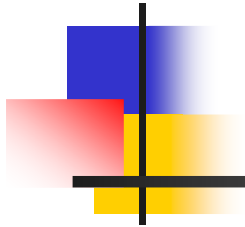


What can we say about the future of Wayland High School Enrollment?



November 2008

*Approved by the Wayland High School Building Committee
and the Wayland School Committee*



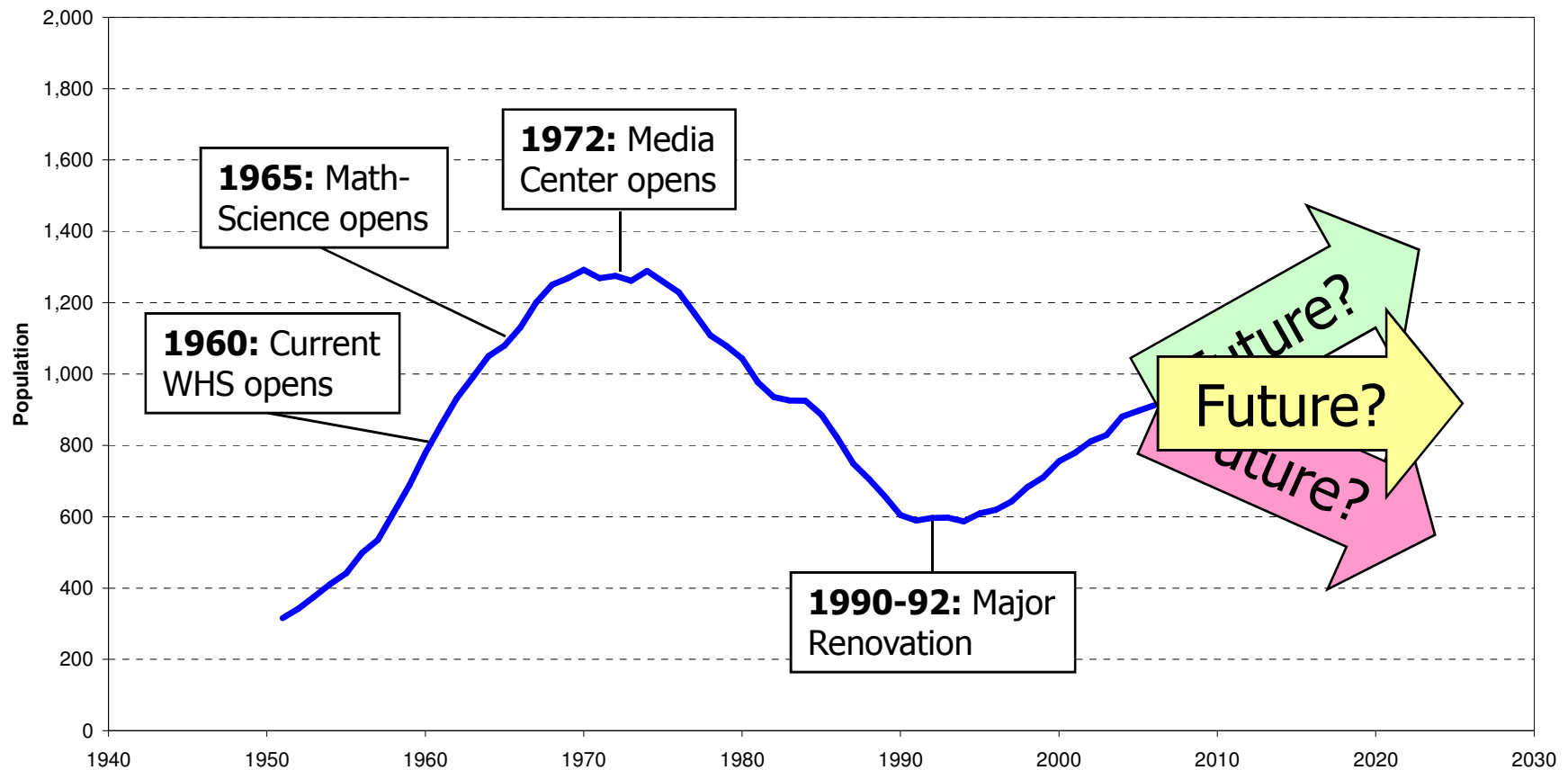
The question

- Wayland High School far past its time
- Modernization an expensive undertaking
- Result to accommodate 50+ years

Q: Given the high uncertainty of projecting enrollments 50 years out, how do we size the project?

WHS through the years

Wayland High School Enrollment: 1951 - Present





What drives enrollment?

- Macro level
 - National, regional, and state trends
- Micro level
 - Town population and births
 - Housing turnover and new construction
 - Funding of school and municipal services



What do the experts say?

