

# Enrollment Sub-Committee Report Out

Aug. 17, 2016

# Summary

- Objectives

- To understand the enrollment projection methodology
- To analyze any past trend / accuracy of the projection data

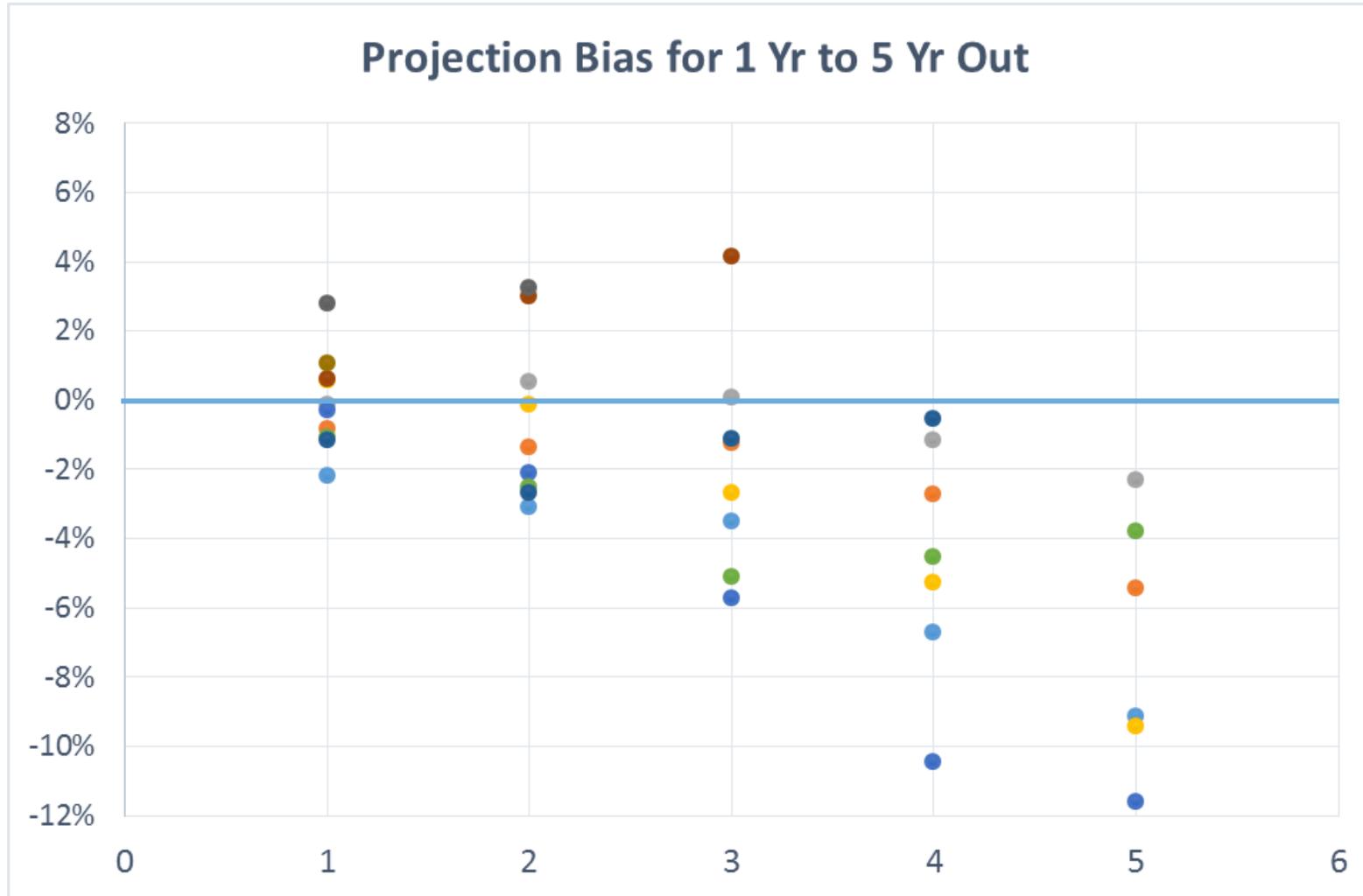
- Findings

- Held meetings with Tom Williams on the projection logic; and within subcommittee to align findings and data.
- We now understand the projection approach well.
- We feel the methodology is rigorous, sound and consistently applied across the 5 high school resident areas.
- We do not feel a second opinion is necessary.

