**M E M O R A N D U M**

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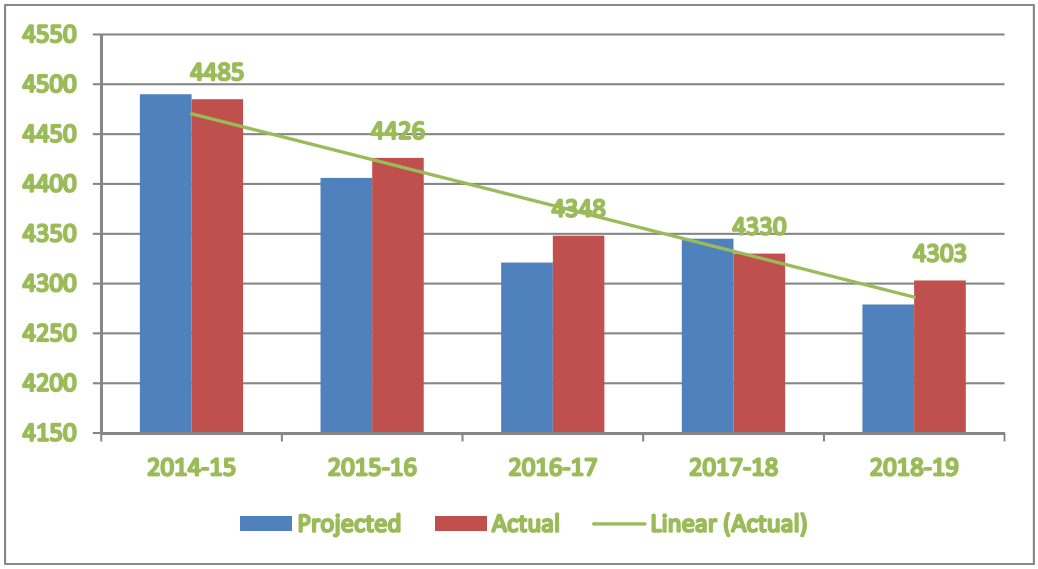
RE: Enrollment Projections

The first step in developing the subsequent year's budget and 5-year budget forecasts is to project enrollment. The district uses a cohort survival methodology (looking back 5 years to project forward for the next 5 years) with greatest weight given to current year data. The steps in the methodology are:

1. Collect and categorize current year data following the 3rd Friday in September enrollment count.
2. Compare prior year projection to the current year actual enrollment to determine the accuracy trend and calculate an error ratio, if needed, to apply to the projection methodology.
3. Prepare four separate enrollment projections, using different averaging and weighting ratios, and examine to determine if adjustments or further analysis is needed.
4. Compare internal projection to the projection from Forecast 5 and reconcile variances. Forecast 5 is a service the district uses to advise on and prepare the multi-year financial projection.
5. Select the projection / adjusted projection with the lowest absolute error based on the prior 5 years.
6. Present projection to school board. Once presented, the projection is considered final and becomes the basis for resource allocation decisions for the subsequent year and the basis for financial projections for the 5-year budget forecast.

Step 2, listed above, is to compare prior year projections to actual enrollment. The following graph illustrates the accuracy of the project methodology showing a 5-year accuracy rate of greater than 98%. Based on this accuracy rate, the current methodology is considered valid and no adjustments have been applied.




In the last 5 years, enrollment has declined 220, with a steady downward trend. The rate, however, has slowed from the highest loss in enrollmnet of 123 from 2015-16 to 2016-17. The decline in the last two school years has been 25 and 26 respectively.

Analysis of the accuracy trend does indicate that closer monitoring of enrollment change in needed. Factors that are beginning to indicate a reversal of the trend for the past several years are:

1. The overall accuracy rate has changed from 99.5% to 98.4%.
2. The accuracy rate on recent grade by grade level projections shows greater dissonance than prior historic analysis had indicated.

The primary cause of the enrollment decline is simply that more students are graduating from 12th grade than are enrolling in the subsequent year's kindergarten. In the table below, the average difference in the two grades enrollment is 135 students.

