

Daylight Saving: The Arizona Experience

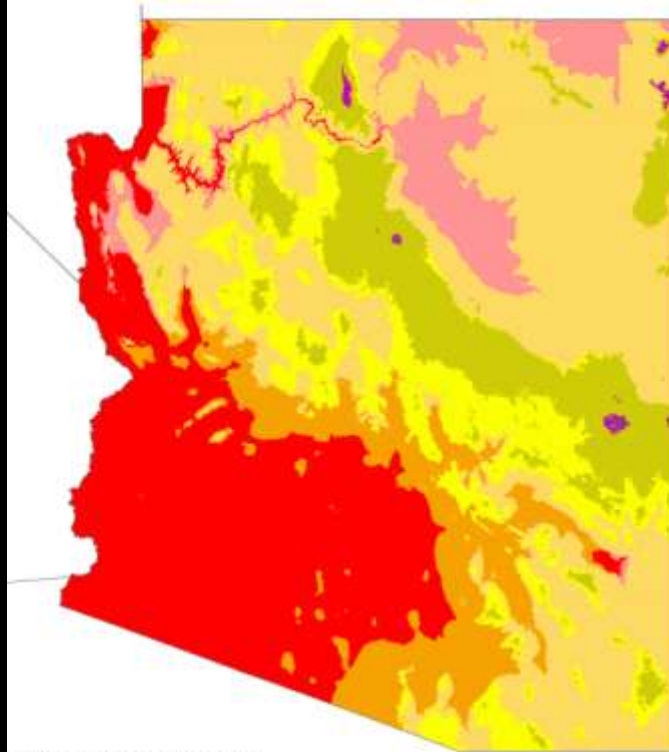


Calvin Schermerhorn,
Professor of History

Arizona State University



Köppen climate types of Arizona



Köppen climate type

ET (Tundra)	Csa (Hot-summer mediterranean)
Dsc (Dry-summer subarctic)	BSk (Cold semi-arid)
Dsb (Warm-summer mediterranean continental)	BSh (Hot semi-arid)
Cfb (Oceanic)	BWk (Cold desert)
Csc (Cold-summer mediterranean)	BWh (Hot desert)
Csb (Warm-summer mediterranean)	

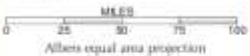
Basemap used is digitalized topographic 1:250,000 scale map of Arizona. Köppen climate type calculated from data from PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>.
Data source: Köppen type calculated from data from PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>.
All data from 1981-2010 period.



FEDERAL LANDS AND INDIAN RESERVATIONS

- Bureau of Indian Affairs
- Bureau of Land Management / Wilderness
- Bureau of Reclamation
- Department of Defense (includes Army Corps of Engineers lakes)
- Fish and Wildlife Service / Wilderness
- Forest Service / Wilderness
- National Park Service / Wilderness

Some small sites are not shown, especially in urban areas.



Abbreviations

- AFB Air Force Base
- IR Indian Reservation
- NCA National Conservation Area
- NF National Forest
- NHP National Historic Park
- NHS National Historical Site
- NM National Monument
- NP National Park
- NKA National Recreation Area
- NWR National Wildlife Refuge
- Res Reservoir





The Uniform Time Act of 1966 set the dates on which states observing Daylight Saving Time (DST) move the clocks forward in the spring and back in the fall. States that did nothing opted in automatically.

Public Law 89-387

AN ACT

To promote the observance of a uniform system of time throughout the United States.

April 13, 1966
[S. 1404]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Uniform Time Act of 1966".

Uniform Time
Act of 1966.

SEC. 2. It is the policy of the United States to promote the adoption and observance of uniform time within the standard time zones prescribed by the Act entitled "An Act to save daylight and to provide standard time for the United States", approved March 19, 1918 (40

Arizonans react to "Fast Time"

Daylight Savings Hassle 'Runs Fast' At Hearing

Optical Sciences
Building Planned
For University



Industries Entering
Controversial Issue

By AL BRADSHAW JR.

PHOENIX — An Arizona House bill to keep the state on Standard Time was submitted in a verbal tug-of-war yesterday, with speakers in favor of it carrying more weight than those opposed.

But Rep. Sam Flake, R-Maricopa, counties and municipalities committee chairman, said: "We [the committee] are not ready to

"The bill is fast becoming a controversial issue among various industries, especially transportation facilities and large firms that must make daily communications contracts with companies in the eastern United States."

