

**Petition**  
**to**  
**Indiana General Assembly**  
**for the**  
**Redress of Grievances**

January 2014

**Central Time Coalition**

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# *Central Time Coalition*

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January 2014

Indiana General Assembly  
200 West Washington Street  
Indianapolis, IN 46204

Dear Indiana Senators and Representatives,

Indiana's citizens are blessed to live in a state that honors the rights granted to its citizens nearly 200 years ago - one of which is the right to petition the government for the redress of grievances. Representing over 250,000 supporters, the Central Time Coalition is exercising that right by petitioning the Indiana General Assembly to redress the grievances enumerated in the attached Petition.

Indiana's dual time zone designations and Daylight Saving Time issues have caused much confusion, divisiveness, inconveniences, and hardships among individuals and families, as well as financial losses for businesses. For the numerous reasons explained in this Petition, the Eastern Time Zone is the *incorrect* designation for Indiana. Furthermore, it jeopardizes the educational well-being of students living in Indiana's Eastern Time Zone and violates their constitutional rights to safety.

The Central Time Coalition believes that Daylight Saving Time is a benefit to Indiana's economic health and points out that for 35 years, when all Indiana clocks were on the same time for 8 months each year, the sunlight schedule of Central Daylight Time proved to be the preferred and most family-friendly summer schedule for Indiana.

On behalf of all Hoosiers, we urge you, as members of Indiana's General Assembly, to honor your oath to protect the "peace, safety, and well-being" of all citizens by conducting a fair and thorough evaluation of the facts presented in this Petition for the Redress of Grievances.

Sincerely,



Susannah H. Dillon, president  
Central Time Coalition

*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.*

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## **Section I. Petition for a Redress of Grievances**

**Whereas**, Indiana’s Bill of Rights, Article 1, Section 1, declares “That all people are created equal; that they are endowed by their CREATOR with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness; that all power is inherent in the People; and that all free governments are, and of right ought to be, founded on their authority, and instituted for their **peace, safety, and well-being;**” and

**Whereas**, Indiana’s Bill of Rights, Article 1, Section 31 states, “No law shall restrain any of the inhabitants of the State .... from applying to the General Assembly for redress of grievances;” and

**Whereas**, time zones are based on the location of the sun overhead at noon above designated meridians spaced one-hour apart, the geography of which places the western half of Ohio and every square inch of Indiana correctly in the Central Time Zone; and

**Whereas**, in the 1960s, the Indiana Chamber of Commerce, representing a select group of businesses that interacted with the East Coast, lobbied USDOT into moving 80 Indiana counties from their original and geographically-correct Central Time Zone to the Eastern Time Zone so that it would be more convenient for them to conduct business; and

**Whereas**, in response to citizens’ strong dislike for the sunlight schedule of Eastern Daylight Time in Indiana (1969-1971) and their strong preference for that of Central Daylight Time during spring, summer and fall, the Uniform Time Act was amended to allow legislatures of split states to have decision-making authority over observance of daylight saving time; and

**Whereas**, for the next 35 years (1971-2005), Indiana’s Eastern Time counties did not change clocks in observance of Daylight Saving Time and all Indiana’s citizens enjoyed the convenience of being united on the same time (Eastern Standard Time aka Central Daylight Time) for eight months each year and were able to enjoy their preferred (Eastern Standard Time aka Central Daylight Time) sunlight schedule in spring, summer and fall; and

**Whereas**, in 2005 the Indiana General Assembly adopted Daylight Saving Time for the 80 Eastern Time Zone counties because it was deemed important to Indiana’s economic health, and to the general economic well-being of all Indiana citizens as a whole, to eliminate the bi-annual time confusion between Indiana and the rest of the US; and

**Whereas**, today, digitization and instantaneous transfer of information through e-technology have rendered the Eastern Time Zone designation in Indiana no more than an insignificant convenience factor in conducting commerce with the East Coast; and

