

# **Report of the School Start Time Implementation Task Force Watertown Public Schools June 19, 2017**

## **Task Force Members:**

**Brian Brewer, Dean of Students, Watertown High School**

**J. Kimo Carter, Principal, Watertown Middle School**

**Peter Centola, Director, Watertown Recreation Department; Parent, Watertown Middle School and Hosmer School**

**Mary DeLai, Asst. Superintendent for Business and Operations**

**Brian Donato, Teacher, Watertown Middle School; Parent, Hosmer School**

**Elaina Griffith, Parent, Watertown Middle School and Cunniff School**

**Rebecca Grow, Parent, Hosmer School**

**Michael Lahiff, Athletic Director**

**Melissa Reohr, Teacher, Hosmer School**

**Donna Ruseckas, Director of Health and Wellness**

**Beth Sahakian, Director of Community Education**

**Kaitlin Tracy, Student, Watertown High School**

**Linda Tracy, Administrative Assistant, Watertown High School; Parent, Watertown High School**

**Beth Wissler, Teacher, Watertown High School**

## Introduction

The Watertown School Start Time Implementation Task Force convened in April-May 2017 to investigate the impacts of moving middle and high school start times from, respectively, 7:40 and 7:55 to 8:30 a.m. and to recommend actions to support the change. An 8:30 start time at WHS and WMS means that there will be a 3:00 dismissal time at WMS and a 3:05 dismissal time at WHS. This report summarizes reasons for making this change, discusses two scenarios for elementary school start times, and recommends ways to accommodate the concerns that will arise from making this change. A chart that summarizes each of the two scenarios is in Appendix A.

The Task Force met on six evenings for a total of 12 hours. At the first meeting, Dr. Brackett and Dr. Carter discussed the purpose and goals, and the Director of Health and Wellness, Ms. Ruseckas, presented on the health reasons for starting secondary school later and the results of a survey of WPS constituent reactions to different start time scenarios. At four successive meetings, the Task Force heard and discussed the potential impacts of changing start times on: (1) athletic and other extracurricular programs, (2) elementary before and after school activities and secondary before and after school activities, (3) transportation and food services, and (4) student, parent, and teacher concerns.

Below is a table that outlines current Watertown school start and dismissal times:

School	Watertown High School	Watertown Middle School	Cunniff School	Lowell School	Hosmer School
Start Time	7:55 a.m.	7:40 a.m.	8:15 a.m.	8:15 a.m.	8:30 a.m.
Dismissal Time	2:30 p.m.	2:10 p.m.	2:30 p.m.	2:30 p.m.	2:45 p.m.

## Value to Delaying High School and Middle School Start Times

In May 2016, the Watertown School Committee decided to change middle and high school start times to 8:30am based on the recommendation of the WPS Wellness Committee. The Wellness Committee had studied medical research about the impact of school start times on adolescent health and had found that there is significant educational value to delaying high school and middle school start times.

Sleep researchers have found in repeated studies of adolescents in districts across the country that teens are chronically sleep-deprived. Sleep researchers have also demonstrated that inadequate sleep contributes to poor

mental health, behavioral problems, and decreased ability to learn. The circadian rhythms unique to teenagers keep them alert in the evenings, requiring them to sleep later in the mornings. Delaying school start times is an important way to support students in getting the amount of sleep they need.

Medical research has found that hormonal changes associated with puberty shift teen circadian rhythms, delaying the release of melatonin so that teens are physically unable to fall asleep until 10:45 p.m. on average. Teens need 8.5 to 9.5 hours of sleep per night for optimum health. When they remain alert until 10:45 p.m., they need to sleep until about 7:45 a.m.

Early school start times conflict with teen circadian rhythms. When high schools and middle schools start before 8:30 a.m., they require youth to awaken before their sleep cycles are complete. This disruption contributes to sleep deprivation and often interrupts the deepest sleep period (the last two hours of REM sleep) that is essential to memory and learning.

Sleep researchers have found that it is “A matter of biology, not choice,” when teens fall asleep and wake (Wahlstrom, “Later start times for teens improves grades, mood, and safety,” *Kappan* Dec 2016/Jan 2017). The rhythm of sleep and wake drives changes with puberty until about age 30, when adult sleep and wake patterns set in.