- Currently, about 2,800 students
- 2002: Lani Ravin projected 4,000 students
 - 10+ years out, based on build-out potential
- 2005: MAPC* projected 2,000 students
 - In 2020, based on population aging

**Metropolitan Area Planning Council*



What if we only look backwards?

- K-12 “cohort survival” highly predictable
 - On average, 100 students in one grade ...
... become 102 students in the next
 - The “next grade” number varies by grade, ...
... ranging from 98 to 104 (historical average)
- Kindergarten arrivals not so predictable
 - In part a function of births 5 years prior ...
... plus turnover and new construction

Cohort survival, new arrival

WAYLAND PUBLIC SCHOOLS

ENROLLMENT TRACKING from 1996 - 2008

and ENROLLMENT PROJECTIONS for FY10, FY11, FY12 and FY13

Oct. 1	Variable births													PROJECTIONS								
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	FY10 2 Yr. CSR	FY10 3 Yr. CSR	FY10 4 Yr. CSR	FY10 5 Yr. CSR	FY10 10 Yr. CSR	FY11 Using 3-Yr. CSR (06-08)	FY12	FY13	
Births	164	177	182	150	168	136	143	131	124	105	128	110	63 YTD									
K	2	2	2	209	232	188	197	203	170	187	193	174	178	180	165	158	155	158	165	140	172	
Grade 1	228				219	242	191	219	221	188	194	208	192	193	190	192	192	190	176	177	150	
Grade 2	228					219	244	200	218	232	188	202	203	195	193	195	194	195	191	177	178	
Grade 3	229	229					231	253	207	220	235	193	204	208	207	207	207	208	197	195	181	
Grade 4	200	229	230					225	257	202	213	230	199	205	203	202	203	204	205	195	193	
Grade 5	217	203	225	239					231	254	200	208	227	195	196	196	198	200	200	202	192	
Grade 6	207	220	209	227	248					234	253	208	210	233	230	230	228	229	199	203	205	
Grade 7	202	209	223	205	228	244					225	248	207	207	206	207	209	209	225	195	199	
Grade 8	185	204	203	220	208	231	248				247	224	248	207	206	207	206	208	205	225	194	
Grade 9	182	178	199	204	218	207	228	240				237	222	242	239	239	237	240	199	198	218	
Grade 10	153	179	176	198	204	218	198	227	241	244			229	216	216	217	218	219	232	193	193	
Grade 11	175	154	175	173	198	198	213	204	218	233			223	229	227	226	224	227	214	230	192	
Grade 12	132	173	160	181	162	190	192	210	201	214	237	228	217	220	223	222	221	220	227	214	230	
Total	2,580	2,679	2,723	2,795	2,887	2,922	2,927	2,965	2,924	2,918	2,860	2,796	2,759	2,710	2,701	2,698	2,692	2,706	2,636	2,544	2,495	
Delta	137	99	44	72	92	35	5	38	-41	-8	-56	-64	-37	-49	-58	-61	-67	-53	-65	-92	-50	
% Growth	5.8%	3.8%	1.6%	2.6%	3.3%	1.2%	0.2%	1.3%	-1.4%	-0.3%	-1.9%	-2.3%	-1.3%	-1.8%	-2.1%	-2.2%	-2.4%	-1.9%	-2.4%	-3.5%	-1.9%	
Totals																						
K-5	1,344	1,384	1,378	1,387	1,427	1,381	1,350	1,347	1,304	1,283	1,221	1,213	1,203	1,158	1,154	1,150	1,149	1,153	1,135	1,088	1,068	
6-8	594	633	635	652	682	730	748	737	723	721	720	680	665	647	642	644	643	648	630	622	598	
9-12	642	682	710	756	778	811	829	881	897	912	919	903	891	907	905	904	900	907	872	835	831	

Births for 2007 and 2008 are preliminary, as reported to Wayland's Town Clerk.

