

Central Time Coalition

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October 2013

Anthony R. Foxx, Secretary
Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Foxx,

We Americans are blessed to live in a democracy that guarantees the rights of its citizens, one of which is the right to petition the government for the redress of grievances. The Central Time Coalition is exercising that right by petitioning the United States Department of Transportation to redress the detrimental effects on Indiana's citizens caused by the decision made forty-four years ago that moved eighty counties from Indiana's original Central Time Zone to the Eastern Time Zone and divided Indiana's citizens into two time zones.

- The change from Central to Eastern was in response to requests from network television broadcasters and selected businesses, both of which were dependent on communications within the Eastern Time Zone. Today, digitization and instantaneous transfer of information through e-technology have rendered the Eastern Time Zone designation in Indiana obsolete as a significant influence on the convenience of commerce.
- The 3-hour time difference with the West Coast is a major inconvenience in conducting *interstate commerce* because of limited times for direct internet and telephone communications. It complicates business travel and exacerbates effects of jet lag. Reducing the time difference to two hours would greatly reduce these inconveniences; however, the adoption of Eastern Daylight Time (EDT) in 2006, extended the 3-hour time difference so that it is now year-round.
- Having Indiana split into two time zones causes costly inconveniences in conducting *intrastate commerce* and countless hardships in the daily lives of thousands of its citizens.
- The sunlight schedule of the Eastern Time Zone in Indiana causes many *unintended consequences* for Indiana's citizens that infringe on their rights and waste \$40-50 million per year in taxpayer's money intended to be spent on education.

Regulation of commerce was given a new interpretation in the Standard Time Act of 1918 when it established time zone boundaries based on the *convenience of commerce* taking into consideration *junction points of common carriers*. Today there are multiple common carriers – freight lines, railroads, airplanes, taxicabs, bus lines, ships, public utilities, telecommunication providers, cable companies, satellite TV providers, internet service providers, etc. Junction points are no longer significant limiting factors.

DOT's decision that split Indiana into two time zones was made with the understanding that Indiana's Eastern Time counties would not observe daylight saving time. This was a compromise decision that placed Indiana officially in the Eastern Time Zone while maintaining the summer sunlight schedule of "Chicago Time" that was overwhelmingly preferred in Indiana (*Chicago Time* aka *Central Daylight Time* aka *Eastern Standard Time*). Because the Eastern Time counties didn't change their clocks, for 35 years all of Indiana was united on the same time the majority of each year. In 2006, the Indiana legislature approved observance of daylight saving time for Indiana's Eastern Time Zone counties. We, the petitioners, agree with former Governor Daniels, the Indiana Chamber of Commerce, and others who say that in today's economy, keeping all of Indiana's clocks in sync year-round with the rest of the U.S. by observing daylight saving time is the most important *convenience of commerce* factor to Indiana's economic health. However, having Indiana split into two times zones, year-round not only causes unnecessary hardships for Indiana's citizens, it is the biggest factor in causing *inconveniences for Indiana's intrastate commerce*. This petition will explore the factors affecting *conveniences* and *inconveniences* to commerce in Indiana today. We will also explore the *unintended consequences* of the time zone decision made forty-four years ago by DOT and exacerbated in 2006 by the adoption of Eastern Daylight Time.

Specifically, we the petitioners, request a resolution to these grievances by restoring all of Indiana (with the possible exception of certain southeastern counties that closely interact with the Cincinnati/Louisville-metro area) within its original, geographically-correct Central Time Zone boundaries with Central Standard Time being observed in the winter and Central Daylight Time the remaining months of the year. This is a middle-ground solution that satisfies the *convenience of commerce* concerns, brings back the summer sunlight schedule that is conducive to the well-being of Indiana's families, and eliminates the *unintended consequences* of the Eastern Time Zone designation in Indiana. It is a win/win/win solution for everyone.

Sincerely,



Susannah H. Dillon, president
Central Time Coalition
507 Cornwall Ct.
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The mission of the Central Time Coalition is to promote the allocation of available sunlight and darkness in a manner that provides the greatest "peace, safety and well-being" for the citizens of Indiana. This mission will be accomplished when Indiana is restored to the Central Time Zone.

Petition
to
United States Department of Transportation
for the
Redress of Grievances

October 2013

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Section I. Petition for a Redress of Grievances

Whereas, the First Amendment to the United States Constitution grants to all Americans the right to petition the government for a redress of grievances: and

Whereas, forty-four years ago the United States Department of Transportation made a decision that moved eighty counties from Indiana's original, geographically-correct Central Time Zone to the Eastern Time Zone and split Indiana into two time zones; and

Whereas, digitization and instantaneous transfer of information through e-technology have rendered the Eastern Time Zone designation in Indiana as no longer a significant influence on the convenience of commerce; and

Whereas, the three-hour time difference between Indiana and the Pacific Time zone, now year-round since the adoption of Eastern Daylight Time in 2006, causes major *inconveniences* in conducting *interstate commerce* due to limited times for direct internet and telephone communications, increased jet lag, and inconveniences for business travel; and

Whereas, having Indiana split into two time zones causes costly *inconveniences* in conducting *intrastate commerce*, as well as, untold hardships in the daily lives of thousands of its Indiana's citizens; and

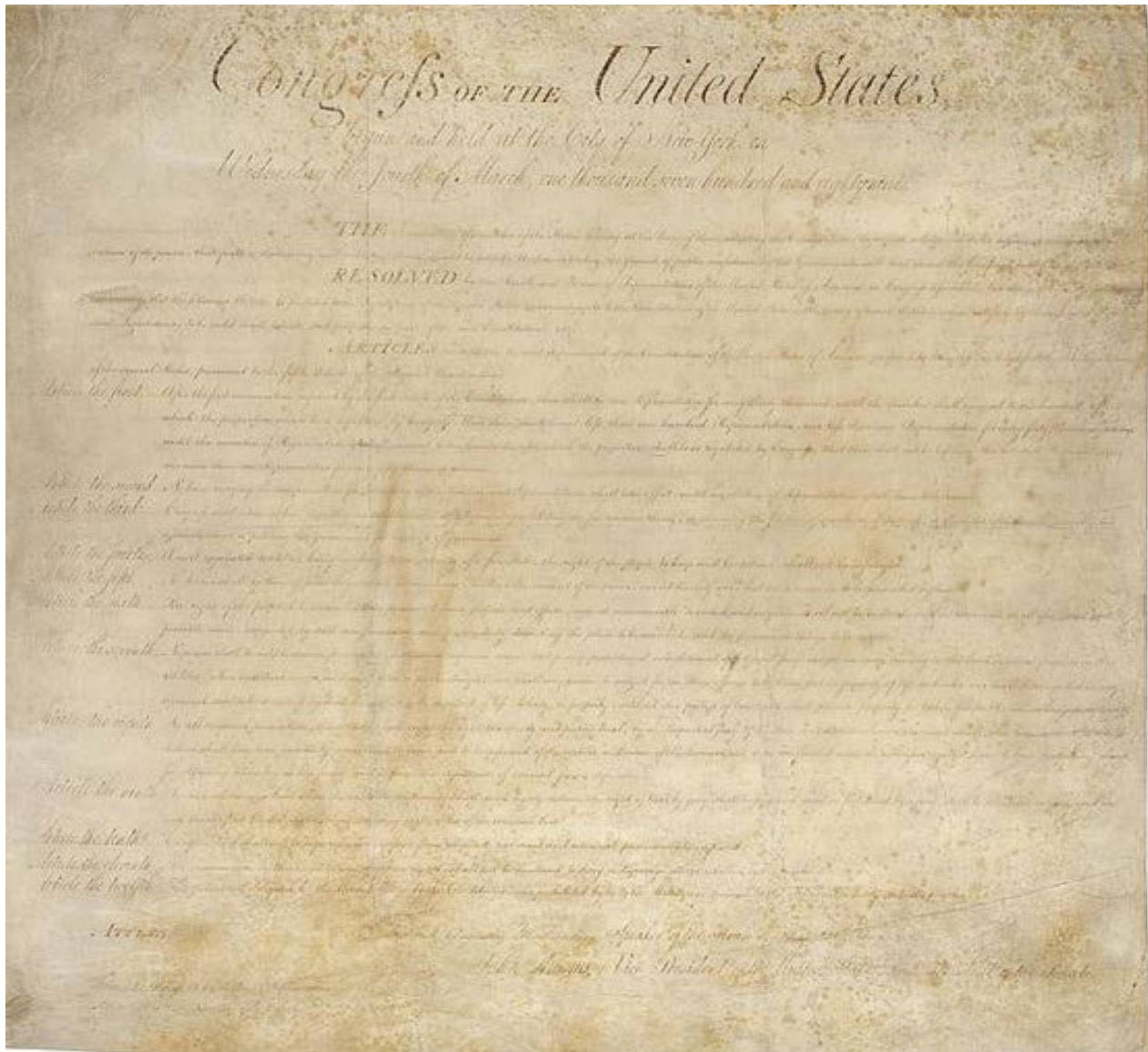
Whereas, the sunlight schedule of the Eastern Time Zone in Indiana causes many *unintended consequences* for Indiana's citizens that infringe on their constitutional rights and waste \$40-50 million a year of taxpayer money intended for education;

Now, therefore, representing its 1,234 members, 23,500 citizen and business signers of petitions, 37 Indiana school boards, and voicing the special concerns of Indiana's 45,000 Amish, the Central Time Coalition petitions the United States Department of Transportation for the redress of grievances concerning the detrimental effects on Indiana's citizens caused by the decision that split Indiana into two time zones by moving eighty counties from Indiana's original, geographically-correct Central Time Zone to the Eastern Time Zone; and

Further, we request the United Stated Department of Transportation to resolve these grievances by restoring all of Indiana to its original Central Time Zone, with the possible exception of, and at the request of, certain southeastern counties that closely interact with the Cincinnati/Louisville-metro area.