# Projection Data Analysis

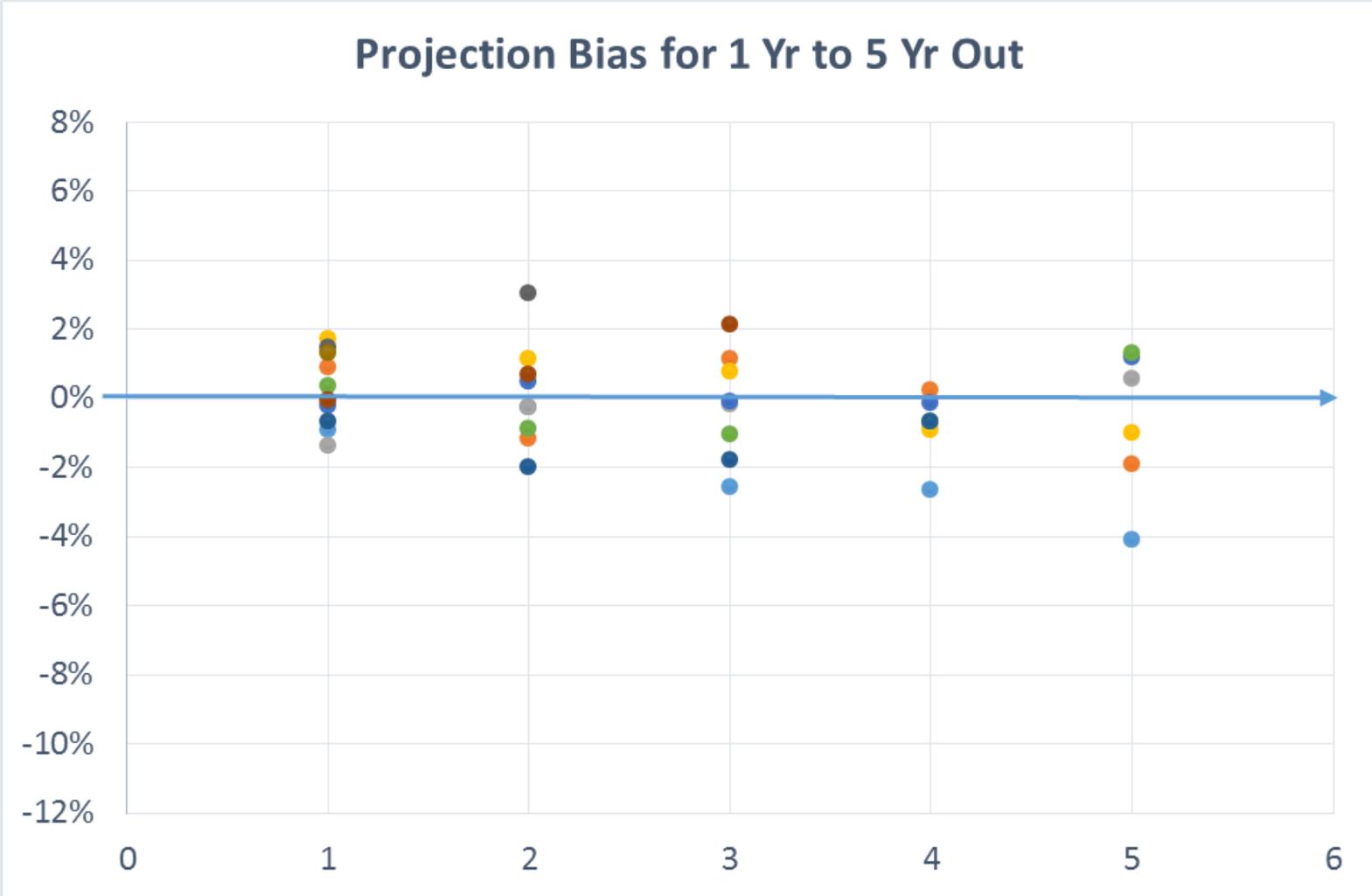
- Limitations with projection models given the uncertainty of the future
- Examined past 10 projections (2005 – 2014) on 1 year to 5 year out accuracy
  - Analysis done on resident enrollment for both actual and forecast (resident enrollment differs from total enrollment because it covers only district-enrolled students from within each attendance area)
  - Fremont and Homestead data combined due to some residence address issue
- Findings
  - Higher accuracy for near term projection than longer term
  - Accuracy level not uniform across different high school areas. It suggests there are localized factors at play.
  - Projection for Lynbrook has generally biased on the low side, unique amongst the schools. It suggests Lynbrook unique factors exist.
    - API effect on resident behavior; Just in time for high school; etc