Studies by the Centers for Disease Control and other academic researchers show that two-thirds of high school students sleep less than eight hours a day (American Academy of Sleep Medicine, “Teens benefit from later high school start times: Teens may get more sleep, have fewer motor vehicle accidents when school starts later,” *Science Daily*, Dec 15, 2016). The recommended amount of sleep for teens is nine and a quarter hours. Most American public high schools start between 7:00 and 8:00 a.m. The American Psychological Association supports later school times based on this research that has shown that “early bell times are responsible for the discrepancy between how much sleep teens need and how much sleep they get” (The Children, Youth, & Families Office of the American Psychological Association fact sheet: “Later School Start Times Promote Adolescent Well-Being” 2014). Some policy leaders describe adolescent sleep deprivation as a national “epidemic.”

Medical research shows that consequences of sleep deprivation include increased tendencies toward depression, obesity, substance use and abuse, and increased car accidents. Adolescents are often vulnerable to depression and to engaging in risky and unhealthy behaviors. Later start times have been shown to counter the effects of sleep deprivation and are associated with improved student mental health and decision-making.

National Youth Risk Behavior Survey analysis shows later high school start times, especially 8:35 a.m. and later, are linked with declines in disciplinary incidents, substance abuse, depression, and sexual activity.

Educational studies find that high school students with later start times show statistically improved grade point averages in first period core courses. Also, tardiness and absences significantly decrease and high school graduation rates increase with later school start times. Students in districts that have changed to later school start times report that there is a calmer mood at school (Wahlstrom, "Changing Times: Findings from the First Longitudinal Study of Later High School Start Times," *NASSP Bulletin* 86,633), possibly contributing to both academic achievement and decreased anxiety.

Research findings show that even an incremental move to a later start time increases the amount of sleep teens get. Studies show that an 8:30 a.m. start time will increase the percentage of high school students getting at least 8 hours of sleep from 33% to 60% (Wahlstrom, 2016/2017).

For the reasons described, the American Academy of Pediatrics recommends middle and high schools to delay the start of class to 8:30 a.m. or later. Likewise, the American Medical Association adopted a policy that specifically calls for high school and middle school start times to be no earlier than 8:30 a.m.

However, school start times are only one of a number of reasons why teens do not get enough sleep. Many keep phones in their bedrooms and awaken to respond to late night texts. Also, many students have too highly programmed schedules. It is important to teach students and their families to prioritize health and to practice good sleep hygiene, such as having regular sleep and wake times, avoiding blue screens and bright lights during the hour before bed, sleeping in a dark, cool room, and avoiding stimulants late in the day. Starting school later gives families an opportunity to support and prioritize teen health, which is foundational to academic, career, and personal success.

## **A Middlesex League and Statewide Movement**

Watertown's decision to change middle and high school start times is not occurring in a vacuum. There are many other districts in the Commonwealth that have either already changed start times or are in the process of considering it. Middlesex League superintendents have agreed to work toward moving high school start times toward 8:30 a.m. beginning in September, 2018. Arlington, Burlington, Melrose, Stoneham, Wakefield, and Winchester are all in the process of moving their high school start times to 8:15 or 8:30 a.m.. Wakefield is discussing flexible start times, so that most core high school classes will begin at 8:30 a.m., with some beginning earlier. Belmont and Lexington are creating task forces, slated to begin in Fall 2017, to determine start times. Information for Reading, Wilmington, and Woburn was not available. The consistency of start times

throughout the Middlesex League will create an easier transition when it comes to athletics, as home and away games will be easier to coordinate. A more detailed account of Middlesex districts considering changing high school start times is in Appendix

According to Start School Later-Massachusetts, a group of education and pediatric health activists, several schools across the state have already implemented a later start time including schools in Arlington, Duxbury, Eastham, Hingham, Marblehead, Marlborough, AMSA Charter School in Marlborough, Medway, Sharon Public Schools and Nauset High School.

On May 30, 2017, Start School Later-Massachusetts, also submitted a petition asking the legislature and governor to move the start time to 8:30 a.m. for all Massachusetts middle and high school students.

## **Two Scenarios for Elementary Start and Dismissal Times**

Bus transportation, particularly the choice to either keep two-tier busing or to move to a single-tier approach (outlined in the next section), determines the two scenarios that the committee believes would be best for elementary school start and dismissal times. In both scenarios, the middle school would start at 8:30 a.m. and dismiss at 3:00 p.m. and the high school would start at 8:30 a.m. and dismiss at 3:05 p.m.