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Section II. Certificate from the Appropriate Governmental Official



Amendment I Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; **or abridging the freedom** of speech, or of the press; or the right of the people peaceably to assemble, and **to petition the Government for a redress of grievances.**

Amendment IX The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

The Uniform Time Act: 15 U.S.C. §266 regarding applicability of the **Administrative Procedure Act:** 5 USC § 553 “Rule Making” which states in (e) “Each agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule.”

Section III – Convenience of Commerce Considerations

1. From where do businesses in Indiana get their supplies and to where do they ship their goods or products.

The best source of information as to origins of supplies and destinations of products is found in the U.S. Commodity Flow Surveys conducted by the Census Bureau and the Bureau of Transportation Statistics (BTS) in years ending in 2 and 7. In 2007, commodities totaling \$303,753 million were purchased within Indiana. Of those \$103,480 million (34.4%) originated within Indiana, \$101,505 million (34%) were imported from time zones west of Indiana (Central, Mountain, and Pacific Time Zones), and \$98,770 million (32.5 %) were imported from the Eastern Time Zone states.¹

In 2007, commodities valued at \$355,425 million were produced in Indiana. Of those \$103,480 million (29%) were shipped to consumers within Indiana, \$121,947 million (34.3%) were exported to time zones west of Indiana, and \$129,998 million (36.6 %) were exported to Eastern Time Zone states.

The 2000 Federal Population Census Report predicts major population movements by 2030 with two-thirds of the U.S. population living in states located in the south and west (Central Time Zone). The movement of the mean center point of U.S. population confirms this steady movement of population southwestward. California and Texas currently are the most populous states in the U.S.

A corresponding westward shift of business interaction

is already taking place and can be seen by comparing the Commodity Flow Survey of 2007 with that of 2002, which revealed in 2007 a - 2.9% decrease in imports into Indiana from Eastern Time Zone states and a - 4% decrease in exports from Indiana to Eastern Time Zone states.²

The movement of auto-related manufacturing out of Indiana has resulted in a migration of many Hoosiers to new job opportunities in the south and west. The 2012 Commodity Flow Survey Census is scheduled to be released in December 2013. It is anticipated to reveal a continuation of the westward movement of business interaction away from Eastern Time Zone states and toward the Central and Mountain Time Zone states.

According to the Standard Time Act of 1918, the location of time zone boundaries are to take into consideration the junction points for common carriers, which at that time were railroads. Today most commodities and products are moved door-to-door by trucks rather than by rail. Even though Indiana has been split into two time zones since the mid-1960s (12 counties on Central Time and 80 counties on Eastern Time), for 35 years prior to 2006, all of Indiana was united on the same time for seven months each year when the Central Time Zone counties



Figure 1 Mean Centers of Population 1790-2010, U.S. Census Bureau

¹ 2007 Commodity Flow by States

² Appendix A. Heller - Comparison of Indiana Commodity Flow Surveys

changed their clocks to Central Daylight Time and the Eastern Time Zone counties did not change their clocks and remained on Eastern Standard Time year-round. This caused confusion for the rest of the U.S. when it came to transportation of goods, people, and communications. In 2006, the adoption of daylight saving time in Indiana's Eastern Time Zone counties eliminated the twice-a-year confusion for the rest of the U.S. but has caused costly confusion within Indiana. Travelers usually know when they are crossing a time zone boundary that corresponds to a state boundary, but few travelers know when they are crossing a time zone boundary that corresponds to a county boundary. 17 Indiana counties are split from each other by the time zone boundary. The resulting confusion wastes uncounted amounts of money in missed deliveries, missed meetings and appointments, inconvenience in communications, etc. Truckers joke about I-64 that goes back and forth across the time zone boundary four times as it crosses southern Indiana. "*What's the matter with these hillbilly Hoosiers that they can't tell time?*" I-65 coming due north from Birmingham, AL, crosses back and forth over the time zone boundary three times as it passes through Nashville, Louisville, and Indianapolis to Chicago.

2. From where do Indiana residents receive television and radio broadcasts?

In the 1960s, Indiana was moved from its original Central Time Zone to the Eastern Time Zone in response to strong pressure from television networks and television broadcasters that operated under a business model which demanded uniformity in broadcast times for programming and had limited capacity to delay network feeds using video tape. Now, television programs are recorded digitally in studios located primarily in California and fed anywhere in the U.S. and foreign countries via digital distribution channels which, except for live sports, are increasingly delivered on demand to consumers. Today, Hoosiers receive television programming through many options: cable, satellite dish, computers and internet connections. We can record programs and remove commercials for later viewing. We can order movies and previously broadcast programs on-demand through the internet for viewing at our convenience.

There are 28 local television stations broadcasting throughout Indiana that are important to Hoosiers for receiving local news, weather, and school delays, however, most local television stations also have online websites that give updated news as it is happening and emergency news alerts can automatically be received on cell phones and computers. In addition to the television stations located within Indiana, there are several Chicago stations providing programming in northwestern Indiana, as well as, stations in Louisville and Cincinnati that provide television for southeastern Indiana.

All over the world, news is being broadcast 24-hours per day, 7 days per week. There is no longer any dependency, whatsoever, on New York or the Eastern Time Zone for convenience of television delivery in Indiana. In fact, Indiana's Eastern Time Zone designation causes many *inconveniences* for the Hoosier viewing audience because nationally televised events are typically broadcast so late into the evening that the Hoosier viewing audience can't afford to stay up to watch the end. Nationally televised events typically are of greater interest to the American viewing audience as a whole. Such events include the Olympics competitions, Baseball World

Series, NCAA competitions, professional sports competitions (which include the Indianapolis Colts and Pacers). These events typically have a positive influence on the values of the viewing audience as they demonstrate desirable standards of good sportsmanship, respect for other cultures, and athletic achievement through hard work and physical fitness. Because students have to go to bed in order to get up for school the next morning, the late broadcast of these events in Indiana limits students' exposure to these positive values and the sense of national pride that are an important part of these national events.

Eastern Time in Indiana has other inconveniences for Indiana's television viewers that result in loss of viewership for local stations. In Indiana's Eastern Time Zone counties the late news on local televisions is broadcast at 11 p.m., however, in Indiana's Central Time Zone counties the late news is broadcast at 10 p.m.

There are 62 radio stations scattered throughout Indiana plus stations in Chicago for northwestern Indiana and stations in Louisville and Cincinnati that reach southeastern Indiana. In addition, programming on Sirius Satellite Radio is available all over the U.S.

3. Where are the newspapers published that serve Indiana.

There are currently 101 print newspapers published within Indiana, 139 free Indiana online newspapers, 11 Indiana college newspapers, and 5 statewide Indiana magazines. There are also 19 major news twitter feeds available free online. In addition, many statewide, national, and international newspapers can be subscribed to online: the Indianapolis Star, the Wall Street Journal, New York Times, the Economist, etc.

The Eastern Time Zone schedule puts Indiana's newspapers at a disadvantage when it comes to reporting sporting events because the print deadline often occurs before the events are concluded. This causes newspapers to lose out on sports reporting to television reporting.

4. From where does Indiana get its bus and passenger rail?

Intercity bus service is provided by Greyhound bus service with pick-up location in 40 Indiana cities. Hoosier Ride provides daily bus service connecting eight Indiana cities (Anderson, Bloomington, Evansville, Ft. Wayne, Indianapolis, Muncie, South Bend and Terre Haute) as well as to surrounding states. Miller Transport offers commuter bus transportation from Carmel/Fishers to downtown Indianapolis.

As in most of the U.S., passenger rail service in Indiana is available on a very limited basis. There are few stations, times of service are inconvenient and travel is slow and unreliable. While you can travel by rail from Indianapolis to Chicago, it is quicker to travel by bus when catching the Amtrak out of Chicago. Needless to say, as with the rest of the U.S., the majority of travel in Indiana is by auto.