# Lynbrook Projection Accuracy



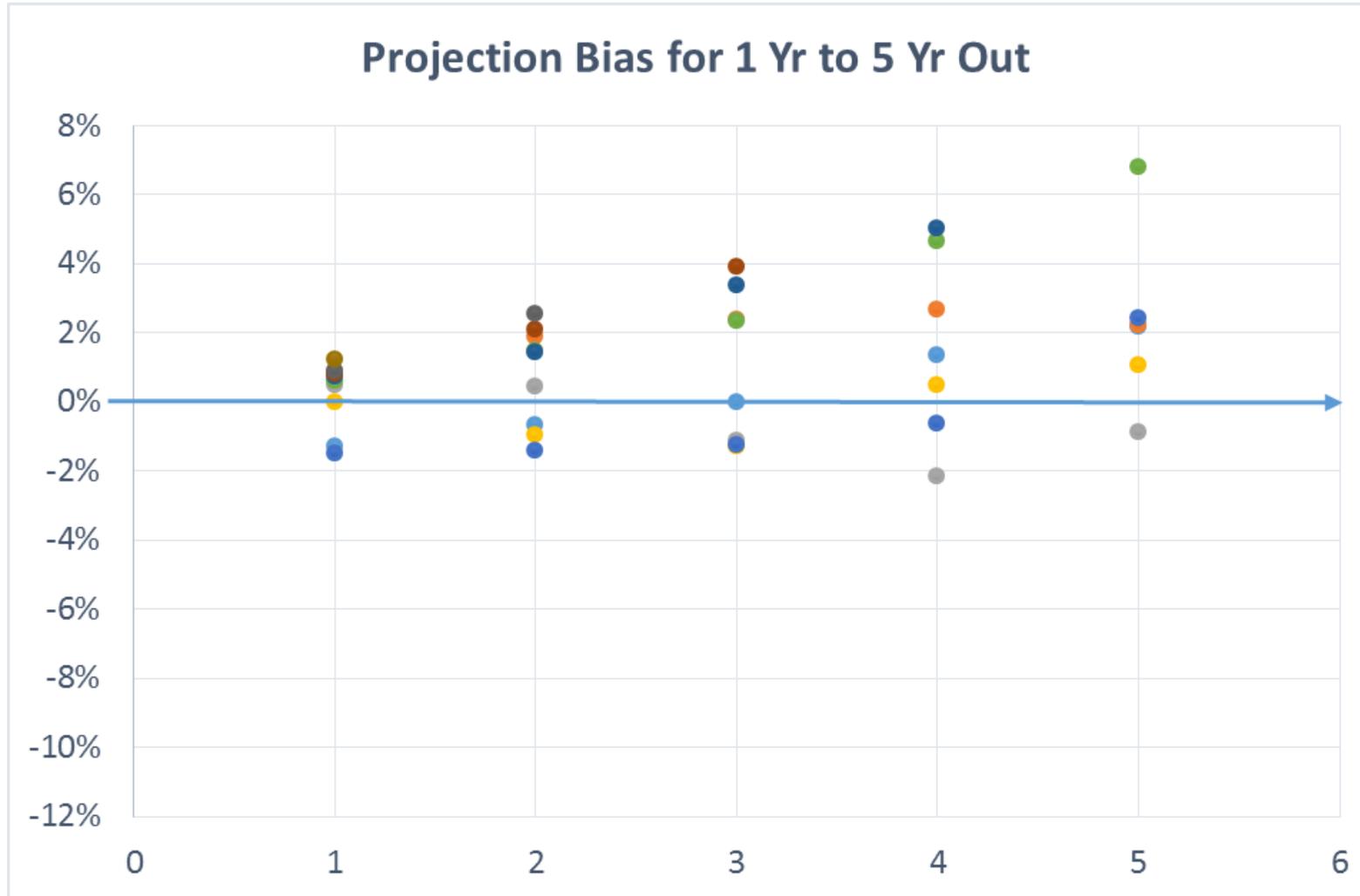
	Average	Min	Max
1 Yr Out	-0.1%	-2.2%	2.8%
2 Yr Out	-0.6%	-3.1%	3.2%
3 Yr Out	-1.9%	-5.7%	4.2%
4 Yr Out	-4.5%	-10.4%	-0.5%
5 Yr Out	-6.9%	-11.6%	-2.3%

