2021 April 12

Committee on Federal Relations & American Indian Affairs North Carolina House of Representatives Raleigh, North Carolina 27601

Re: Oppose HB-307—Deprives Sleep, Increases Illness/Accidents, Endangers Children

Dear Honorable Committee Members,

Please oppose HB-307 until it is amended from permanent Daylight Saving Time (DST) to permanent Standard Time. Permanent DST is federally forbidden and more harmful than clock change. Only permanent Standard Time can improve viral immunity with better sleep, protect start times with morning sunlight, and be enacted without congressional action.

Scores of organizations representing thousands of scientists/doctors and millions of teachers/parents oppose permanent DST and endorse permanent Standard Time. Among these are the Southern Sleep Society, Tennessee Sleep Society, Kentucky Sleep Society, National PTA, National Safety Council, American Academy of Sleep Medicine, American College of Chest Physicians, National Sleep Foundation, American College of Occupational & Environmental Medicine, Start School Later, and Society for Research on Biological Rhythms (example expert statements enclosed). [AASM][CSC][ESRS][NSF][RIVM][SRBR]

Permanent Standard Time is the quickest way to end clock change, as the Uniform Time Act pre-approves any state's self-declared exemption from DST and restoration of permanent Standard Time. Recent scientific polling shows strong public support to end clock change, with slight preference for Standard Time. [AP] History shows support for permanent DST reverses into strong opposition once its forced early waking in dark, cold winter mornings is experienced. Permanent DST has repeatedly failed around the world; it was a deadly disaster in the US in 1974. [BBC][Ripley][Yorkshire]

With Standard Time, your sunrises never come later than 8am (when most work and school days start<sup>[CDC][Silver]</sup>). Permanent DST would delay sunrises in North Carolina to 8:44am, and past 8am up to 4.0 months (photos enclosed). It would depress and endanger millions of schoolchildren and workers. It would undo the benefits of starting school later. [Borisenkov][Cell][Skeldon] Permanent Standard Time instead preserves morning sunlight, when human biology needs it most. [AASM][CSC][Curtis][ESRS][Juda][RIVM][Roenneberg][SRBR]

Sleep is essential to viral immunity (including COVID), [Meira][Panda][Ray] and for years the CDC has classified sleep deprivation as a nationwide epidemic. [Jin] Springing clocks forward to DST acutely deprives sleep. Leaving clocks forward on DST chronically deprives sleep (estimated average 19 minutes nightly). [CSC][Curtis][Giuntella][Roenneberg] Artificial delay of sunrise by one hour each day (such as by DST) manifests as statistically significant increases in accidents, disease

(certain cancers up 12–36%), and healthcare costs, and as statistically significant decreases in learning, productivity, and earnings (individual wages down 3–5%). [CSC][Curtis][ESRS][Gibson][Giuntella] [Gu][Juda][RIVM][Roenneberg] It's not just clock change that harms, but also DST's forced early waking. Permanent Standard Time lets us sleep. [AASM][SRBR]

Please listen to the consensus of doctors, teachers, polling, history, and law. Please save money and lives. Please oppose permanent DST and support permanent Standard Time. Thank you.

Sincerely,

Jay Pea

Founder & President

jay@savestandardtime.com

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### Endorsements of Permanent Standard Time as the Better Year-Round Clock

The following parties reject permanent Daylight Saving Time and endorse permanent Standard Time as the better year-round clock. These are not implied to be endorsements of the Save Standard Time entity.