### **Scenario 1: All elementary schools start at 8:15 a.m. and dismiss at 2:30 p.m.**

Because the Hosmer and Middle schools start 15 minutes apart and dismiss 30 minutes apart, Scenario 1 do not allow for bus sharing. Instead, the Hosmer and Middle School would each need their own buses, substantially increasing the budget (\$173,880 per year for three additional buses). On the other hand, there would be no change to Cunniff and Lowell start and dismissal times and a relatively minor change to Hosmer, minimizing extra afternoon child care costs for elementary families. Additionally, a 35-minute gap between dismissal times makes it reasonably easier for all teachers K-12 to be together during afternoon professional development. To see a summary of impacts of Scenario 1, please consult the chart in Appendix A.

### **Scenario 2: All elementary schools start at 7:50 a.m. and dismiss at 2:05 p.m.**

Scenario 2 does not have an impact on bus transportation costs, as there will be at least 40 minutes between the start time for Hosmer and the Middle School. Thus, Hosmer and Middle School can continue to share the same buses. However, there will at least be an additional 25 minutes of child care needed at the elementary level and the resulting cost increases may be internally funded by the extended day program or there may be a slight increase in fees. Other providers that give afternoon care may raise rates. Additionally, there will be a full hour difference between elementary and secondary dismissals, which makes it unfeasible for elementary

and secondary teachers to work together during afternoon professional development. An option to mitigate this impact would be to have all schools start at the same time on early release days. While this would have a transportation impact, it would be limited to just the four professional development days. To see a summary of impacts of Scenario 2, please consult the chart in Appendix A.

One variation of Scenario 2 that the Start Time Implementation Task Force does not support is to have only Hosmer start at 7:50 a.m. while Lowell and Cunniff start at 8:15 a.m. The committee believes that elementary schools should begin and end at the same time. However, this scenario needs to be mentioned because it is the most cost efficient: the Middle and Hosmer schools can share buses and only Hosmer families may incur price increases for more afternoon child care. From a professional development standpoint, Hosmer teachers would have to wait 25 minutes before meeting with Lowell and Cunniff teachers.

## **Bus Transportation**

Changing start times in Watertown brings up a number of concerns and opportunities. These relate primarily to transportation, before- and after-school child care, and extra-curricular activities. Bus scheduling has the greatest impact on coordinating elementary and secondary school start times.

The law (Ch. 71, Sect. 68) requires that transportation be provided for all students in grades K through 6 living two or more miles away from school (portal-to-portal over a commonly-traveled route). The school committee may assess fees, but not to families eligible for free or reduced-price lunches. The Watertown Public Schools gives free transportation to K-5 Hosmer students living over 1.5 miles from school and to sixth grade WMS students living over 2.0 miles from school. The district offers fee-based transportation to Hosmer K-5 students who live 0.75 to 1.5 miles from school and WMS 6-8 students who live 0.75 to 2.0 miles from school.

Watertown currently has a two-tier bus system, where three buses are shared between Hosmer Elementary School and Watertown Middle School. (No buses are provided to the Cunniff or Lowell elementary schools or to Watertown High School.) A fourth bus is used for an extended one-tier route for the Hosmer after-school and the WMS late bus. The cost per bus is \$322/day; \$57,960/year. The late bus is \$90/day; \$16,200/year. For each bus to run a two-tier route, WMS and Hosmer must start and end their days at least 40 minutes apart.

Many towns accommodate later secondary school start times by flipping elementary and secondary school start times. With this approach, two-tiered busing can continue without budgetary impact. Consideration should also be given to starting all five schools at similar times, which could mean changing to single-tier busing. The cost of three additional buses would be \$173,880 per year.

The number of riders whom the town is required to accommodate is relatively small; therefore, limiting services to this group would reduce transportation costs. However, the inconvenience to families of other riders probably would not be worth the ill will that would result from ending or limiting bus service. Also, there are safety and traffic concerns, especially given the population of students living south of the Charles River who must travel through congested Watertown Square to get to school. The task force seeks to minimize budgetary impact and maintain the current level of service.

The annual transportation cost of \$173,880 is offset by about \$50,000 in bus fees.. During Fiscal Years 2012-2015, the fee was \$300 per year. The actual per rider cost in that period ranged from \$506 to \$576 per year.

Although a single-tier scenario would be more expensive, some offsets may be made by raising bus fees and/or reducing the number of middle school buses to one or two. The district should review bus usage for both schools when deciding to continue two-tier busing or change to single tier. Additionally, the district should try to anticipate whether middle school bus ridership would increase or decrease with the later start and dismissal times.