Three important drivers

- Town population



- Town births

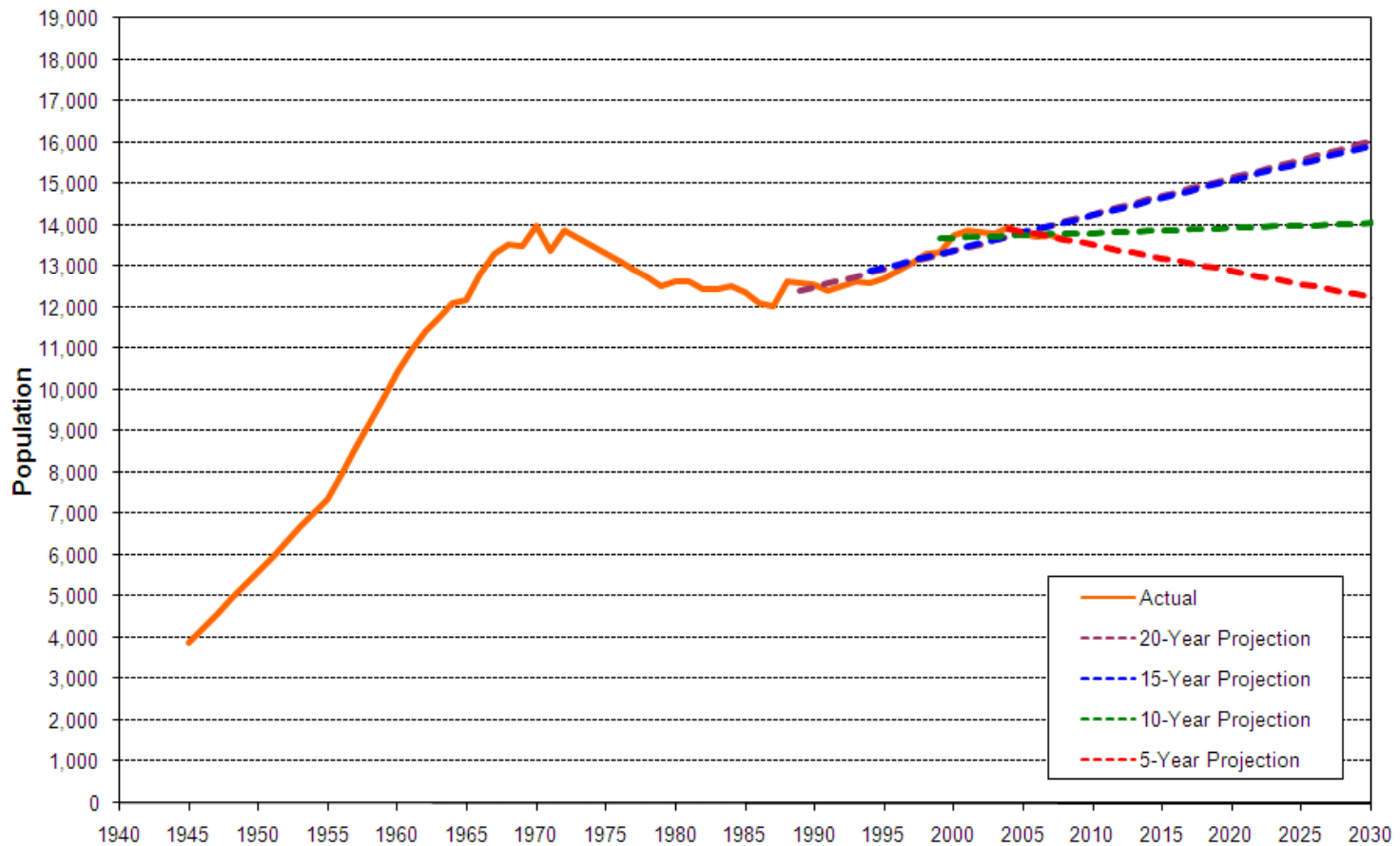