#### Organizations (non-comprehensive list)

National PTA

National Safety Council

American College of Chest Physicians

National Sleep Foundation

American College of Occupational/Environmental Medicine B-Society

Start School Later

Rabbinical Council of America

Society for Research on Biological Rhythms

Florida PTA

World Sleep Society

European Biological Rhythms Society

French Society for Sleep Research & Medicine

National Commission for Rationalization of Spanish Hours American Academy of Cardiovascular Sleep Medicine

California Islamic University Agudath Israel of Florida

Francophone Chronobiology Society Association of Canadian Ergonomists

Good Light Group

Catalunya Advisory Council for Timetable Reform

California Sleep Society

Michigan Academy of Sleep Medicine

Ohio Bicycle Federation Wisconsin Sleep Society

Canadian Society for Chronobiology

Southern Sleep Society Normal Time All the Time German Society for Time Policy

Missouri Sleep Society

Solaris Fatigue Management

Sleep Medicine Association Netherlands

Chronobiology Lab Groningen

Better Times Platform

National Education Association American Academy of Sleep Medicine

American Federation of Teachers National School Boards Association

American Academy of Dental Sleep Medicine

European Sleep Research Society

Agudath Israel of America

Society of Anesthesia & Sleep Medicine

German Teachers' Association

International Alliance for Natural Time Society of Behavioral Sleep Medicine

Portuguese Sleep Association

Society for Light Treatment & Biological Rhythms

Rabbinical Council of California Agudath Israel of California Northwest Noggin Neuroscience Agudath Israel of Chicago

Daylight Academy Kentucky Sleep Society Maryland Sleep Society

Australasian Chronobiology Society Cuyahoga Astronomical Association

Adath Israel San Francisco Tennessee Sleep Society Curtis Clock Lab

Capitol Neurology

Stephens Memorial Observatory Dutch Society for Sleep-Wake Research

Dakota Sleep Society

Barcelona Time Use Initiative for a Healthy Society

#### Individuals (non-comprehensive list)

Raúl Aguilar-Roblero MD PhD, Laboratory on Circadian Rhythmicity, Institute of Cellular Physiology, Mexico Konstantin V Danilenko MD PhD, Institute of Physiology & Basic Medicine, Novosibirsk, Russia

Elizabeth B Klerman MD PhD, Associate Professor, Harvard Medical School, Boston, Massachusetts

Michael T Lam MD PhD, San Diego, California

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Thomas E Nordahl MD PhD, Professor Emeritus, University of California, Davis

David K Welsh MD PhD, Professor Emeritus, University of California, San Diego

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Salman Ahsan PhD, San Jose, California

Shimon Amir PhD, Professor, Concordia University, Montreal, Quebec

Sonia Ancoli Israel PhD, Professor Emeritus, University of California, San Diego

Michael Antle PhD, Professor, Hotchkiss Brain Institute & University of Calgary, Alberta

Susanna Barry PhD, College Mental Health Counselor & Sleep Coach, Cambridge, Massachusetts

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Mikhail Borisenkov PhD, Institute of Physiology, Komi Science Centre, Russian Academy of Sciences

Joseph Boyd PhD, Research Scientist, MilliporeSigma, Temecula, California

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Scott Cookson PhD, Quantitative BioSciences, San Diego, California

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Grant Denn PhD, Physics Department Chair, Metropolitan State University of Denver, Colorado

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Frederic Gachon PhD, Group Leader, Physiology of Circadian Rhythms, Institute for Molecular Bioscience

Susan S Golden PhD, Director, Center for Circadian Biology, University of California, San Diego

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Dietrich Henckel PhD, Professor, Technical University of Berlin, Germany

Erik Herzog PhD, Professor of Biology, Washington University, St Louis, Missouri

Myriam Juda PhD, Researcher, Simon Fraser University, Vancouver, British Columbia

Achim Kramer PhD, Professor of Chronobiology, Charité - Universitätsmedizin Berlin, Germany

Camilla Kring PhD, Speaker, Author, & Entrepreneur, Copenhagen, Denmark

Katja Lamia PhD, Associate Professor of Molecular Medicine, Center for Circadian Biology, UC San Diego

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Travis Longcore PhD, Institute of the Environment & Sustainability, University of California, Los Angeles

Emily Manoogian PhD, Postdoctoral Fellow, San Diego, California

Peter Mansbach PhD, Bethesda, Maryland

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Ralph Mistlberger PhD, Professor, Simon Fraser University, Vancouver, British Columbia