## **Elementary School Before and After School Programming**

Watertown Public Schools' Extended Day Program provides excellent before and after school programming for elementary school students at Cunniff, Hosmer, and Lowell Schools. Running from 7:15 to 8:15 a.m. in the mornings and from 2:30 to 6:00 p.m. in the afternoons, the program provides a wide range of activities for elementary children. It does so at a very reasonable cost for families (a \$139 monthly fee for the morning program and a \$340 fee for the afternoon program five days per week) and still turns a profit. The Extended Day Program is quite popular in all three elementary schools and has a waitlist. Watertown is fortunate to have many organizations -- including the Boys and Girls Club, Watertown Recreation, and the Arsenal Center for the Arts -- that offer programming for elementary students. Coupled with the school district's Extended Day Program, the extensive after school opportunities found in Watertown limit the number of latchkey students, especially in the younger grades.

Scenario 1 would only affect Hosmer, as Cunniff and Lowell would have no change in start time. Scenario 2 would shift elementary school start and dismissal times earlier by 25 minutes: 7:50 a.m. to 2:05 p.m. This will affect the Extended Day Program and other providers. Even with earlier start times, some elementary students will continue to need before-school care and programming from 7:15 to 7:50 a.m. The reduced time could

translate to reduced costs in the morning. The earlier start time of 7:50 a.m. could also potentially benefit families who are going to work.

With a 2:05 p.m. dismissal time, the afternoon portion of the extended day program will need to go from 3 hours 30 minutes per day (3 hours 15 minutes at the Hosmer) to 3 hours 55 minutes per day, an increase of 25 to 40 minutes. Current wait lists for the extended day program might become even longer if dismissal times are earlier. This might result in needing to add staffing to minimize wait lists. Since the extended day program serves many more students after school than before school, there will need to be approximately a 10% increase in program costs of the extended day program to provide the same services. These costs can either be built into the Extended Day Program or fees may be raised slightly. Longer hours might result in more staff members benefiting from health benefits, further escalating costs.

There are a number of before-school activities at the elementary school, including instrumental music, chorus, and fitness. If elementary schools start at 7:50 a.m., it may be best to move these before-school activities to after school. Some teachers in the Middle and High schools teach the before-school instrumental music and chorus groups, which could create scheduling issues if the Middle and High schools are starting and ending later. One benefit of ending elementary school one hour before secondary schools is that gyms and fields are more available to elementary students right after school.

A rough approximation of 5% (a small, but significant number) of elementary parents depend on middle and high school students (as older siblings or as babysitters) to take care of younger students during at least one afternoon a week. With either Scenario 1 or 2 where elementary schools dismiss earlier than secondary schools, such families will need to make other arrangements. Families who do not elect to have their students participate in the extended day program or are on the wait list, will need 25-40 more minutes of child care per day. Costs and pricing systems vary widely for the various forms of after school care, but it is safe to say that after-school child care costs for families would increase with earlier elementary dismissal times.

The committee knows that there are a number of latchkey students in the elementary and middle grades who go home after school dismissal to an empty house. While a later middle school dismissal time will help reduce the amount of time middle school students are home alone, an earlier elementary school dismissal will increase the time when some elementary school students are home alone. We are unable to quantify how many students are latchkey, but are aware that this is a serious issue, and it will be important to think of ways to prevent young students from going home to an empty house.

## Middle and High School Before and After School Programming

At the secondary level, later start and dismissal times will impact before- and after-school programming at WMS and WHS. One morning challenge is that many students arrive to school well before school opens. Students arrive as early as 7:00 a.m. at both the middle and high school. Sometimes they come early because it is the only time they can get a ride from their parents or guardians who need to go to work. Sometimes they like to hang out with their friends eating breakfast in the cafeteria. A few years ago, the middle school opened up the gym regularly before school with PEP grant money, and an average of forty students showed up early to play basketball, indoor soccer, floor hockey, and other sports. Morning exercise has been shown to stimulate learning and the WMS morning gym program was deemed a success.

However, the sleep research that forms the basis of delaying middle and high school start times tells us that 7:00 a.m. is too early to open school doors. Furthermore, once school doors open to students, the school takes responsibility for student care and safety. One of the most unstructured and under-supervised times for both the high school and middle school is the time before school starts, and this is something that needs to be addressed regardless of start time. Thus, with the start time change to 8:30 a.m., there should be a set time when WMS and WHS doors open. The committee believes doors should open for students approximately one hour before the 8:30 tardy bell, at 7:30 a.m. The committee expects that many more students will enter school well before school starts with the delayed start times. Once the doors open, it is important to have before-school supervision and programming. Ideally, students would have the opportunity to eat breakfast in the cafeteria and talk with their friends, exercise in the gym or the fitness center, or do some schoolwork in the library. Perhaps they would want to join morning clubs or participate in other morning activities. With an 8:30 a.m. start time and the expectation that many students will arrive to school well before 8:30, high school and middle school administrators would work to open the cafeteria, library, and gym before school.