An exception is the Northern Indiana Commuter Transportation District (NICTD) that provides important commuter transportation between South Bend and downtown Chicago. A major inconvenience for the many St. Joseph County residents (Eastern Time Zone) who commute into the Chicago area (Central Time Zone) is that the commuter train crosses the time zone boundary

on its route back and forth between South Bend and Chicago with the train schedule being dictated primarily for the convenience of the Central Time Zone commuters. A 2-hour train commute leaving downtown Chicago at 5:30 p.m. Central Time arrives in South Bend at 8:30 p.m. Eastern Time, thus causing the person to lose one hour of personal/family time every evening.

5. To what major airports do Indiana residents go to find passengers service?

According to FAA records, the number of *enplanements* (commercial passenger boardings) that occurred at Indiana airports in calendar year 2012 are as follows:³

Indianapolis International Airport	3,586,422
South Bend Airport (was South Bend Regional)	299,592
Fort Wayne International Airport	280,732
Evansville Regional Airport	164,767
Gary/Chicago International Airport	11,443

Additionally enplanements:

Chicago O'Hare	45,798,929
Chicago Midway	9,436,387
Cincinnati	2,937,850
Louisville	1,642,790

Airports located within Indiana provide service to most of Indiana's air passengers. Chicago's O'Hare and Midway (Central Time Zone) provide the most convenient passenger service for most of northwest Indiana. Southeast Indiana is served primarily by airports in Cincinnati and Louisville.

The South Bend Airport is the second busiest airport in Indiana. Its primary service is to provide shuttle service between South Bend and Chicago. The fact that the South Bend Airport is located in the Eastern Time Zone while Chicago's two airports are located in the Central Time Zone poses numerous inconveniences and confusions for passengers in scheduling and arriving at the airport on the correct time.

6. What percentage of Indiana residents work outside their community and where do they work?

Having 17 Indiana counties separated from their neighboring Indiana counties by the internal time zone boundary means that thousands of Hoosiers live in one time zone and work in the other time zone. This causes confusion that is costly in missed meetings, missed appointments, confusion about pick-ups and delivery of goods, missed communications, etc.

³ *Passenger Boarding(Enplanements) and All-Cargo Data for U.S. Airports*

Hoosiers who live in Central Time counties and work in Eastern Time counties express great concerns about winter highway conditions making travel unsafe. Because of the time difference, Central Time Hoosiers must leave home an hour earlier on their clocks, which means that highways in winter often haven't yet been cleared of snow and ice. Not only does northern Indiana get large amounts of snow caused by the lake effect, they also have inordinate amounts of morning fog. Southern Indiana's counties along the Ohio River have a lot of morning fog and ice that make commutes on dark mornings especially dangerous. While roadways are typically cleared by the time of the evening rush hour, having all of Indiana united in its original Central Time Zone, where the latest sunrise would be around 7:15 a.m., would make the morning commute much safer for all Indiana citizens, including students who have to stand out beside dark roadways.

Construction workers comprise a large group of people who frequently live in one community and travel to different communities where job sites are located. Construction trades prefer a 7 a.m. - 3:30 p.m. work day because this schedule allows them to avoid rush-hour traffic shortening their travel time to and from the job site, and allows more time for family and personal activities after they return home. The start time for most construction projects is dictated by the trades that are dependent on sunlight for safety: framers, roofers, masons, glazers, carpenters, earth movers, pavers, concrete installers, etc. In Indiana's Eastern Time Zone counties there are 245 days that sunrise occurs after 7 a.m. delaying the start time for construction projects and causing workmen and delivery trucks to contribute to rush hour traffic. This is one of the unintended consequences of Eastern Time in Indiana. The latest sunrise in Indiana on Central Time is around 7:15 a.m. and the construction work day could start at 7 a.m. year-round.

Beth Ann Riffel, a waitress in Jasper, IN, shared the frustration experienced by tourists who visit Holiday World and Splashin' Safari located in Southwest Indiana. Visitors come from many surrounding states and are not prepared to contend with two time zones. *"They often express, 'Whose stupid idea was it to have two different time zones in one state?' One of the problems is that there are no restaurants outside the park (CDT) until you get to Jasper (EDT). The parks close at 9:30 (CDT) and by the time visitors arrive in Jasper wanting to get something to eat, it is 11 p.m. (EDT). By then the restaurants are closed so now mom and dad can't get a beer and the kids have to eat fast food again even though that's what they've been eating all day at the park. They can't sit down and have a nice meal in a casual restaurant. It not only affects the customers, we also have several employees who live in the Central Time Zone and have to leave their houses, in effect, 2 hours before their shift starts for what is only a 45 minute drive. Can't imagine the chaos that causes in their households in the morning?"* Beth Ann concludes, *"Indiana is just not meant to be in the Eastern Time Zone, not geographically, not mentally, not commercially, NOT SAFELY!"*⁴

⁴ Riffel - I Support Central Time

7. What are the major elements of Indiana's economy? Is Indiana's economy improving or declining? What Federal, State, or local plans, if any, are there for economic development for Indiana? (Included is how Indiana's time zones affect Indiana's economy)

In the 1960s, when 80 Indiana counties were moved from their original Central Time Zone to the Eastern Time Zone, the Indiana Chamber of Commerce petitioned on behalf of businesses that were dependent on telephone and telegraph communication in conducting transactions with financial centers located in the Eastern Time Zone. Telephone and telegraph communications were unreliable at that time and they claimed that being on Eastern Time would facilitate these transactions. Today, we live in a global economy made possible through instantaneous transfer of information worldwide via e-technology. Modern communication has negated the "convenience of commerce" rationale for Indiana to be in the same time zone as financial centers in the Eastern Time Zone.

In several years of researching, polling, and repeatedly asking, we can find no Indiana business that substantially benefits from being in the Eastern Time Zone. We were assured that Grain Processing Corporation (GPC), with a major corn production facility in Washington, IN, supported Eastern Time for Indiana. When we consulted their vice-president in charge of marketing at their corporate headquarters located in Muscatine, IA, he said, *"Eastern Time has no advantages to us over Central Time. It makes no difference. We ship all over the world. But having Indiana observe daylight saving is important to our ability to conduct business smoothly."*

When two former secretaries of Indiana's Department of Commerce were asked if there was an advantage of Eastern over Central Time to Indiana's businesses, both said that there was none. *"The time zone doesn't make any difference, but today what is important to Indiana's economic health is keeping our clocks in sync with the rest of the U.S. by observing daylight time."* The president of a major nationwide trucking business headquartered in Indianapolis also concurred with this opinion. *"What is important to interstate commerce today is keeping our clocks in sync by observing daylight saving time. Time zones don't matter"*

The vice-president of GPC went on to say, *"A 1-hour time difference is a minor inconvenience that is easily handled. A 2-hour time difference begins to cause problems. But a 3-hour time difference causes major problems with direct communications, such as conference calls, online and phone communications, business travel, etc."* With Indiana's adoption of Eastern Daylight Time in 2006, there is now a year-round, 3-hour time difference with California, the 9th largest economy in the world. In 2007, when the Commodity Flow Survey was conducted, Indiana had already experienced two years of Eastern Daylight Time with the corresponding year-round, 3-hour time difference with the Pacific Time Zone. The 2007 Commodity Flow Survey revealed that between 2002 and 2007, Indiana experienced a -.5% decrease in exports to states located in the Pacific Time Zone and a -.7% decrease in imports from states in the Pacific Time Zone. Do

these decreases reflect the year-round, 3-hour time difference inconveniences of conducting business with Indiana?⁵

On October 17, 2010, Mitch Roob, Indiana's Secretary of Commerce and chief executive of the Indiana Economic Development Corp. (IEDC), announced that the IEDC was contributing \$500,000 to help Purdue University open an outreach office in Mountain View, Calif.

Roob said, "*the office can give fledgling Indiana Companies access to Silicon Valley investors. He added that **the three-hour time difference from Indiana to the West Coast makes it more difficult to coordinate business remotely.***"⁶

Historically, a major element of Indiana's economy has been auto-related manufacturing. This was severely hit in the 2007 recession leaving several communities (Kokomo, Anderson, South Bend, Connersville, Indianapolis, etc.) with facility closings and soaring unemployment rates from which they are continuing to struggle. While Indiana's unemployment rates have historically been well below the national average, a report, released in July 2013 by the Indiana Institute for Working Families, reported that Indiana's current unemployment rate of 8.4% in 2013 is .8% higher than the national average. The report also showed that only 5 other states in the U.S. have seen larger percentages of people who are officially "low income" since the recession began in 2007. The state's median family income dropped from \$78,599 in 2000 to \$57,148 in 2011 – the 2nd largest decrease in the nation.⁷ The Indianapolis Star predicts that in 2013, Hoosiers' income will be the same as it was in 1996. The Working Families report found a majority (54% of all jobs in Indiana) are still "middle-skill" jobs – often requiring less than a four-year college degree but more than a high school degree – but only 47 % of Hoosier workers have the appropriate skills and credentials to fill these middle-skill jobs. This is a grim picture for Indiana's economic recovery that, according to everything in the news media, all hinges on improving Indiana's education. On August 23, 2013, Governor Pence announced the launch of the Center for Education and Career Innovation to serve as a collaboration point for state agencies helping students and adults prepare for quality careers.

