# Planning for the Future:

**Status of Enrollment** 

Johnston Community School District





# **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 1: Enrollment & Demographics Discussion

# Making it Happen

# **Bondurant-Farrar 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

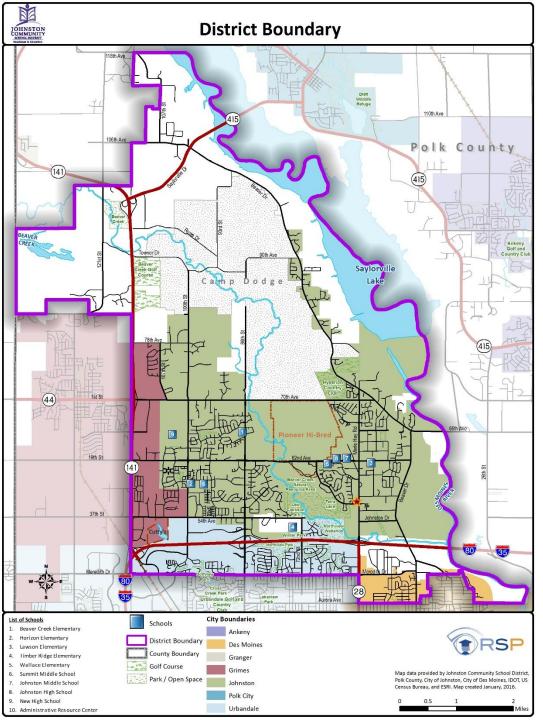
# Thank you!



# **General Conclusions**

- The district will increase between 70 and 130 more students each year
- The district 2018/19 midpoint enrollment should be near 7,000 student enrollment
- Elementary, Middle, and High School enrollment is expected to be greater in five years than it is in 2015/16
- Elementary transfers happen and need to be closely monitored to be sure capacity is not impacted
- New residential development will occur at a much slower rate impacting enrollment yield rates – the District is maturing
- Future residential development will likely continue on the west side of the district, mostly north of NW 70th Avenue with Infill Development off 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
- Secondary capacity will be resolved with the opening of the new High School in 2017/18
- The elementary redistricting alleviated all the elementary school capacity concerns that were in place in 2013/14

