

Help Alaskans Sleep Again:

HB 229 to



End Daylight Saving Time

Alaska lost two time zones in 1983

- *The sundial best aligns with Juneau during the winter months. During the summer, even Juneau is displaced from morning light.*
- *This displacement of morning light has significant economic and societal costs for safety, education, health, mental health for all of Alaska.*

- *The loss of those time zones constitutes an unconsented public health experiment for Western Alaska.*
- *Increasingly, research suggests that this time zone misalignment plays a contributing role in high suicide rates and limits educational attainment via sleep deprivation.*

**Problem:
Alaskans are
Sleep-deprived!**

*We function best when we get enough
sleep.*

We sleep best when we wake with the sun.

*Most Alaskans wake in the dark to go to
school and work. This enforced sleep
deprivation has consequences.*



*St. Paul Island, 10:00 am November 2, 2019, AK Daylight
Time*

Sleep deprivation contributes to:

- ✿ *Suicide*
- ✿ *Poor student test scores and school performance rankings*
- ✿ *Higher rates of car crashes and other unintentional injuries*
- ✿ *Higher rates of heart disease, diabetes, cancer*

Since 1983, Alaskans west of Yakutat have lived with permanent Daylight Saving Time—multiplied by 2, 3, or 4 hours. Mornings are darker, later.

Decisions about school start time are determined by local schools and districts, often without considering the displaced time zone.

Students in at least one village, start as early as 4:55 by the sundial. Village schedules orient around the school schedule. The entire community is affected.

Alaskan youth are especially sleepy . . .

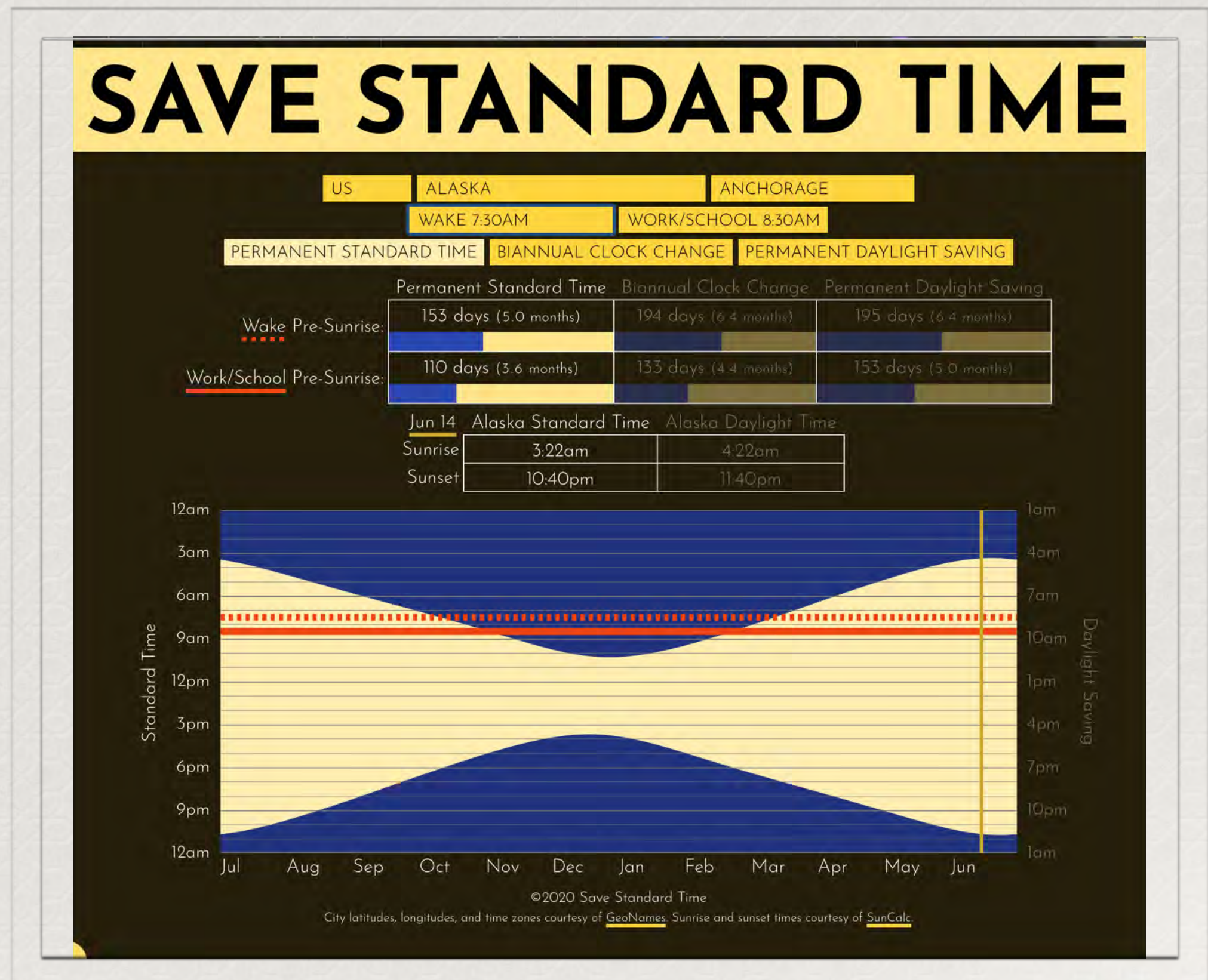
- *Morning sunlight sets our circadian rhythms—our bodies and brains don't truly wake up without light on our faces—ideally, sunlight.*
- *Youth age 13-25 are affected most of all. Teens worldwide experience a shift in their sleep cycle of about 3 hours: they go to bed later, wake up later. ([Rand study](#))*
- *However, students of all ages in Alaska stay up later in spring and fall due to longer evenings with DST. Western AK parents struggle to get young children to bed at a reasonable hour, thus younger children as well as teens are sleepy on spring and fall mornings.*