- Town Kindergarten to birth ratio



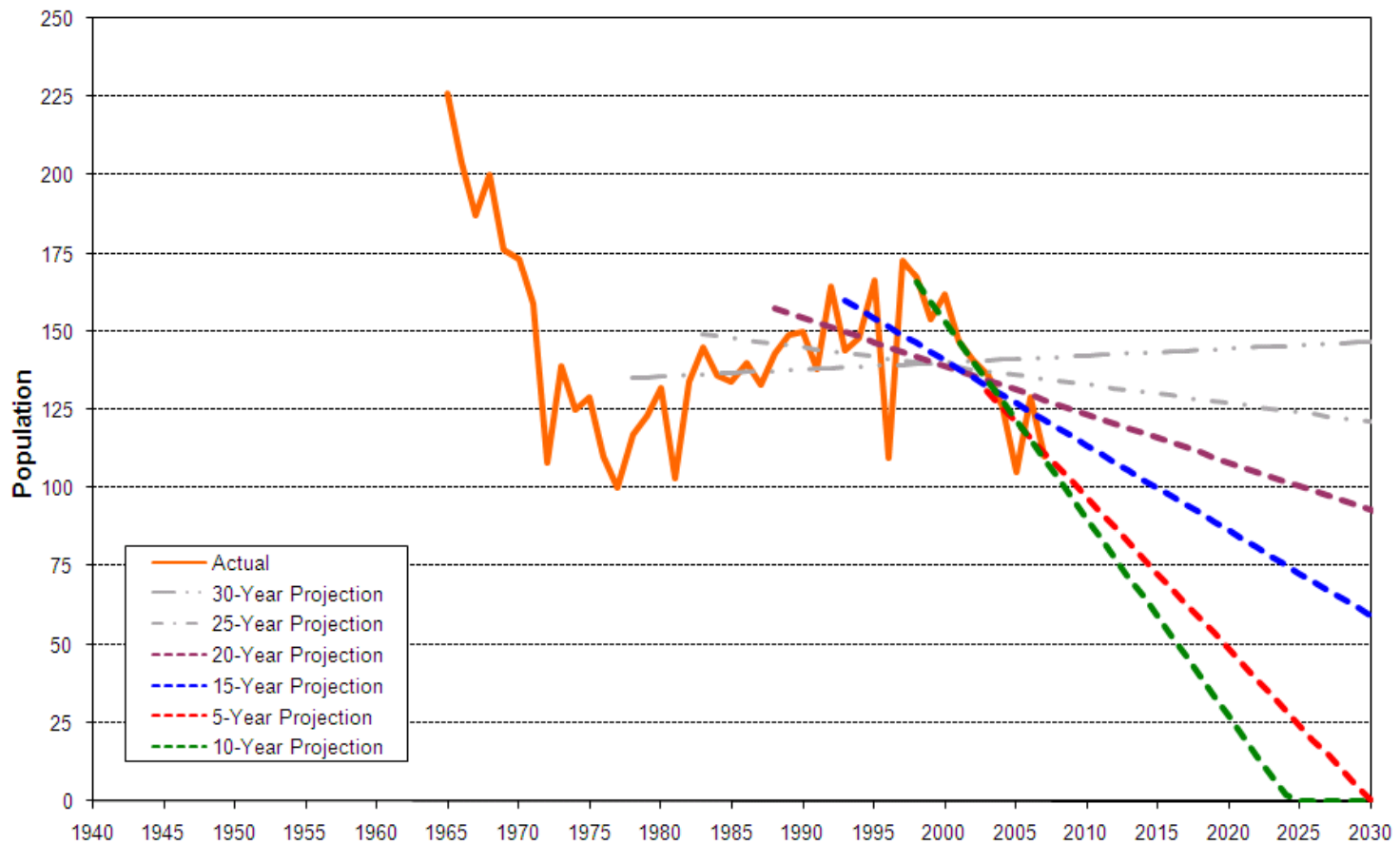
Wayland population history (FYI)