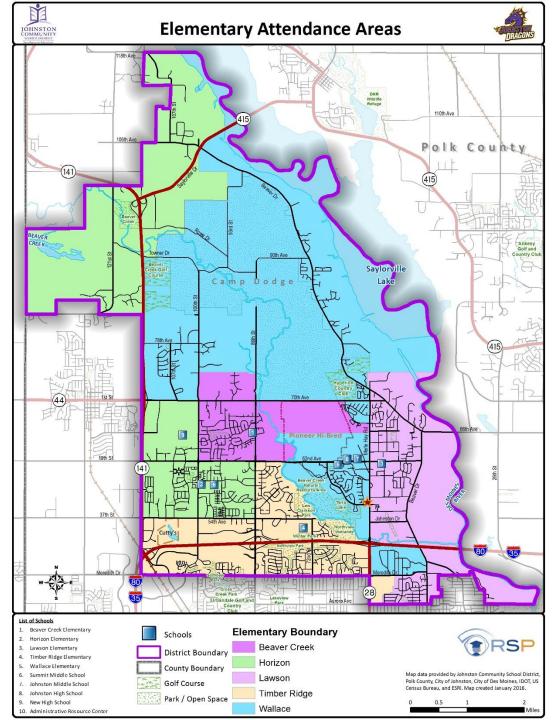




### **District Map**

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

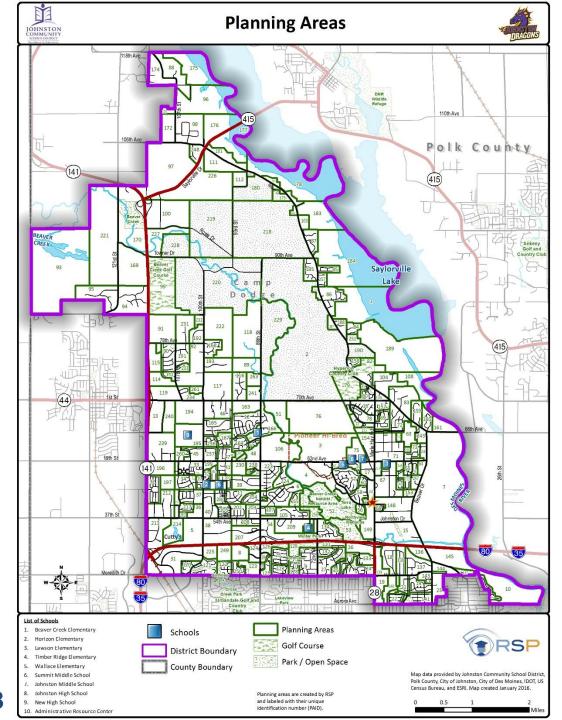




# **2015/16 Elementary Attendance Areas**

- District Boundary (purple line)
- Elementary Attendance Areas
  - Beaver Creek (Dark purple)
    - Horizon (green)
    - Lawson (light purple)
    - Timber Ridge (tan/yellow)
    - Wallace (blue)
- School locations
- Major streets

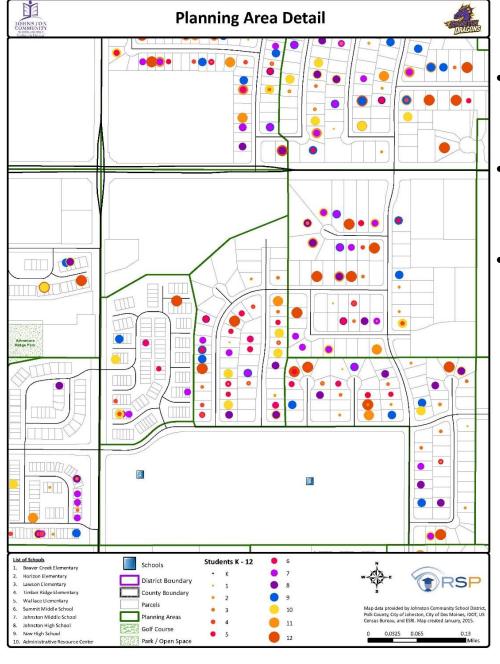




### **Planning Areas**

- By Land Use (Residential, Commercial, Industrial)
- By Residential Density (singlefamily, 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 Horizon 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	5,356
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

Source: Iowa Department of Education (2000/01 to 2009/10) & Johnston Community School District (2010/11 to 2015/16)

## Pig in the Snake Effect

Largest class in 2015/16 – 7<sup>th</sup> grade (554)

Smallest class in 2015/16 – 2<sup>nd</sup> grade (484)

Graduating senior class similar to smaller than the next year incoming Kindergarten class



# **Past School Enrollment Change**

### **Enrollment Grade Change**

		_	К	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
From	То	К	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
3-Yr Avg		14.3	-27.3	16.3	12.0	7.7	14.0	20.0	10.3	-0.7	13.3	1.7	5.3	27.3
3-Yr Wavg	5	8.8	-29.5	19.8	17.2	10.0	17.5	22.3	11.0	1.0	12.7	2.0	7.7	26.5

Source: Iowa Department of Education (2000/01 to 2009/10) & Johnston Community School District (2010/11 to 2015/16)

The above enrollment totals are Kdg to 12<sup>th</sup> grade

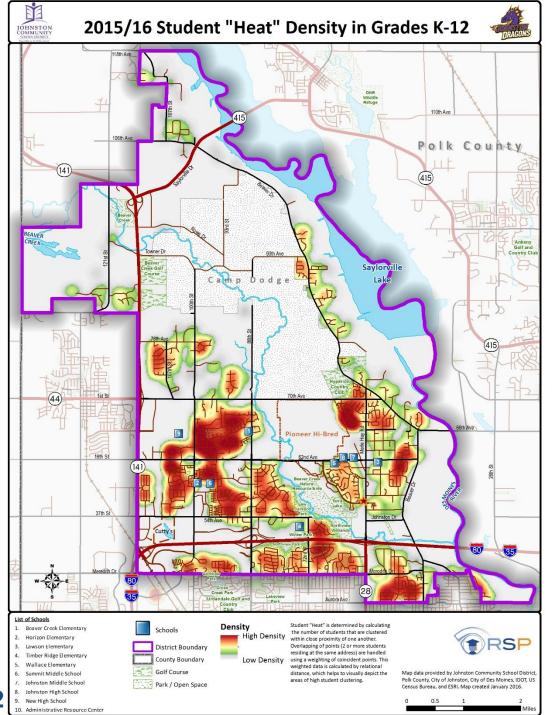
### **Changing Cohort**

Largest average class increase – 11<sup>th</sup> to 12<sup>th</sup> grade (+27)