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Marie Pariollaud PhD, Postdoctoral Associate, Scripps Research, La Jolla, California

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Frank Powell PhD, Professor of Medicine, University of California, San Diego

Kendall Satterfield PhD, San Diego, California

Dorothy D Sears PhD, San Diego, California

Lori L Shemek PhD, Health Expert & Bestselling Author, Dallas–Fort Worth, Texas

Benjamin Smarr PhD, Professor of Bioengineering & Data Science, University of California, San Diego

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Andrew Steele PhD, Associate Professor of Biological Sciences, California State Polytechnic University

Jennifer Thomas PhD, Professor, San Diego, California

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John F Gottlieb MD, Clinical Assistant Professor of Psychiatry & Behavioral Sciences, Chicago, Illinois

Royan Kamyar MD, Physician, La Mesa, California

Jack Kruse DMD MD, Neurosurgeon, New Orleans, Louisiana

Beth Malow MD MS, Medical Doctor & Researcher, Brentwood, Tennessee

Melody T McCloud MD, Obstetrician-Gynecologist, Atlanta, Georgia

Tessa Sugarbaker MD MFT, San Francisco, California

Nathaniel F Watson MD MSc, Bainbridge Island, Washington

Dr Archana G Chavan, University of California, Merced

Dr Chelsea Gustafson, Assistant Professor, Portland, Oregon

Dr Paul Kelley, Milton Keynes, United Kingdom

Dr Irving Lebovics, Los Angeles, California

## **Oppose Permanent Daylight Saving Time**

Forces early waking-decreases immunity and alertness.

# **Support Permanent Standard Time**

Lets us sleep—for health, safety, and education.

"Permanent, year-round Standard Time is the best choice to most closely match our circadian sleep—wake cycle.

Daylight Saving Time results in more darkness in the morning and more light in the evening, disrupting the body's natural rhythm."

Muhammad Adeel Rishi MD

Mayo Clinic & American Academy of Sleep Medicine

https://aasm.org/american-academy-of-sleep-medicine-calls-for-elimination-of-daylight-saving-time/

**® SAVE STANDARD TIME** 

"The human circadian system does not adjust to Daylight Saving Time.

> Sleep becomes disrupted, less efficient, and shortened. Permanent Standard Time is the healthier, more natural choice."

Nathaniel F Watson MD MSc

Neurology Professor, University of Washington, Seattle

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6557642/

SAVE STANDARD TIME

### Most work/school starts at 8am.

How would you rather start your day half the year?



Permanent Standard Time is the safest, healthiest, quickest end to clock change.



8:03am average school start in the US, CDC, US ED, SASS, 2015. https://www.cdc.gov/mmwr/preview/mmwr/html/mm6430a1.html
7:55am median work project in the US, 538, ACS, USCB, 2014. https://lbw/birtheinth.com/lantures/which-celles-bleen-in-and-which-peet-th-work-period-period-peet-th-work-period-period-peet-th-work-period-peet-th-work-period-peet-th-work-period-peet-th-work-period-peet-th-work-period-peet-th-work-peet-th-work-period-peet-th-work

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8:03am overage school start in the US, CDC, US ED, SASS, 2015. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6430a1.htm

"[Standard Time's] light in the morning not only makes you feel more alert, but helps you go to bed at the right time at night."

**Beth Ann Malow MD MS** 

Sleep Neurologist, Vanderbilt University

https://khn.org/news/daylight-saving-time-debate-changing-clocks-is-bad-for-your-health-but-which-time-to-choose/

SAVE STANDARD TIME

"National PTA is opposed to Daylight Saving Time during the winter months because of the safety factor."

Heidi May Wilson

Spokesperson for the National Parent Teacher Association

https://www.washingtonpost.com/science/2019/03/08/springing-forward-daylight-saving-time-is-absolute-confusing-unhealthy-critics-say/