Wayland Population: 1945 - Present



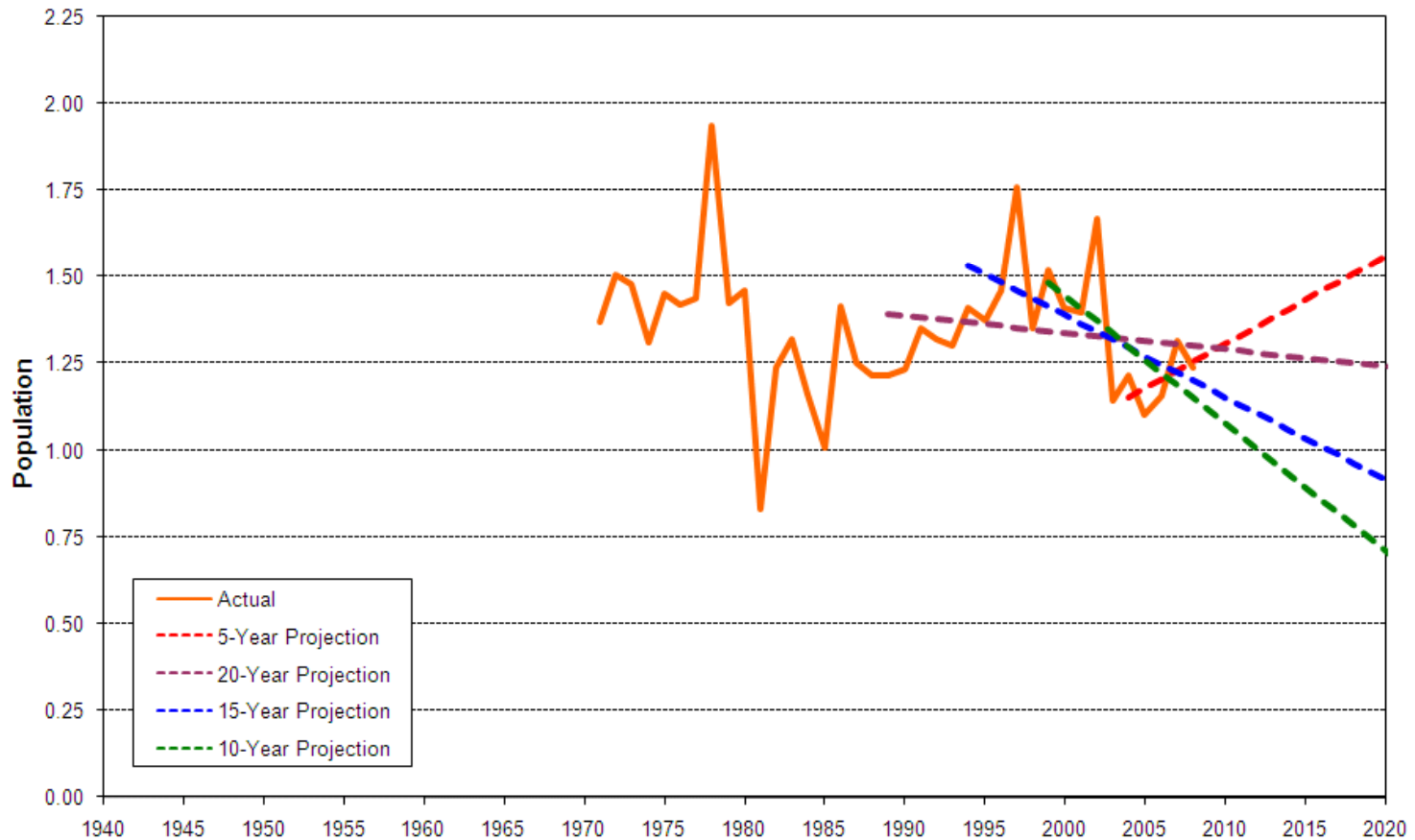
Wayland birth history

Wayland Births: 1965 - Present

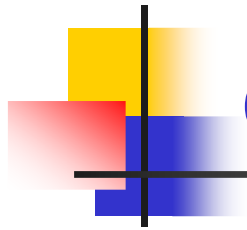


Wayland K:birth ratio history

Wayland Birth to K Ratio: 1971 - Present



What about the declining elementary enrollment?



