development (SF, MF, Dup)?
- Is it related to perceptions of a school building?
- <u>528</u> new students attending 14/15
- e 639 new students attending 15/16
- <u>536</u> new students attending 16/17





Out-Migration Map

- Students attending the district in 2015/16 who were in Kindergarten through 11th grade that are not attending in 2016/17 as 1st through 12th grade
- Who was in the District that is not attending the current year?

2014/15

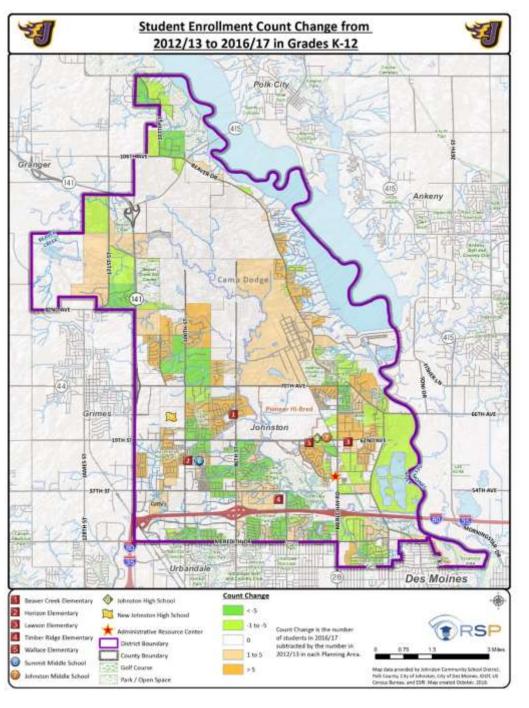
- 445 students no longer attending 14/15
- +83 District migration increase 14/15

2015/16

- 434 students no longer attending 15/16
- +205 District migration increase 15/16

• 2016/17

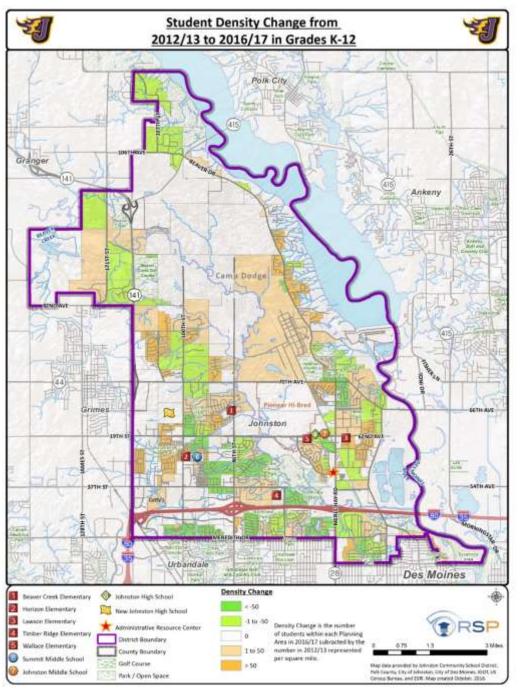
- 412 students no longer attending 16/17
- +124 District migration increase 16/17



Planning Area Change Map (Count Difference)

- Depicts student movement at each Planning Area from 2012/13 to 2016/17
- Orange areas experienced an increase since 2012/13
- Green areas experienced a decrease since 2012/13
- White areas had no net change of students between 2012/13
- and 2016/17
- New developments have a greater propensity to have more students in future years

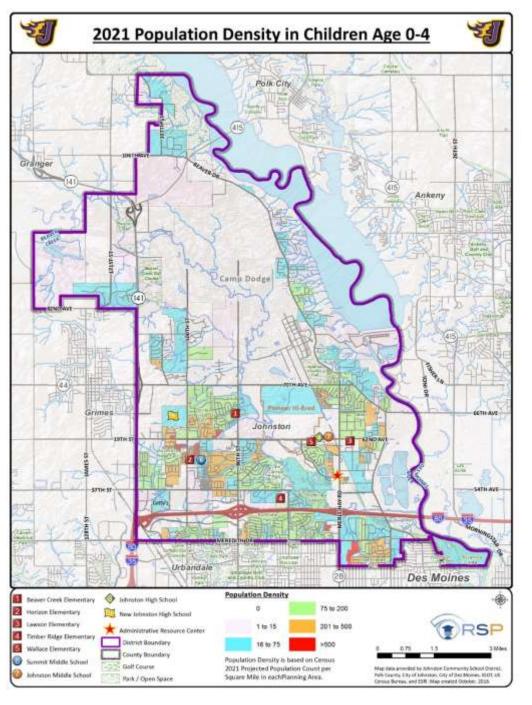




Planning Area Change Map (Density)