--*Arizona Daily Star* January 26, 1967.

"For one thing . . . it could ruin football game attendance at the University of Arizona and Arizona State early in the season. By moving the clock ahead one hour for the summer hours, temperatures would be higher at the usual 8 p.m. game starting time than they are under standard time." --*Daily Star* 3/12/67

THE ARIZONA DAILY STAR

'Fast Time' Decision Now Up To Senate Majority

Exemption Bill
Clears Committee

Kelley argued that the federal legislation is intended to bring uniformity within states, not to that the legislature acted prior to the April deadline. He said court action could be

Arizonans react to Daylight Saving Time

The State's Business

Fast Time Impact Brings Complaints

By DON G. CAMPBELL

Business and Financial Editor

As a summer it was, well, different.

"Different," that is, if you consider it odd to find sleepy-groggy birds fighting manfully to stay awake at 9:30 in the evening; to come out of a double-feature drive-in movie at 2:30 in the morning, or to attend a cocktail party at the tra-

"This will be called the Daylight Saving Time Legislature," *Arizona Republic* June 13, 1967.

"To a man . . . both restaurateurs and drive-in operators are unanimous in their opinion that daylight savings time is just peachy keen--for the residents, perhaps, of Greenland, parts of northern Michigan and Alaska. In Arizona, they claim, we need t like we need a case of prickly heat." --*Arizona Republic*, September 20, 1967



**Don
Dederer**

***DST Too Hot
To Handle***

IF THERE were any justice in the world, history would judge the reigning Arizona Legislature as one of the more productive since statehood.

Reapportionment. Revaluation. A flood of other major legislation passed or proposed.

Arizonans abolish Daylight Saving Time

Individualist Arizona

Arizona is one of the two states in the union (Hawaii is the other) in which clocks were not put ahead an hour tomorrow morning. So Arizona will remain on

Senators Holding Out For Statewide Vote

PHOENIX (AP) — Despite reluctance on the part of some key senators, the Arizona Legislature is moving toward early

peared at odds over public sentiment on the issue.

Barr said he feels the public has made it clear that one

“[House Majority Leader Burton] Barr said he feels the public has made it clear that one year of daylight savings time is more than enough--that the majority wants to remain on standard time the year around.” --*Tucson Daily Citizen*, Jan. 16, 1968

Arizona Daily Sun March 20, 1968 -->



From the Desk

By

Jim Garner

The Arizona Legislature will wind up its session sometime this week.

Many were the problems.

And many were the lobbyists trying to get this or that bill through or killed.

This year, however, the lawmakers faced an entirely new “lobbyist” during the debate on daylight savings time.

It wasn't the hired, professional.

“It” just happened to be the mothers of Arizona, and what a job they did.

Navajo Nation Keeps DST

Navajo Council Puts Reservation On Daylight Time

WINDOW ROCK (AP)—Navajo Tribal Council, legislative body of the nation's largest Indian tribe, has voted to put the vast reservation on daylight saving time.

Navajo Clocks To Show DST

Eastern Arizona Bureau

WINDOW ROCK—A big chunk of Arizona will be on Daylight Savings Time after all, effective at 2 a.m. Sunday.

The Navajo Tribal Council Wednesday approved DST by a 25-to-13 vote for the entire Navajo Reservation.

"Arizona remained on standard time this summer with the exception of the Navajo Reservation. Navajo Tribal Chairman Raymond Nakai had ruled that his territory, which spans three states, would go on daylight savings time. The Hopi Reservation chose to go along with the rest of the state and remain on standard time." *Arizona Daily Sun* October 25, 1968

The Donut Hole in Northern Arizona



Daylight Saving: The Arizona Experience



Calvin Schermerhorn,
Arizona State University

#LOCKTHECLOCK

DAYLIGHT SAVING TIME



#DITCHtheSWITCH



**TIME FOR
THE FALL BACK TO
RETIRE**

#DITCHtheSWITCH



**TIME FOR A
SPRING WITHOUT A
SPRING FORWARD**





ONE OF THESE
POST CARDS
FREE INSIDE



"SAVING DAYLIGHT!"



Sign and Mail one of these Post Cards to Your Congressman at Washington
and help make it a National Law to SET THE CLOCK ONE HOUR AHEAD

United Sugar Stores Company

SAVING DAYLIGHT!