Wayland Kindergarten: 1971 - Present

2006-07

10/05:
159 est

10/06:
193 act

2007-08

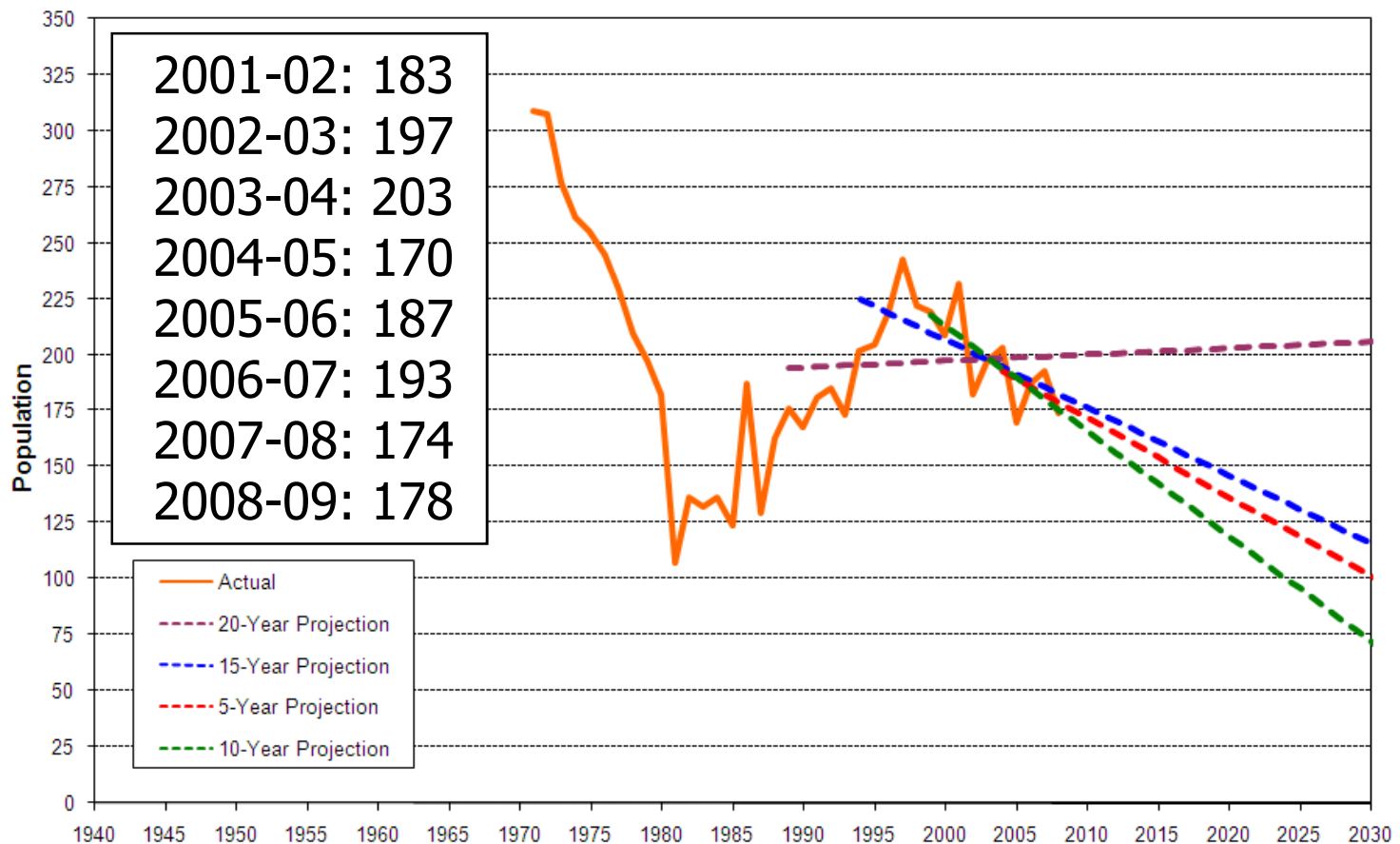
10/06
168 est

10/07:
174 act

2008-09

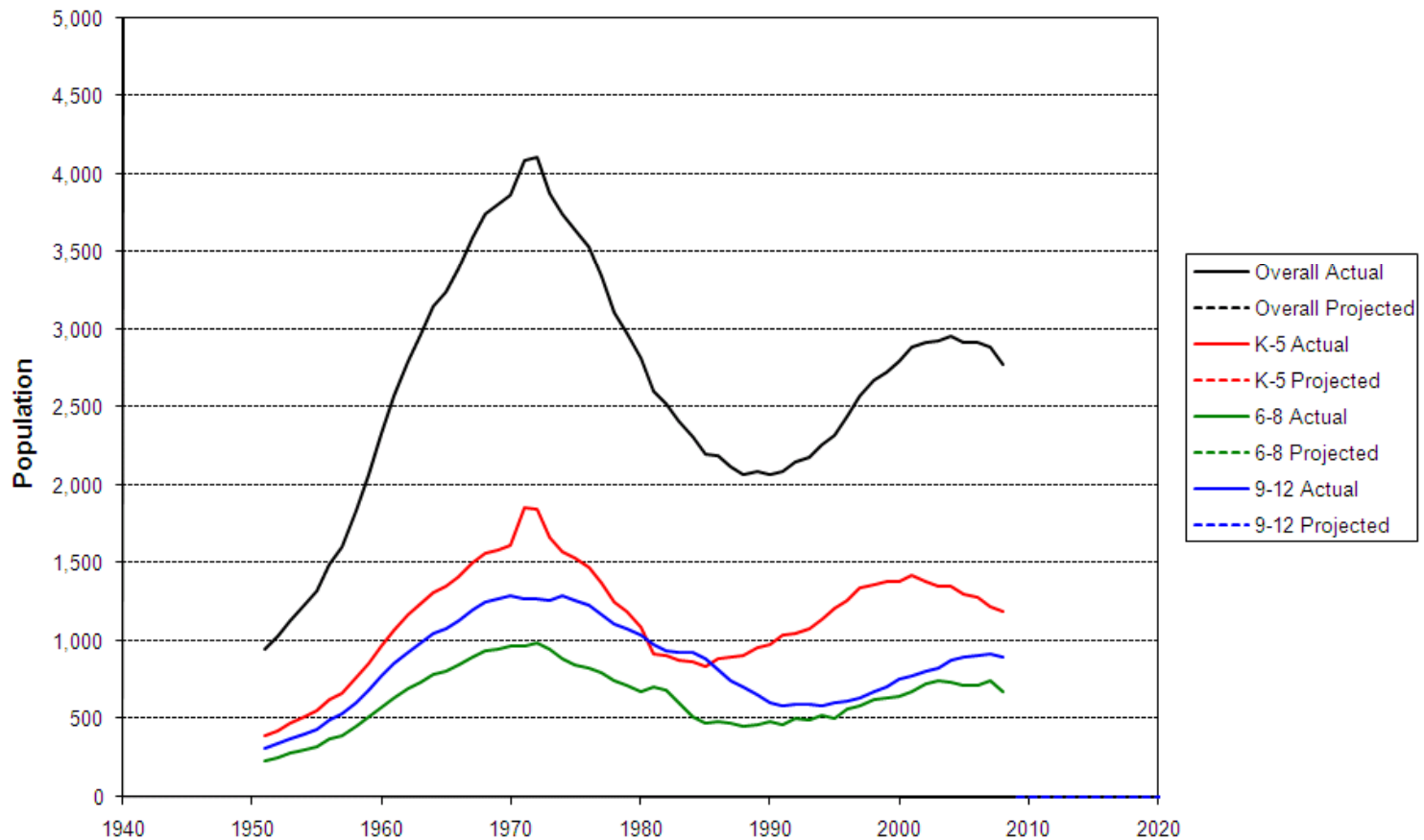
10/07
164 est

10/08:
178 act



Wayland's enrollment history

Wayland Enrollment: 1951 - Present





The challenge

- Q:** Given the high uncertainty of projecting enrollments 50 years out, how do we size the project?
- Q:** Working together, can Wayland, the MSBA, and IIC enhance the existing projections?



MSBA/IIC projections

- Methodology uses only last 5 years of births, K enrollment, and cohort survival
- Projection goes only to 2017, covers only 1st 5 years of use

MA Enrollment Projection-WAYLAND

	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
1993	202	182	202	192	193	199	178	158	197	147	147	143	150	2,260
1994	205	214	189	211	192	196	173	180	156	184	139	144	142	2,325
1995	219	223	218	189	213	196	198	184	184	160	175	134	150	2,443
1996	242	228	228	229	200	217	207	202	185	182	153	175	132	2,580
1997	223	253	225	230	229	204	220	209	204	176	179	154	173	2,679
1998	219	227	245	232	230	225	209	223	203	199	176	175	161	2,724
1999	211	234	233	237	235	239	227	205	220	204	198	173	181	2,797
2000	232	219	241	242	244	251	245	228	207	220	207	202	172	2,910
2001	186	245	221	249	241	242	262	244	231	208	214	193	191	2,925