- Depicts student movement at each Planning Area from 2012/13 to 2016/17
- Enrollment change is weighted by land area of each Planning Area to show density
- Orange areas experienced an increase since 2012/13
- Green areas experienced a decrease since 2012/13
- White areas had no net change of students between 2012/13
- and 2016/17
- Shows change in students relative to land area

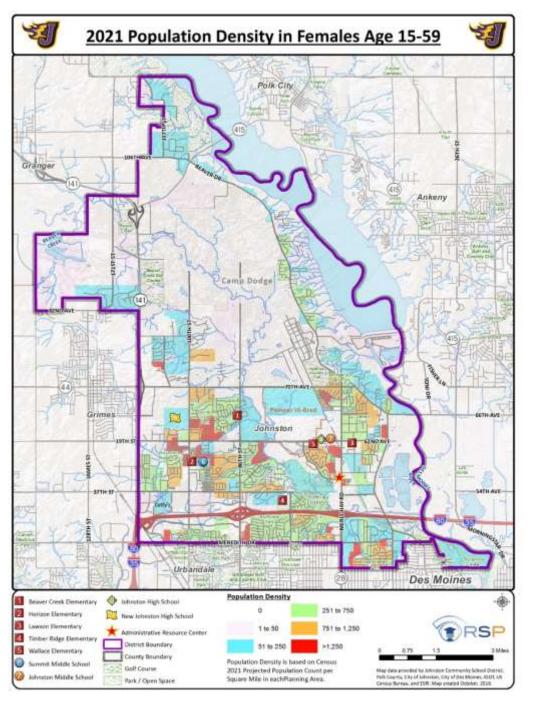




Census Map (Children Ages 0-4 in 2021)

- Depicted by Census estimates for each Block Group
- Density weighted by land area of each Planning Area
- Red areas have greatest density
- Blue areas have least density
- This data helps benchmark the projection model choices for future student enrollment
- Census data does not reflect as well the changes related to new residential construction





Census Map (Female Ages 15-59 in 2021)

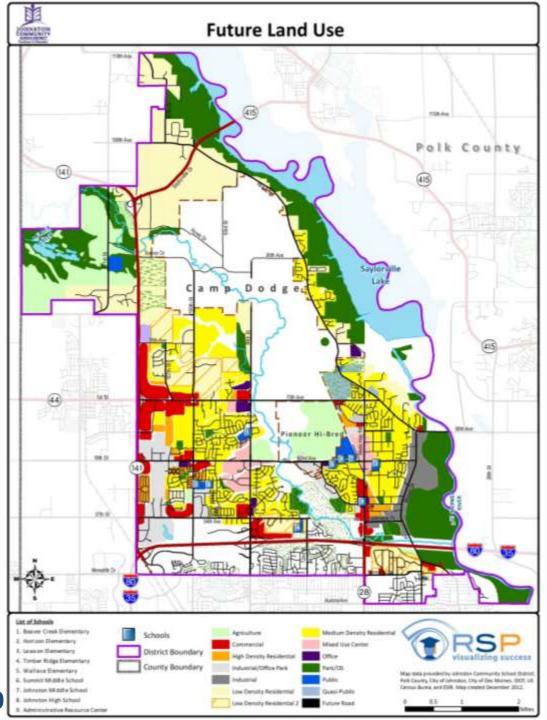
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Enrollment Conclusions

- Enrollment will continue to increase with larger incoming Kdg replacing smaller graduating 12th grade classes
- Some elementary school students have elected to utilize district school choice options (Transfers)
- Wallace elementary enrollment will have to be closely monitored during the transition timeframe
- Enrollment tends to increase Kdg to 11th
- The largest increase from grade to grade is 1st to 2nd grade where typically that has been from 11th to 12th grade
- Enrollment increases have occurred in some of the older developed areas of the community
- The district should continue to annually monitor enrollment