Largest average class decrease – Kdg to 1st grade (-27)

Propensity to have each cohort increase students from year to year in most grades

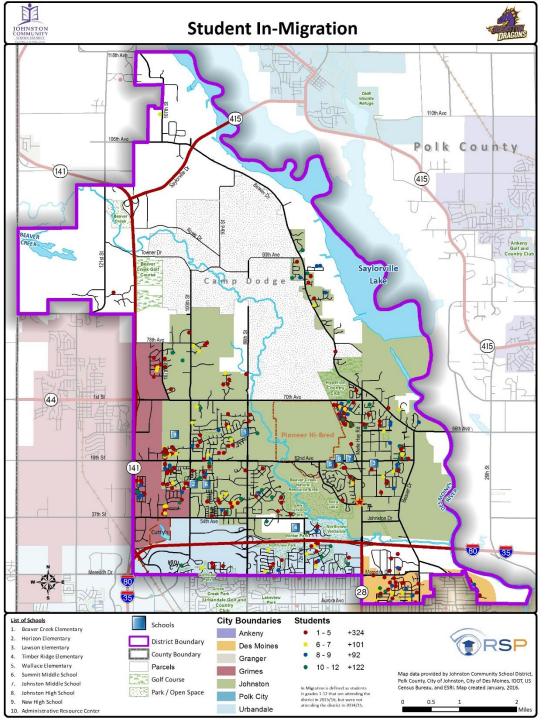




# 2015/16 Student "Heat" Density Map

- 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 2011/12 to 2015/16

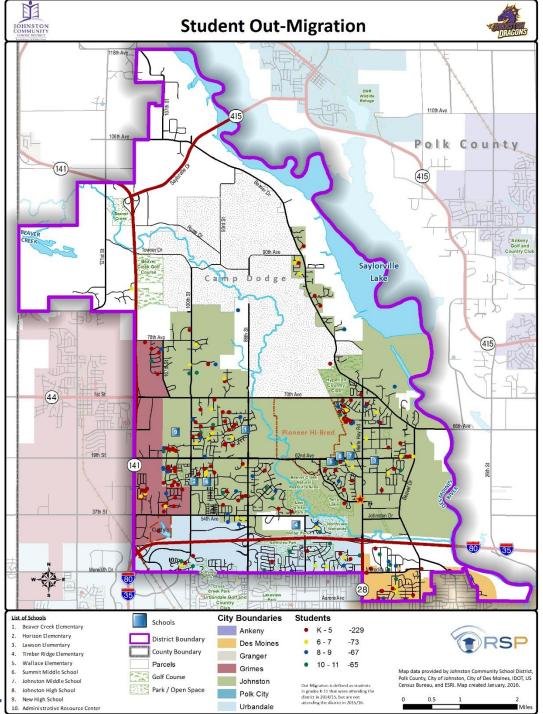




## **In-Migration Map**

- 2015/16 students who are in 1st through 12th grade that were not attending the district in 2014/15 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
- <u>639</u> new students attending 15/16