Agriculture and agribusiness are major elements of Indiana's economy. They interact primarily with the Chicago commodity markets and suppliers located in the Central Time Zone.

Field activities on farms can't begin until fields and crops have been dried out by morning sunlight. Late sunrises delay the start of field work forcing family farmers to work into the evening. This interferes with a farmer's ability to be involved in family activities and deprives the community of his participation in community activities. The Indiana Farm Bureau is an official supporter of the Central Time Zone for all of Indiana. Lawn and landscape businesses share similar inconveniences with Indiana's Eastern Time Zone sunlight schedule.

⁵ Appendix A. Heller - *Comparison of Indiana Commodity Flow Surveys*

⁶ Lee - *Purdue to Go to the Heart of Tech World*

⁷ Appendix B. Thomas - *Status of Working Families in Indiana*

The sunlight schedule of Eastern Daylight Time has caused significant financial concerns for golf courses. Maintenance activities are delayed by 1-hour, which in turn, delays morning tee times by 1-hour. Morning tee times are the most sought-after and fees are at premium prices. EDT has meant that courses have lost 1-hour of premium fees every day. Twilight fees allow golfers to play in the evening at reduced rates, but EDT has not resulted in an increase of evening play. At the same time employee costs to serve those players continue at regular rates.⁸

Prior to the adoption of Eastern Daylight Time in Indiana, Ft. Wayne's malls and restaurants benefited from having Ohio shoppers and diners take advantage of the extra hour of time difference between Ohio and Indiana. Ft. Wayne is an economically depressed city and the malls and restaurants lost business when they lost the advantage of the time difference with Ohio. Restoring Indiana to the Central Time Zone would return the time difference advantage to Ft. Wayne's businesses and extend that advantage to year-round.

The 2010 Federal Population Census revealed that Indiana has 45,000 adherents to the Amish religion giving Indiana the 3rd largest population of Amish in the U.S. While the Amish aren't active in governmental affairs, they have contacted the Central Time Coalition asking that we share their concerns about Eastern's sunlight schedule and the hardships it causes them. Amish are primarily farmers and the Amish religion requires a lifestyle that is more compatible with the earth's natural sunlight/darkness schedule which, in Indiana's Eastern Time Zone counties, is out-of-sync 1-hour in winter and 2-hours during the remaining eight months. Artificial lighting in Amish homes and barns is provided by kerosene lanterns. Indiana's dark mornings mean the Amish have to burn kerosene that wouldn't otherwise be necessary.

Egg production commonly provides Amish families with year-round income. Poultry require 24-hours per day of light to stimulate the laying of eggs which, on Amish farms, is provided at night by kerosene lanterns. Maple Leaf Farms, headquartered in Leesburg, IN, dominates the North American duck market as the leading producer of quality duck products, supplying retail and foodservice markets throughout the world. They contract with Amish farmers in the production of duck eggs that are then hatched in Maple Leaf's hatcheries to produce over 1 million ducks per year. A typical sized duck barn requires 40 kerosene lanterns to provide artificial light at night. Since sunlight is so late in the summer and these lanterns have to be lit before the farmer can go to bed for the night, he often has to light them while it is still daylight outside unnecessarily wasting fuel.

Today corporations benefit from geographically and temporally central locations. Many corporations have moved their corporate headquarters into the Central Time Zone primarily to facilitate communications within their nationwide customer base – Boeing from Seattle to Chicago, Comerica (Michigan's largest bank) from Detroit to Dallas, American Airlines from New York to Fort Worth, Navistar from Ft. Wayne to Chicago, etc. Indiana's Eastern Time

⁸ Richards -*Golf Courses Aren't Cashing in Like Expected*

Zone designation doesn't allow Indiana businesses to take advantage of their natural Central Time location within the nation.^{9 10}

Indiana takes great pride in its bio-science industries. According to Indiana's Bioscience Research Institute, "*Only two other states – California and Texas – have more life science exports than Indiana. Life science products make up 1/3 of all Indiana exports and contribute more than \$50 billion in annual value to Indiana's economy.*"¹¹ Product delivery time is critical for many of Indiana's highly prized bio-science manufacturers and they often require nationwide, same-day delivery for medicines, medical devices, etc. This can best be accomplished from distribution centers near air transit logistic hubs located in the Central Time Zone but *not in the Eastern Time Zone*. Warsaw, IN is home to several orthopedic device manufacturing companies that ship worldwide. In March 2012, Zimmer Orthopedics, Warsaw's largest employer, announced that it was moving its distribution center from Warsaw to Memphis, TN. They stated their reason for the move was the inability to provide same-day delivery nationwide from Indiana's Eastern Time zone.¹² While Indiana has a FedEx hub in Indianapolis and Louisville has a UPS hub, both Indianapolis and Louisville are located in the Eastern Time Zone. Thus Zimmer is going to Memphis.

Modes for transportation of goods are changing and shortening the supply chain from manufacture to delivery of goods saves money. Shopping online with same-day/next-day delivery of goods is only going to increase in the future. This will involve more and more air transport. As Zimmer has realized, air hubs located in the Central Time Zone can meet nationwide same-day delivery demands.

8. If residents leave the community for schooling, recreation, health care, or religious worship, what standard of time is observed in the places where they go for these purposes?

Most Indiana residents seek medical care from dentists, doctors and hospitals located within Indiana, however, with 17 Indiana counties divided by the internal time zone boundary, many residents live in one time zone and receive their medical care in the other time zone. This is a constant inconvenience that often results in missed appointments that require rescheduling and delay of diagnosis and treatment of a condition that could prove to be detrimental to a person's health.

Hoosiers living in a time zone boundary county frequently socialize with family and friends living near but in the other time zone. They often attend church, participate in

⁹ Ovans - *Inside Boeing's Big Move*

¹⁰ *Comerica to Relocate Corporate Headquarters to Dallas*

¹¹ *Economic Impact.*" Indiana Biosciences

¹² *Zimmer Moving Part of Operation to Memphis*

community activities and their children participate in youth sport events that occur in the other time zone from where they live. This causes many personal hardships for families.

Seven Indiana public school districts straddle the time zone boundary causing significant problems for those teachers, students, and parents. Any parent who works in a different time zone from their child's school has multiple problems in attending their child's school events, attending teacher's conferences, coordinating child care either before or after school, getting to their child when he/she gets sick at school, arranging for transportation to their child's community events, etc. The problems of scheduling inter-school events and competitions extend way beyond the 17 time zone boundary counties. For the 20% of Indiana's students living in the Central Time Zone counties, competing or traveling on field trips to their state capital must leave their homes an hour early. It isn't unusual for time confusion to cause students to arrive too late to participate in competitions or cultural events.

Jim J. Marquez, Office of the General Counsel, Regulations and Enforcement, U.S. Department of Transportation, issued the following policy statement on behalf of the Department of Transportation as quoted in the Federal Register/ Vol. 50, No. 209/ Tuesday, October 29, 1985, p. 43748. *"The Department recognizes that it is very difficult to live near a time zone border because one continually has to make allowances for time differences. In a very real sense, being near the border affects how many hours per day one can conduct business, the activities one can participate in and how one runs his or her life. The Department can never remove these difficulties; only reduce them by deciding where to locate the country's time zone boundaries."*¹³

Currently, Indiana is fractured into two time zones with 20% of the population living in the Central Time Zone while 80% of the population lives in the Eastern Time Zone. It is anticipated that approximately five southeastern counties (Clark, Dearborn, Floyd, Harrison, and Ohio) that are closely tied to the Louisville/Cincinnati areas may choose to remain in the Eastern Time Zone. The population in these counties is relatively low totaling only 4% of Indiana's population. If they should choose to remain Eastern, the resulting 4%/96% population split would greatly reduce the divisive impact of the current 20%/80% time zone split in Indiana.