# Monta Vista



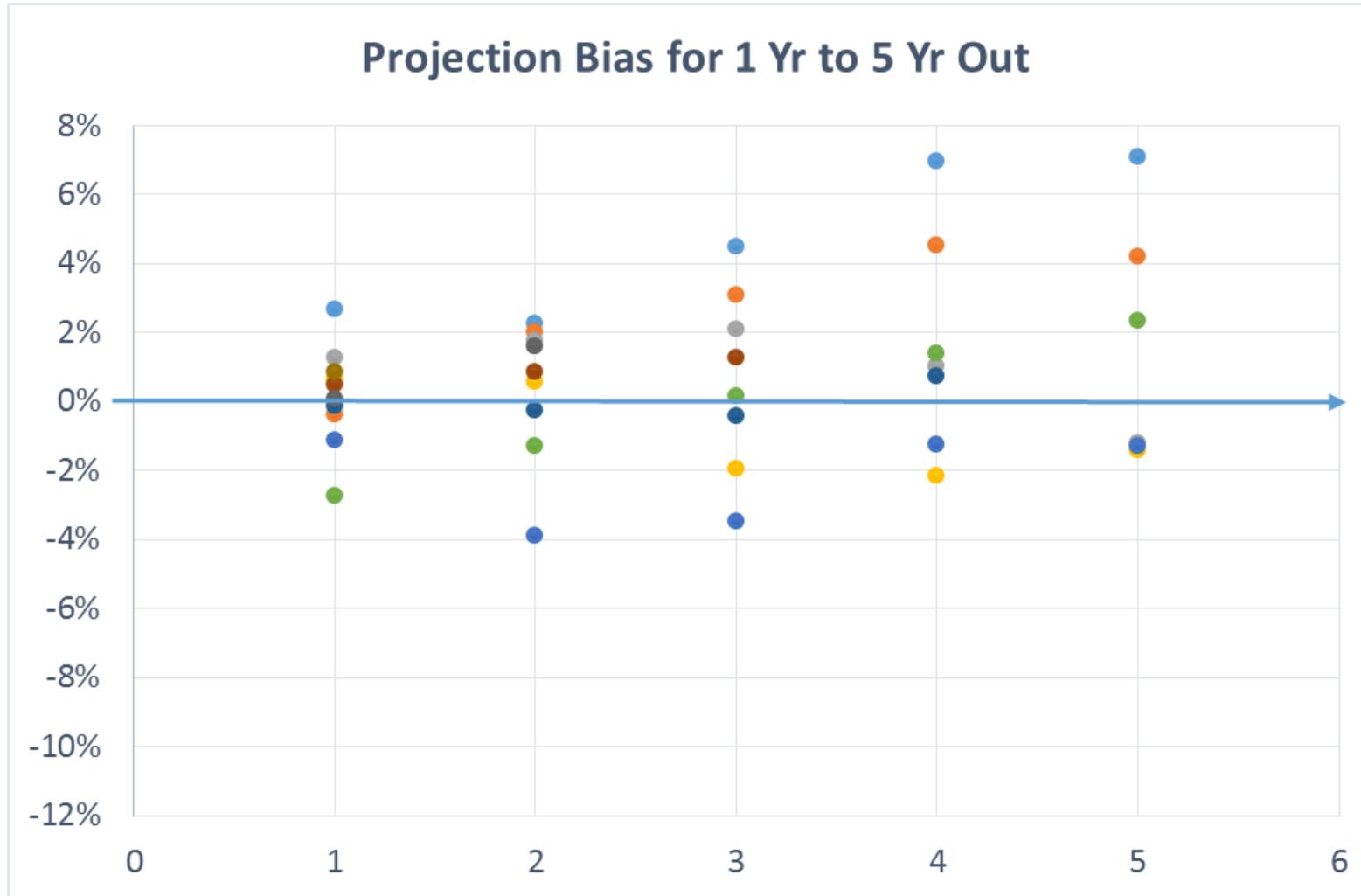
	Average	Min	Max
1 Yr Out	0.2%	-1.4%	1.7%
2 Yr Out	0.1%	-2.0%	3.0%
3 Yr Out	-0.2%	-2.6%	2.1%
4 Yr Out	-0.8%	-2.6%	0.2%
5 Yr Out	-0.7%	-4.1%	1.3%