"SET THE CLOCK AHEAD
ONE HOUR AND
WIN THE WAR!"



**MOBILIZE AN EXTRA
HOUR OF DAYLIGHT AND
HELP WIN THE WAR!**

≡ HEADLINES IN ≡

HISTORY

FEBRUARY 9, 1942

WAR TIME

DAYLIGHT SAVINGS

BEGINS

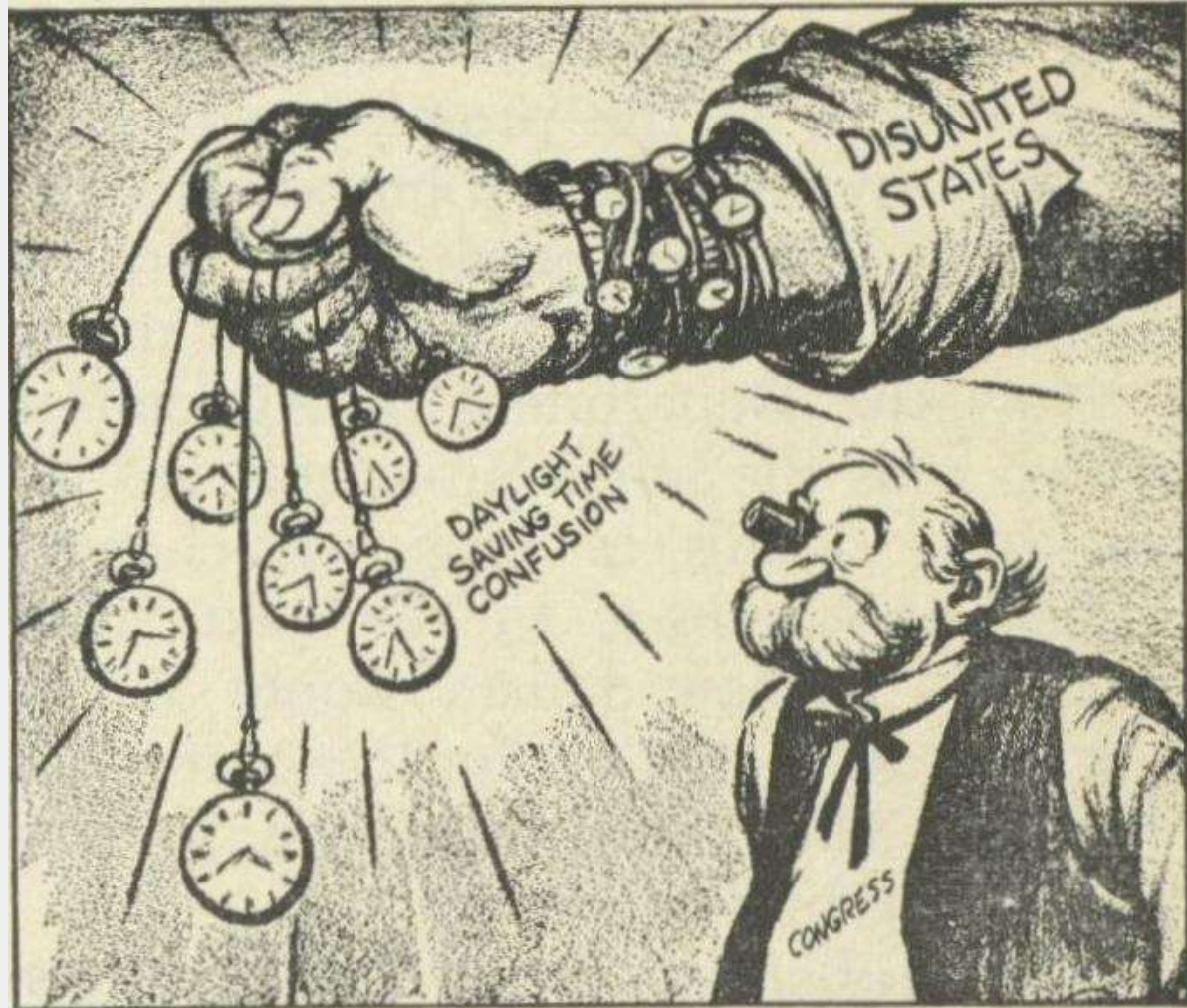


City Yawns as New War Time Goes Into Effect

Many Workers Have New Experience, Going to Job in Dark.