### **Out-Migration**

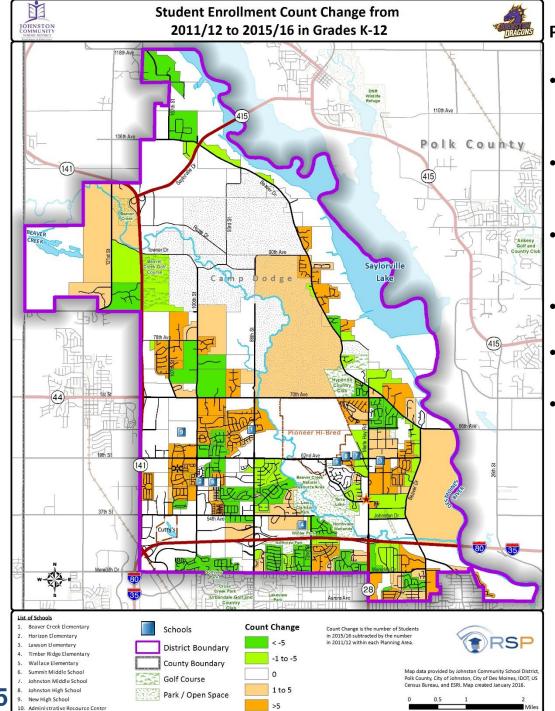
- Students attending the district in 2014/15 who were in Kindergarten through 11th grade that are not attending in 2015/16 as 1st through 12th grade
- Who was in the District that is not attending the current year?
- Is it related to a particular type of Development (SF, MF, Dup)?
- Is it related to perceptions of a school building?

### 2014/15

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

### 2015/16

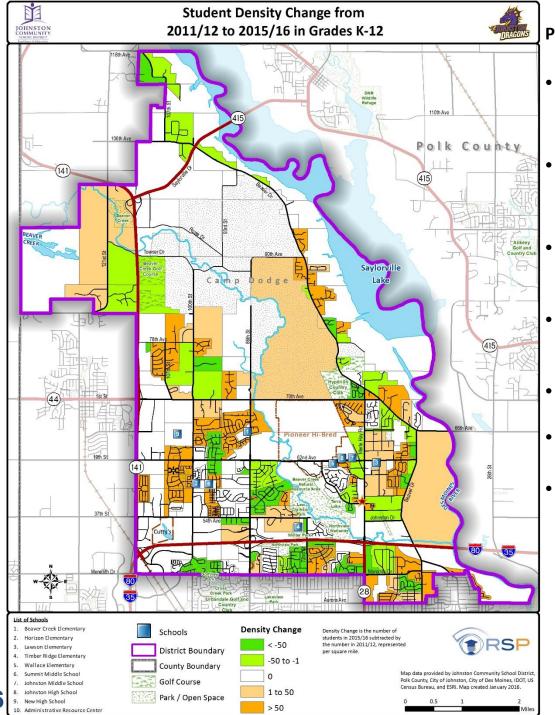
- 434 students no longer attending 15/16
- +205 District migration increase 15/16



### **Planning Area Change Map (Count Difference)**

- Depicts student movement at each Planning Area from 2011/12 to 2015/16
- Orange areas experienced an increase since 2011/12
- Green areas experienced a decrease since 2011/12
- White areas had no net change of students between 2011/12
- and 2015/16
- New developments have a greater propensity to have more students in future years

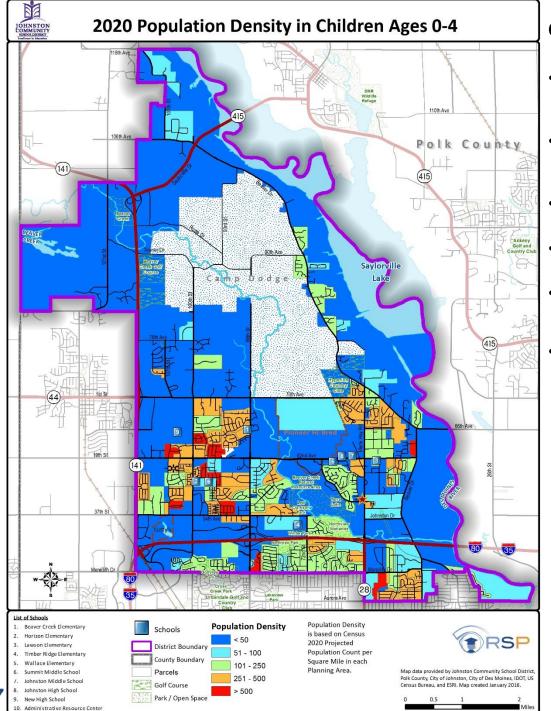




### **Planning Area Change Map (Density)**

- Depicts student movement at each Planning Area from 2010/11 to 2015/16
- Enrollment change is weighted by land area of each Planning Area to show density
- Orange areas experienced an increase since 2011/12
- Green areas experienced a decrease since 2011/12
- White areas had no net change of students between 2011/12
- and 2015/16
- Shows change in students relative to land area