The cost for one hour morning supervision in the cafeteria for each cafeteria monitor would be approximately \$20/day; \$3,600/year for each school. The cost for each teacher helping students in the library or setting up and monitoring activities in the gym would be \$30/day; \$5,400/year for each school. If both the middle and high schools had one cafeteria monitor, one teacher in the library, and one teacher in the gym, the total cost for the district would be \$28,800.

With the change in start times, the cost of morning programming at the middle and high school will be partially offset by savings from reduced hours in the afternoon. Currently, after school programs at the middle school -- after school clubs, Community Explorers, and Library Learning Lab -- are two hours long, running from 2:15 to 4:15 p.m., the time when the late bus picks up students. With a 3:00 p.m. dismissal time, after school activities

would be shortened to approximately 80-90 minutes, especially at those times of year when it gets dark early. (The latest a bus could pick up students at the middle school to deliver them home is 4:30 p.m. during November through February; otherwise students will be walking home from the bus stop in the dark.) With a 25% reduction of programming hours, Community Explorers and Library Learning Lab would cost approximately 20% less, a cost savings of about \$8,000. Likewise, middle school clubs would be less expensive, probably costing families \$40 for 10 weekly sessions rather than the \$50 being charged now.

After school activities at Watertown High School are not dependent on bus departures and run at various times throughout the afternoon and evening. The committee expects that there will be little change in high school after-school activities with a 3:05 p.m. dismissal time.

### **Interscholastic Athletics, Youth Sports, and Recreation**

The same cannot be said for sports and recreation. A 3:00 p.m. dismissal time for the middle school and a 3:05 p.m. dismissal time for the high school will greatly affect interscholastic athletics, youth sports, and recreational programs on town fields, gyms, and rinks. Athletic programs provide teens with important experiences in developing team skills, physical and mental ability, self-awareness, healthy habits, and time-management skills. Watertown gives children and teens a variety of opportunities to play sports, and these are supplemented by youth programs for children of all ages. About one-third of high school and middle school students participate in WPS-sponsored athletic programs.

Even with current 2:10 and 2:30 p.m. dismissal times, Watertown faces challenges that stem from a relative scarcity of field, gym, and rink space compared to the demand for facilities by interscholastic athletics, youth sports, and other recreational activities. High demand and limited availability is most pronounced with the Ryan Arena during the winter season, with the four lighted fields (Victory, Filippello, Saltonstall and Casey fields) after sundown, and with the one artificial turf field (Victory) all the time. Gymnasium space is also in short supply, but the crunch is not as severe as it is with the Ryan Arena and the Victory Field. Teams often share space for practices, and varsity and J.V. games often have to be played consecutively as there is not enough space available for them to be played simultaneously. For these reasons, it is quite common that both school and youth sports use these facilities well into the evenings. Typically, school and youth practices and games run until 9:30 p.m., sometimes later.

Other complicating factors include the expected longer commute times to away games, the need to schedule varsity and J.V. games simultaneously instead of consecutively, and the possible issue of other organizations who rent space from the town and school district (there may need to be scheduling adjustments)..

Many districts compensate for this by dismissing students early for travel to games. The committee does not recommend early dismissal times from school.

With later dismissal times (3:00 p.m. for WMS; 3:05 p.m. for WHS), the window for school sports, youth sports, and other recreational activities shrinks by at least 35 minutes. With the already very tight scheduling, less daylight time, and longer commute times for visiting teams with later game times, it is abundantly clear that just pushing back practices and games is unfeasible. Ending practices and games even later at night, especially for youth sports, runs counter to the reasons behind changing school start times in the first place, and care must be given so that all practices and games end at a reasonable time on school nights. Some options to increase the supply of space include adding lights to more fields, installing artificial turf to more fields, and adding another regulation-size gymnasium. Options to reduce demand of space include limiting the length of practices and/or the number of practices per week for those sports using the high-demand facilities, limiting or capping the number of youth sports offered or recreational activities for children and adults, or not making facilities as available to outside organizations (which would, in turn, decrease rental income).

In summary, significantly delaying dismissal times for high school and middle school would necessitate rethinking the school and town athletics programs and facilities. We believe creative options would develop that would allow all organizations to benefit. However, as organized now, it would be very difficult to fit all sports and recreation programming into the reduced number of space and time slots on school nights. Either the town and school committee will need to invest in more and/or improved athletic and recreational facilities or limit sports and recreation programming so that student-athletes can end practices and games at a reasonable time.