¹³ Appendix C. Proposed Rules - Federal Register

Section IV - Unintended Consequences of Eastern Time in Indiana

A. Education

During the past forty-four years since eighty Indiana counties were moved from their original Central Time Zone to the Eastern Time Zone, two major events have combined that are infringing on student's rights to safety and educational well-being. These two events are school consolidation and the adoption of Eastern Daylight Time (EDT) in 2006. Citing educational and safety concerns, 47 Indiana school boards have signed resolutions in support of restoring Indiana to the Central Time Zone.¹⁴

School Consolidation

Beginning in the mid-1950s, major public school consolidations have occurred in Indiana. Today, being able to walk to a neighborhood school is the exception and almost all public school districts in Indiana provide bus transportation. Transportation is a big expense to school districts in costs to purchase, operate, and maintain buses plus insurance and salaries for drivers and related personnel. To reduce the cost of transporting students, most school districts run multiple bus routes. This necessitates staggering the start times of schools to allow the buses to run a second or third route which results in the first tier of schools starting very early in the morning. For example: of the 11 school districts in Marion County (Indianapolis) the earliest start time is 7:10 a.m. for Franklin Twp. Middle School. Pike Twp. High School starts next at 7:15 a.m. with the 3rd tier of Pike Twp. schools starting at 9 a.m. Ideally, the high schools should start last to allow teens to get the additional sleep they need, but this would mean that the elementary students would be standing out at dark bus stops. Sunrise on EDT in Indiana is as late as 8:15 a.m. but on CDT it would be 7:15 a.m. and the majority of travel to and from school would occur in daylight.¹⁵

Student Safety

The Eastern Time Zone designation automatically places civil clocks one-hour out of sync with solar time in Indiana. The adoption of EDT in 2006, places Indiana's civil clocks two hours out of sync with solar time for eight months each year and mornings in Indiana are excessively dark. Reduced visibility means that pedestrians are never safe in the dark. While adults usually make a choice to be pedestrians in the dark, Indiana's 850,000 Eastern Time public school students have no choice but to travel to school in the dark. Those students, whose parents don't drive them to school, are forced to be either pedestrians or drivers in the dark for the majority of the school year. The Central Time Coalition has tracked incidents reported in the news media that

¹⁴ Appendix D. *School Districts in Support of Central Time*

¹⁵ Burdsall - *Daily Schedule for Marion County Schools*

have occurred to students prior to sunrise. Since 2007, incidents reported prior to sunrise are as follows:

- 6 students have been killed when struck by vehicles.
- 16 additional students have been severely injured when struck by vehicles.
- 6 girls have been raped - 3 of whom were only 12-years old.
- 9 failed abductions have occurred to girls walking to school or standing at their bus stops.
- 10 students have been attacked and robbed while standing at their bus stops.

Former Hamilton County Sheriff Doug Carter, who is currently superintendent of Indiana State Police, was asked to look at this list of incidents. His comment was “***This list is just the tip of the iceberg. For every incident that makes the newspapers there are probably 10 lesser incidents that don’t get coverage.***”¹⁶

Chronic Absenteeism and School Drop-Out

A recently released report, mandated by the Indiana legislature, revealed that at least 55,000 Hoosier students are chronically absent every year. While there are multiple reasons, absenteeism is disproportionately higher in low-income, inner-city school districts where parental encouragement is often lacking and getting to school on dark mornings is unpleasant and is often justifiably frightening.¹⁷

Typically, school buses begin picking up students about 1¼ hour prior to the start of school. One Indianapolis student told of the schedule he has to meet to get to school. His school (Arsenal Technical High School) requires students to be in their seats by 7:20 a.m. meaning that he has to be at his bus stop at 6:15 a.m. He gets out of bed around 5:30 a.m. On the days of sunrise at 8:15 a.m., this student will have already been out of bed 2½ hours before sunrise and will have completed his first period class by the time it gets light outside. For students who aren’t motivated and aren’t pushed by their parents, it’s easy to sleep in, skip school, and eventually drop out of school. A high percentage of these students become the adults who can’t get jobs because of lack of education. They are also the ones who end up in trouble with the law. On Central Time the latest sunrise in Indiana would be around 7:15 a.m., the majority of travel to and from school would be in daylight, and students would arrive at school more awake and ready to learn.

School Performance Tied to Sunlight Schedule

With Indiana’s students performing below the national average, educational performance is of great concern to legislators, educators, parents, everyone. There is a biological reason that

¹⁶ Appendix E. Dillon *Indiana’s Student Victim Report*

¹⁷ Appendix F. Spradlin - *Attendance and Chronic Absenteeism in Indiana*

Indiana's students aren't performing well and it's called circadian rhythms. "*Circadian rhythms are the physical, mental and behavioral changes that follow the earth's 24 hour cycle, responding primarily to light and darkness in an organism's environment.*"¹⁸ Sunlight tells our biological clocks that it's time for our body to wake up and darkness tells it when to go to sleep. "*Recently, mental performance has been found to be greatly affected by circadian rhythms.*"¹⁹ Students simply can't achieve their educational potential when they are forced to get out of bed 2-3 hours before sunrise with school often starting while it's still dark outside. Compounding the situation is the fact that "*all teens undergo a delay in the onset of sleepiness at puberty, when the body's release of the sleep-inducing hormone melatonin shifts later by about 1.5 hours. Sunlight has enormous effects on our behavior and timing.*"²⁰ On September 5, 2013, Secretary of Education, Arne Duncan, said that "*high school students do better if they sleep longer. Common sense to improve student achievement that too few have implemented: let teens sleep more, start school later. They're absent or tardy less often, have lower drop-out rates, less depression and even fewer car accidents.*"²¹ The simplest way to reset students' sleep clocks is to restore Indiana to the sunlight schedule of the Central Time Zone where the sun sets and rises one hour earlier.

On Central Time the latest ***sunrise*** would be around 7:15 a.m. in mid-winter and the latest ***sunset*** would be around 8:15 a.m. in mid-summer, which is a much more conducive sunlight schedule for students' readiness to learn and preparedness for the classroom. Indiana's students will never be able to perform at their maximum until Indiana's sunlight schedule is more compatible with their biological clocks.²²

Late Evening Sunlight is Detrimental to School Performance

The flip side of the abnormally late sunrises in Indiana's Eastern Time Zone is abnormally late sunsets. Prior to 2006 and the adoption of EDT, youth sports in Indiana didn't start until mid-April because of evening darkness. On EDT youth sports now start in mid-March and competition doesn't stop until forced by darkness. While exercise and competitive experiences are important, education is more important. It isn't an either/or choice. For 35 years prior to the adoption of EDT in 2006, Indiana's youth were always able to do both - be good students and participate in sports. Indiana High School Athletic Association (IHSAA) Commissioner Bobby Cox doesn't see a problem with Indiana high school athletics being on the Central Time Zone sunlight schedule. "*There would be no effect on winter sports since all are played indoors, while*

¹⁸ Sancar - *Link Between Light Signal and Circadian Rhythms*

¹⁹ Kobayashi - *Mental Performance and Circadian Rhythm*

²⁰ Ellenbarger - *Latest Statistics on Teen Sleep Needs*

²¹ Education Secretary: *Start School Later in Day*

²² Appendix G. Sagarin - *Sunrise/Sunset Day-By-Day*

spring and fall sports would require the same scheduling considerations as prior to the adoption of Eastern Daylight Time in 2006.”

Darkness brings students indoors, distractions diminish and students can concentrate on homework. Darkness is conducive to going to bed on time and getting adequate amounts of sleep allowing students to be alert the next day. The sunlight schedule of Indiana’s correct Central Time Zone is definitely more conducive to educational performance for Indiana’s students.

Students’ Rights

Indiana’s constitution identifies “*peace, safety, and well-being*” as the inalienable rights to which Indiana’s citizens are entitled. These rights have never been voted away by Indiana’s citizens. However, the safety of Indiana’s students is being violated by a decision initially made 44 years ago by USDOT that has been severely complicated by the adoption of daylight saving time in Indiana in 2006. The Eastern Time Zone in Indiana jeopardizes students’ safety as well as their educational “well-being”, and thus their right to their future “well-being”. The odds are stacked against Indiana’s students.

B. School Delays Waste Education and Taxpayers’ Money

Sunlight is important in dissipating fog and activating melting compounds for snow and ice. The sunlight schedule of the Eastern Time Zone in Indiana results in excessive numbers of school delays while students and teachers wait at home for the roads to become safe for travel. Indiana allows a 5-hour day to count as a whole day of education, thus, most school delays in Indiana are for 2-hours and result in an inordinate number of 5-hour school days.

School Delays Waste Quantity and Quality of Education

Most teachers consider “delay days” as lost educational days. Typically, the 2 hours of lost time is spread out over the remaining 5 hours with each class being reduced by about 20 minutes. The time lost in each period is the most valuable “on-task time”. Because of the disruption in the day’s routine, students’ ability to concentrate is seriously compromised. Students just get settled in and it’s time to move on. Special-needs students are especially stressed out by the changes in their routine on delay days. Classes that require a block of time can’t be conducted – tests, laboratory classes, physical education, etc. 5 days of delays within a school year is the equivalent of losing an entire week of quality education. Some schools in northeast Indiana average between 10 and 15 delay days each year – the equivalent of 2-3 weeks of lost education.