**Whereas**, the 2000 Federal Population Census predicted future large shifts of population (with accompanying jobs and consumer markets) to the Central and Southwestern regions of the

US and this trend in population shifts has been confirmed by data gathered in the 2010 Federal Population Census; and

**Whereas**, comparisons of 2002 and 2007 U.S. Commodity Flow Surveys confirm these accompanying shifts of markets and manufacturing away from the East Coast and toward the Central and Southwestern regions of the US by showing a 4% decrease of Indiana's exports going to markets in the Eastern Time Zone and a 3% decrease of imports coming into Indiana from Eastern Time Zone sources; and

**Whereas**, in the last fifty years large scale school consolidations have occurred in Indiana necessitating school districts to provide bus transportation for the majority of their students with pick-up times beginning by 6 a.m. all over Indiana, thus necessitating the need for students to get out of bed as early as 5 a.m.; and

**Whereas**, the cost of providing bus transportation forces schools districts to run multiple bus routes and stagger the start times for schools with schools starting as early as 7:10 a.m. (Franklin Township Middle School, Marion County); and

**Whereas**, morning sunlight burns off fog and activates ice-melting compounds, Eastern Time's late sunrise schedule causes excessive numbers of 2-hour school delays in Indiana's schools; and

**Whereas**, 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" to all citizens of Indiana;

**Now therefore**, the Central Time Coalition declares that Eastern Time is an outdated time zone designation in Indiana.

The Coalition supports the restoration of Indiana's original and geographically-correct Central Time Zone, as well as the observance of daylight saving time. Specifically we support Central Standard Time in the winter with Central Daylight Time in spring, summer, and fall.

We further declare and enumerate the following grievances caused by the Eastern Time Zone designation in Indiana that violate, and/or place in jeopardy, the "peace, safety, and well-being" guaranteed to its citizens in Indiana's State Constitution.

**Grievance 1** The adoption of Eastern Daylight Time in 2005 resulted in Indiana being permanently divided year-round into two time zones with 20% of its citizens living in the Central Time Zone and 80% living in the Eastern Time Zone. The time zone boundary divides 18 Indiana counties (800,000 Hoosiers) from adjacent Indiana counties with 7 school districts straddling the time zone boundary. This causes untold hardships in the daily lives of these individuals and families.

**Grievance 2** Confusion caused by having Indiana split into two time zones is a costly inconvenience to businesses conducting **intrastate** commerce because of missed meetings, delivery times, communications, deadlines, appointments, etc.

**Grievance 3** The three-hour, year-round time difference between Indiana and the Pacific Time Zone 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.

**Grievance 4** Increasing demands for same-day, nation-wide delivery of products is forcing some of Indiana's manufacturers to relocate facilities from Indiana's Eastern Time Zone to logistic hubs located in the Central Time Zone. Businesswise, Indiana is not taking advantage of its natural Central Time location.

**Grievance 5** Darkness is an acknowledged safety risk for all pedestrians. Eastern Time's excessively late sunrises force hundreds of thousands of Indiana's students to be pedestrians in morning darkness, thus **violating their constitutional right to safety**. Their rights are further violated because **students have no choice in the matter**.

**Grievance 6** The excessive numbers of school delays in Indiana's Eastern Time counties wastes \$25-60 million of Eastern Time's taxpayer's money each year.

**Grievance 7** School delays are costly to local businesses and their employees.

**Grievance 8** Excessive numbers of school delays in Indiana's Eastern Time counties cheat students out of quantity, as well as, quality of education, thus contributing to the poor performance ratings of Indiana's students.

**Grievance 9** The sunlight discrepancy between Eastern Time on the clock and a student's natural biological clock is jeopardizing students' educational well-being, as well as their future financial well-being. When combined with the early start time of schools, Indiana's teens are chronically sleep-deprived and unable to function at their full potential.

