# Inequities in Monomoy's Elementary Per Pupil Budgets and the Challenges with the Loss of Elementary Enrollment

Across the Cape, there has been a demographic shift, with towns having increasingly fewer young families with school-aged children. Lack of affordable housing, high cost of living, lack of affordable childcare options, and a growing "Airbnb" industry only exacerbate this demographic shift and loss of school-aged children. The rate of the attrition of young families varies by community, and over the past decade, the Town of Chatham has seen some of the greatest loss of year-round school-aged children.

On December 6, 2010, the simultaneous town meetings in Harwich and Chatham voted to regionalize their schools. Heading into the following academic year (FY12), Harwich Elementary School's enrollment was 579. Chatham Elementary School's enrollment was 279, just under half the HES enrollment. In FY12, a significant number of Harwich resident students (53) elected to attend CES through school choice, compared to a half-dozen Chatham resident students who attended HES. Complete elementary enrollment figures since regionalization can be found in Appendix 1.

Over the 10 years since regionalization, CES enrollment has fallen by 62 students, and HES enrollment has dropped by 67 students. While the total number loss of students was similar, HES started as a much larger school. CES enrollment is now just under a third of the HES enrollment. The decrease in CES enrollment and Chatham resident students has escalated over the past four years (FY17 to present).

In the past decade, the enrollment at HES has dropped by 12%, and the school shrank from six classrooms of kindergarteners to five. By contrast, CES lost 39% of its enrollment over the past 10 years and contracted from three classrooms of kindergarteners to only one classroom this year. There are currently not enough resident students in Chatham to fill a single kindergarten classroom, so the district heavily relies on intra- and inter-district school choice to round out that kindergarten class. It is quite possible that in the next few years there will not be enough Chatham kindergarteners and School Choice applicants to fill even a single standalone kindergarten classroom.

Two dilemmas are becoming quite evident as CES enrollment declines, and both are exacerbated by the fact that CES enrollment is declining at a much higher rate than HES enrollment. First, there is a rapidly increasing inequity in per pupil budgets between Monomoy's two elementary schools. Second, declining enrollment at CES potentially compromises our ability to provide enough grade-level peers to provide a rich social environment for students and CES teachers are increasingly lacking opportunities for professional collaboration within the school building.

#### 1. Inequities of Per Pupil Budgets

As the district came together in FY12, the budgeted per pupil budgets at the two elementary schools was similar. The budget per student at CES was \$941 more than at HES, as shown in Table 1.

Ten years later, the FY21 budget finds smaller elementary school populations in both Monomoy elementary schools, sending per pupil budgets upwards at each. This upward trend happens when a school's "fixed costs" (which include main office, custodial, nurse, and librarian salaries, heating and electrical costs, and maintenance expenses) are spread over fewer students. As CES enrollment has

plummeted since FY17, its per pupil costs are nearly double what they were in FY12 – during this time period, the district has seen the difference in per pupil budgets between CES and HES increase from about \$1,000 to nearly \$5,000 per student.

As the enrollment at CES declines, the amount Harwich taxpayers will be subsidizing the funding for CES will quickly escalate. By FY25, CES enrollment will likely decrease to about 100 students. This would result in per pupil school expenditures of around \$26,526, which will likely be nearly double the per pupil budget at HES, based on the projections in Table 1.

Table 1: Per Pupil Budgets at Monomoy's Elementary Schools, FY12, FY21 & FY25

	FY12	Number	FY12
	School Budget	of Students	Per Pupil Budgets
Chatham Elementary	\$ 2,499,028	265	\$9,430
Harwich Elementary	\$ 4,999,819	589	\$8,489
	\$941		

	FY21 School Budget	Number of Students	FY21 Per Pupil Budgets
Chatham Elementary	\$2,869,394	170	\$16,879
Harwich Elementary	\$6,085,214	512	\$11,885
	\$4,994		

Note: this is a projection*	FY25 School Budget	Number of Students	FY25 Per Pupil Budgets		
Chatham Elementary	\$2,652,551	100	\$26,526		
Harwich Elementary	wich Elementary \$6,462,331 470				
	\$12,776				

<sup>\*</sup>Based on 2% annual increases and predicted staff reductions as enrollment contracts

The inequity in per pupil budgets is not that the district is providing a better educational program to students at CES. The educational program, curriculum, and offerings are painstakingly coordinated between the district's two elementary schools to ensure all Monomoy students have access to the same excellent quality of education and same educational opportunities. The inequity happens in how the district's Regional Agreement assesses our two towns. Local tax dollars largely fund Monomoy's budget, with Harwich currently paying (in FY21) 74.35% of the district's operational costs, based on Harwich having a much larger 3-year average of foundation enrollment.

Some families from Harwich directly benefit from Chatham Elementary School. Since regionalization, between 14% and 19% of CES enrollment has been Harwich resident students. By contrast, only 1% to 2% of HES enrollment has come from Chatham resident students.

Despite the fact that a significant number of Harwich children attend CES, the Harwich taxpayers end up paying the bulk of the total per pupil budget difference at CES. The total per pupil budget difference has escalated significantly since FY17, and will escalate quickly and dramatically heading to FY25, as indicated in the Table 2.

#### Table 2: Total Per Pupil Budget Difference (CES vs. HES), FY12, FY21 & FY25

#### In FY12

\$941 per pupil difference X 265 CES pupils = \$249,365

FY12 predated fiscal regionalization. Chatham fully paid this difference. In FY13, Harwich would have paid a large portion of the difference:

\$1,263 FY13 per pupil difference x 259 CES pupils = \$327,117,
given a 3-year foundation enrollment split that was 72% Harwich

#### In FY21

\$4,994 per pupil difference X 170 CES pupils = \$848,980 Harwich's share of the operating assessment beyond minimum contribution grew to 74.35%.

#### In FY25

\$12,776 X 100 CES pupils = \$1,277,587

It is anticipated that Harwich's share of operating expenses beyond minimum contribution is likely to be around 79%

#### **How to Remedy This Inequity**

The remedy involves amending the Regional Agreement, which requires the Selectmen in both towns and the School Committee to adopt a new assessment procedure that would need to be approved by Town Meetings in both communities. A working group of Selectmen and appointees from the towns, as well as Monomoy's School Committee and its appointees, could convene to develop a proposed remedy. Bringing this group together is one of our School Committee's 2020-2021 goals.