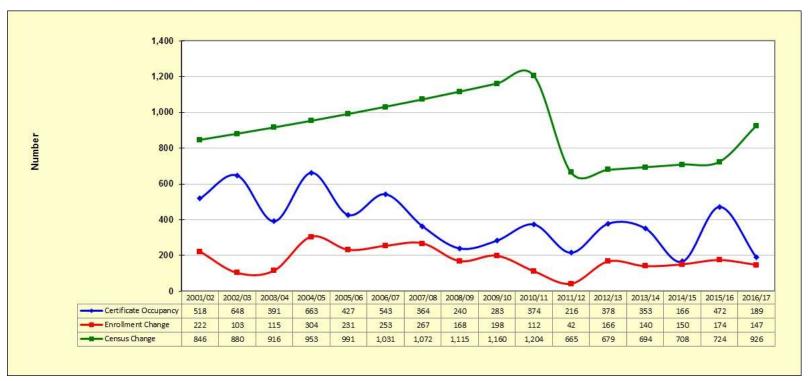


Plan for the Future

- Will land uses change?
- What type of land uses are being planned?
- Red areas nonresidential
- Yellow and orange areas residential
- Much of the future growth areas are nonresidential
- The area NW of Camp Dodge on 141hwy has limited infrastructure
- Majority of areas west of 141
 Hwy are planned for nonresidential development



Population, Enrollment & Development



Source: Census Bureau, Polk County, Johnston Community Schools, and RSP SFM & Demographic Models

Graphic Explanation

Census data indicates the area has an increasing population

Since 2001-02 student enrollment growth correlates with population change

Residential building activity for the last few years has averaged nearly 400 units a year – the dip for this year is likely more with data release

What Does This Mean

People locating in the Johnston Community School District tend to have school aged children

The housing market is responsive to demographic shifts



Yield Rate

Student Yield Rate

School		Grade Cor	figuration		Total	K to 5	6 to 7	8 to 9	10 to 12	District
Year	K to 5	6 to 7	8 to 9	10 to 12	Units	Yield Rate				
2000/01	1,939	662	613	914	8,105	0.239	0.082	0.076	0.113	0.509
2001/02	2,016	722	640	972	8,623	0.234	0.084	0.074	0.113	0.504
2002/03	2,108	732	664	949	9,271	0.227	0.079	0.072	0.102	0.480
2003/04	2,164	740	752	912	9,662	0.224	0.077	0.078	0.094	0.473
2004/05	2,281	816	777	998	10,325	0.221	0.079	0.075	0.097	0.472
2005/06	2,394	824	782	1,103	10,752	0.223	0.077	0.073	0.103	0.475
2006/07	2,565	792	839	1,160	11,295	0.227	0.070	0.074	0.103	0.474
2007/08	2,706	831	843	1,243	11,659	0.232	0.071	0.072	0.107	0.482
2008/09	2,787	909	811	1,284	11,899	0.234	0.076	0.068	0.108	0.487
2009/10	2,887	943	857	1,302	12,182	0.237	0.077	0.070	0.107	0.492
2010/11	2,907	969	942	1,283	12,556	0.232	0.077	0.075	0.102	0.486
2011/12	2,876	997	966	1,304	12,772	0.225	0.078	0.076	0.102	0.481
2012/13	2,944	1,015	996	1,354	13,150	0.224	0.077	0.076	0.103	0.480
2013/14	2,945	1,025	1,028	1,451	13,503	0.218	0.076	0.076	0.107	0.478
2014/15	2,974	1,050	1,032	1,543	13,669	0.218	0.077	0.075	0.113	0.483
2015/16	3,064	1,091	1,049	1,569	14,141	0.217	0.077	0.074	0.111	0.479
2016/17	3,135	1,114	1,077	1,594	14,330	0.219	0.078	0.075	0.111	0.483