**Grievance 10** Indiana has 55,000 students who are chronically absent from school. Eastern Time's dark mornings, combined with the early start times of schools, encourage chronic absenteeism due to truancy. Chronic truancy leads to dropping-out of school.

**Grievance 11** Indiana's Eastern Time Zone designation causes inconveniences for Hoosier television viewing audiences because nationally televised events, prime-time programing and local news are broadcast one hour later than they would be on Central Time. Hoosiers frequently cannot afford to stay up to watch late-night wrap-ups, and sports fans are frequently disappointed that their morning newspaper has not reported outcomes of sporting events because of missed print deadlines.

**Grievance 12** Eastern Time's late sunlight schedule has a causal effect on Indiana's teens having the highest crash rates in the US.

**Grievance 13** Roadway snow and ice conditions would be cleared 1-hour earlier on Central Time's sunlight schedule than they are on Eastern Time's sunlight schedule and the morning commute would therefore be safer and take less time in inclement weather.

**Grievance 14** Eastern Time's late sunrise schedule causes inconveniences for Indiana's construction workers.

**Grievance 15** Eastern Time's late sunrise schedule causes inconveniences that impose hardships on Indiana's farmers and their families.

**Grievance 16** Eastern Daylight Time's late sunrise schedule has been financially costly for Indiana's golf courses and causes inconveniences for lawn maintenance businesses.

**Grievance 17** Eastern's sunlight schedule (especially Eastern Daylight Time) imposes hardships on Indiana's Amish who embrace a simple lifestyle that is dependent for light from the sun but who also need to interact within the parameters of their community's civil sunlight schedule.

**Grievance 18** Traditional family summertime activities that are dependent on darkness are either diminished or eliminated by Eastern Daylight Time's late sunlight.

**Whereas**, 25,000 citizens and businesses, 47 Indiana public school boards, the Indiana State School Bus Drivers Association, and organizations representing over 170,000 Indiana workers support restoring Indiana to the Central Time Zone. In addition, leaders representing Indiana's 45,000 Amish have ask that we share their special concerns about the sunlight schedule of Eastern Time in Indiana.

**Now therefore**, representing the above individuals and organizations, the Central Time Coalition petitions the Indiana General Assembly to redress these grievances by requesting the United States Department of Transportation restore all of Indiana to its original Central Time Zone, with the possible exception of, and at the official request of, certain Southeastern counties that closely interact with Cincinnati and Louisville.

## Section II Grievances Explained

**Grievance 1** The adoption of Eastern Daylight Time in 2005 resulted in Indiana being permanently divided year-round into two time zones with 20% of its citizens living in the Central Time Zone and 80% living in the Eastern Time Zone. The time zone boundary divides 18 Indiana counties (800,000 Hoosiers) from adjacent Indiana counties with 7 school districts straddling the time zone boundary. This causes untold hardships in the daily lives of these individuals and families.

### Explanation

Most Indiana residents seek medical care from dentists, doctors and hospitals located within Indiana, however, Hoosiers living near the time zone boundary frequently receive their medical care at facilities located in the other time zone. This is a constant inconvenience that often results in missed appointments that require costly rescheduling with delay of medical diagnosis and treatment that could prove detrimental to a person's health.

Hoosiers living near a time zone boundary frequently socialize with family and friends living in the other time zone. They often shop, attend church, participate in 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 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 school events, etc. The problems of scheduling inter-school events and competitions extend way beyond the 18 time zone boundary counties. Central Time Zone students competing or traveling on field trips to Indianapolis must leave their homes an hour early. It isn't unusual for time zone confusion to cause these students to arrive too late to participate in competitions or cultural events.

Hoosiers who live in the Central Time Zone but work in Eastern Time Zone counties express great concerns about winter highway conditions making travel unsafe. Because of the time difference, they 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.