The remedy cannot simply be to increase enrollment at CES by moving Harwich resident children to CES (through intra-district school choice, redistricting, or creating upper and lower elementary schools). This would not provide relief to Harwich taxpayers, who would still be subsidizing the education of an ever-dwindling number of Chatham elementary-aged children. Moving Harwich children to CES decreases enrollment at HES, thereby increasing HES per pupil costs — while the difference in per pupil budgets at both elementary schools could be equalized doing this, it happens at the expense of the Harwich taxpayer. Empty classrooms at CES would simply become empty classrooms at HES. A fair remedy ultimately would require Chatham paying more towards the assessment to mitigate the real costs of running a very small elementary school in their town, with an enrollment far less than half that of HES.

Attached to this document are the following appendices to inform this working group conversation:

Appendix 1: Monomoy Elementary Enrollment FY12-FY21 and beyond

Appendix 2: Number of Classrooms per Grade (FY12, FY20 & FY25)

Appendix 3: Elementary Class Sizes (2019-2020)

Appendix 4: Monomoy Elementary Budgets FY12-FY21 and beyond

Appendix 5: Monomoy Elementary Per Pupil Budgets FY12-FY21 and beyond

Appendix 6: FY13 Assessment If Each Town Paid for Their Own Elementary School

Appendix 7: FY21 Assessment If Each Town Paid for Their Own Elementary School

Appendix 8: FY25 Assessment If Each Town Paid for Their Own Elementary School

#### The Superintendent's Recommendation

The simplest and fairest way to deal with the dilemma of inequitable funding at the elementary level would be to have each town pay for its own elementary school. This would require a change to the Regional Agreement. This would work well as long as there is no reconfiguration (redistricting or formation of upper and lower elementary schools). Appendix 6 provides an example of the FY13 Assessment if the towns paid for their own elementary schools, compared to how the Assessment was calculated following the Statutory Method. Appendix 7 provides the same for FY21. Using this alternative assessment methodology, the Town of Chatham would have paid an additional \$408,069 in FY13 and \$572,537 in FY21, if the town were paying for its own elementary school. Had this provision been in the Regional Agreement since the district's formation, this would have found the Town of Harwich paying \$408,069 less in FY13 and \$572,537 less in FY21, if it paid for only its own elementary school.

Projecting forward, Appendix 8 provides an example of what an FY25 Assessment might be if the towns paid for their own elementary schools, compared to how that year's Assessment would be calculated following the Statutory Method. As CES enrollment contracts, the assessment impact of Chatham paying for its own elementary school increases. In FY25, it is anticipated that Chatham would pay \$738,426 more in funding its elementary school, compared to the Statutory method – Harwich would pay \$738,426 less.

Should either redistricting or the formation of upper and lower elementary schools be approved by change to the Regional Agreement, it would artificially shift per pupil budgets, pushing HES spending up and CES down, simply by creating empty classrooms at HES to fill ones at CES. Mathematically, we could calculate a solid estimate of costs that would have been attributable to the Town of Chatham for running its elementary school had elementary reconfiguration not happened.

Plotting the ratio of Chatham resident elementary students to the sum of Harwich and Chatham resident elementary students in Monomoy from FY18 to FY25 against the ratio of the CES budget to the combined elementary school budgets provides a "best fit" line, which can accurately estimate the CES budget had reconfiguration not happened. FY18 to FY25 are used because that is when we are seeing the greatest change in enrollment. This estimate of the CES budget would then be plugged into the Assessment calculation, assessing both towns for the operational costs of their elementary schools while controlling for the fiscal effects of reconfiguration.

The equation predicting the Chatham Elementary Budget if reconfiguration happens:

CES Estimated Budget without reconfiguration = (.3353 x (number of elementary-aged students from Chatham divided by the number of elementary-aged students from both Harwich and Chatham) + .2471)

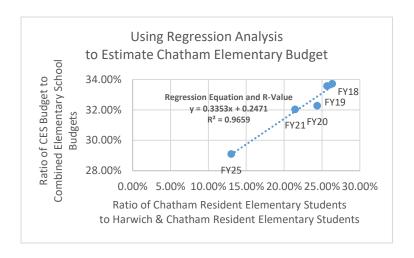
times the combined school budgets of both elementary schools

FY12 the equation would predict the CES budget to be  $(.3353 \times (182/750) + .2471) \times \$7,498,847 = \$2,463,117$  compared to the actual CES FY12 budget of \\$2,499,028, a \\$36,911 difference

FY21 the equation would predict the CES budget to be  $(.3353 \times (132/615) + .2471) \times \$8,954,608 = \$2,857,118$  compared to the actual CES FY21 budget of \$2,869,394, a \$12,276 difference

FY25 the equation would predict the CES budget to be  $(.3353 \times (65/434) + .2471) \times \$9,114,882 = \$2,650,392$  compared to the projected CES FY25 budget of \$2,652,551, a \$2,159 difference

If for whatever reason in the future there is only one Monomoy elementary school, the district would stop using this methodology and simply attribute operational costs based on the Statutory Method.



#### 2. Educational and Developmental Challenges of a Declining Elementary Enrollment

There is a good deal of research in the literature on the positive impacts of smaller class sizes on children's learning. These studies are largely done in more urban settings where elementary class sizes in the mid-20s are reduced to 15 to 18 students. For the past seven years, Monomoy has operated with this research in mind, striving to keep our elementary class sizes 18 +/- 1 and our middle school and high school class sizes at 19 +/- 2 students. Our district is known for having very educationally supportive, small class sizes (Appendix 3).

The unaddressed question is whether class sizes can become too small. In FY12, many Chatham Elementary School classrooms had 14 or fewer students, Chatham Middle School had as few as 11 students in a classroom, and there was an Advanced Placement class at Chatham High School with only three students. Most educators would agree that there is a point when classes become too small for vibrant discussions and too small for effective group dynamics that keep some individuals from dominating the class and disrupting learning. Classes that are too small also limit the pool of peers for individual students, preventing some children from connecting with a like-minded friend, who may be a key social-emotional support for that child.

Demographic and housing trends in Chatham do not provide any indication that CES enrollment will begin to grow in the near future. Monomoy's Regional Agreement also provides the district no option to move more elementary-aged students to CES. The district uses intra- and inter-district school choice to bring in additional students to CES and to balance class sizes between the two elementary schools, but school choice alone will not allow CES to have two or three classrooms per grade. The only way to reverse the trends at CES would be to amend the Regional Agreement to permit some sort of reconfiguration: either redistricting Harwich students to CES or creating upper and lower elementary schools. It's important to note that any reconfiguration option doesn't fill classrooms in both elementary schools, it just trades empty classrooms in CES for empty classrooms in HES.