School Delays Waste Millions of Dollars in Indiana

School cancellations are considered cost-neutral because arrangements for rescheduling “snow days” are included in teachers’ contracts. However, on “delay days” teachers are being paid while they and their students wait at home for the roads to be cleared. A conservative estimate of cost to educate a student, based solely on teachers’ salaries, is \$7 per student per hour. On

“delay days” this money is wasted that was intended to be spent on education. The Central Time Coalition has tracked the number of school delays since 2009 and calculated the actual cost to taxpayers in Indiana’s Eastern Time school districts. ²³

School year	Number of delays	Cost to Eastern Time schools
2009-2010	1,058 delays days	cost \$30,548,000
2010-1011	1,420 delays days	cost \$59,962,060
2011-2012	696 delays days	cost \$24,811,108
2012-2013	1,172 delays days	cost \$47,384,995

To get a comparison of the effect of sunlight on school delays we contacted the Illinois Department of Education and asked about their number of school delays. Most of their delays were for one-hour each. In 2010-2011, Illinois had 28 counties call 1 school delay, 7 counties called 2 delays and 1 county called 3 delays. In 2011-2012, Illinois had 16 counties called 1 delay and 3 counties called 2 delays. In 2012-2013, Illinois had 12 counties call 1 delay, 2 counties called 2 delay days, and 1 county called 3 delays. ²⁴

On Central Time, Indiana’s school delays could be limited to one-hour, thus cutting in half the amount of money wasted. On “delay days” for Jay County Schools located in northeastern Indiana, delay is for three hours and the school day is extended by one hour, thus keeping the total within the 2-hour limit. On Central Time, Indiana could follow the example of Jay County Schools and eliminate all lost classroom time by simply starting and ending the school day one hour later.

C. Adverse Effects of Late Sunsets on Families

It doesn’t get dark in mid-summer in Indiana on EDT until around 10 p.m. Proponents of EDT’s late evening sunlight often claim that families can play together in the evening and that people can exercise in the evening. While this sounds good, the opposite is true for the majority of people. The hottest time of the day on EDT is 5 p.m. People are tired at the end of the day, working parents have tasks to do, families to take care of, and dinner to prepare. Late sunsets adversely affect families in many ways.

- **Bedtime** – Late evening sunlight causes nightly battles as parents try to put children in bed while it’s still daylight outside. Going to bed early is made difficult for adults, also.

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²³ Appendix H. Gettelfinger - *The Cost of School Delays in Indiana for Years 2010–2013*

²⁴ *Report of Public School Calendar013”, Illinois State Board of Education*

skits, delighting in the talents that come out in fellow campers and leaders are what makes the campfire experience so memorable. Evening darkness is an essential ingredient of the campfire experience because the magic doesn't come until it gets dark. EDT's late summer daylight has robbed Indiana's youth and families of the summer campfire experience.

- **Youth and Family Camping** – Family camping is an affordable vacation for many families - even more so in times of economic recessions. Campgrounds don't quiet down until it gets dark and it is almost impossible to get children in bed in their tents until it gets dark outside. Summer-camp provides some of the most positive growth experiences of a young person's life. On EDT campfires are diminished or started very late in the evening. EDT's late evening sunlight has negatively affected the youth and family camping experience in Indiana.

- **Stars** – Stars don't come out until it gets dark.

Indiana's children are growing up without experiencing the wonder of seeing the stars in the summer sky. Indiana's astronomers support restoring Central Time to Indiana.

- **Quiet Evenings** – Darkness signals that the day is over and it's time to relax and unwind. Everyone needs this. Quiet conversations on a dark patio are special because the distractions are gone. EDT has robbed Hoosiers of evening darkness.



Figure 3 Too late for children

- **Late dinners** – People typically don't sit down to eat until it is getting dark. Since EDT was adopted in 2006, restaurant business has declined in the summer because people aren't going out to dine while it is still broad daylight outside. People tend to get out the snacks and have a drink while waiting for "dinnertime" to arrive. By dark it's too late to dine out, people are tired and don't want to prepare a meal and clean-up the kitchen afterward. This encourages families to order pizzas or grab fast food, both of which are high in calories and lacking in nutrition. Late dining isn't healthy and is contributing to Indiana's ranking as the 8th most obese state in the U.S.
- **July 4th Fireworks** – Since EDT went into effect in 2006, fireworks on July 4th can't be held until 10 p.m. After a day of celebration, this late hour is not family or community friendly.
- **Summer concerts** – The audience at summer concerts doesn't quiet down to absorb the music until it gets dark. Outdoor movies require darkness. Since adoption of EDT in 2006, many community evening events are starting later, which results in declined participation of families with children.
- **Late gathering of teens** – Most teens come inside when it gets dark. Late sunsets in summer promote teen gatherings in public places. Even though many municipalities have curfews, late evening sunlight has posed problems for city police and city management that they didn't experience prior to the sunlight schedule of EDT.

- **Position of sun** – Most field sports are best played after dark on lighted fields. Because of the sunset schedule of Eastern Daylight Time in Indiana, the low position of the setting sun at game-time in spring and fall means that the eastern sideline referees and fans are looking directly into the sun and having their view of action on the field impeded.

D. Time Zone Effects on Teen Crash Rates in Indiana

In June 2013, the Governors' Highway Safety Administration released a report showing that Indiana teens lead the country in teen driving deaths with 16 deaths in the first six months of 2012.²⁵ Why is this? A study conducted in 2008, by researchers at the University of Kentucky, is entitled "*Adolescent Sleep, School Start Times, and Teen Motor Vehicle Crashes*".²⁶ This study and its results are especially pertinent and could help explain the high crash rate of Indiana teens.

In school year 1998-1999, the Fayette County School District (which includes Lexington, KY) changed the start time of their high schools from 7:30 a.m. to 8:30 a.m. This change afforded an opportunity to compare teen crash rates the year prior to the change with those of the year following the change. The study revealed that there was a -16.5% drop in teen crash rates in school year 1999-2000 over the previous year. This drop is even more significant when you consider that crash rates for all of Kentucky for that same time period rose by +7.5%. An additional factor that adds to the significance of these statistics is the fact that by moving the start time of school to 8:30 a.m., the teens were now driving to school in the morning peak traffic time, whereas, previously their drive to school had occurred prior to the morning peak traffic time.

How does this relate to Indiana's teen crash rates? Sunrise in Fayette Co., KY occurs 5 minutes prior to sunrise in Indianapolis. As far as sunlight is concerned, changing the start time from 7:30 a.m. to 8:30 a.m. in Fayette Co. was the equivalent of changing from Eastern Time to Central time. Not only did this mean that teens were more rested because they got one more hour of sleep in the morning, it also meant that they were now driving to school in daylight every day instead of the dark.

While the Fayette County School District successfully implemented this switch, it is often difficult for school districts to change their schedules to a later start time because working parents need to have their children settled before they can go to work. However, Indiana's teens could realize these same sunlight benefits of having their school day start later simply by having Indiana restored to its original geographically-correct Central Time Zone where the sunrise/darkness schedule would occur one hour earlier. Teen's sleep schedules would be reset to an earlier time schedule and the majority of travel to and from school would occur in daylight.

²⁵ Hisson - *Indiana Leading Country in Teen Driving Deaths*

²⁶ Appendix I. Danner - *Adolescent Sleep, School Start Times, and Teen Motor Vehicle Crashes*

E. Effects of Time Zones on Incidence of Winter Depression

Seasonal Affect Disorder (SAD – also known as winter depression) more often occurs in winter and is caused by later sunrise and/or longer night length. In 2005, the purpose of a collaborative study conducted by four university faculty psychiatrists was to determine if SAD was more prevalent in the western tier of time zones and if latitude and time zone effects summate or interact. Their research concluded:

- The time zone effect demonstrates that later sunrise per se – in distinction from night length – is a significant risk factor for SAD.
- People who live in the western tier of time zones suffer more than their neighbors just a few miles away in the eastern tier of adjacent time zones – a disruptive quantum effect of the time zone artifice.

Taking into consideration that the solar divide between the Eastern Time Zone and the Central Time Zone is east of Columbus, OH on the 82.5 longitude, Indiana is far west of the western edge of the Eastern Time Zone's geographic dividing line.

People eat for comfort when they are depressed. They are less energetic and less productive when they are depressed and their employability becomes at risk. Depressed people incur more medical bills. Depression in a family member affects the entire family. People commit suicide when they are depressed. Based on the results of this study, it is predictable that Hoosiers will be happier and healthier once they are restored to the sunlight schedule of their correct Central Time Zone.²⁷



F. Sunlight's Schedule Effects on Obesity and Fitness

Recent studies conducted by the Trust for America's Health and the Robert Wood Johnson Foundation revealed that Indiana is ranked as the 8th most obese state in the U.S. The state's obesity rate is 31.4 %, up from 30.8% in 2012. Obesity is one of the unintended consequences of the Eastern Time Zone in Indiana.²⁸

Physical Fitness Activities

²⁷ Appendix J. White - *Incidence of Winter Depression Varies Within Time Zones*

²⁸ Berggoetz - *Indiana Still 8th Most Obese State in U.S*

In Indiana's Eastern Time Zone, sunrise occurs prior to 7 a.m. on only 120 days per year (less than 1/3 of the days). Compared to 251 days in Denver, 272 days in Chicago, 290 days in New York, and 330 days in Los Angeles,

Indiana is a very dark state in the morning.