In 1985, the Indiana General Assembly petitioned USDOT to move five southwestern counties from the Central Time Zone to the Eastern Time Zone. USDOT denied the request based on testimony given by over 4,000 people. Quoting from USDOT's official report published in the Federal Register, here is what Hoosiers had this to say about Indiana's divided time zone situation in 1985. Their arguments still stand true today.

- "It was important for state unity and development of the state's economy to be on one 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." (Note: today the time difference is year-round.)
- "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.”
- “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.”

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. **“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.”**<sup>1</sup>

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. Were Indiana restored to its original Central 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. Because the population in these counties is relatively low, the resulting populating split of 4% Eastern Time to 96% Central Time would greatly reduce the divisive impact of today’s 20% to 80% population split in Indiana.

**Grievance 2** Confusion caused by having Indiana split into two time zones is a costly inconvenience to businesses conducting **intrastate** commerce because of missed meetings, delivery times, communications, deadlines, appointments, etc.

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<sup>1</sup> Appendix A. *Proposed Rules - Federal Register*, Vol. 50, No. 209/ Tuesday, October 1985, p. 43748

## Explanation

In 1985, the Indiana Legislature enumerated in writing their arguments concerning the economic effects of having Indiana's southwestern counties in a different time zone than the rest of the state. Again, quoting from the USDOT's official report published in the Federal Register<sup>2</sup>, the reasons given by the Indiana Legislature include:

- "Difficulties that businesses and manufacturers 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."
- "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."

Have these concerns voiced by citizens, businesses, and the Indiana Legislature 29 years ago changed or gone away? No! They are as true today as they were then.

**Grievance 3** The three-hour, year-round time difference between Indiana and the Pacific Time Zone 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.

## Explanation

Grain Processing Corporation (GPC) is a global manufacturer and marketer of corn-based products, headquartered in Muscatine, IA with a major corn production facility and offices in Washington, Indiana. When consulted about how time zones affect their business, their vice-president in charge of marketing said, "*Eastern Time has no advantages to us over Central Time. It makes no difference. We ship all over the world. A 1-hour time difference is a minor inconvenience that is easily handled. A 2-hour time difference begins to cause problems. However, a 3-hour time difference causes major problems with direct communications, such as conference calls, online and phone communications, business travel, etc.*"

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 was quoted, "*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.*"<sup>3</sup>

With adoption of Eastern Daylight Time in 2006, Indiana's 3-hour time difference with California, the 9<sup>th</sup> largest economy in the world, is now year-round. When the 2007 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<sup>4</sup> revealed that between 2002 and 2007, Indiana experienced a .7% decrease in imports into

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<sup>2</sup> Appendix A. *Proposed Rules - Federal Register*, Vol. 50, No. 209/ Tuesday, October 1985, p. 43748

<sup>3</sup> Lee, Daniel. "Purdue to Go to the Heart of Tech World."

<sup>4</sup> Appendix B. Heller, Thomas. *Comparison of Indiana Commodity Flow Surveys for Years 2002 & 2007*,

states located in the Pacific Time Zone and a .5% decrease in exports from states to the Pacific Time Zone. Do these decreases reflect the year-round, 3-hour time difference inconveniences of conducting business with Indiana?

The results of the 2012 Commodity Flow survey will be released by the US Department of Commerce in December 2014.

**Grievance 4** Increasing demands for same-day, nation-wide delivery of products is forcing some Indiana manufacturers to relocate facilities from Indiana's Eastern Time Zone to logistic hubs located in the Central Time Zone. Businesswise, Indiana is not taking advantage of its natural Central Time location.

### **Explanation**

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."*<sup>5</sup> 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."<sup>6</sup> While there is a FedEx hub in Indianapolis and a UPS hub is in Louisville, both Indianapolis and Louisville are located in the Eastern Time Zone. Thus, Zimmer felt it had no choice but to go to Memphis for the delivery services they need.