2002	194	191	244	231	248	238	246	254	248	226	198	212	192	2,922
2003	204	217	200	251	224	247	233	247	257	240	225	203	209	2,957
2004	169	221	217	207	258	231	240	241	242	236	240	218	201	2,921
2005	186	187	232	219	201	253	233	243	244	231	234	234	215	2,912
2006	194	194	186	235	214	201	253	225	242	230	224	228	237	2,863
2007	172	205	203	194	231	209	205	248	223	242	221	225	226	2,804
2008	156	186	211	208	191	230	208	205	248	213	238	219	223	2,737
2009	148	169	191	216	205	191	229	208	205	237	210	236	217	2,661
2010	125	160	174	196	213	205	190	229	208	196	233	208	234	2,569
2011	154	135	164	178	193	212	204	190	229	199	192	230	206	2,467
2012	131	166	139	169	176	193	211	204	189	219	195	190	229	2,412
2013	123	142	171	143	166	175	192	211	203	181	215	193	189	2,305
2014	114	133	146	175	141	166	174	192	211	194	178	213	192	2,230
2015	106	124	137	150	173	140	165	174	191	202	191	178	212	2,140
2016	109	114	127	140	147	172	140	165	174	183	198	189	175	2,035
2017	109	118	117	130	138	147	172	140	165	166	180	196	188	1,966

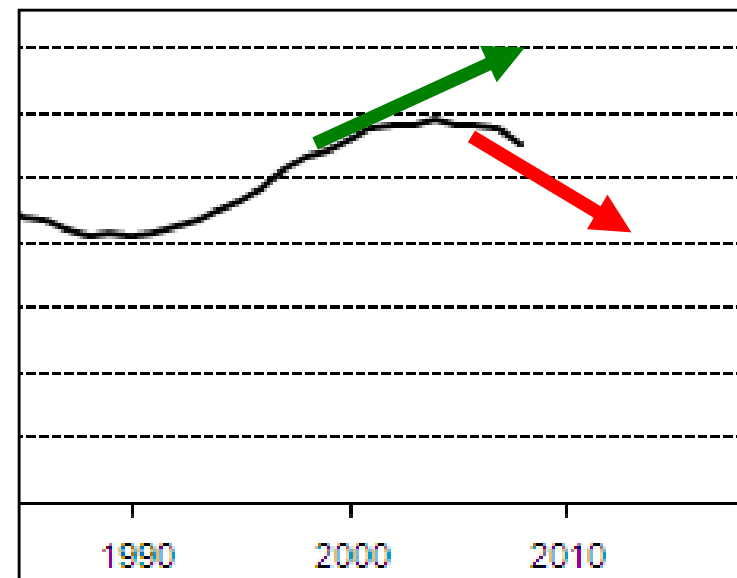
Projection generated using the following information:

Ratio used: 5-yr average. Notes state that 100 2BR residential units are possible in Mixed Use Overlay at Town Center, but we have not taken these into account as they are not reflected in planned units for 2008 or 2009.

