



SAVE STANDARD TIME

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2019-07-19

Government of British Columbia
Attn: John Horgan, Premier
PO Box 9041, Stn Prov Govt
Victoria, British Columbia, V8W 9E1
citizenengagement@gov.bc.ca

Re: Year-Round Daylight Saving Time – OPPOSE

Dear Mr Premier,

The extension of Daylight Saving Time (DST) to the full calendar year would have deadly consequences for the citizens of British Columbia.

In contrast, Year-round Standard Time would save lives, improve health, reduce pollution, slow global warming, and save money. It's for good reason that year-round DST has long been discouraged by law.

For the reasons outlined below, we urge your office and all government officials to oppose year-round DST and instead to restore year-round Standard Time. Please legislate by data, not anecdote.

Public Health

Both the change of clocks to DST and the continual observation of DST are lethal to human health. The abrupt move forward in springtime by one hour is well-known for its shock to both body and mind, causing traffic deaths, workplace accidents, lost productivity, and hospitalizations. Circadian biologists have also found that remaining on DST causes continual health harm—that we *never fully adjust* to DST.

Healthful sleep is necessary for prosperity and longevity, and it's biologically regulated by melatonin and cortisol. The body's natural release of these sleeping and waking hormones is tuned to the setting and rising of the sun. DST postpones both sunset and sunrise, which disrupts the body's hormone balance, and leads people both to stay awake late and to feel a need to sleep late. However, social schedules demand we wake on time regardless of how we feel, and year-round DST demands we wake before sunrise for nearly half the year.

Waking before sunrise increases risks of heart disease, stroke, diabetes, depression, and suicidality. DST negatively affects cognition, productivity, reaction time, stress management, and

life expectancy, in both children and adults. Incidence of heart attacks has been found to increase by 24 to 50% after switching to DST, and to decrease by 21% after returning to Standard Time. The Center for Circadian Biology, the Society for Research on Biological Rhythms, the European Biological Rhythms Society, the European Sleep Research Society, and the Journal of Clinical Sleep Medicine have all opposed year-round DST, citing its continual disruption to sleep cycles.

Some claim DST may increase exercise. However, the study to back this claim only considered regions that observe DST (ignoring those on year-round Standard Time), its gains averaged just two minutes per day, and its gains failed to translate across cultural differences (gains were seen in Europe and Australia but none in America). Furthermore, another study that did compare regions with different time observations found no increase or decrease in exercise.

Public Safety

DST *kills* commuting children and adults. In 1974, eight children died on dark winter mornings in just one month of year-round DST in Florida. 70% of all US pedestrian deaths occur under darkness, and 20% of all US pedestrians killed are children. Nationwide traffic deaths in the US after switching to DST have been found to increase 17% (30 lives per year), at a cost of \$275M annually. The National Education Association, American Federation of Teachers, National School Boards Association, and National PTA have all opposed year-round DST, citing children's safety.

Energy & Environment

DST wastes energy and increases pollution. Under DST, electrical consumption, gasoline consumption, pollution, global warming, and expenses increase, due to increased afternoon driving and air conditioning, and increased morning heating. It's a chief reason why Arizona observes year-round Standard Time. When Indiana switched from year-round Standard Time to summer DST in 2007, annual consumer electricity demand rose 1 to 4%. This jump cost residents an extra \$9M per year in utilities, and up to \$5.5M annually in added pollution. Losses could be far worse in regions with greater populations or more extreme weather. Studies elsewhere in America, Europe, and Australia have confirmed these effects.

Economy

Both switching to DST and remaining on DST have high economic costs, which manifest as workplace injuries, lost productivity, healthcare expenses, and overall lower earnings.

Workplace injuries in US laborers increase 5.7% the days after moving clocks forward in spring, due to the sudden loss of sleep. Injuries increase in severity too, resulting in 67% more days lost after switching clocks. US office productivity drops 20% upon switching, for a loss of \$434M annually nationwide. These losses don't reappear in the autumn return to Standard Time, nor are they regained.