Three years ago, Monomoy's Superintendent was increasingly hearing from Chatham teachers and parents concerned about the shrinking size of grade-level cohorts at CES and that CES class sizes were often smaller than those in Harwich. In a November 7, 2017, blog post the Superintendent wrote:

What was a stable elementary population in Harwich and Chatham of 9 classes per grade level (3 at Chatham Elementary School and 6 in Harwich Elementary School) seems to be reaching a new stable state of 8 classes per grade level. No matter what, we will need both elementary schools to house all of our elementary-aged children. Based on the demographics of our towns, Chatham Elementary will likely gradually contract to have two classes per grade level, as it currently has at the kindergarten level. Harwich Elementary may be larger than optimal at six classes per grade, while Chatham Elementary may become smaller than optimal with only two classes per grade. Should Monomoy consider reconfiguring its elementary schools to more optimally support teaching, learning, and children's social development?

<u>The complete blog post can be found on the Monomoy website</u>, and much has changed in just three short years.

To assess the appetite for amending the Regional Agreement, the Superintendent sent out a survey to then current and future elementary parents and elementary staff with options for reconfiguring Monomoy's elementary schools. Parents and staff were asked for their input on the options of maintaining the status quo in the Regional Agreement, allowing for an elementary redistricting option, or allowing for the formation of upper and lower elementary schools. The one-page fact sheet behind that survey is provided in Appendix 9, listing what was seen as the pros and cons of each option, given what we knew at the time.

The Superintendent provided a presentation of the survey results to the School Committee at its November 30, 2017, meeting. The slides of that presentation can be found in Appendix 10. There was not a clear consensus amongst the respondents, who were almost equally split between the three options (no reconfiguration, redistrict, or create upper and lower elementary schools). Staff, Harwich parents, and School Choice parents favored creating upper and lower elementary schools, with one elementary school in each town — no reconfiguration was the least common response for all three of these groups. By contrast, Chatham parents leaned towards no reconfiguration, with a near equal percentage expressing interest in redistricting. Given the lack of consensus, the conversation was tabled, knowing that at some point in the future the subject would need to be revisited, perhaps after CES families experienced first-hand increasingly fewer students in the school.

Today, much has changed. Three years ago, it appeared that CES was rapidly heading to having only two classes per grade level, but the number of elementary-aged children in the town has dropped at a much faster rate. Today, the Town of Chatham does not have enough kindergarteners to fill one classroom, without relying on intra- and inter-district school choice to round out the class. The FY22 cohort of kindergarten children will likely be even smaller. By FY25, it is anticipated that CES will only have one classroom at each grade, kindergarten through Grade 4 (see Appendix 2). In FY21, even before the challenges of running schools during a time of COVID, Chatham's integrated preschool program did not have enough children to merit full-time staff, so Chatham's preschoolers were sent to the PreK program at HES.

Change is also happening at HES, as that school's enrollment has slowly dropped from six classrooms per grade level to five (see Appendix 2). By FY25, it is anticipated that HES will have five classrooms at each grade, kindergarten through Grade 4.

It would be remiss to not clearly point out the obvious. HES long operated with six classrooms of students per grade level. Granted, it was a large elementary school, but it has long had a history of serving over 550 students. By FY25, the district will reach a point where HES will have a steady state of five classrooms per grade level, and CES will have a steady state of one classroom per grade level. All of these classrooms are projected to operate at or below a very supportive 18 students per classroom, and therefore all of Monomoy's elementary classrooms could fit under one roof at HES by FY25.

There is increasing urgency to this dilemma. Where once educators and many parents were concerned about CES only having two classes per grade level, all of these concerns have only magnified as the elementary school-aged population in Chatham dropped to just one classroom of kindergartners. While some may appreciate the intimacy that this creates, many others are concerned about the limitations and challenges of having these kindergarteners experiencing the same small grouping of students for five consecutive years (kindergarten through Grade 4), before experiencing larger social groups in middle school.

#### How to Remedy Having Too Few Students in Any Elementary School

There are options to remedy the situation of having too few students at Chatham Elementary School, but each will require amending the Regional Agreement. Amending the Regional Agreement requires the Selectmen in both towns and the School Committee to adopt new language on how the elementary schools should operate and these changes would need to be approved by Town Meetings in both communities.

The Superintendent strongly emphasizes that cost should not be the main factor in determining how to best educate the district's elementary students, and there will be budgetary implications to each of the options. One of the School Committee's 2020-2021 goals is to establish, organize, and lead a visioning session and/or community forum that includes a representative working group of stakeholders from Chatham and Harwich to discuss an elementary developmental learning program. This conversation will focus on the pros and cons of continuing the status quo with our elementary schools with no reconfiguration. A parallel conversation will be happening with the towns' Selectmen on how to address the inequities in elementary per pupil expenditures if there is no reconfiguration. The conversation will also cover the pros and cons of reconfiguration in one of three different ways.

The first is to "redistrict," where a subset of Harwich students are sent to CES. This would likely impact 50 to 85 children in neighborhoods closes to the Chatham line, who would be redistricted to attend CES instead of HES. This would allow CES to maintain two classrooms per grade level. Redistricting would allow students and teachers at CES to have more peer interaction and support.

The second is to create a new elementary system with "upper" and "lower" elementary schools. Here, HES could potentially house all of Monomoy's preschool through Grade 2 students, and CES could then house all Grade 3 and 4 students (or vice versa). Each school would have six classrooms of students for each grade served by the building. This option offers greater connectedness, with all students of the same age attending elementary school together. It provides families better opportunities to connect

with others having children of the same age. All educators will have multiple peers to collaborate with, all in the same building, allowing for much improved professional collaboration, sharing of best practices, and alignment and pacing of curriculum. The schools will be more efficient to staff, so class sizes within grade levels can be homogeneous (rather than balancing class sizes between CES and HES). This option also helps give greater staffing flexibility and efficiency as enrollment numbers shift. Under the current system, small cohort changes at CES create difficult decisions. For example, a single grade-level class of 11 students or 25 students both present staffing challenges – 11 is too small to be effective and efficient, and 25 is above our goal of 18 students but not quite large enough for two separate classes. By having all classes of the same grades in the same building, shifts in cohort population are better managed. There may be increased transportation costs with the creation of upper and lower schools, and this may impact school start times district-wide, if an additional tier of bussing is needed.