WAR TIME

In listing the time of events in all items appearing in The Evening Republican, the new



—Hutton in 'Philadelphia Inquirer'






1

Do you prefer to continue with our current system of changing the clocks twice a year? Or would you prefer to stop changing the clocks and stay on the same schedule all year. (Note: We would only plan to stop changing when we got permission from the Federal Government and when other nearby states also stopped changing their clocks as well.)

Answer	0% <div></div>	100% <div></div>	Number of Responses	Response Ratio
I prefer to continue our current system of changing the clocks twice a year.	<div></div>		47	20.0%
I would prefer to stop changing the clocks and stick with the same schedule all year.	<div></div>		184	78.2%
No Responses	<div></div>		4	1.7%
		Totals	235	100%

Do you prefer (Option 1) to continue to change the clocks every year, or (Option 2) to stock changing the clocks.

If it did happen that we stopped changing the clocks every year, would you prefer to stay all year on the summer schedule (more light in the evening, less light in the morning) or the winter schedule (more light in the mornings, less light in the evenings)?

Answer	0%100%	Number of Responses	Response Ratio
I would prefer more light in the evenings (like we currently have in the summer.)		155	65.9%
I would prefer more light in the mornings (like we currently have in the winter.)		69	29.3%
No Responses		11	4.6%
	Totals	235	100%

If we stop changing, do you prefer (Option 1) to stay on the summer schedule (more light in the evenings), or (Option 2) to stay on the winter schedule (more light in the mornings).

3

Do you think this issue is important enough to warrant spending time and energy on it?

Answer	0%	100%	Number of Responses	Response Ratio
Yes, this issue is very important to me. I hate having to change the clocks twice a year.	<div></div>		94	40.0%
This issue is important to me.	<div></div>		59	25.1%
This issue is a little bit important to me.	<div></div>		43	18.2%
This issue is not important at all to me -- stop wasting time on it.	<div></div>		39	16.5%
No Responses	<div></div>		0	0.0%
	Totals		235	100%

Do you think this issue is (Option 1) very important, (Option 2) important, (Option 3) a little bit important or (Option 4) not important - stop wasting time on it.



HOW IS
THIS
STILL A
THING?

And Yet --- This is still a thing.

Why is this issue so hard to
change?

Why is this issue difficult?

- There are 3 options - not just 2 -- so hard to reach 50%
- What people want is what the Feds won't let you have.
- There is discomfort with being out of sync with neighboring states.

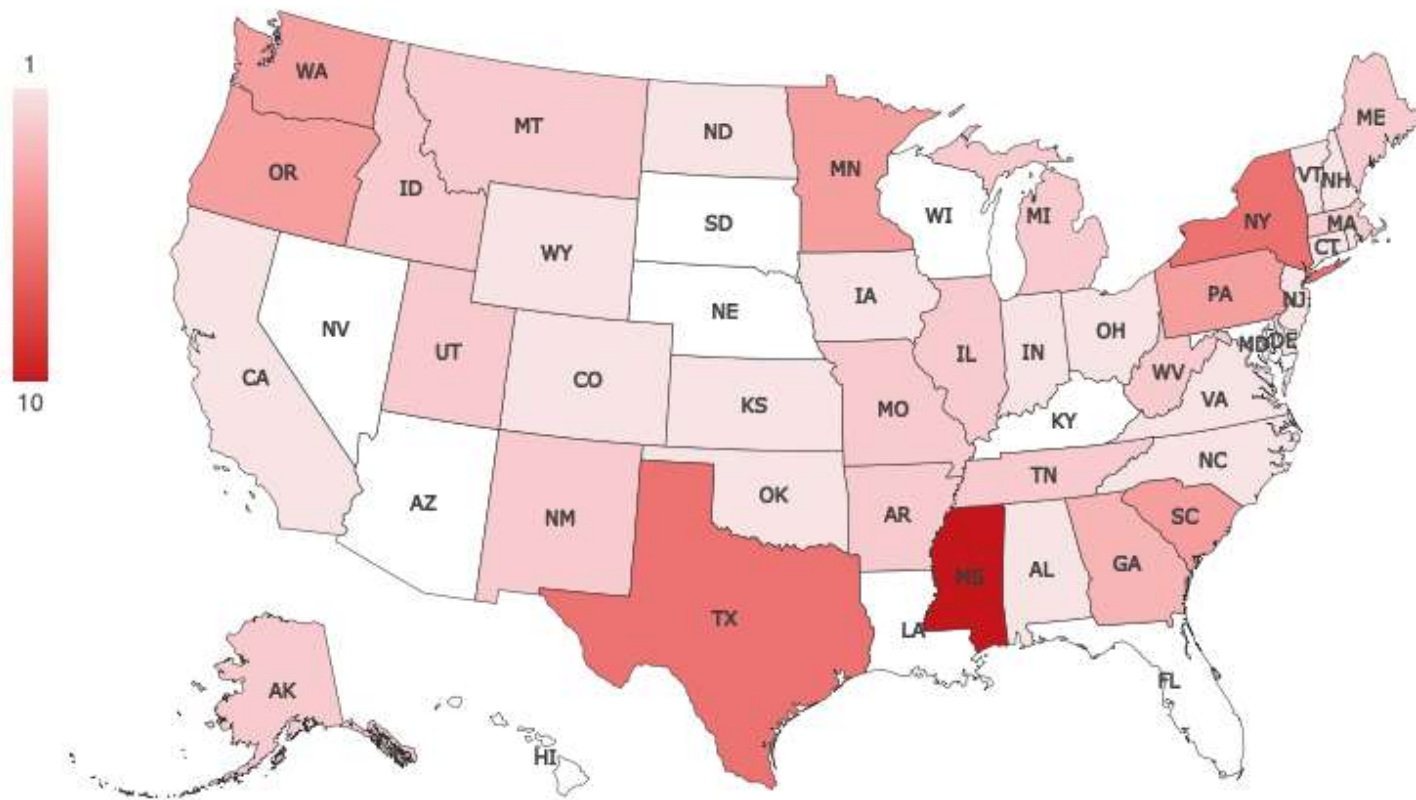
What is the Solution?