Source: Polk County, Johnston Community School, and RSP $\,$

What Does This Mean

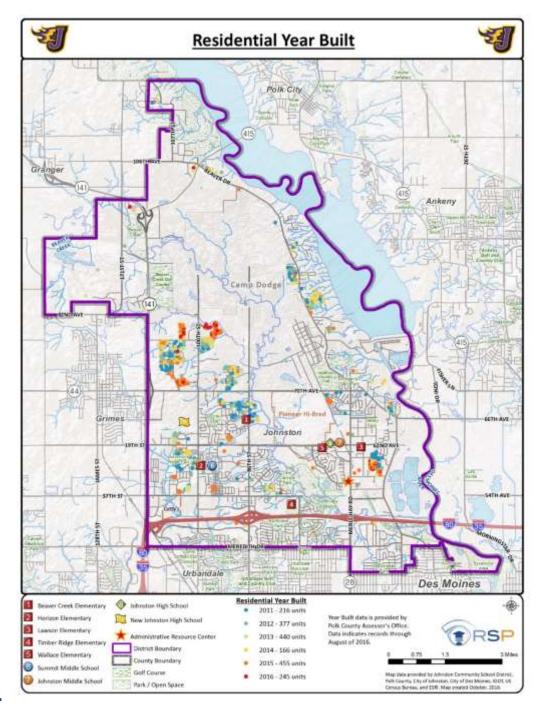
- In 2000/01 there were about 51 students for every 100 units
- In 2016/17 there were about 48 students for every 100 units
- Housing inventory increased by over 6,000 units resulting in more households and subsequently more students



Assumptions For Future

- Mortgage interest rates have reached a historic low and likely will remain below 7%
- Subprime loans will have worked their way through the banking system
- The rate of foreclosures will continue to decline over the next five years
- Recirculation of existing homes will remain stable
- Final Platted developments will be nearly built-out there is limited land available for development influencing some infill development opportunities
- Unemployment rates will remain below 6%
- Nonresidential developments continue to be built to meet employment demand and need
- Fuel prices will remain between \$2.00 and \$4.00 with the potential to be more toward \$2.00
- Private, Parochial, and Open school enrollment remains stable

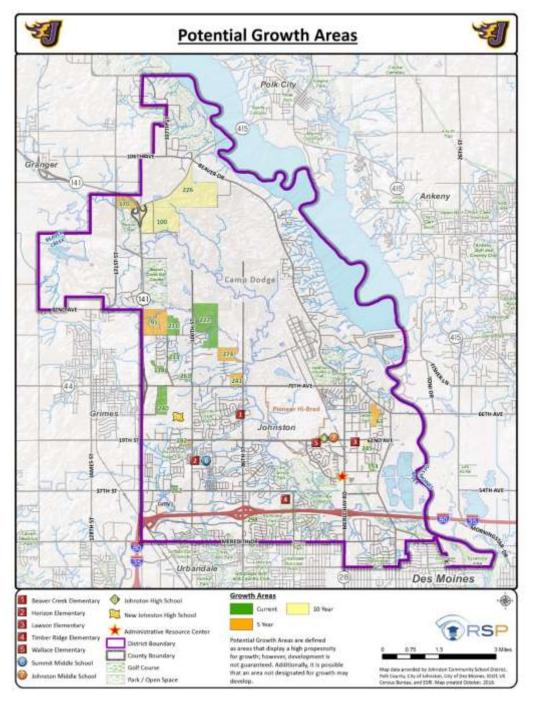




Where will growth be?

- Is development changing—will it impact enrollment and use of facilities?
- Will this impact enrollment?
- Will this impact the use of facilities?
- Crosshaven Subdivision north of 70th Ave and west of 86th Street is the likely hottest residential development in the next few years
- Other developments based on the future land use designations mean more multi-family developments are likely to be built





Unique Situation

- Will the development continue as initially planned?
- Will households be able to afford the types of housing stock being built?
- What housing products will be built (SF, MF, smaller or larger)?
- Is residential development happening at the anticipated rate?
- Is the economy a positive or negative outlook for the community?
- While by color it appears to be a lot of space for residential development, the reality is many of these areas are nearly finished or could have land use changes based on who owns the property