# Fremont and Homestead



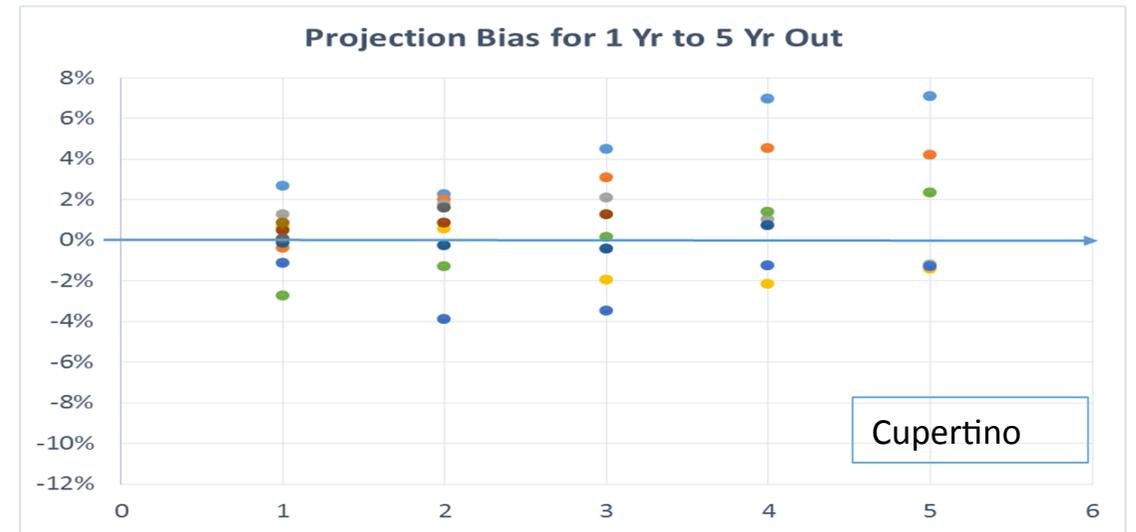
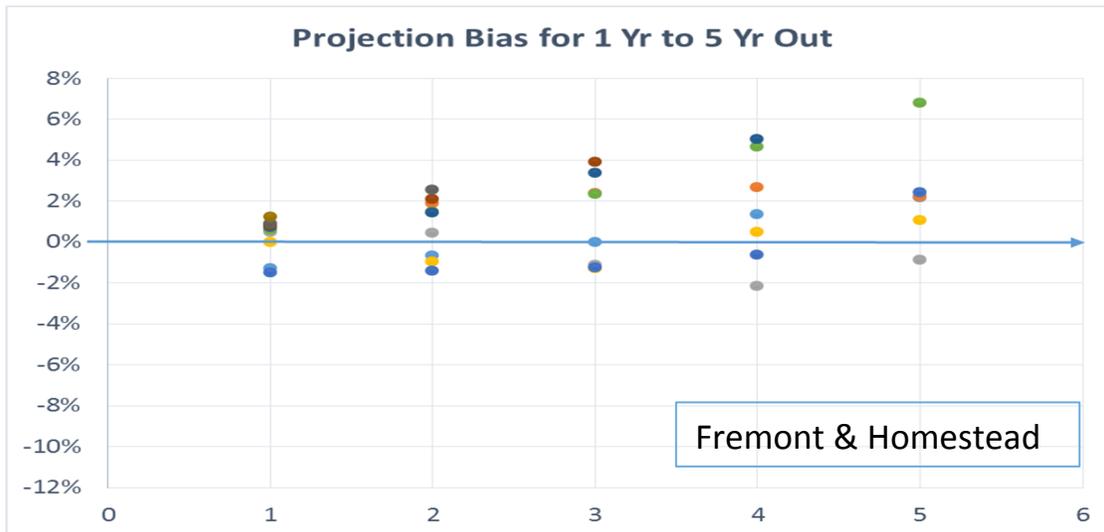
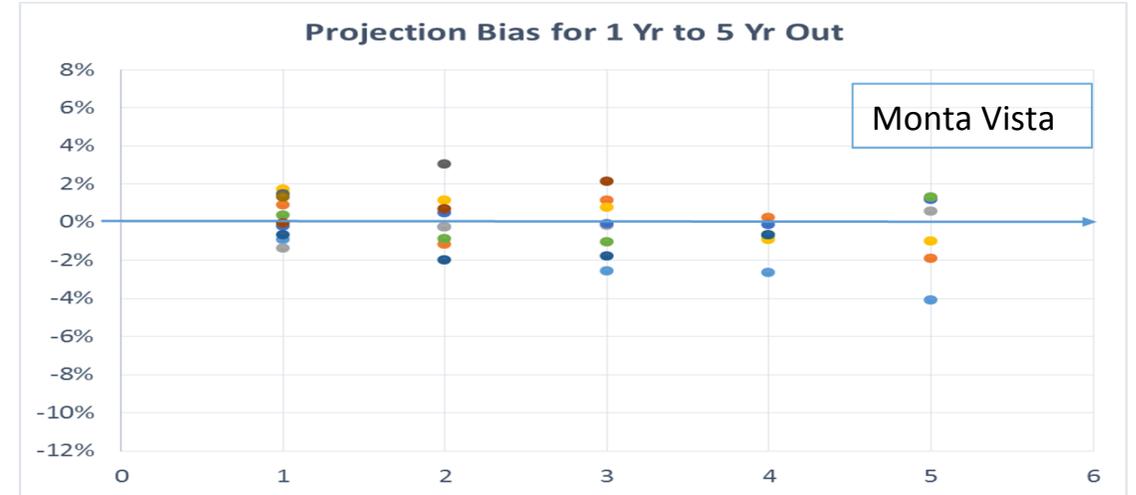