The third is to house all Monomoy elementary students "under one roof." This is more of a theoretical option at present, but by FY25, Monomoy would be able to fit all elementary students within HES with class sizes of 18 or fewer. This provides the most connectedness of all options, with all of Monomoy's elementary students being educated together. It provides maximum opportunities for families to connect with each other. It provides elementary educators maximum opportunities to professionally collaborate to best support teaching and learning. It provides for homogeneous class sizes within grade level and efficiency in staffing. It would create one large elementary school with slightly under 600 elementary students under one roof, and HES historically has operated with enrollment of this size. If demographic trends were to change dramatically in the opposite direction and the number of elementary-aged children grew exponentially, whether through a baby boom or through families moving here, there is little room for expansion under this model. This option is the only one that provides both towns fiscal relief. A sample Assessment, in FY21 dollars, estimating the savings if all elementary students were consolidated at HES is provided in Appendix 11. Under this option, Harwich taxpayers could realize approximately \$1.5 million in savings and Chatham taxpayers could realize \$500,000 in savings, compared to the current elementary organization and Statutory Assessment dictated in the Regional Agreement.

#### **Next Steps**

The Superintendent will once again put out an Elementary Reconfiguration Survey to all current and future Monomoy elementary parents, as well as to our elementary staff. This survey will go out on December 8, 2020, and a report will be available for the School Committee by December 17, 2020. The proposed one-page fact sheet to inform that survey is on the following page. The survey results, along with all of the information in this document, will be used to inform the discussions the School Committee will be having with Selectmen and stakeholders.

Written for the Monomoy Regional School Committee by:

Dr. Scott Carpenter
Superintendent
Monomoy Regional School District
Submitted and presented November 19, 2020

## Monomoy Regional School District Potential Elementary School Reconfiguration Options

### Why consider reconfiguring Monomoy's elementary schools?

Enrollment at Chatham Elementary School has been in steady decline, with a much greater loss of enrollment than at Harwich Elementary School. There are concerns that CES is becoming too small, lacking in adequate peers for both students and teachers. Given the loss of elementary enrollment, we must consider what is in the best educational interests of our towns' children. Some of the possible options below require amending the Regional Agreement.

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OPTIONS	FACTS
No reconfiguration  Continue to let CES get very small (meaning only one class per grade level at all grades). HES would operate with five classes at each grade level.  Does not require a change to the Regional Agreement	<ul> <li>This is the only option available under the current regional agreement</li> <li>Offers limited social connections for students at CES</li> <li>Class sizes within grades and between buildings differ</li> <li>Provides CES educators with no grade-level collaboration in the building</li> </ul>
2. "Redistrict" some Harwich students to CES  Divert a number of elementary students currently slated to attend HES and have them attend CES, which would allow CES to offer two classes at each grade level. HES would have four classes per grade.  Requires a change to the Regional Agreement	<ul> <li>The redistricting would likely impact 50-85 children in a few neighborhoods in Harwich, closest to the Chatham town line</li> <li>Class sizes within grades and between buildings differ</li> <li>This would allow students and teachers at CES to have more peer interaction, since the school could maintain two classes per grade level</li> </ul>
3. Create a new elementary system with an "upper" and "lower" elementary school  This could potentially see HES housing all preschool through Grade 2 students in our district, and CES could then house all Grade 3 and 4 (or vice versa). Each school would have six classrooms of students for each grade served by the building.  Requires a change to the Regional Agreement	<ul> <li>Offers greater connectedness with all students of the same age attending elementary school together, allowing families better opportunities to connect with each other</li> <li>All educators of the same grade are physically in the same building, allowing for maximum professional collaboration, sharing of best practices, and alignment of curricula and pacing</li> <li>Allows for efficient staffing, so class sizes within grade levels are more homogeneous</li> <li>This option may involve greater transportation costs</li> </ul>
4. House all Monomoy elementary students "under one roof"  With the decline in CES enrollment, as well as HES enrollment, by the 2024-2025 school year all elementary students could now be housed at HES, with all class sizes 18 or fewer.  Requires a change to the Regional Agreement	<ul> <li>Offers greater connectedness with all students attending elementary school together, allowing families better opportunities to connect with each other</li> <li>All elementary educators are in the same building, allowing for enhanced professional collaboration, sharing of best practices, and alignment of curricula and pacing</li> <li>Allows for efficient staffing, so class sizes within grade levels are more homogeneous</li> </ul>

Appendix 1: Monomoy Elementary Enrollment FY12-FY21 and beyond

		<b>Chatham Elementary</b>	School	
Fiscal	Chatham resident	Harwich resident	School Choice from	Total
Year	Students	Students	other towns	Enrollment
FY12	176	53	36	265
FY13	194	44	21	259
FY14	191	44	25	260
FY15	186	39	52	277
FY16	188	42	40	270
FY17	194	41	38	272
FY18	177	32	33	242
FY19	173	25	31	229
FY20	157	23	24	204
FY21	125*	24	21	170
FY25***	53	24	21	100

<sup>\*</sup>includes 13 Chatham resident students currently homeschooled because of COVID

		Harwich Elementary	School	
Fiscal	Chatham resident	Harwich resident	School Choice from	Total
Year	Students	Students	other towns	Enrollment
FY12	6	515	68	589
FY13	6	522	58	586
FY14	4	526	68	598
FY15	5	524	71	600
FY16	9	525	63	597
FY17	7	516	43	566
FY18	12	496	42	550
FY19	7	496	53	556
FY20	7	486	59	552
FY21	10	459**	46	512
FY25***	10	410	50	470

<sup>\*\*</sup>includes 36 Harwich resident students currently homeschooled because of COVID

	Monomoy Elementary-Aged Students							
Fiscal	Chatham resident	Harwich resident	Total Resident	% Residents				
Year	Students	Students	Students	from Chatham				
FY12	182	568	750	24.3%				
FY13	200	566	766	26.1%				
FY14	195	570	765	25.5%				
FY15	191	563	754	25.3%				
FY16	197	567	764	25.8%				
FY17	201	557	758	26.5%				
FY18	189	528	717	26.4%				
FY19	180	521	701	25.7%				
FY20	164	509	673	24.4%				
FY21	132	483	615	21.5%				
FY25***	65	434	499	13.0%				

<sup>\*\*\*</sup>projection based on FY21 kindergarten enrollments

Appendix 2: Number of Classrooms per Grade at Monomoy's Elementary Schools (FY12, FY20, FY25)

	FY	12	FY2	21*	FY2	5**
Grade	CES	HES	CES	HES	CES	HES
K	3	6	1	5	1	5
1	3	6	2	5	1	5
2	3	6	2	5	1	5
3	3	6	2	6	1	5
4	3	5***	3	6	1	5

<sup>\*</sup>Pre-COVID projection based on enrollment and new kindergarten enrollments

<sup>\*\*</sup>Projection based on current kindergarten enrollments

<sup>\*\*\*</sup>Historically, as the district came together, HES often had 5 large classes of 4<sup>th</sup> grade, but the enrollment in these classes would have supported 6 classrooms of students.