- Try and get people what they want (more daylight in the evenings) - even if that requires federal change.
- Couch the request in language that makes clear that the change will take place only when surrounding states also change.

Things are moving in the direction of
stopping the changing of the clocks.



Map with links to Daylight Saving Bills in every state.



116TH CONGRESS
1ST SESSION

S. 670

To make daylight savings time permanent, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 6, 2019

Mr. RUBIO (for himself and Mr. SCOTT of Florida) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To make daylight savings time permanent, and for other purposes.



Donald J. Trump ✓

@realDonaldTrump

Following

Making Daylight Saving Time permanent is
O.K. with me!

10:17 AM - 11 Mar 2019



14K



20K



111K



Tweet your reply







#DITCHtheSWITCH



**TIME FOR
THE FALL BACK TO
RETIRE**

#DITCHtheSWITCH



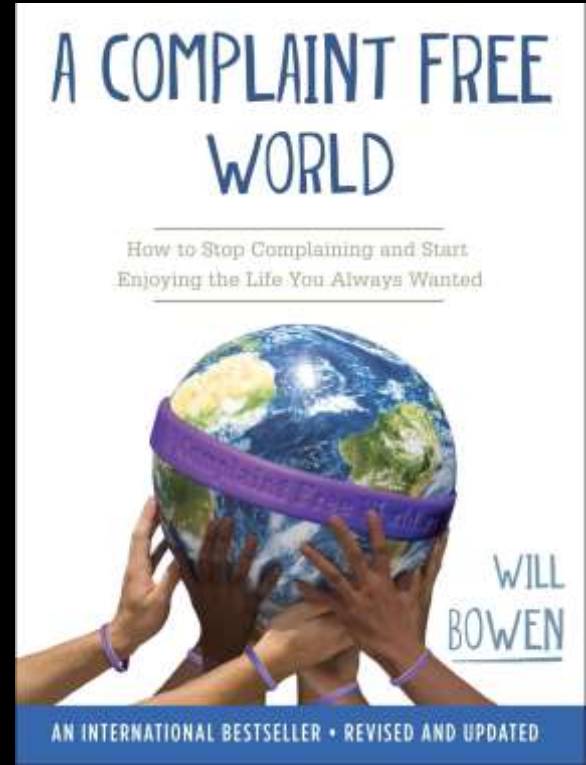
**TIME FOR A
SPRING WITHOUT A
SPRING FORWARD**

Scott Yates

#LockTheClock

#LockTheClock

How it started:



#LockTheClock

Research

Health

- Heart attacks go up because of the clock change. (New England Journal of Medicine, Sleep Medicine Reviews)
- Strokes go up because of the clock change. (Circulation Journal)
- Clock-changing increases IVF miscarriages. (Chronobiology International)
- The "spring forward" change means more overdoses and suicides and other causes. (Intl. Journal of Law and Psychiatry)
- DST reduces homicides. (Universities of Braunschweig and Bonn)
- The "Fall Back" change brings an increase in suicides. (Journal of Epidemiology)
- Year-round Daylight Time means people walk less. (Journal of Environmental Psychology)

Children and Schools

- There is NO increased risk to children in rural areas. (American Journal of Public Health)
- Again, there is simply no evidence that school children are harmed by DST. (Congressional Research Service, citing multiple studies)
- Permanent DST helps in the fight against childhood obesity. (Journal of Behavioral Nutrition and Physical Activity)

Traffic

- Staying in DST will improve traffic safety in the fall. (Journal of Safety Research) (Royal Automobile Club of Canada)
- Traffic accidents spike on the Monday after "fall back". (American Economic Association, New England Journal of Medicine)

Energy and Environment

- Evidence mixed, but some indication that DST helps reduce energy use. (U.S. Department of Energy)
- Permanent DST will help decrease air pollution. (Journal of the Air & Waste Management Association)

Crime and Human Behavior

- Crime goes down in Daylight Saving Time. (Review of Economics and Statistics)
- Crime goes up in Standard Time, down in DST. (Inter-American Development Bank)
- Moral Awareness goes down after the Spring time change. (Journal of Sleep Research)
- People are less civil online after the Spring time change. (Stevens Institute of Technology)

Business

- Workplace injuries go up. (Journal of Applied Psychology)
- Workplace productivity goes down because of the clock changes. (Journal of Applied Psychology, story here)
- Getting rid of clock changing will make the stock market perform better, by investors. (Journal of Psychological Reports, Journal of Banking and Finance)
- Switching out of DST hurts retail sales. (JP Morgan Chase Institute)

Etcetera

- Clock-changing harms relationships. (Wall St. Journal, citing several studies, subscription required)
- Ending clock changing helps sleep, and standard time is better than DST. (Journal of Biological Rhythms, Journal of Health Economics)
- Clock-changing brings harsher sentences from judges. (Psychological Science)
- It's a non-partisan issue, and farmers have traditionally been opposed to DST. (Social Science Quarterly)

Also, here is the excellent study done in the state of Massachusetts:



The NEW ENGLAND
JOURNAL of MEDICINE

Shifts to and from Daylight Saving Time and Incidence of Myocardial Infarction

#LockTheClock Coverage

THE NEW YORKER

...which might have been a good idea (the first time it was passed, it would go into effect only if Massachusetts followed suit.) "I weird, niche, oddball issue, but it's become much more of a public-pol Scott Yates, a D.S.T. activist, told me recently. "Part of that is because pushing it."



Tired of daylight saving time? These places are trying to end it.

It doesn't save energy, and it seems to put health at risk. Now, twice-yearly time shifts are inching closer to success.

BY MAYA WEI-HAAS

PUBLISHED MARCH 8, 2019

Each year, the approach of spring fills Scott Yates with a familiar longing: lengthening days and warmer weather are both signals that Y millions of U.S. residents—will soon be forced over an annual clocks forward at the start of daylight saving time.



Ditch the switch? Call to go on permanent daylight saving time

the emotional, according to those leading the charge to "lock the clock."

"We don't have a good reason to do it. Let's stop," said Scott Yates, 54, of Denver, an activist who for more than five years has advocated for the elimination of the time change and has testified before state legislatures about it. "Even if it doesn't kill you, it's annoying."



U.S. | Daylight Saving Is Here. Suppose We Made This Time Change O...


Scott Yates, a technology entrepreneur in Colorado who runs a website dedicated to staying on daylight saving time year-round, predicted that most of the state bills would go nowhere. Though he believes the idea has gained some legitimacy, with lawmakers thinking especially about the health effects of time changes, it is hardly a top legislative priority for anyone. At the same time, it is not a bitterly partisan issue, which in these days of divided politics feels pretty rare.

"It's sort of odd, in that it doesn't have any natural political division to it, but it doesn't have a natural constituency, either," Mr. Yates said. "It's actually kind of refreshing in that way."