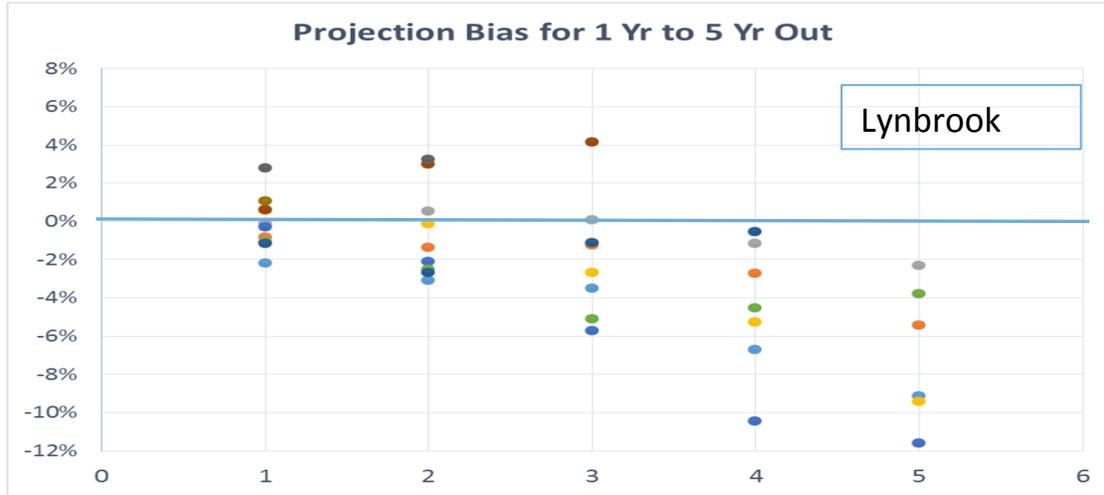
	Average	Min	Max
1 Yr Out	0.3%	-1.5%	1.2%
2 Yr Out	0.8%	-1.4%	2.5%
3 Yr Out	1.0%	-1.3%	3.9%
4 Yr Out	1.6%	-2.2%	5.0%
5 Yr Out	2.3%	-0.9%	6.8%