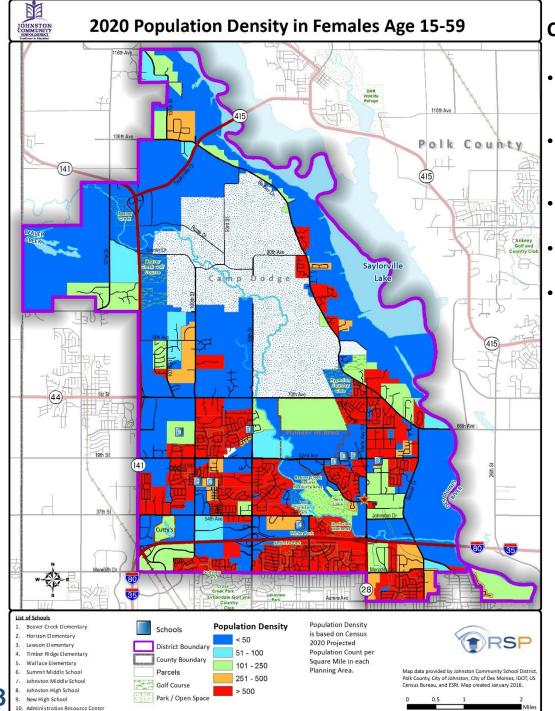




# Census Map (Children Ages 0-4 in 2020)

- 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 2020)

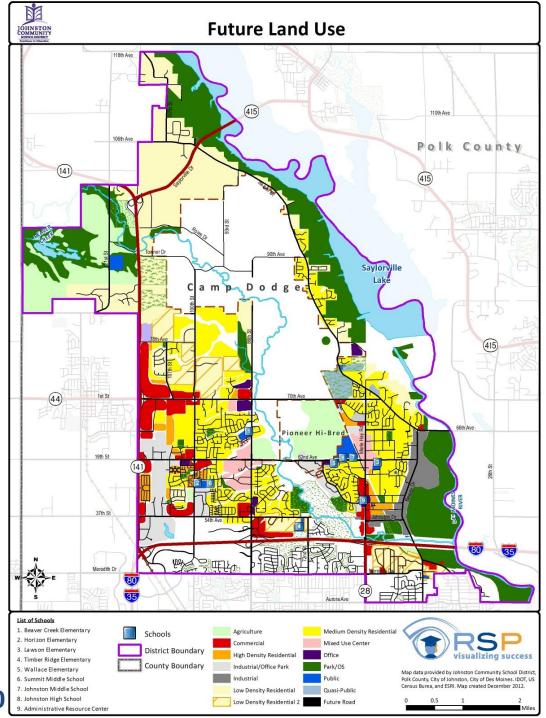
- Depicted by Census estimates for each Block Group
- Density weighted by land area of each Planning Area
- Red areas have greatest density
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- This data helps benchmark the projection model choices for future student enrollment



# **Enrollment Conclusions**

- Midpoint data indicates enrollment will continue to increase
- Some elementary school students have elected to utilize district school choice options (Transfers)
- Wallace elementary enrollment will have to be closely monitored
- Enrollment tends to increase Kdg to 11<sup>th</sup>
- The largest increase from grade to grade is 11<sup>th</sup> to 12<sup>th</sup> grade
- Enrollment increases have occurred in some of the older developed areas of the community
- The district should continue to annually monitor enrollment