## **Other Concerns and Opportunities**

In addition to the above stated issues -- bus transportation, child care, before and after school programming, and sports and recreation -- the committee anticipated other concerns and opportunities from students, parents, and staff. Following is a list of a number of areas that may be impacted by the change in start times.

- **Homework:** Everyone on the committee thought that changing start times may open the conversation about the role of homework at elementary, middle, and high school. WHS and WMS students will have less time in the afternoons and evenings for homework, while some scenarios may provide elementary students more time to do homework. One way to address this concern is to develop new, or expand already existing, in-school homework assistance programs before and after school.

- **Student Employment:** Many high school students work in the afternoons and may be concerned that their work hours will be impacted by later dismissal times. One way to help these students is to expand work-study opportunities at the high school.
- **Nutrition:** With the change in start times for all schools, there is an opportunity to emphasize our nutrition program. With later start times at the middle and high school, there is great potential for more students to have school breakfasts. Additionally, lunch will be served more toward the middle of the day (from 11:00 a.m. to 1:00 p.m.) in all schools.
- **Professional Development:** Teachers are concerned about professional development and how the change in dismissal times will affect Wednesday afternoon meetings, particularly the two-hour department meeting on the second Wednesday of the month. Changing school start and dismissal times might allow teachers and administrators to negotiate a new, more effective professional development structure that can be more efficient, convenient, and productive for all.
- **Staff Commutes:** Because of the high and rising housing costs in and around Boston, an increasing number of teachers reside a fair distance away from Watertown. The committee estimates that about a third of all staff live over 30 minutes away and about 5% (a small but significant number) live over one hour away. While earlier start and dismissal times at the elementary level will help shorten commute times, significantly later start and dismissal times at the secondary level extend commuting time, especially for those teachers who live far from Watertown.

## **Start and Dismissal Time Implementation<sup>1</sup>**

The School Start Time Implementation Task Force discussed much about the practical steps the school committee and district leadership should take to change school start and dismissal times to better accommodate student sleep cycles. The superintendent, the school committee, other administrators, teachers, and community members will need to communicate to the broader public both the health and safety benefits for changing bell schedules and that the district will overcome any challenges that may stand in the way. It will be important for our leaders to respond to the legitimate concerns of students, parents, and teachers, but at the same time, refute misconceptions about the powerful sleep science research at the foundation of the proposal. One common misconception that the committee wrestled with is “if school starts later, teens will just stay up later and won’t get more sleep.” In her longitudinal study of seven Minneapolis Public School District schools, Kyla Wahlstrom found that after later school start times were implemented, “Students continued to go to bed at

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<sup>1</sup> Steps for Implementation taken directly from “School Start Time Change: An In-Depth Examination of School Districts in the United States.” (See references.)

the same time” (*NASSP Bulletin* 86.633). Other studies have reported the same finding. Additionally, some community members may focus on perceived complications related to personal convenience concerns, and leadership will need to gently remind stakeholders that the health, well-being, and safety of students is the proposal’s priority. At the same time, it is important to address misconceptions by proponents. One such misconception is that changing start times will be a panacea for all teens. It is important to recognize that starting school later is only one factor that can contribute to healthy sleep habits. Late-night screen time, excessive homework, and a host of other issues can cause a lack of sleep. Nevertheless, later start times can significantly help students with their sleep.

Additionally, it is important to educate students, staff, and community members about the health and safety benefits associated with providing adolescents the opportunity to get more sleep. Many of the potential benefits go well beyond academic performance. During the 2017-18 academic year, the district will need to develop targeted education about sleep, sleep disorders, and the consequences of sleep deprivation for the entire Watertown community. These education efforts should be multi-modal and the information should be presented in a variety of forums for various audiences. There should also be ample time during these forums to address and answer questions and concerns. Students should learn about the most recent sleep science research in their health and/or science classes. Finally, it will be important to distribute information in print and online about the changing start times and the reasons behind them to families and other community members. This information should be culturally sensitive and translated into Watertown’s languages.