Shopping online with same-day/next-day delivery of goods is revolutionizing the way goods are sold and delivered. Modes for transportation of goods are changing and shortening the supply chain from manufacture to delivery of goods saves money. As Zimmer has realized, air hubs located in the Central Time Zone can meet nationwide same-day delivery demands that those in the Eastern Time Zone cannot.

In recent years several large corporations have relocated their headquarters from the Eastern and Pacific Time zones to the middle of the US in order to be more centrally located within their customer base. Boeing moved from Seattle to Chicago<sup>7</sup>, American Airlines from New York to Dallas, Comerica (Michigan's largest bank) from Detroit to Dallas<sup>8</sup>. Indiana businesses aren't able to take advantage of their natural Central Time location.

**Grievance 5** Darkness is an acknowledged safety risk for all pedestrians. Eastern Time's excessively late sunrises force hundreds of thousands of Indiana's students to be pedestrians in morning

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<sup>5</sup> *Economic Impact*. Indiana Biosciences Research Institute

<sup>6</sup> *Zimmer in Warsaw Moving Part of Operation to Memphis*

<sup>7</sup> *Inside Boeing's Big Move: Conversation with John Warner*

<sup>8</sup> *Comerica to Relocate Corporate Headquarters to Dallas*

darkness, thus **violating their constitutional right to safety**. Their rights are further violated because **students have no choice in the matter**.

## **Explanation**

Reduced visibility means that pedestrians are never safe in the dark. While an adult usually make the choice to be a pedestrian in the dark, Indiana's 850,000 Eastern Time public school students have no choice but to travel to school in the dark for the majority of their school year. 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 hazard also holds true for all vehicle drivers. On clear days children become distinguishable about 15 minutes prior to sunrise, but even that visibility is greatly reduced on rainy days.

The Central Time Coalition has tracked numerous incidents reported in the news media that students have experienced prior to sunrise. These include the following:

- 6 students have been killed when struck by vehicles.
- 17 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.

While serving as sheriff of Hamilton County, Doug Carter (now Superintendent of Indiana State Police) was asked to evaluate our 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.***"<sup>9</sup>

Safety concerns prompt parents to drive their children to school or to sit at school bus stops with their cars running. Teens fortunate enough to have parents who can afford to provide them with a car, do not have to stand out at cold dark bus stops; however, inexperienced teen driving in the dark is also a safety issue.

Indiana's Constitution guarantees citizens' rights to "peace, safety and well-being". Do these constitutional rights apply to adults only or do children fall under their protection? If children are entitled to the constitutional right of "safety", whose responsibility is it to see that their rights are enforced? Forty-seven school boards have signed resolutions in support of Central Time for Indiana.<sup>10</sup>

**Grievance 6** The excessive numbers of school delays in Indiana's Eastern Time counties wastes \$25-60 million of Eastern Time's taxpayer's money each year.

## **Explanation**

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

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<sup>9</sup> Appendix C. *Indiana's Student Victim Report*

<sup>10</sup> Appendix D *School Districts in support of Restoring Indiana to Central Time*

money, that was intended to be spent on education, is wasted. The Central Time Coalition has tracked the number of school delays since 2009 and calculated the actual cost to taxpayers living in Indiana’s Eastern Time Zone counties. <sup>11</sup>

School year	Number of delays	Cost to Eastern Time schools
2009-2010	1,058 delays days	cost \$30.5 million
2010-1011	1,420 delays days	cost \$60 million
2011-2012	696 delays days	cost \$25 million
2012-2013	1,172 delays days	cost \$47.5 million
2013 (Aug - Dec. 31)		cost to date \$25 million

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<sup>12</sup>. Most of their delays were for one-hour only. In 2010-2011, Illinois had 28 counties call 1 school delay, 7 counties called 2 delays and 1 county called 3 delays. In 2012-2013, Illinois had only 17 counties call 1 delay of one hour each.