Sleep deprivation costs lives: Suicide

- *Alaska consistently has one of the highest suicide rates in the nation and one of the highest in the world, especially for young men.*
- *Military bases in AK have seen skyrocketing numbers of suicides in recent years. “A third of the 4,000 surveyed soldiers stationed in Fort Wainwright said they couldn’t sleep well . . . About 10.8% had thought about or considered suicide, according to the report.” Could distorted time zones be a factor?*
- *Public health measures to reduce sleep deprivation reduce suicide risk factors.*

Alaskans need permanent Standard Time

- *Changing the clock is both annoying and harmful. DST causes persistent harm by interfering with sleep. Morning light is key to improving our overall health and wellbeing.*
- *Permanent Standard Time would reduce the problem of morning darkness in the spring and fall, improving sleep for the majority of Alaskans. Even Juneau!*
- *However, if DST were made permanent as Alaska SB26 advocates, winter mornings would be longer and darker. Anchorage sunrise would be after 11am for five weeks every winter.*
- *[Interactive chart](#) demonstrates the change in morning light with different clock and school/work start times.*



Making pST is easier than making pDST, and it's the right move for Alaskans

- *Under the [Uniform Time Act](#), ANY state can opt out of Daylight Saving Time and become a permanent Standard Time state. This is what Hawaii, Arizona, and the U.S. Territories have done. This has historically been a state-level decision option. This is what HB 229 proposes to do.*
- *Making Daylight Saving Time permanent requires federal action. SB 26 asks the DOT to put the entire state on Alaska Daylight Time, permanently, including Adak, which is currently in another time zone.*
- *Alaska, more than any other state, needs to put its clock on permanent Standard Time, and it is within our power to do so at the state level.*

The Midnight Sun Team compiled the spreadsheet and facts in some of the following slides in 2017 as part of their science project for the Bright Schools Competition program in conjunction with the National Sleep Foundation and the National Science Teachers Association.



Alaskans ALSO need school to start later

- *The CDC and the American Association of Pediatrics recommend that adolescents start school at 830 am or later. While many AK schools start at 830 or later, the majority of students do not. Even worse, the solar equivalent school start time is much earlier than the clock says. Thus, taking the actual sun time into account, Alaska has the earliest school start times in the nation.*
- *Anchorage and Fairbanks start high school at 845 am and 745 am. Their solar equivalent school start time on Halloween is around 645 and 545 in the morning. With SB 26, it would remain this way through the winter, when the sun wouldn't come up until after 11am for over a month. This means they are going to school in the dark and not seeing the sun until almost lunch time.*

Protecting sleep improves learning

*When schools delay the start of the school day, students do sleep more.
Schools see improved attendance, graduation rates, and standardized test scores.*

Tardiness, sleeping in class, and car crashes DECREASE.

*Permanent Standard Time (HB 229)
is congruent with starting school later an hour later in fall and spring.*

Permanent Daylight Time (SB 26) would make students get up an hour earlier in the winter.

Protecting sleep will save money

The [Rand Corporation](#) projects that a nationwide delay of school start times to 830 a.m. would gain the U.S. economy \$8.6 billion after just two years—just modeling the effects of car crash mortality and impaired academic performance. This far outweighs the costs of the change. The gain is projected to be \$83 billion within a decade.

This conservative study did not include modeling the impacts of insufficient sleep on mental and physical health, including depression, suicide, diabetes, and heart disease. Actual proportionate gains in Alaska would likely be far more substantial.

Permanent Standard Time (HB 229) moves us in the right direction.

Permanent Daylight Time (SB 26) moves education and safety backwards, increasing costs for everyone.



In Anchorage, high school now starts at 8:45 a.m., making their solar equivalent school start time on Halloween around 6:45 a.m, and on December 21st, around 7:45 a.m.