Education is only the first step to build consensus among stakeholders within the Watertown school community. The school committee and district leadership will need to engage all members in an open dialogue to address concerns and find solutions. The district will need to contact organizations that provide programs and services to students as well as those who regularly use school and town facilities well in advance of the start time change. Representatives from these organizations should have the opportunity to partner with the district to plan and implement the change. Second, it will be critical to engage faculty and staff in the decision-making about implementation and to think of ways to provide for planning and flexibility. Within the district, key areas most affected by the change in bell schedules -- transportation, athletics, facilities, extended day programming, food services, special education, health services -- need the opportunity to identify logistical issues and develop potential solutions. Third, it will be necessary to have dialogue with unions to address any impacts that changing bell schedules may have on district staff. Finally, and most importantly, the district will need to engage Watertown students and garner their support. Student support has great potential to provide momentum for the implementation process; on the other hand, lack of student support creates a large potential for derailment.

One point that was brought up frequently within the committee is that the anticipation of change is often worse than the reality. Once the change happens, people adjust until the new bell times are “normal.” Sometimes, anticipated problems do not happen. Many districts across the country have changed their start times, and after monitoring their implementation, some have found out that teacher retention, participation in after-school activities, and work hours for students, remained more or less the same than the predicted declines. However, each district is different, and it will be important for Watertown to monitor outcomes following its shift in start times, communicate positive results to the community, and address unforeseen negative impacts.

An important step district leadership will need to take is to determine what metrics will be used to assess the effectiveness of changing school start times. Furthermore, it will be important to determine how to collect and analyze the data. The district must take baseline measurements before the change in start time in order to measure growth and improvement.

The School Start Time Implementation Task Force unanimously believes that establishing healthy school start times is beneficial for students and should be implemented. The committee has suggested two scenarios. In both, high school and middle school start times are proposed to be at 8:30 a.m., consistent with American Medical Association, American Academy of Pediatrics, and American Psychological Association guidelines. The committee understands that changing start times will be challenging for the school community in terms of logistics, space, time, and convenience. However, the potential benefits to our students’ well-being outweigh the challenges. We encourage the school committee to adopt one of the two options proposed, take into account the possible concerns and opportunities outlined in the document, and work to partner with stakeholders and inform and educate the community throughout the implementation process.

## Appendix A: Summary of Impacts on Changing School Start and Dismissal Times

Scenarios	Scenario 1: Elementary Schools: 8:15 - 2:30 Watertown Middle: 8:30 - 3:00 Watertown High: 8:30 - 3:05	Scenario 2: Elementary Schools: 7:50 - 2:05 Watertown Middle: 8:30 - 3:00 Watertown High: 8:30 - 3:05
Bus Transportation	Single-tier busing necessary. Cost increase: \$174,000 per year.	Two-tier busing continues. No cost increase.
Elementary Before School Programming	No change at Cunniff and Lowell. 15 minutes less morning extended day at Hosmer.	25 minutes less morning extended day at Cunniff and Lowell 40 minutes less morning extended day at Hosmer Possible cost reduction Conflict with 4th grade instrumental music and 4th and 5th grade chorus
Elementary After School Programming	No change at Cunniff and Lowell 15 minutes more afternoon extended day at Hosmer Middle and high school students cannot pick up elementary students from school.	25 minutes more afternoon extended day at Cunniff and Lowell. 40 minutes more afternoon extended day at Hosmer. Likely 10% cost increase for Watertown Extended Day, to be internally funded or passed on to families. Likely child care cost increases for families not using extended day. Latchkey elementary students at home longer. Middle and high school students cannot pick up elementary students from school.
Middle and High Before School Programming	Suggested time for doors to open: 7:30 a.m. Anticipating greater number of students arriving to school early. Opportunity to enhance breakfast program. Before school programming in the cafeteria, library, and gym. Estimated cost for both schools: \$28,800.	
Middle and High After School Programming	Highly-scheduled students will have less time for after school activities. Students with little to no after school activities will have less unstructured, unsupervised time in the afternoons. Middle school after school activities will be shortened: 3:00 - 4:30. Estimated 20% cost savings associated with shortened middle school activities. High school after school and evening activities unchanged.	