Appendix 3: Elementary Class Size Ranges by Grade at Monomoy's Elementary Schools (2019-2020 school year)

	CES		HES		
	Number of	Range of	Number of	Range of	
Grade	Classrooms	Class Sizes	Classrooms	Class Sizes	
K	2*	16-18	5	14-16	
1	2	17-18	5	17-18	
2	2	16-17	6**	19-20	
3	3	15-16	5	20-21	
4	2	21-22	6**	16-18	

<sup>\*</sup>For the 2020-2020, kindergarten in CES would have dropped to only one classroom. This would result in one kindergarten class, two classrooms in Grades 1-3, and three classrooms of Grade 4.

#### Additional factors behind elementary class sizes and staffing:

It is important to note that since FY14, Monomoy budgets for elementary class sizes of 18 +/- 1 students. Any "free" seats beneath 18 are made available to school choice, potentially rounding out the class size and bringing in some school choice revenue.

It is challenging to equalize class sizes between buildings, particularly when one cohort is being divided by a factor of 2 (classrooms) in one school and by a factor of 5 in the other building. It is far easier to equalize class sizes when the entire cohort (all students of the same grade) are in the same building.

There are occasionally behavioral dynamics within classes that require additional staffing at a particular grade level to address the challenge. This often results in reducing class size at one grade level often at the expense of increased class size elsewhere in the school.

<sup>\*\*</sup>For 2020-2021, the six sections of second graders would have moved up to Grade 3. The five Grade 3 classrooms would move up to Grade 4; however, the district planned to retain a sixth Grade 4 teacher to pull the class sizes down (from 20-21) to 17. This would leave five classrooms in Grades K-2 and six classrooms of in Grade 3 & 4.

Appendix 4: Monomoy Elementary Budgets FY12-FY21 and beyond

			Combined
Fiscal Year	CES Budget	HES Budget	Elementary Budgets
FY12	\$2,499,028	\$4,999,819	\$7,498,847
FY13	\$2,321,712	\$4,512,727	\$6,834,439
FY14	\$2,470,218	\$4,592,557	\$7,062,775
FY15	\$2,653,323	\$4,672,135	\$7,325,458
FY16	\$2,667,863	\$4,870,444	\$7,538,307
FY17	\$2,788,339	\$5,165,891	\$7,954,230
FY18	\$2,828,225	\$5,558,808	\$8,387,033
FY19	\$2,953,802	\$5,843,037	\$8,796,839
FY20	\$2,877,296	\$6,035,185	\$8,912,481
FY21	\$2,869,394	\$6,085,214	\$8,954,608
FY25*	\$2,652,551	\$6,462,331	\$9,114,882

<sup>\*</sup>FY25 Elementary budgets estimated by deducting anticipated staff reductions and increasing budget by 2%/year

Appendix 5: Monomoy Elementary Per Pupil Budgets FY12-FY21 and beyond

	Per town's elementary budget/	Pupil Budgets	ol enrollment		
Fiscal Year	CES per pupil budgets	HES per pupil budgets	Difference	Chatham Elementary Enrollment	Difference x Chatham Elementary Enrollment
FY12	\$9,430	\$8,489	\$942	265	\$249,630
FY13	\$8,964	\$7,701	\$1,263	259	\$327,117
FY14	\$9,501	\$7,680	\$1,821	260	\$473,460
FY15	\$9,579	\$7 <i>,</i> 787	\$1,792	277	\$496,384
FY16	\$9,881	\$8,158	\$1,723	270	\$465,210
FY17	\$10,214	\$9,127	\$1,087	273	\$296,751
FY18	\$11,687	\$10,107	\$1,580	242	\$382,362
FY19	\$12,899	\$10,509	\$2,390	229	\$547,310
FY20	\$14,104	\$10,933	\$3,171	204	\$646,884
FY21	\$18,276	\$12,784	\$5,492	157	\$862,244
FY25	\$26,526	\$13,750	\$12,776	100	\$1,277,600

### Appendix 6: What the F13 Assessment Would Have Been Had the Towns Paid for Their Own

**Elementary School** (compared to the actual assessment using the Statutory Method at the bottom of the page)

Elementary School Budgets							Pupil	
Chatham Elementary School FY21 Budget	\$		,321,712		259		8,964	Per Pupil Differe
Harwich Elementary School FY21 Budget	\$	- 4	,512,727		586	\$	7,701	\$
inal FY21 Monomoy Budget						\$	31,054,592	
evenue								
Ch 70	\$	2,3	384,540					
E&D								
Charter School	\$		284,129					
Medicaid	\$		170,000					
Interest								
Misc Revenue	\$		76,240	(region	nal bonus ai	d)		
otal						\$	2,914,909	
on-Operating Expenditures								
Transportation	\$	676	,931.00					
Capital/Stabilization	\$		,312.00					
Debt	\$		,654.00					
otal	~	202	,054.00			\$	1,160,897	
otal Operating Assessment						\$	26,978,786	
						(*)		
perating Assessment	H.	wich		Chatha		Total		
Required Minimum Contribution	ș \$		,444,862	\$		\$	16,140,983	
	\$		,512,727					
Cost to Run Elementary Schools otal Operating Assessment (Required Minimum Plus Elementary Costs)	\$		.957.589	\$	2,321,712 7,017,833	\$	6,834,439 22,975,422	•
ocal Operating Assessment (Nequired William Plus Elementary Costs)	7	13	, 200, 100	7	7,017,033	7	22,37 3,422	
unding Beyond Minimum Contribution Needed to Support Budget						\$	4,003,364	
	Har	wich		Chatha	m			
olit Based on 3-Year Rolling Foundation Enrollment			72.00%		28.00%			
dditional Operational Funding Per Member	\$	2	,882,422		1,120,942			
perating Assessment Per Member	\$	18	,840,011	\$	8,138,775			
ransportation Assessment						\$	676,931	
less Regional Transportation Aid						\$	340,317 336,614	
	Uon	wich		Chatha				
plit Based on 3-Year Rolling Enrollment from Towns	паг	wich	72.00%		28.00%			
ransportation Assessment Per Member	\$		242,362	\$	94,252			
apital/Stabilization Assessment				a				
plit Based on 3-Year Rolling Foundation Enrollment	Har	rwich	72.00%	Chatha	m 28.00%			
apital/Stabilization Assessment Per Member	\$		144,945		56,367	s	201,312	
lebt Assessment	*		21,513		30,507	Y	202,522	
est riscoment	Har	wich		Chatha	m			
olit Based on 3-Year Rolling Foundation Enrollment			72.00%		28.00%			
IRHS Bond (principal and interest)	\$		60,281	\$	222,373	\$	282,654	
inal MRHS Financing								-
ebt Assessment Per Member	\$		60,281	\$	222,373	\$	282,654	
otal FY13 Assessment								
		rwich		Chatha				
perating Assessment	\$		,840,011		8,138,775		26,978,786	
ransportation Assessment	\$		242,362		94,252		336,614	
apital/Stabilization Assessment	\$		128,958		72,354	\$	201,312	
otal Before Debt	\$	19	,211,331	\$	8,305,381	\$	27,516,712	
ebt Assessment	\$		60,281	\$	222,373	\$	282,654	
otal FY13 Assessment	\$	19	,271,612	\$	8,527,754	\$	27,799,366	
otal FY13 Statutory Assessment	\$	19	,679,681	\$	8,119,685	\$	27,799,366	
ifference between methods	\$		(408,069)		408,069	\$		