Most people who exercise by walking, jogging, and bicycling find that exercising in the early morning before going to work is stimulating and energizes them for the entire day, however, darkness makes 2/3 of Indiana's mornings *unsafe* for morning outdoor exercise. Evenings discourage exercising because it is the hottest time of the day in summer, people are tired at the end of the day, and they have home and family responsibilities to take care of. Evenings are the time for winding down. Central Time's earlier sunrise allows safe morning exercise for the majority of the year.

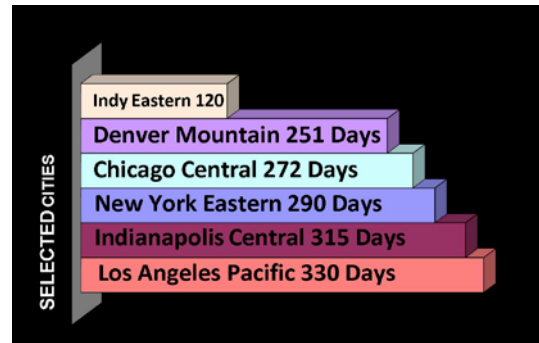


Figure 5 Sunrise before 7 a.m.

Bicycling

Hoosier cities have recently added bicycling lanes to streets to encourage more physical activity, Indianapolis being one of the biggest proponents. People are being encouraged to ride their bicycles to work, however, with Eastern's sunlight schedule, riding bicycles to work is unsafe for two-thirds of the year. Likewise, walking to school in the dark is equally unsafe. *National Walk to School Day* was held on October 9, 2013. Sunrise in Indianapolis was at 7:49 a.m. Most Indiana students were already in their seats by the time the sun rose and it was unsafe for most Indiana students to participate in this national event. In fact, on *National Walk to School Day* in 2010, two New Castle, IN, boys were struck by a car driven by a 27-year veteran teacher. One boy was killed and the other had a broken neck. This was a horrible tragedy for the families, the teacher, and the community. **Walking to school is unsafe in Indiana.**²⁹

G. Lost Sleep Can Lead to Weight Gain

Whereas evening darkness signals that it is time to be inside and triggers natural winding down leading to bedtime, EDT's late sunsets encourage Hoosiers to continue to work into the evening or run to the store while it is still light outside. Over and over, people express how tired they are. Researchers from the University of Colorado conducted a study to determine how inadequate sleep affects a person's weight, behavior and physiology. Their experiment showed that when people weren't getting enough sleep they over-ate carbohydrates. *"They ate more food, and, when they ate, food choices also changed. They ate a smaller breakfast and they ate a lot more*

²⁹ Kinsey - *Students Stop Walking to New Castle School after Death*

*after dinner. In fact, sleep-deprived eaters ended up eating more calories during after-dinner snacking than in any other meal during the day.”*³⁰

Because of Indiana’s position west of the western edge of the Eastern Time Zone, people experience more SAD and when you are depressed you tend to eat. Is it any wonder that Hoosiers rank as the 8th most obese state in the U.S.?

H. Rick Moore’s Email Sums It Up

On November 12, 2008, Indiana National Guard Specialist Rick Moore was welcomed back home after a tour of duty in Iraq. In 2009, Rick wrote:

“I spent part of last year in Iraq. Our unit had breakfast with Governor Daniels at Joint Base Balad. Just out of happen-chance, the Governor sat almost directly across from me. He spoke of many topics with us. One of his last sentences to me; ‘*We should be on Central Time*’. What can I do to contribute to the effort?”

On April 21, 2011 Rick sent another email that sums up how the Eastern Time Zone designation affects many Hoosiers.

“The new sunrise/sunset times (EDT) have impacted my personal life, my job and my health. I hate it. I am to the point where I question how much longer I can tolerate Indiana’s sunlight schedule.

I am a father of four children and am in an MBA program. Time isn’t abundant. The late sunsets have, without any doubt, affected my personal life and my health. My wife and I are both early risers. In the summer, we struggle to spend time together as our children fight going to bed in the broad daylight.

My health because, being an early riser, I prefer to work-out in the mornings. Doing so in the dark simply isn't safe and, as a father of four, I can’t come home after work and then disappear again for an hour to go running. I have actually gained weight out of this whole deal.

In terms of business, the last company for which I worked was forced into a situation where they had to have staff on hand for an extra three hours per day, as opposed to two, to support West Coast operations.

Thank you for your efforts.

Rick Moore

³⁰ Parker-Pope - *Lost Sleep Can Lead to Weight Gain*

Section V. – History of Three Indiana Time Zone Requests

1967 Request by Governor Roger Branigin

In 1967, Governor Roger Branigin petitioned USDOT to modify Indiana’s time zone boundary “to include the entire State of Indiana in the Central Time Zone.” USDOT neither denied nor acted on this petition, therefore, it could be considered as still pending.³¹

2005 Request by Indiana’s Legislature

In 2005, Indiana’s General Assembly directed Governor Daniels to petition USDOT to hold hearings to determine the best location of Indiana’s time zone boundary.³² Senate Enrolled Act 127 specified that the current northwestern and southwestern counties should remain in the Central Time Zone. It also identified five southeastern counties that should remain in the Eastern Time Zone because of their close interaction with the Louisville/Cincinnati metro-area. These counties are Clark, Dearborn, Floyd, Harrison, and Ohio. USDOT refused to hold hearings because “*The General Assembly and Governor did not take a position on where the boundary should be.*” Instead, they offered to accept petitions from counties and gave counties a 35-day deadline to get petitions submitted. Even with such a short preparation time, 19 counties submitted petitions to be restored to the Central Time Zone.

Note: A lesson should be learned from this experience. The county-by-county approach was very divisive in Indiana. It pitted county against adjacent county and neighbor against neighbor – an approach that resulted in unfair pressure being brought on certain individuals and caused hard feelings that still exist today. Indiana’s time zone situation is a state-wide issue that affects the rights and well-being of all Hoosiers, not just those in a single county.

1985 Request by Indiana’s Legislature - DOT’s Time Zone Decision

In 1985, the Indiana Legislature submitted a request to DOT for 5 southwestern Indiana counties to be changed for Central to the Eastern Time Zone. DOT held 6 public hearings in Indiana, 2 in Kentucky and 2 in Illinois. Close to 1,000 people attended the public hearings of which 200 people gave testimonies. Over 4,000 people expressed their opinion in written comments.³³

The reasons given by the Indiana Legislature for requesting the change from Central to Eastern include:

- “Difficulties that businesses and manufacturer have in terms of schedule mix-ups if headquarters are located in a different zone from area offices.”
- “The extra cost to operate in both zones.”

³¹ Appendix K. - Branigin - 1967 Letter Petitioning USDOT the Central Time Zone

³² Appendix L. – Daniels - 2005 Letter requesting USDOT to Hold Hearings

³³ Appendix C. *Proposed Rules Federal Register*

- “The time inconvenience and expense for employees traveling from one zone to another.”
- “A fairly substantial portion of people in the area commute into other counties and have to contend with a split time zone.”
- “The impact on the media and on school-age children.”

200 gave testimony at the ten public hearings. Of those giving testimony, 30% supported changing the time zone, 65% opposed the change and 5% were neutral or asked for a change outside the scope of the rulemaking. Opinions from the 4,000 written comments opposed the change by a margin of over 3 to 1.

Those giving testimony in favor of changing the five counties to the Eastern Time Zone argued:

- “It was important for state unity and development of the state’s economy to be on one time.”
- “Many were more concerned with being on the same time as the majority of the state, be it eastern or central time.”
- “It is extremely confusing and inconvenient to be on a different time from the other cities and counties in the state six months of the year.”
- “Different time zones limit hours available for business communications, deliveries, and shopping.”
- “Different time zones cause personal hardships involved in working, socializing and living across the time zone.”
- “Different time zones make it difficult in scheduling meetings and doctor’s appointments, complicate inter-scholastic events, confuses children and in general makes life difficult.”

Those who gave testimony in opposition to the change testified:

- “According to the theoretical time division of the earth, the area is appropriately on Central Time.”
- “Many argued that although they favored one time zone for the state, the zone should be Central and the rest of the state should change.”
- “The area has historically been on Central and that people have adjusted to it and like it that way.”
- “Others argued that the southwestern portion of Indiana is Midwestern in outlook and that changing to Eastern Time would be inappropriate and personally repugnant.”
- “The most common argument had to do with school-age children waiting for buses in the dark in the morning. Many parents and grandparents expressed great concern over this issue.”

- “Because southern Indiana has a great deal of fog and ice, particularly in the early morning, a change would expose children (and bus drivers and parents who drive them) to increased danger.”
- “The potential change in scheduling of the late night news from 10 p.m. to 11 p.m. was a problem. Many people enjoyed the present scheduling of television shows and were strongly opposed to any change.”

Comments from businesses and governmental spokespersons on the need for unity in the tri-state area.

- “Many people live in one state and work in the other.”
- “There is a lot of interstate movement for schooling, medical treatment, entertainment, and shopping.”
- Many were concerned that the change would fragment the area and significantly interfere with the commercial and social relationships that have been established over time.”
- “The time zone border should be located in the least populated areas so as to cause inconvenience to the fewest number of people.”
- “Many commented that the entire state should be put on central time for convenience or since that is more appropriate because of geographic location.”