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|---|---|---|---|---|---|---|---|
| 12th Out | 420 | 395 | 404 | 416 | 403 | 395 | 418 | 367 |
| New K | → | 284 | 267 | 281 | 244 | 265 | 286 | 282 |
| | | (136) | (128) | (123) | (172) | (138) | (109) | (136) |

Projections for enrollment are made at the district-wide level. However, actual enrollment may impact some schools more than others indicating a need to allocate resources differently. For example, the overall projection for 2017-18 was 99.7% accurate. However, the accuracy rate for individual grades had a broad range as shown in the table below.

| Year | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | K-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017-18 | | | | | | | | | | | | | | |
| Projected | 265 | 248 | 302 | 282 | 314 | 300 | 335 | 346 | 372 | 395 | 370 | 423 | 393 | 4345 |
| Actual | 286 | 292 | 269 | 307 | 288 | 312 | 301 | 352 | 347 | 399 | 391 | 368 | 418 | 4330 |
| Variance | -21 | -44 | 33 | -25 | 26 | -12 | 34 | -6 | 25 | -4 | -21 | 55 | -25 | 15 |
| % Variance | -7.9% | -17.7% | 10.9% | -8.9% | 8.3% | -4.0% | 10.1% | -1.7% | 6.7% | -1.0% | -5.7% | 13.0% | -6.4% | 0.3% |

The district also examines grade change data to determine the need, if any, for further adjustments or projection methodology changes. For example, many school districts

experience a change from elementary to middle or middle to high schools as a result of students in private educational programs entering the public school. Our analysis of the last 7 years shows that the expected change in entry points will not materially affect the overall enrollment projection.

## Five-Year History and Projection

The following chart shows the change in enrollment for the last 5 years and projection for the next 5 years.

**SCHOOL DISTRICT of NEW BERLIN**
**Enrollment Projection Summary**

| | PRE - K | Elem K - 6 | Mid / Hi Schools 7 - 12 | Total Enrolled | Enroll Change |
|---|---|---|---|---|---|
| **Historical Data** | | | | | |
| 2014-15 | 43 | 2,103 | 2,382 | 4,528 | |
| 2015-16 | 56 | 2,082 | 2,344 | 4,482 | (46) |
| 2016-17 | 11 | 2,046 | 2,302 | 4,359 | (123) |
| 2017-18 | 4 | 2,055 | 2,275 | 4,334 | (25) |
| 2018-19 | 5 | 2,116 | 2,187 | 4,308 | (26) |
| **Projection** | | | | | |
| 2019-20 | 23 | 2,134 | 2,175 | 4,332 | 24 |
| 2020-21 | 23 | 2,161 | 2,141 | 4,325 | (7) |
| 2021-22 | 23 | 2,173 | 2,114 | 4,310 | (15) |
| 2022-24 | 23 | 2,226 | 2,073 | 4,322 | 12 |
| 2023-24 | 23 | 2,247 | 2,066 | 4,336 | 14 |

*Historic Data - Total Enrolled* is the number of pupils attending one of the district's schools, regardless of the residence status. *Projection - Total Enrolled* is adjusted to include changes in the number of students from other school districts that will be accepted for attendance in a district school.

## Enrollment versus Membership

Projections of enrollment are important because the number of pupils that attend our schools is a primary determinate of cost drivers, such as staff, materials, space and other resources. However, in the State of Wisconsin, a district's revenue is determined from a concept known as membership.

Membership is an adjustment of enrollment that takes into consideration district of residence and full-time equivalency. In other words, for the School District of New Berlin, the following adjustments are common:

- Add New Berlin students that attend a school outside of the district.
- Subtract students from another school district that attend a New Berlin school.
- Subtract New Berlin students that attend part-time, for example a student in a home-based private school that comes to a New Berlin school for 2 hours each day.

For purposes of estimating revenue for the budget year and 5-year budget forecast, the district needs to also project membership. Whereas the enrollment projection shown above shows an increase of 28 students in the next 5 years, membership is projected to increase by only 10 students.

There are several factors outside the control of the district that could have a bearing on the accuracy of the projection. The cohort survival methodology can result in error if population trends in the future occur at a rate that differs from the past. The district monitors birth rates, land use plans and economic data and will make an adjustment when changes in these factors warrant such.