### Appendix 7: What the FY21 Assessment Would Have Been Had the Towns Paid for Their Own

**Elementary School** (compared to the actual assessment using the Statutory Method at the bottom of the page)

#### Town Funding of Their Elementary School Assessment FY21

Pro: Harwich has a more equitable assessment. Easily explained and calculated approach. Easily maintains the status quo agreement.

Con: This approach not work if redistricting or elementary reconfiguration happened, each of which places more HES students in CES (emptying classrooms at HES and driving HES per pupil costs up). A different approach would be needed to estimate a CES budget.

Elementary School Budgets		Cost	No. Stds		Per Pupil		
Chatham Elementary School FY21 Budget	\$	2,869,394		170		16,879	Per Pupil Differen
Harwich Elementary School FY21 Budget	\$	6,085,214		512		11,885	\$ 4,
inal FY21 Monomoy Budget					\$	41,261,134	
levenue							
Ch 70	\$	3,798,314					
E&D	\$	850,440					
Charter School	\$	75,717					
Medicaid	\$	155,000					
Interest	\$	7,500					
Misc Revenue otal	\$	13,562			\$	4,900,533	-
Ion-Operating Expenditures							
Transportation	\$	1,484,699					
Capital/Stabilization	\$	355,000					
Debt	\$	2,110,916					
otal	-				\$	3,950,615	-
otal Operating Assessment					\$	32,409,986	
Operating Assessment	Harw	lah	Chatha		Total		
Required Minimum Contribution	\$	13,156,660	\$	4,190,569	\$	17,347,229	
Cost to Run Elementary Schools	\$	6,085,214	\$	2,869,394	\$ \$	8,954,608	
otal Operating Assessment (Required Minimum Plus Elementary Costs)	\$	19,241,874	\$	7,059,963	\$	26,301,837	-
	Ş	13,241,074	3	7,039,503			
unding Beyond Minimum Contribution Needed to Support Budget					\$	6,108,149	
	Harw		Chatha				
plit Based on 3-Year Rolling Foundation Enrollment		74.35%		25.65%			
dditional Operational Funding Per Member	\$	4,541,409	\$	1,566,740			
Pperating Assessment Per Member	\$	23,783,283	\$	8,626,703			
ransportation Assessment					\$	1,484,699	
less Regional Transportation Aid					\$	641,360 843,339	-
	Harwi	ich	Chatha	m		50 MED \$100.00.	
plit Based on 3-Year Rolling Enrollment from Towns	i idi w	74.80%	Cildula	25.20%			
ransportation Assessment Per Member	\$	630,818	\$	212,521			
apital/Stabilization Assessment							
plit Based on 3-Year Rolling Foundation Enrollment	Harw	ich 74.35%	Chatha	m 25.65%			
apital/Stabilization Assessment Per Member	\$					355,000	
apitaly Stabilization Assessment Per Member	Ş	263,943	Þ	91,058	Þ	355,000	
	Harw		Chatha				
plit Based on 3-Year Rolling Foundation Enrollment		74.35%		25.65%			
ARHS Bond (principal and interest)	\$	1,475,197	\$	508,928	\$	1,984,125	
inal MRHS Financing Debt Assessment Per Member	\$	94,269 1,569,466	\$	32,522 541,450	\$	126,791 2,110,916	-
otal FY21 Assessment		2,000,400	×	5.2,450	T	2,210,510	
	Harw		Chatha		ć	22 400 000	
Operating Assessment	\$	23,783,283	\$	8,626,703		32,409,986	
ransportation Assessment apital/Stabilization Assessment	\$	630,818 263,943	\$	212,521 91,058	\$	843,339 355,000	
apital/Stabilization Assessment otal Before Debt	\$	24,678,043	\$	91,058 8,930,282		33,608,325	-
otal before bebt		1,569,466	\$	541,450	\$	2,110,916	_
Debt Assessment	\$						
	\$	26,247,509	\$	9,471,732	\$	35,719,241	
bebt Assessment			\$	9,471,732 8,899,195		35,719,241 35,719,241	1

## Appendix 8: What the FY25 Assessment Would Have Been Had the Towns Paid for Their Own Elementary School (compared to the project assessment using the Statutory Method at the bottom of the page)