If AK went on pDT (per SB 26), Anchorage winter high school solar equivalent start time would become 6:45 a.m.

Alaska School Start Time Equivalents

TOWN	POPULATION	LONGITUDE	SCHOOL START TIME	2016: CIVIL TIME SUNRISE OCTOBER 31st (AKDT)	SOLAR NOON OCTOBER 31st (AKDT)	SCHOOL START TIME EQUIVALENT OCTOBER 31st (AKDT)	2016: CIVIL TIME SUNRISE DECEMBER 21st (AKST)	SOLAR NOON DECEMBER 21st (AKST)	SCHOOL START TIME EQUIVALENT DECEMBER 21st (AKST)
ST. PAUL ISLAND	479	170	8 00 AM	10 30 AM	3 05 PM	4 55 AM	10 54 AM	2 19 PM	5 41 AM
UNALASKA	4,376	167	8 30 AM	10 06 AM	2 50 PM	5 40 AM	10 24 AM	2 10 PM	6 20 AM
GAMBELL	681	172	9 00 AM	11 05 AM	3 10 PM	5 50 AM	12 15 AM	2 25 PM	6 35 AM
SAVOONGA	671	170	9 00 AM	10 59 AM	3 06 PM	5 54 AM	12 40 AM	2 20 PM	6 40 AM
HOOPER BAY	1,093	166	8 50 AM	10 31 AM	2 48 PM	6 02 AM	11 23 AM	2 02 PM	6 48 AM
BETHEL	6,080	162	8 40 AM	10 12 AM	2 31 PM	6 09 AM	10 57 AM	1 46 PM	6 54 AM
FAIRBANKS	31,535	148	7 45 AM	9 38 AM	1 34 PM	6 11 AM	10 59 AM	12 49 PM	6 56 AM
GALENA	470	157	8 30 AM	10 11 AM	2 11 PM	6 19 AM	11 33 AM	1 25 PM	7 05 AM
KOTZEBUE	3,201	163	9 00 AM	10 52 AM	2 34 PM	6 26 AM	12 58 AM	1 49 PM	7 11 AM
NIKOLAI	94	154	8 30 AM	9 51 AM	2 01 PM	6 29 AM	10 54 AM	1 16 PM	7 14 AM
ADAK (HADT)	326	177	9 00 AM	10 02 AM	2 30 PM	6 30 AM	9 54 AM	1 45 PM	7 15 AM
GOOD NEWS BAY	243	162	9 00 AM	9 34 AM	2 30 PM	6 30 AM	10 40 AM	1 44 PM	7 16 AM
VALDEZ	3,974	146	8 00 AM	9 10 AM	1 29 PM	6 31 AM	9 40 AM	12 43 PM	7 17 AM
ANCHORAGE	291,826	150	8 15 AM	10 52 AM	1 43 PM	6 32 AM	10 14 AM	12 58 PM	7 17 AM
UNALAKLEET	688	161	9 00 AM	10 22 AM	2 27 PM	6 33 AM	11 33 AM	1 41 PM	7 19 AM
NOME	3,598	165	9 20 AM	10 46 AM	2 45 PM	6 35 AM	12 03 AM	2 00 PM	7 20 AM
YAKUTAT	642	140	8 20 AM	8 37 AM	1 03 PM	7 17 AM	9 17 AM	12 17 PM	8 03 AM
JUNEAU	31,275	134	8 30 AM	8 12 AM	12 41 PM	7 49 AM	8 45 AM	11 56 AM	8 34 AM
METLAKATLA	1,375	132	8 54 AM	7 48 AM	12 30 PM	8 24 AM	8 10 AM	11 44 AM	9 10 AM

Even though Anchorage adopted later school start times for teens, they would still benefit from a shift to permanent Standard Time.

The chart above was developed in 2017. Some school districts have since moved to later start times.

Protecting sleep is a public health issue: Protecting sleep will save lives

- *People think they want longer evenings, like they want to smoke, skip vaccines, and skip wearing a seatbelt.*
- *By staying up later with the light, Alaskans cut short their sleep for the next day. This has significant health, safety, educational, and economic costs.*
- *Good public health and safety legislation guides decisions which benefit the health and well-being of communities.*



St. Paul Island, Alaska

November 3, 2019 at 10:00 a.m. Alaska Standard Time

References/Links

- <https://www.sciencedirect.com/science/article/abs/pii/S016503272300931X>
- https://www.rand.org/pubs/research_reports/RR2109.html
- <https://pubmed.ncbi.nlm.nih.gov/37590832/>
- <https://www.adn.com/alaska-news/military/2022/04/06/an-alarming-number-of-active-duty-soldiers-in-alaska-died-by-suicide-last-year/>
- <https://schoolstarttime.org/early-school-start-times/suicidal-ideation-completed-suicide/>
- <https://savestandardtime.com/chart/>
- <https://www.startschoollater.net/wake-up-calls-fast-facts.html>