<p>Interscholastic Athletics, Youth Sports, and Recreation</p>	<p>35-minute shorter time frame for sports will increase competition for limited field, gym, and rink space.          Lighted fields, artificial turf fields, and ice arenas experiencing the most demand. Longer commute times to away games. Longer commute times for visiting teams. More difficult to schedule simultaneous varsity and JV games.          One solution to increase supply (especially at night) is more lighted fields. Another solution to increase supply is more fields with artificial turf. Without increased supply, there may need to be limited practice time. Outside organizations may be squeezed out of fields, gyms, and ice arenas. Early dismissals for games are not a favored solution.</p>	
<p>Student Concerns</p>	<p>Homework: More time for elementary students; less time for secondary students. After school employment: Less work hours for high school students who have afternoon jobs.</p>	
<p>Parent Concerns</p>	<p>Homework: Less time for secondary students.          Breakfast and Lunch: Less time to have breakfast for elementary students; more time for breakfast for secondary students. All lunches in the middle of the day (11:00 - 1:00)          Shift in morning drop off commute times</p>	
<p>Staff Concerns</p>	<p>Staff commutes: Secondary schools starting later would translate to longer commute times.</p>	<p>Professional Development: Elementary and secondary teachers finish school an hour apart. Not likely to be together during afternoon professional development.          Staff commute times: Elementary schools starting earlier would translate to easier commutes. Secondary schools starting later would translate to longer commutes.</p>

## Appendix B: Middlesex League School Start Times

Middlesex League School Start Times					
District	Middle School		High School		Notes
	Current Time	Proposed Time	Current Time	Proposed Time	
Arlington	8:00 AM	8:30 AM	8:00 AM	8:30 AM	School Committee and teachers' union have an agreement to recommend change to middle school and high school start times; a Calendar Committee will begin meeting in fall 2017
Belmont	7:55 AM	TBD	7:35 AM	TBD	School Start Times Task Force to begin in fall 2017 to implement change for 2018-2019 school year
Burlington	7:30 AM	7:30 AM	7:30 AM	8:30 AM	Currently in public discussions regarding changing start times; hoping to implement change to high school start time by 2018-2019 school year with dismissal at 3:00 PM; middle school start time will likely remain the same due to bus/transportation costs
Lexington	8:00 AM	TBD	7:45 AM	TBD	Task Force currently in process; working to create draft surveys regarding start times for parents, students, and staff
Melrose	7:45 AM	8:15 AM	7:45 AM	8:15 AM	8:15 AM start time begins in 2018-2019 school year; an Implementation Committee has been created to handle any lingering issues of changing the start time
Reading					
Stoneham	7:58 AM	8:15 AM (at latest)	7:50 AM	8:15 AM (at latest)	Elementary reorganization in 2018-2019 will likely affect middle and high school start times which are not expected to be later than 8:15 AM
Wakefield	7:50 AM	TBD	7:30 AM	8:30 AM (flexible)	Currently discussing and planning for flexible start times whereby most core high school classes begin at 8:30 AM but some begin earlier; dismissal will be at 2:05 PM or 2:55 PM; changes to start times will be implemented in the 2018-2019 or 2019-2020 school year
Watertown	7:40 AM	8:30 AM	7:55 AM	8:30 AM	Implementation Task Force meeting with recommendation to School Committee in June 2017 targeting 8:30 AM start for High School and the same or close to the same for the Middle School; dismissal at or near 3:05 PM; Elementary times are in play, but not clear yet
Winchester	7:45 AM	8:30 AM	7:45 AM	8:30 AM	Planning to implement an 8:30 AM start time for middle and high school by 2018-2019 school year; 8:00 AM is the targeted start time for elementary schools

Updated 3/9/17

## References

American Academy of Sleep Medicine. Teens benefit from later high school start times: Teens may get more sleep, have fewer motor vehicle accidents when school starts later. *Science Daily* 15 December 2016.

American Psychological Association Children, Youth & Families Office fact sheet: Later School Start Times Promote Adolescent Well-Being, 2014.

The Children's National Medical Center's Blueprint for Change Team. *School Start Time Change: An In-Depth Examination of School Districts in the United States*. April 15, 2014.

Wahlstrom KL. Changing Times: Findings from the First Longitudinal Study of Later High School Start Times. *NASSP Bulletin* December 2002 86(633):3-21.

Wahlstrom KL. Later start times for teens improves grades, mood, and safety. *Kappan* December 2016/January 2017: 8-14.

Walker T. Despite Proven Benefits, Starting School Later Remains a "Tough Sell." *NEA Today*. September 20, 2015 (online posting).

## Further Reading

Mary DeLai, Assistant Superintendent for Business and Operations, Later Start Time: Student Transportation Considerations

Michael Lahiff, Athletic Director, Later School Start Times: Athletic Impact

Steven Marshall, Food Services Director, Later School Start Times: Food Services Programs

Beth Sahakian, Director of Community Education, Elementary School Extended Day Program and Before School Program

Start School Later Masconomet. They CAN'T go to bed earlier: how is teen sleep different from adult sleep? May 10, 2016 blog post: <http://startmascolater.com/2016/05/10/understanding-how-teen-sleep-is-different/>.