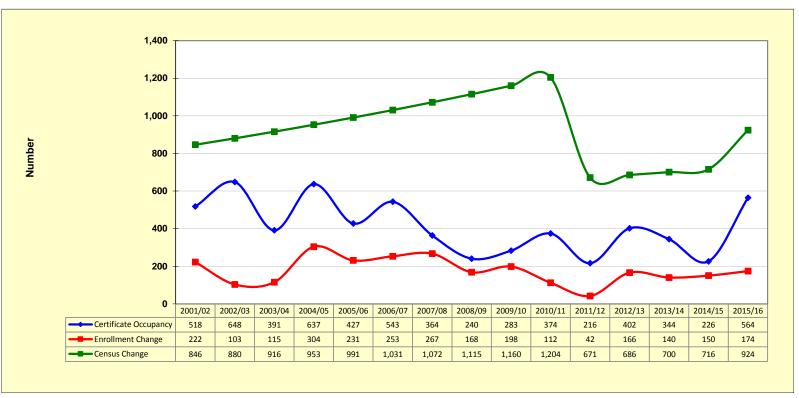


### Plan for the Future

- 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 building activity and a little less with population

Residential building activity for the last few years has averaged nearly 400 units a year

### **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
New residential development is attracting younger families with school aged children



# **Yield Rate**

### **Student Yield Rate**

School		Grade Con	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	11,990	0.162	0.055	0.051	0.076	0.344
2001/02	2,016	722	640	972	12,508	0.161	0.058	0.051	0.078	0.348
2002/03	2,108	732	664	949	13,156	0.160	0.056	0.050	0.072	0.338
2003/04	2,164	740	752	912	13,547	0.160	0.055	0.056	0.067	0.337
2004/05	2,281	816	777	998	14,184	0.161	0.058	0.055	0.070	0.343
2005/06	2,394	824	782	1,103	14,611	0.164	0.056	0.054	0.075	0.349
2006/07	2,565	792	839	1,160	15,154	0.169	0.052	0.055	0.077	0.353
2007/08	2,706	831	843	1,243	15,518	0.174	0.054	0.054	0.080	0.362
2008/09	2,787	909	811	1,284	15,758	0.177	0.058	0.051	0.081	0.367
2009/10	2,887	943	857	1,302	16,041	0.180	0.059	0.053	0.081	0.373
2010/11	2,907	969	942	1,283	16,415	0.177	0.059	0.057	0.078	0.372
2011/12	2,876	997	966	1,304	16,631	0.173	0.060	0.058	0.078	0.369
2012/13	2,944	1,015	996	1,354	17,033	0.173	0.060	0.058	0.079	0.370
2013/14	2,945	1,025	1,028	1,451	17,377	0.169	0.059	0.059	0.084	0.371
2014/15	2,974	1,050	1,032	1,543	17,603	0.169	0.060	0.059	0.088	0.375
2015/16	3,064	1,091	1,049	1,569	18,167	0.169	0.060	0.058	0.086	0.373

Source: Polk County, Johnston Community School, and RSP

### **What Does This Mean**

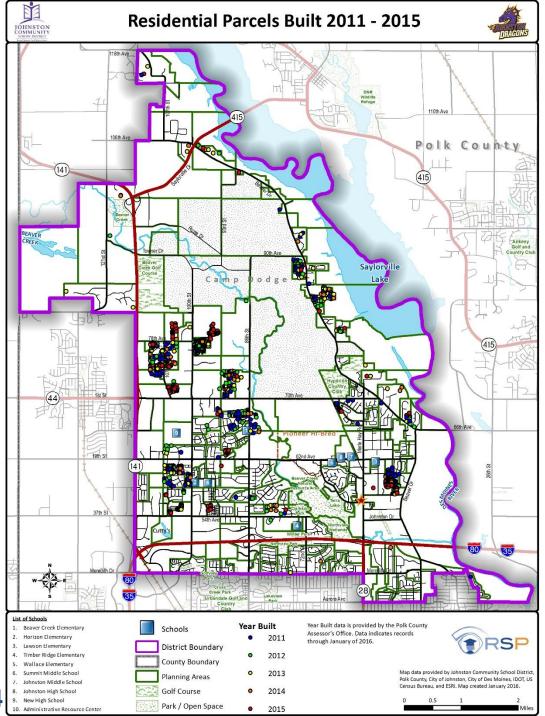
In 2000/01 there were about 34 students for every 100 units
In 2015/16 there were about 37 students for every 100 units
Housing inventory increased by over 6,000 units resulting in more households and subsequently more students