Elementary School Budgets	Tota	l Cost	No. Std	ls	Per Pu	ıpil	
Chatham Elementary School FY21 Budget	\$	2,652,551		100			pil Diffe
Harwich Elementary School FY21 Budget	\$	6,462,331		470		13,750 \$	
inal FY21 Monomoy Budget						\$43,006,937	
evenue							
Ch 70	\$	4,145,292					
E&D	\$	850,440					
Charter School	\$	69,043					
Medicaid	\$	155,000					
Interest	\$	7,500					
Misc Revenue	\$	13,414					
otal					\$	5,240,689	
on-Operating Expenditures							
Transportation	\$	1.845,371					
Capital/Stabilization	\$	388,004					
Debt	\$	1,824,850					
otal					\$	4,058,225	
otal Operating Assessment					\$	33,708,023	
perating Assessment							
S 5	Harv	vich	Chatha	m	Total		
Required Minimum Contribution	\$	14,091,914	\$	4,148,626	\$	18,240,540	
Cost to Run Elementary Schools	\$	6,462,331	Ś	2,652,551	Ś	9,114,882	
otal Operating Assessment (Required Minimum Plus Elementary Costs)	\$	20,554,245	\$	6,801,177	\$	27,355,422	
unding Beyond Minimum Contribution Needed to Support Budget					\$	6,352,600	
			ol	200			
alit Based on 3 Year Balling Foundation Facelliness	Harv	79.00%	Chatha	m 21.00%			
plit Based on 3-Year Rolling Foundation Enrollment	120		1				
dditional Operational Funding Per Member	\$	5,018,554	\$	1,334,046			
Operating Assessment Per Member	\$	25,572,799	\$	8,135,223			
Transportation Assessment					\$	1,845,371	
less Regional Transportation Aid					\$	713,287	
					\$	1,132,084	
	Harv	vich	Chatha	m			
plit Based on 3-Year Rolling Enrollment from Towns		79.00%		21.00%			
ransportation Assessment Per Member	\$	894,346	\$	237,738			
Capital/Stabilization Assessment							
	Harv	vich	Chatha	m			
plit Based on 3-Year Rolling Foundation Enrollment		79.00%		21.00%			
Capital/Stabilization Assessment Per Member	\$	306,523	\$	81,481	\$	388,004	
ebt Assessment							
	Harv	wich	Chatha	m			
plit Based on 3-Year Rolling Foundation Enrollment	0.000	79.00%		21.00%			
	14		1				
ARHS Bond (principal and interest)	\$	1,441,631	\$	383,218	\$	1,824,850	
inal MRHS Financing		4 451 00	^	202 244		4 024 555	
ebt Assessment Per Member	\$	1,441,631	\$	383,218	\$	1,824,850	
otal FY21 Assessment							
8 12	Harv		Chatha		0200	72.2 25.4534	
Operating Assessment	\$		\$	8,135,223		33,708,023	
ransportation Assessment	\$	894,346	\$	237,738	\$	1,132,084	
apital/Stabilization Assessment	\$	306,523	\$	81,481	\$	388,004	
otal Before Debt	\$	26,773,669	\$	8,454,442	\$	35,228,111	
ebt Assessment	\$	1,441,631	\$	383,218	\$	1,824,850	
otal FY25 Assessment	\$	28,215,300	\$	8,837,660	\$	37,052,960	
Total FY25 Statutory Assessment	\$	28,953,726		8,099,234	1200	37,052,960	
						37,032,300	
Difference between methods	\$	(738,426)	\$	738,426	\$	s I	
	-						

### Appendix 9: One-page Fact Sheet Guiding the November 2017 Survey on Possible Elementary Reconfiguration

Monomoy Regional School District Possible Elementary School Reconfiguration **Mission Statement** 

Monomoy Regional School District is a community of learners of all ages focused on building knowledge, positive character, and resiliency in a safe, supportive, creative, and challenging environment.

#### Why consider reconfiguring Monomoy's elementary schools?

Given that Chatham Elementary School (CES) enrollment is in decline, relative to the enrollment at Harwich Elementary School (HES), a concern is that Chatham Elementary may become too small, lacking adequate peers for both students and teachers, while Harwich Elementary would be operating at a capacity beyond which is ideal. By statute, a regional school district must periodically review its regional agreement and when doing so needs to consider what is in the best educational interests of our towns' children. Two of the options below require amending the regional agreement.

OPTIONS	FACTS
#1 No reconfiguration:  Let Chatham Elementary School get small (shrinking from three classes per grade level to two) and Harwich Elementary School to operate with six classes per grade level.  DOES NOT REQUIRE A CHANGE TO THE REGIONAL AGREEMENT	<ul> <li>This is the only option available under the current regional agreement.</li> <li>Limited social connections for children if CES shrinks to only two classes per grade level.</li> <li>Provides our educators at CES only one other grade-level colleague with whom to regularly collaborate and share best practices.</li> <li>HES will be pressed for space and one grade level will likely be compressed into five larger sized classes (as the building has run in recent history).</li> <li>Having five to six classes per grade level provides ample peers for both students and teachers, but it also finds HES operating as a very large, not so intimate, school.</li> <li>With one third of CES likely vacant in future years, the district could consider using this space to expand preschool options.</li> </ul>
#2 "Redistrict":  Divert one of elementary-aged students currently attending Harwich Elementary School and have them attend Chatham Elementary School, which will allow Chatham Elementary to continue to operate with three classes per grade level and Harwich Elementary to operate with five classes per grade level.  REQUIRES A CHANGE TO THE REGIONAL AGREEMENT	This redistricting would impact only a few neighborhoods in Harwich, closest to the Chatham town line.  A bus load of HES children, roughly 15 per grade level, would find CES to be their new elementary school.  This would allow CES students and teachers to have more peer interaction, since the school could maintain three classes per grade level.  This would also allow HES to get slightly smaller, shrinking from six to five classes per grade level, which would allow the building to be more intimate for the families we serve.  This would find HES with up to four classrooms available to consider future expansion of preschool options.
#3 Create a new elementary system with an "upper" and a "lower" elementary school: This could see the Harwich Elementary School building housing all Pre-K through Grade 2 students in our district. Chatham Elementary School would then house all Grade 3 and Grade 4 students, with each elementary grade level having eight sections per grade level.  REQUIRES A CHANGE TO THE REGIONAL AGREEMENT	This approach maximizes peer connections for both students and teachers.  All students of the same age attend the same elementary school together, which allows both students and parents better opportunities to connect with peers with like interests.  All educators teaching the same grade are housed in the same building, allowing for maximum professional collaboration, sharing of best practices, and alignment of curricula and pacing.  Allows for more efficient to staffing, so class sizes within grade levels are more homogeneous, while also kept small (averaging 18 or fewer students per class).  This would find the HES with the capacity to expand preschool options for Monomoy families, using a few available classrooms, with HES functioning as an early childhood hub.  This option may involve greater transportation costs.

For more information, please go to https://www.monomoy.edu/Page/113.

## Appendix 10: Monomoy Reconfiguration Survey Presentation to the Monomoy Regional School Committee from November 27, 2017

11/15/2020

### Monomoy Elementary Reconfiguration Survey Preliminary Results

Survey closed 11/27/17 at 10 AM 453 responses

#### Note:

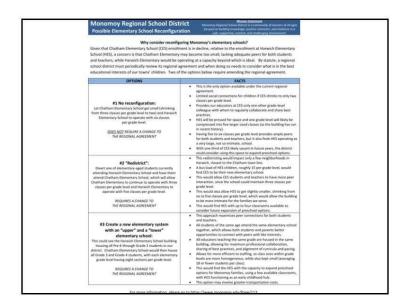
The survey soliciting parents, community members, and staff input is now closed. It was open from November 7 until November 27.