Part 2: Enrollment Projections Discussion

Projection Accuracy

Elementary

- Projected 3,117
- Actual 3,132
- 99.5% Accuracy

Middle School

- Projected 2,171
- Actual 2,187
- 99.3% Accuracy



High School

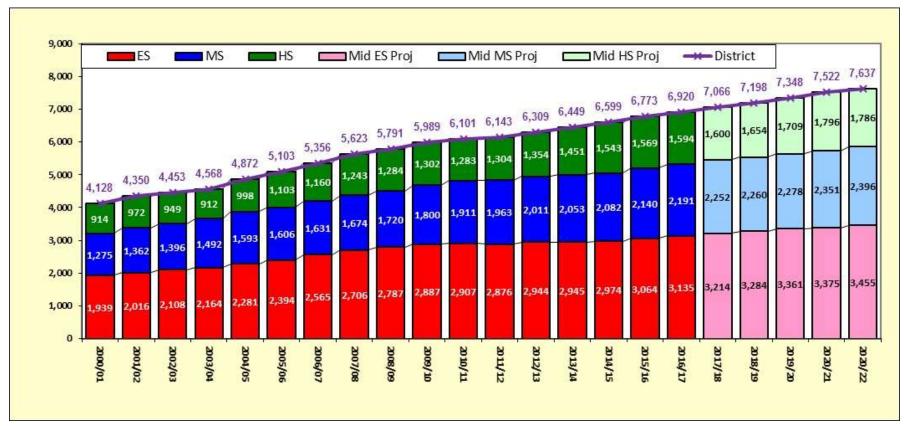
- Projected 1,612
- Actual 1,589
- 98.6% Accuracy

District

- Projected 6,900
- Actual 6,908
- 99.9% Accuracy

Economic, development, demographic, and enrollment trends will change and are factored into future projections The new high school opening in 2017/18 school year should likely have a bigger bounce in high school enrollment

Past, Current & Future Enrollment



Source: Johnston Community School District Official Count and RSP SFM & Demographic Models

What Does This Mean

Enrollment growth – increase anticipated to coincide with development activity and demographic changes Outlook for growth changed resulting in about a 3% more students (Compare 2015/16 Year 5 to the 2016/17 Year 4)

Elementary Enrollment Projections

School Desired Student Past School Enrollment			llment	Projections Based on Residence					Projections Based on Attendance						
	Capacity	Tracking	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2017/18	2018/19	2019/20	2020/21	2021/22
Beaver Creek Elementary	690	Res/Attend	597	621	631										
K to 5th	750	Reside	616	652	646	657	655	636	638	627	651	649	630	632	621
	840	Attend	605	641	649										
Horizon Elementary	690	Res/Attend	619	615	628										
K to 5th	750	Reside	633	634	659	669	671	673	662	660	663	665	667	656	654
	840	Attend	631	636	640										
Lawson Elementary	621	Res/Attend	516	555	537										
PreK to 5th	675	Reside	573	582	550	549	538	544	546	562	541	530	536	538	554
	756	Attend	524	576	581										
Timber Ridge Elementary	690	Res/Attend	625	657	678										
PreK to 5th	750	Reside	637	672	694	716	741	784	783	822	756	781	824	823	862
	840	Attend	703	702	718										
Wallace Elementary	552	Res/Attend	498	495	529										
K to 5th	600	Reside	515	524	583	623	679	724	746	784	604	660	705	727	765
18/19 relocate to MS	672	Attend	511	509	544										
ELEMENTARY TOTAL	3,243														
K to 5th	3,525	Reside	2,974	3,064	3,132	3,214	3,284	3,361	3,375	3,455	3,214	3,284	3,361	3,375	3,455
	3,948	Attend	2,974	3,064	3,132										

Over Low Capacity

Over Low & Mid Capacity

Over Low, Mid, & High Capacity

Source: RSP & Associates, LLC - November 2016

Note 1: Student Projections are based on the residence of the student. Early Childhood and Wild Rose students not in projections

Note 2: The Enrollment Model is based on a Head count of students by Planning Area at each facility

Note 3: School capacity and timing of facilities provided by the Johnston Community School District (Capacity per classroom Low =23, Mid = 25, High = 28)

Note 4: Transfers between facilities are factored into the projections

Note 5: Attend is the facility the student has been assigned by the District

Note 6: Reside is the placement of a student in the model either geographically or by attenandance area for out of district students

Note 7: The Enrollment Model assumes ES(K-5) MS(6-9) and HS (10-12)

Note 8: In 2018/19 when Wallace ES relocates to the MS, Wallace ES capacity will be 690, 750, and 840. Also increasing the overall ES capacity to 3,381, 3,675, and 4,116.