DOT’s Reasons for their decision

- *“Based on analysis of the comments, the department concluded that the five southwestern counties are more closely intertwined with the surrounding communities in western Kentucky and southeastern Illinois, which are on Central time, than with the remainder of Indiana.”*
- *“To change the five counties to Eastern Time would not serve the “convenience of commerce” and it would have an adverse effect on the communities’ commerce.”*

Policy Statement

“The Department recognizes that it is very difficult to live near a time zone border because one continually has to make allowances for time differences. In a very real sense, being near the border affects how many hours per day one can conduct business, the activities one can participate in and how one runs his or her life. The Department can never remove these difficulties; only reduce them by deciding where to locate the country’s time zone boundaries.”

Jim J. Marquez, General Counsel

Federal Register/ Vol. 50, No. 209/ Tuesday, October 29, 1985, pp 43745-43748.

Why is the 1985 petition and outcome pertinent to this 2013 petition?

- Every testimony made in 1985, both for and against the 1985 petition, applies in support of this 2013 petition to unite all of Indiana in the Central Time Zone.

- Everyone concurs that living with an in-state time zone border causes complications and hardships in the daily lives of Indiana's citizens.
- The sunlight schedule of Eastern is unsafe for school children and commuters.
- Television broadcast on the Central Time schedule is much more convenient to viewers than on the Eastern Time schedule.
- The overwhelming opinion from people on both sides of the issue is that they want all of Indiana to be united in the same time zone and the majority thinks the time zone should be Central Time.

The final statement issued by Jim J. Marquez, General Counsel, on behalf of DOT, should set precedence that applies as much today as it did in 1985. **“The Department can never remove these difficulties; only reduce them by deciding where to locate the country's time zone boundaries.”**

The current time zone border divides 17 Indiana counties and places 20% of Indiana's population in the Central Time Zone while 80% live in the Eastern Time Zone. It is anticipated that certain Southeastern counties will choose to remain in the Eastern Time Zone because of their close ties to the Cincinnati/Louisville-metro area. Even so, these counties are low in population and the population split would be approximately 4% living in the Eastern Time Zone with 96% of Indiana's citizens living in the Central Time Zone. This would greatly reduce the current divisive situation in Indiana.

VI. Questions

Does Eastern Daylight Time Violate the National Environmental Policy Act?

The adoption of Eastern Daylight Time in Indiana in 2006 presented the opportunity to use the empirical data derived from a natural experiment to determine if there is an environmental impact of daylight saving time. A study was conducted that focused on residential electricity demand of more than 7 million observations on monthly billing data for nearly all households in southern Indiana for three years. The study was conducted by Matthew J. Kotchen from UC Santa Barbara (member of National Bureau of Economic Research (NBER), along with Laura E. Grant of UC Santa Barbara. Their research was entitled “*Does Daylight Saving Time Save Energy: Evidence from a Natural Experiment in Indiana?*”³⁴ The outcome of the study showed that DST actually increases residential electricity demand by a range from 1 to 4 percent. Their findings were consistent with simulation results that point to a tradeoff between reducing demand for lighting and increasing demand for heating and cooling. Based on their results, Kotchen and Grant estimate a cost of increased electricity bills to Indiana households of \$8.6 million per year. Most of Indiana’s electricity is produced by coal-fired plants. Kotchen and Grant “estimate social costs of increased pollution emissions that range from \$1.6 to \$5.3 million per year.”

Prior to the adoption of Eastern Daylight Time in 2006, Indiana’s official time year-round time for 80 counties was Eastern Standard Time. When the rest of the U.S. moved their clocks forward in observance of daylight saving time, all clocks in Indiana were on the same time as Chicago’s clocks (Central Daylight Time). Therefore, in reality, what Kochen and Grant were comparing was the environmental impact between Eastern Daylight Time in Indiana with that of Central Daylight Time in Indiana. When considered in this light, the results could be expressed that Central Daylight Time in Indiana would save Hoosiers \$8.6 million per year over what Eastern Daylight Time costs and that Central Daylight Time would decrease pollution emissions in a range of \$1.6 to \$5.3 million per year in Indiana on Eastern Daylight Time. The empirical data in this research proves that Eastern Daylight Time in Indiana results in increased emissions that are adding pollutants to our air. The study even quantifies the estimated social costs as requested in the National Environmental Policy Act.

In addition, safety concerns about morning darkness prompt many parents to drive their children to school or to sit at dark bus stops with their cars running while waiting for the school bus to arrive. While these additional emissions have not been quantified, common sense and observations tell us that this is happening.

Isn’t it safe to say that Eastern Time in Indiana flunks the National Environmental Policy Act?

³⁴ Appendix M. Kotchen - *Does Daylight Saving Time Save Energy?*

Does Eastern Time's Morning Darkness Create an Unsafe Environment that Falls Under Executive Order 13045 – Protection of Children from Environmental Risks Act?

Because of reduced visibility, darkness creates an environment that poses safety risks for all pedestrians. Are these safety risks proportionately greater for children standing at dark bus stops or walking along dark streets? According to the Indiana State School Bus Drivers' Association president, Ronald Chew, the answer is, "Yes. Children are small and their actions are unpredictable. On trash pick-up days it is difficult for a driver to distinguish a child from a bag of trash." This situation holds true for automobile drivers also. On clear days children become distinguishable about 15 minutes prior to sunrise, but visibility is greatly reduced on rainy days. Safety concerns prompt parents to drive their children to school or to sit at school bus stops with their cars running. Teens, whose parents can afford to provide them with a car, usually drive to school when they reach driving age rather than stand out at cold dark bus stops. Not only does the safety hazard of morning darkness waste fuel and contribute to air pollution, the safety risks are felt disproportionately on low-income, inner-city students whose parents don't have the financial resources to provide car transportation.

Constitutional Rights

Do constitutional rights apply to children or do children have to wait until they are of voting age for their constitutional rights to go into effect? If children are entitled to constitutional rights, whose responsibility is it to protect these rights?

- **Life** - *Life* has been denied to 6 students killed on Indiana's dark streets. The *quality of life* has forever been altered for the 6 girls who were raped, 16 students who were seriously injured when struck down by vehicles, and 19 students who have been attacked in morning darkness.
- **Liberty** – Do students have *liberties*? Have they chosen to be out on dark streets where it is unsafe? Didn't the time zone decision, made 44 years ago by USDOT, take that choice away from today's students?
- **Pursuit of Happiness** – Poverty guarantees unhappiness, encourages lawlessness, and is self-perpetuating. The key to the successful *pursuit of happiness* is education and acquiring the skills and knowledge that enable a person to provide the necessities and comforts in life. Eastern's sunlight schedule is undermining the quality of education in Indiana. It encourages marginal students and those without parental encouragement to become drop-outs. The effects are disproportionately felt on low-income, inner-city students. When students don't acquire the skills that enable themselves to maintain employment, the *well-being* of society as a whole is negatively impacted because of increased crime and increased numbers on welfare. The financial burden of poor education falls on society as a whole to provide the additional costs of law enforcement, as well as, the welfare costs to sustain unemployed members of society.

VII. Conclusion

While there is a lengthy history of disagreement about which time zone is best for Indiana, the disagreement has hinged primarily on which time zone is perceived as being best for certain businesses versus which time zone provides the sunlight schedule that is best for the citizens as they go about their daily lives. Results of numerous surveys conducted over many years show that, historically, Indiana's citizens have preferred the sunlight schedule of the Central Time Zone. The adoption of Eastern Daylight Time in 2006, caused major life-style changes for Hoosiers. While that decision is still a very contentious issue in Indiana, the Central Time Coalition supports the adoption of daylight saving time because of its beneficial effects on Indiana's economic health. Daylight saving time is *not* the problem. ***This is a time zone problem*** and Eastern Time in Indiana is the culprit.

The Department of Transportation's denial of St. Joseph County's time zone petition in 2005, prompted a comprehensive examination of Indiana's time history with particular attention given to the decision made for St. Joseph County.³⁵ John Gaski, PhD, Professor of Marketing at Notre Dame, has also examined "Indiana's Time Law and its Detrimental Effects"³⁶

It is time for the situation to be examined officially with the following questions asked and answered.

1. Does the Eastern Time Zone designation in Indiana provide measurable *conveniences to commerce* today?
 - a. If so - where is the data to support this?
2. Do these supposed *conveniences* to commerce outweigh the proven *inconveniences*?
3. Do these supposed conveniences justify the detrimental unintended effects on the lives of the citizens of Indiana?
4. Do these supposed conveniences justify the infringement on the constitutional rights of the Indiana's students?

If the answer to any of these questions is, "No", then it's time to correct this situation which had gone on far too long.

³⁵ Appendix N. *A Report of the USDOT's Response to the St. Joseph County, Indiana's 2005 Time Zone Petition.*

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