# **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 more land will be needed for development
- Unemployment rates will remain below 8%
- Nonresidential developments continue to be built to meet employment demand and need
- Fuel prices will remain below \$4.00 with the potential to be more toward \$2.00
- Private and Parochial school enrollment remains stable

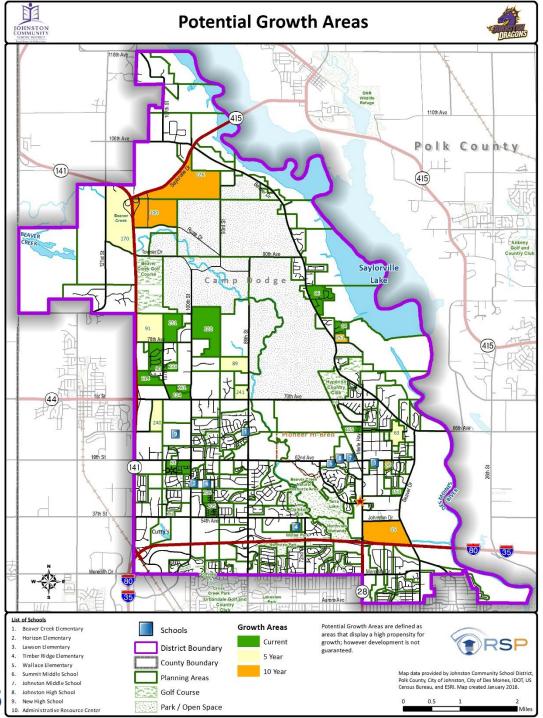




### Where will growth be?

- 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 70<sup>th</sup> Ave and west of 86<sup>th</sup> 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 3,037
- Actual 3,064
- 99.1% Accuracy

# Middle School

- Projected 2,117
- Actual 2,139
- 99.0% Accuracy

# **High School**

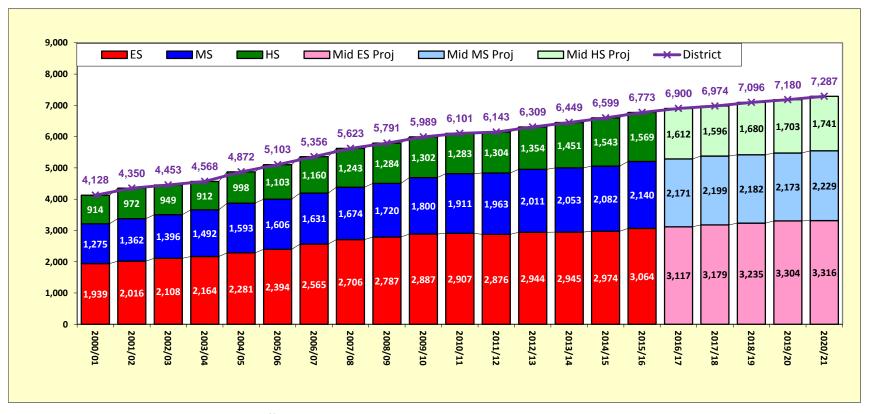
- Projected 1,551
- Actual 1,570
- 98.9% Accuracy

# **District**

- Projected 6,705
- Actual 6,773
- 99.0% Accuracy

Economic, development, demographic, and enrollment trends will change and are factored into future projections

# Past, Current & Future Enrollment



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

# **Elementary Enrollment Projections**

Enrollment Projections from 2016/17 through 2020/21

School	School Desired Stude		Student Past School Enrollment				Projections Based on Residence					Projections Based on Attendance				
	Capacity	Tracking	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2016/17	2017/18	2018/19	2019/20	2020/21	
Beaver Creek Elementary	690	Res/Attend	715	597	621											
K to 5th	750	Reside	747	616	652	649	663	666	654	663	634	647	651	639	648	
	840	Attend	723	605	641											
Horizon Elementary	690	Res/Attend	693	619	615											
K to 5th	750	Reside	711	633	634	644	653	665	676	673	641	649	661	673	670	
	840	Attend	701	631	636											
Lawson Elementary	621	Res/Attend	531	516	555											
PreK to 5th	675	Reside	547	573	582	586	587	583	591	598	566	567	564	572	579	
	756	Attend	543	524	576											
Timber Ridge Elementary	690	Res/Attend	432	625	657											
PreK to 5th	750	Reside	436	637	672	675	684	695	724	716	721	730	741	770	762	
	840	Attend	478	703	702											
Wallace Elementary	552	Res/Attend	485	498	495											
K to 5th	600	Reside	504	515	524	562	593	626	658	666	554	586	618	650	658	
18/19 relocate to MS	672	Attend	500	511	509											
ELEMENTARY TOTAL	3,243															
K to 5th	3,525	Reside	2,945	2,974	3,064	3,117	3,179	3,235	3,304	3,316	3,117	3,179	3,235	3,304	3,316	
	3,948	Attend	2,945	2,974	3,064											