# Cupertino



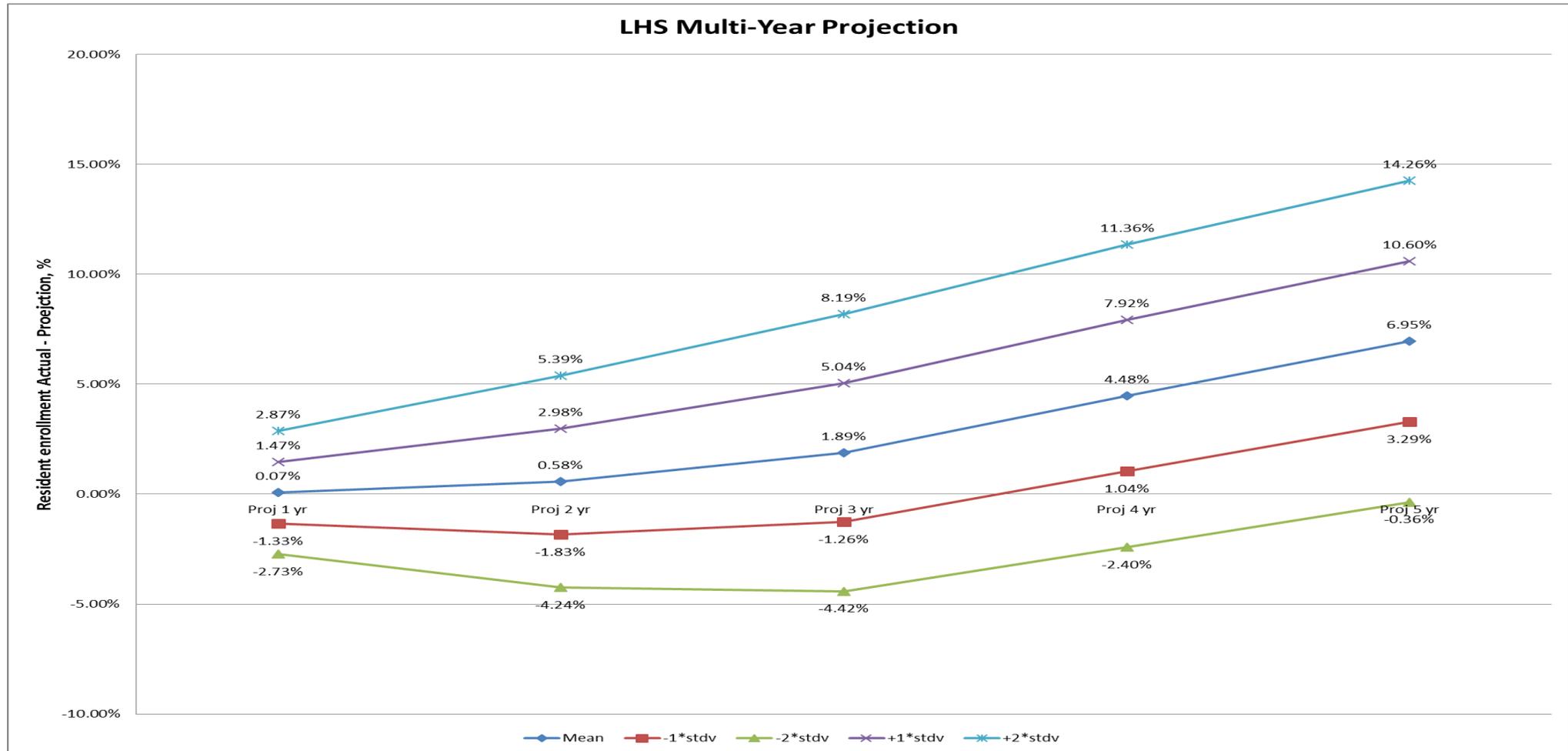
	Average	Min	Max
1 Yr Out	0.2%	-2.7%	2.6%
2 Yr Out	0.4%	-3.9%	2.2%
3 Yr Out	0.6%	-3.5%	4.5%
4 Yr Out	1.6%	-2.2%	7.0%
5 Yr Out	1.6%	-1.4%	7.1%

# Combined View



# Statistical View on Lynbrook Projection

To correct the bias, we need to apply below measures. 1 standard deviation gives 67% confidence; 2 gives 95% confidence.



# Apply Historical Bias to Projections

- Because of the future uncertainty, we recommend CAC to think of enrollment projection not as single data points, but as a range.
- To calculate the range, we applied historical bias plus 2 standard deviation
- Use Lynbrook 2016 Jan. projections as example:

2016 Jan. projection:	Yr 2016	Yr 2017	Yr 2018	Yr 2019	Yr 2020
Resident Enrollment Proj:	1632	1592			1461
Adjust for avg bias	1633	1601			1563
95% confidence high end	1679	1678			1677
95% confidence low end	1587	1524			1448

} Likely Range Resident Enrollment

<b>Translate into Attending Enrollment:</b>					
95% confidence high end	1749	1748			1747
95% confidence low end	1657	1594			1518

} Likely Range Attending Enrollment

- 5 yr out resident enrollment is likely between 1448 to 1677. Total enrollment will be moderately higher (by roughly 70) than these resident enrollment numbers due to intra- and inter-district attendance, between 1518 to 1747.
- Even the high end is lower than current enrollment level (1767 attending), so we are faced with a real issue
- Need to focus on solution(s) that allow flexibility because of the wide range