On Central Time, Indiana’s school delays could be limited to 1-hour, thus cutting in half the current amount of money and education time that is being wasted. Currently, some Indiana counties are calling 3-hour delays and extending the school day by 1-hour, thus keeping the total within the 2-hour limit. On Central Time, the state could adopt a policy of limiting delays to 1 hour plus extending the school day by one hour, whereby, no classroom time would be lost, no taxpayer money would be wasted, and students would still get home by dark.

**Grievance 7** School delays are costly to local businesses and their employees.

**Explanation**

Delays typically require one parent to either stay home from work until children are safely on their way to school or pay for additional child care. Salaried employees are usually required to deduct lost time from their paycheck or vacation allotment. Hourly employees are not paid for non-working hours and often cannot make-up the lost income. Their absence throws off project work schedules and can affect contract completion deadlines. Income productive time is lost when appointments and meetings have to be cancelled and rescheduled. Salaries of office and medical support staff are part of ongoing overhead costs that have to be paid even when appointments and meetings are cancelled.

**Grievance 8** Excessive numbers of school delays in Indiana’s Eastern Time counties cheat students out of quantity, as well as quality, of education, thus contributing to the poor performance ratings of Indiana’s students.

**Explanation**

Most teachers consider “delay days” as lost educational days. Typically, school starts with the 3<sup>rd</sup> period class with periods 1 and 2 tagged on at the end of the day. The two hours of lost time are spread

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<sup>11</sup> Appendix E. Gettelfinger - *The Cost of School Delays in Indiana for Years 2010–2013*

<sup>12</sup> *School Delays for Years 2011, 2012, 2013*”, Illinois State Board of Education

out over what is now a 5-hour school day by reducing each period by approximately 20 minutes. The time lost in each period is the most valuable “on-task time”. Students just get settled in and it is time to move on. This total disruption in the day’s routine seriously compromises students’ abilities to concentrate. Classes that require a block of time – tests, laboratory classes, physical education, etc. – cannot be conducted. Five days of delays within a school year are 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.

**Grievance 9** The sunlight discrepancy between Eastern Time on the clock and a student’s natural biological clock is jeopardizing students’ educational well-being, as well as their future financial well-being. When combined with the early start time of schools, Indiana’s teens are chronically sleep-deprived and unable to function at their full potential.

### **Explanation**

The educational level of Indiana’s workforce ranks 42<sup>nd</sup> in the nation. In fact, Indiana’s students in general are performing well below the national average. There is a biological reason that Indiana’s students are not performing well and it is 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.”*<sup>13</sup> Sunlight tells our biological clocks that it is time for our bodies 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.”*<sup>14</sup> Students simply cannot achieve their educational potential when they are forced to get out of bed 2-3 hours before sunrise, with school often starting while it is 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.”*<sup>15</sup>

On September 5, 2013, US Secretary of Education, Arne Duncan, was quoted, **“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 are absent or tardy less often, have lower drop-out rates, less depression and even fewer car accidents.”**<sup>16</sup> The simplest way to reset students’ sleep clocks is to restore Indiana to the sunlight schedule of the Central Time Zone where the sun rises and sets one hour earlier.

On Central Time the latest sunrise would be around 7:15 a.m. in mid-winter which is a much more conducive sunlight schedule for students’ readiness to learn in 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.

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<sup>13</sup> Sancar - *Link Between Light Signal and Circadian Rhythms*

<sup>14</sup> Kobayashi - *Mental Performance and Circadian Rhythm*

<sup>15</sup> Ellenbarger - *Latest Statistics on Teen Sleep Needs*

<sup>16</sup> Education Secretary: *Start School Later in Day*

**Grievance 10** Indiana has 55,000 students who are chronically absent from school each year. Eastern Time’s dark mornings, combined with the early start times of schools, encourage chronic absenteeism due to truancy. Chronic truancy leads to dropping-out of school.

### **Explanation**

A recent report mandated by the Indiana legislature revealed that at least 55,000 Indiana students are chronically absent every year.<sup>17</sup> 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 in all kinds of weather is unpleasant, unsafe, and frightening. As absentee students fall further and further behind, many will drop out of school and join Indiana’s unemployable.