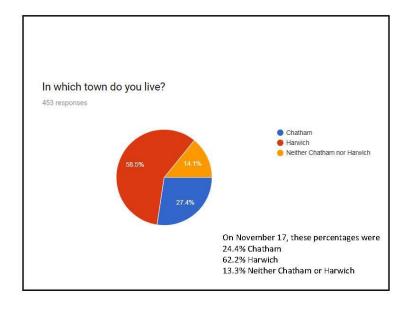
 $\frac{https://docs.google.com/forms/d/e/1FAIpQLScagLrXpF1R2urdalFj63iQYZ0hVpkqVpyunrVwZssffBX1tw/viewform}{}$ 

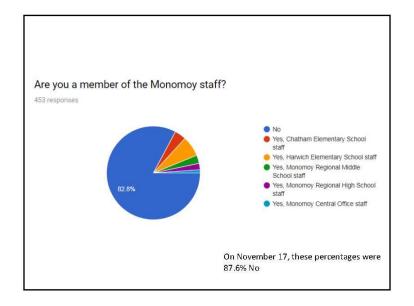
453 people responded to the survey.

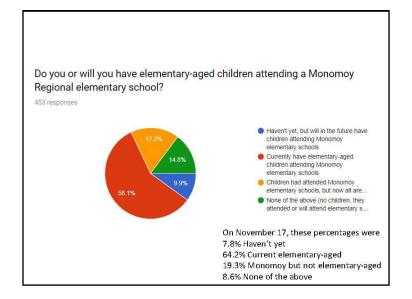
Requests to participate in the survey were sent thrice to all parents and staff, and it has been sent out to Monomoy parents "to be" through the local Early Childhood Council.

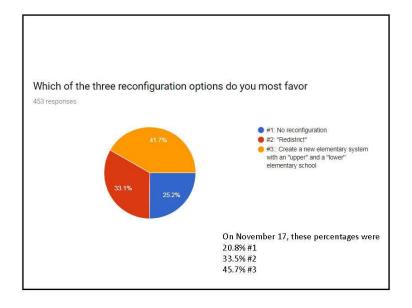
A one-page document has been created to summarize the three options under consideration. The content of this one-page summary was included in the text of the survey, to help educate and inform those taking it.

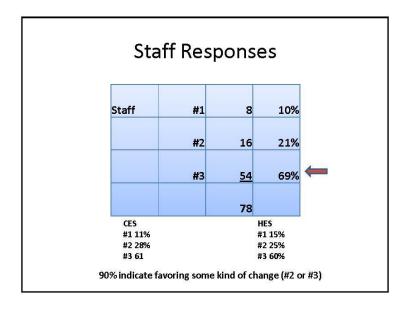


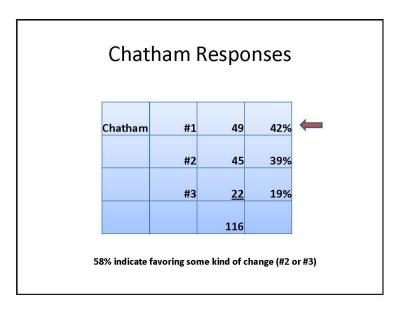


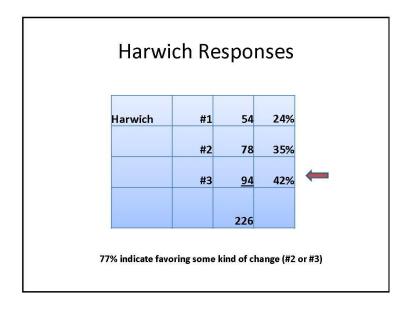


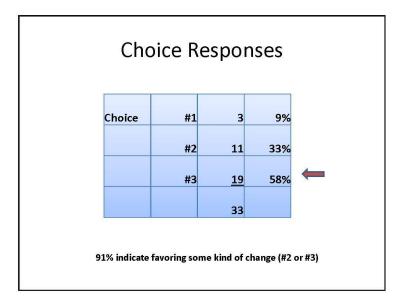












### Appendix 11: What the FY25 Assessment Theoretically Could Be (in FY21 dollars) If All Monomoy's Elementary Students Were Educated Under One Roof at HES (this presumes 6 sections per grade)

#### Note: This is not realistically feasible until FY25, but is calculated as a point of reference. The enrollment below is an FY25 projection Pro: Both towns save money, because of economies of scale. Smallest possible per-pupil spending. All children in a grade-level are educated together. Con: Creates one large elementary school, perhaps too large. Chatham Elementary School FY21 Budget 2 869 394 "Under One Roof" savings \$ (2,027,07 less carryover costs from CES required if consolidated with HES Harwich Elementary School FY21 Budget 6,085,214 Final FY21 Monomoy Budget 39,234,058 Ch 70 3.798.314 850,440 Charter School 75.717 Medicaid 155,000 Interest 7,500 Misc Revenue 4,900,533 Total Non-Operating Expenditures 1.484.699 Capital/Stabilization 355,000 Debt 2,110,916 3,950,615 30,382,910 **Total Operating Assessment** Operating Assessment Total Required Minimum Contribution 13,156,660 \$ 4,190,569 \$ 17,347,229 Funding Beyond Minimum Contribution Needed to Support Budget 13,035,681 Split Based on 3-Year Rolling Foundation Enrollment 25.65% Additional Operational Funding Per Member 9,692,029 \$ \$ 22,848,689 \$ 7,534,221 **Operating Assessment Per Member** Transportation Assessment 1.484.699 less Regional Transportation Aid 641,360 843.339 Split Based on 3-Year Rolling Enrollment from Towns 74.80% 25.20% Transportation Assessment Per Member 630,818 \$ 212,521 Capital/Stabilization Assessment 74.35% 25.65% Split Based on 3-Year Rolling Foundation Enrollment \$ 263,943 \$ 91,058 \$ Capital/Stabilization Assessment Per Member 355,000 Debt Assessment 25.65% Split Based on 3-Year Rolling Foundation Enrollment 74.35% MRHS Bond (principal and interest) 1,475,197 \$ 508,928 \$ 1,984,125 Final MRHS Financing Debt Assessment Per Member 2,110,916 Total FY21 Assessment 22,848,689 7,534,221 \$ 30,382,910 Operating Assessment Transportation Assessment Capital/Stabilization Assessment 630,818 212,521 843,339 263,943 91,058 355,000 Total Before Debt 23.743.449 \$ 7.837.800 S 31.581.249 Debt Assessment 1,569,466 \$ 541.450 2,110,916 Total FY21 Assessment \$ 25,312,915 \$ 8,379,250 \$ 33.692.165 Total FY21 Statutory Assessment 26,820,046 \$ 8,899,195 \$ 35,719,241 (1,507,131) \$ (519,945) \$ (2.027.076) Difference between methods