Impact of when to project

- Using the last 5 years to project forward 50 years risks erring if the last 5 years aren't the most representative 5 years

- What if projection had been made in 2000 instead of 2008?



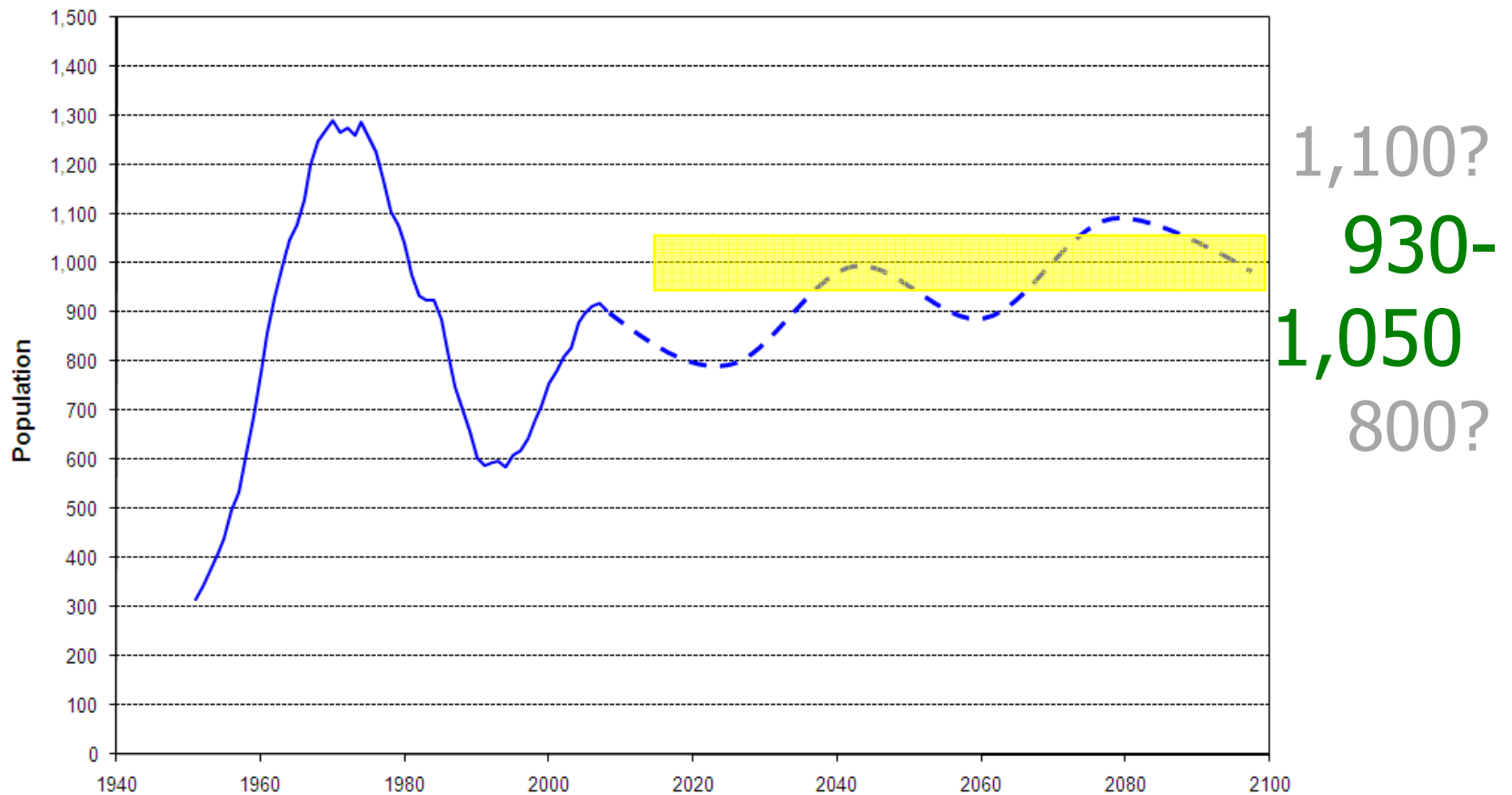


Enhancing the projection?

- Can we enhance the projection to include
 - Consideration of 50+ year building life
 - Climb/dip cycle of 30 years (so far)?
 - Pending (and pent up) turnover?
 - Development under construction and possible?
- A reasonable hypothesis
 - Gradual, fluctuating increase

What should we build for?

Wayland High School Enrollment: 1951 - Present





Responsible sizing

- Recognize 50+ year building life
- Core space
 - Low cost at initial build
 - Expensive to add later
- Classroom space
 - Build sensibly for 25+ years
 - Design to allow for future expansion