Note 9: In 2017/18 new HS opens and the MS will relocate to the old HS (MS Capacity will be 1,500, 1,550, 1,600)

Secondary Enrollment Projections

School	Desired	Student	Past	School Enrol	lment		Projections Based on Residence					Projections Based on Attendance				
	Capacity	Tracking	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2017/18	2018/19	2019/20	2020/21	2021/22	
Summit Middle School	1,080															
6th and 7th	1,200	Reside	1,051	1,091	1,112	1,114	1,105	1,123	1,208	1,225	1,114	1,105	1,123	1,208	1,225	
	1,280	Attend	1,051	1,091	1,112											
Johnston Middle School	1,500															
8th and 9th	1,550	Reside	1,031	1,048	1,075	1,138	1,155	1,155	1,143	1,171	1,138	1,155	1,155	1,143	1,171	
	1,600	Attend	1,031	1,048	1,075											
Johnston High School	1,750															
10th to 12th	1,800	Reside	1,543	1,570	1,589	1,600	1,654	1,709	1,796	1,786	1,600	1,654	1,709	1,796	1,786	
	1,850	Attend	1,543	1,570	1,589											
ELEMENTARY TOTAL	3,243															
K to 5th	3,525	Reside	2,974	3,064	3,132	3,214	3,284	3,361	3,375	3,455	3,214	3,284	3,361	3,375	3,455	
	3,948	Attend	2,974	3,064	3,132											
MIDDLE TOTAL	2,580															
6th to 9th	2,750	Reside	2,082	2,139	2,187	2,252	2,260	2,278	2,351	2,396	2,252	2,260	2,278	2,351	2,396	
	2,880	Attend	2,082	2,139	2,187											
HIGH TOTAL	1,750															
10th to 12th	1,800	Reside	1,543	1,570	1,589	1,600	1,654	1,709	1,796	1,786	1,600	1,654	1,709	1,796	1,786	
	1,850	Attend	1,543	1,570	1,589											
DISTRICT TOTALS	7,573															
K to 12th	8,075	Reside	6,599	6,773	6,908	7,066	7,198	7,348	7,522	7,637	7,066	7,198	7,348	7,522	7,637	
	8,678	Attend	6,599	6,773	6,908											

Over Low Capacity

Over Low & Mid Capacity

Over Low, Mid, & High Capacity

Source: RSP & Associates, LLC - November 2016

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Note 9: In 2017/18 new HS opens and the MS will relocate to the old HS (MS Capacity will be 1,500, 1,550, 1,600)

Part 4: Next Steps

Key Considerations

- The district will increase between 100 and 180 more students each year where elementary enrollment will be closing in on its peak enrollment
- The district 2017/18 enrollment should be greater than 7,000 students
- Elementary, Middle, and High School enrollment is expected to be greater in five years than it is in 2016/17, with future kindergarten classes getting closer to 600 students
- Elementary transfers happen and need to be closely monitored to be sure capacity is not impacted as the community finishes its build out and infill development
- New residential development will occur at a much slower rate impacting enrollment yield rates
 the district is maturing more change will be based on household demographics
- Future residential development will likely continue on the west side of the district, mostly north of NW 70th Avenue with Infill Development off of NW Beaver Drive
- Elementary capacity issues will be minimized with planned building expansion Wallace
 Elementary will have to be closely monitored until relocated to the middle school in 18/19 and
 there will likely need to be changes to Timber Ridge ES
- A decision will need to be made on the need and/or use of land in the Cross Haven Subdivision
- Secondary capacity will be resolved with the opening of the new High School in 2017/18

Next Steps

- Closely monitor the interest level of the new High School from both open enrollment and households choosing to locate in the district (Can there be some changes to Timber Ridge attendance area to alleviate planned capacity challenges)
- Continue to analyze the enrollment, demographics, and development provided by RSP
- Make decisions that will provide World Class Education to every student



NOTES