#LockTheClock

Testimony



A photograph of a red wall in a room. The wall is covered in a large, white, sans-serif quote. The quote is arranged in four lines, with the last line being the largest. The room has a drop ceiling with a light fixture visible in the top left. A yellow chair is partially visible in the foreground at the bottom center.

**FIRST THEY IGNORE YOU.
THEN THEY LAUGH AT YOU.
THEN THEY FIGHT YOU.
THEN YOU WIN.**

MAHATMA GANDHI



“We have not been contacted by any States.”

— U.S. Department of Transportation

#LockTheClock

States that have passed something

1. California passed a statewide initiative. Bill passed Assembly.
2. Delaware, if New York, Pennsylvania, New Jersey, and Maryland all go.
3. Florida, if Federal Law changes.
4. Maine, if every other state in the Eastern Time Zone goes.
5. Oregon, if Washington and California go along.
6. Tennessee, if a Federal Law passes.
7. Washington, if California and Oregon go along

#LockTheClock

Federal Bills



Two active Federal Bills

[Senate Bill 670](#)

Sunshine Protection Act

Central Idea	Immediate switch to make DST the new Standard Time.
Main points in favor	<ol style="list-style-type: none">1. Ends clock changing for all states uniformly.2. Puts all states into generally more popular DST unless they take immediate action to opt out.
Main points against	<ol style="list-style-type: none">1. Moves too quickly.2. Forces states to act that may not be ready.
Current status	Waiting for hearing in Senate Commerce, no indication that it will get a hearing.

[House Bill 1601](#)

Daylight Act

Central Idea	Ability for states to adopt DST as their own standard time.
Main points in favor	<ol style="list-style-type: none">1. Gives states flexibility to end clock changing if they choose to do so.2. Allows states the ability to go into the time zone most popular for that state.
Main points against	<ol style="list-style-type: none">1. Moves too slowly.2. Creates situation of patchwork and constant changes.
Current status	Waiting for hearing in House Commerce, some indication that it will get a hearing with more D support, but nothing concrete.

The Weather

Today — Partly cloudy and windy, high in the 60s, low around 35. Chance of rain is 30 per cent today, near zero tonight. **Monday—Sunday** — High in the 50s, Temp. range: Today: 60-26; Tomorrow: 49-63; Details: D.

The Washington Post

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50¢



Before Judge Nixon in U.S. District Court yesterday, from left, defendants Colson, Parkins, Sirhan, Haig, Ehrlichman, Mitchell and Madan.

7 Give Pleas Of Not Guilty In Cover-Up

George Lardner Jr.
Washington Post Staff Writer

The most powerful men of President Nixon's first administration stood with their defense lawyers in U.S. District Court here yesterday and pleaded not guilty to conspiring to obstruct justice in the Watergate scandal.

Their titles gone, they clustered before the bench in Chief Judge John J. Sirhan's courtroom as the clerk called their names one by one in a routine, unceremonious fashion.

Two of them, former White House domestic affairs adviser John D. Ehrlichman, 48, and former White House special counsel Charles W. Colson, 42, were arraigned at the same time on another set of conspiracy charges announced last the 1973 breaking of the office of Daniel Ellsberg's psychiatrist. Again they pleaded not guilty.

The entire hearing lasted only four minutes and 32 seconds. All seven defendants were released on their own recognizance. A crowd of about 200 waited for them outside the courtroom in John Marshall Plaza with signs that said "Law and Order" and "Nixon's Nephew."

Former Attorney General John N. Mitchell, 69, was the first to stand and one of the first to leave. Police escorted him to his car just hours of "Mug Day" and "Treason Day" for Sirhan.

Strauss: The Issue Is Nixon

By John Edgar Hoover
Washington Post Staff Writer

Democratic National Chairman Nelson A. Rockefeller, with a nod at critics in San Francisco's crowded Union Square in 1968, said yesterday that the Democratic candidate for Congress this year "is not here" against President Nixon.

The names of 200 people in New York City who are the Democratic candidate in the 1974 election were announced by Nelson A. Rockefeller yesterday when he announced that he was not running for Congress.

Va. Conferees to Guarantee \$15.2 Million for Metro Costs

Joint Panels Zero In on Oil Industry

A Joyless Reunion The Once-Mighty Face Judgment

By Lawrence Sanders



#LockTheClock