Over Low Capacity

Over Low & Mid Capacity

Over Low, Mid, & High Capacity

Source: RSP & Associates, LLC - January 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 when new HS opens the HS capacity will be 1,800

Note 10: In 2017/18 the MS will relocate to the HS changing the MS capacity to a yet undetermined number that based on programming will be between the current MS and HS capacity

# **Secondary Enrollment Projections**

Enrollment Projections from 2016/17 through 2020/21

School	Desired	Student	Past School Enrollment			Projections Based on Residence					Projections Based on Attendance				
	Capacity	Tracking	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2016/17	2017/18	2018/19	2019/20	2020/21
Summit Middle School	1,080														
6th and 7th	1,200	Reside	1,026	1,051	1,091	1,088	1,079	1,070	1,069	1,133	1,088	1,079	1,070	1,069	1,133
	1,280	Attend	1,026	1,051	1,091										
Johnston Middle School	930														
8th and 9th	1,050	Reside	1,027	1,031	1,048	1,083	1,120	1,112	1,105	1,096	1,083	1,120	1,112	1,105	1,096
	1,130	Attend	1,027	1,031	1,048										
Johnston High School	1,500														
10th to 12th	1,550	Reside	1,451	1,543	1,570	1,612	1,596	1,680	1,703	1,741	1,612	1,596	1,680	1,703	1,741
	1,600	Attend	1,451	1,543	1,570										
MIDDLE TOTAL	2,010														
6th to 9th	2,250	Reside	2,053	2,082	2,139	2,171	2,199	2,182	2,173	2,229	2,171	2,199	2,182	2,173	2,229
	2,410	Attend	2,053	2,082	2,139										
HIGH TOTAL	1,500														
10th to 12th	1,550	Reside	1,451	1,543	1,570	1,612	1,596	1,680	1,703	1,741	1,612	1,596	1,680	1,703	1,741
	1,600	Attend	1,451	1,543	1,570										
DISTRICT TOTALS	6,753														
K to 12th	7,325	Reside	6,449	6,599	6,773	6,900	6,974	7,096	7,180	7,287	6,900	6,974	7,096	7,180	7,287
	7,958	Attend	6,449	6,599	6,773										

Over Low Capacity

Over Low & Mid Capacity

Over Low, Mid, & High Capacity

Source: RSP & Associates, LLC - January 2016

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

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Note 9: In 2017/18 when new HS opens the HS capacity will be 1,800

Note 10: In 2017/18 the MS will relocate to the HS changing the MS capacity to a yet undetermined number that based on programming will be between the current MS and HS capacity

# Part 4: Next Steps

# **Key Considerations**

- New developments will likely continue in the remaining areas for development but additional opportunities will hinge on property owners' desire to sell or develop
- Building Permit activity should be stable as developments finish build out and the remaining areas of land develop
- Future Kindergarten classes will likely be between 500 and 600 students
- Economic conditions, development activity, Pre-K trends and Census trends for 0-4 children and women are variables to monitor for how well projections will become reality
- District capacity considerations over the next 5 years
  - Elementary School: With 3,316 K-5 students projected in 2020/21, likely getting to the top ES enrollment, along with a 3,381 low district-wide ES capacity, the District will need to begin the process of determining if the land owned in the Cross Haven District is needed for an elementary site.



# **Next Steps**

- Further analysis on deciding the utilization of existing district owned land and the option for a new elementary school
- Continue to analyze the enrollment, demographics, and development provided by RSP
- Make decisions that will provide World Class Education to every student



# **NOTES**