Economic losses would continue under year-round DST, according to data from western and eastern edges of time zones, where sunsets and sunrises naturally differ by an hour. One added

hour of sunlight in evenings and its corresponding lost hour in mornings reduce sleep duration by 19 minutes daily. This continual loss of sleep manifests as health problems at a cost of \$2.35B annually nationwide in the US, plus 4.4M days of lost productivity at a cost of \$613M annually nationwide.

Religious Freedom

DST disrupts religious communities. Judaism, for example, calls for morning prayers at sunrise, which would unfairly overlap with work hours under year-round DST. Agudath Israel of America, Agudath Israel of California, the Rabbinical Council of America, and the Rabbinical Council of California have all opposed year-round DST.

Late Sunrises

Year-round DST would make sunrises too late. Under year-round DST, sunrise would be as late as 10:04am in British Columbia. Sunrises after 8am would last as many as 20 weeks (4.7 months) in British Columbia.

Public Opinion

No poll has shown definitively which time the populace prefers. Most people don't know which time is which. It can be a confusing matter, and polls depend heavily on how the question is asked. Those who favor one time or the other are roughly evenly split. The clear majority wish to stop switching clocks as soon as possible. And history has shown when public opinion favors year-round DST before enactment, support quickly reverses to opposition after DST's long, dark winter mornings are experienced (as happened in the UK in 1971, the US in 1974, and Russia in 2014).

Learn from History

Year-round DST has repeatedly been tried and reverted. The US tried year-round DST in 1974. While initially supported by an estimated 79% of the population, its popularity quickly plummeted to 42% after its first winter. *Several children died* on their way to school, the public bemoaned the unnaturally late, dark mornings, and the experiment was ended early. Year-round DST was similarly tried in the UK and Russia, and each time the program was greeted with initial optimism followed by public outcry and reversal.

Objective Reality

No bill can make winter's daylight as long as summer's daylight. DST is mistakenly associated with summer's naturally longer days, but summer days will still be just as long under year-round Standard Time as they were under DST. We could add six hours to the clock to keep sun up until midnight, but it would be dark until noon.

DST is "vanity sizing" for time. Some clothiers arbitrarily assign different numbers to the same sizes, to make consumers feel thinner. Similarly, DST falsely makes some people feel they have more daylight. DST is just as unsustainable as vanity sizing. Calls have already begun to delay

work hours until 10am DST (which is only 9am Standard). And any benefit from starting school later would be canceled by year-round DST.

Standard Time is the most practical model for timekeeping that is based in objective reality. It's an approximation of solar time, which is itself a geometric measurement of nature. Twelve noon corresponds to the sun's highest point in the sky; twelve midnight corresponds to the darkest point of night. Twelve was chosen for its even fractions (half, third, quarter).

Standard Time facilitates many simple estimations: time of day from the sun's position, time of night from the moon or stars, time of sunrise or sunset, time zone differences, latitude on earth, sunburn hours... This knowledge, this connection to nature, is needlessly obscured under Daylight Saving.

Simplest Solution

The simplest way to end clock changes is to restore year-round Standard Time. Year-round Standard Time could end clock switches in mere months, with no Federal action. Arizona, Hawaii, and Northeastern British Columbia did so, without complaint. The pursuit instead for year-round DST on the West Coast would require sweeping change to Federal law by Congress—which would take several years, or which might never occur. Year-round DST defies the people's will for an immediate end to clock switches; it is a waste of legislative time and taxpayer money. A return instead to year-round Standard Time would cost nothing and could be enacted this year; it would be an easy win for lawmakers.

We respectfully oppose your proposal to extend DST to the full calendar year, and we urge your office and all lawmakers to halt the current progression of this proposal. We support abolition of the biannual clock-change, but only if accomplished by the restoration of year-round Standard Time.

Please file this position letter in opposition to your proposal, on behalf of our organization.

Thank you,



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References with quotations to support all claims are documented in full on our website.