Reports in the media are full of concern about education in Indiana; however, all solutions so far seem to be centered on setting standards that students are expected to meet. Is anyone considering the school experience from the students’ perspectives? How many adults would stick with a job that required them to get out of bed at 5 a.m. to stand out on a dark street corner in all kinds of weather to catch a bus, and then be expected to be alert and at peak performance by 7:30 when it is still dark outside? Wouldn’t those adults be looking for a different job? Why are we surprised that so many students become discouraged and give up? In fact, the real surprise is that there are some students who actually survive and are able to excel. On Central Time’s sunlight schedule the latest sunrise is 7:15 a.m., travel to school would be in daylight the majority of the school year, streets would be less frightening, and students would be awake and ready to learn when class starts. It is a winning situation for all Eastern Time students.

**Grievance 11** Indiana’s Eastern Time Zone designation causes inconveniences for Hoosier television viewing audiences because nationally televised events, prime-time programing and local news are broadcast one hour later than they would be on Central Time. Hoosier’s frequently cannot afford to stay up to watch late-night wrap-ups, and sports fans are frequently disappointed that their morning newspaper has not reported outcomes of sporting events because of missed print deadlines.

### **Explanation**

Eastern Time in Indiana has many inconveniences for Indiana’s television viewing audience. Prime-time programs, nationally televised events and late-night news are all broadcast an hour later than they would be on Central Time. Events that are televised nationally include: special cultural performances, Olympics competitions, baseball’s World Series, NCAA competitions and tournaments, professional sports competitions (which include the Indianapolis Colts and Pacers), etc. These events have positive influences on the viewing audience as they demonstrate desirable standards of good sportsmanship, respect for other cultures, athletic achievement through hard work and physical fitness, and give exposure to unique cultural events. Because students have to go to bed in order to get up for school the next morning, the late broadcast of these events limits students’ exposure to these positive values and the sense of national pride that accompany these national events. The adult viewing audience often cannot afford to stay up to watch the conclusions either. To compound matters for sports fans, late conclusions of sporting events frequently result in local newspapers missing the print deadlines for reporting the results in the morning edition.

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<sup>17</sup> Spradlin - *Attendance and Chronic Absenteeism in Indiana: The Impact on Student Achievement*

**Grievance 12** Eastern Time’s late sunlight schedule has a causal effect on Indiana’s teens having the highest crash rates in the US.

### **Explanation**

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.<sup>18</sup> Why is this? A study conducted by researchers at the University of Kentucky in 2008, is entitled “*Adolescent Sleep, School Start Times, and Teen Motor Vehicle Crashes*”.<sup>19</sup> 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 Kentucky 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., 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 school start time from 7:30 a.m. to 8:30 a.m. in Fayette County was the equivalent of changing from Eastern Time to Central time. Not only did this mean that teens were more rested because they had gotten 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 adjust their schedules to a later start time because working parents need to have their children settled before they can leave for work. However, Indiana’s teens could realize these same sunlight benefits of having their school days 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 their drive to and from school would occur in daylight.

**Grievance 13** Roadway snow and ice conditions would be cleared 1-hour earlier on Central Time’s sunlight schedule than they are on Eastern Time’s sunlight schedule and the morning commute would therefore be safer and take less time in inclement weather.

### **Explanation**

The coldest time of day is the hour before sunrise. At sunrise temperatures begin to rise. This is very important in winter because even a 1-degree rise in temperature triggers activation of melting compounds that assist street and highway departments in clearing roadways of snow and ice. Northern Indiana gets large amounts of lake-effect snow while the counties along the Ohio River have frequent icy

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<sup>18</sup> Hisson - *Indiana Leading Country in Teen Driving Deaths*

<sup>19</sup> Appendix F. Danner - *Adolescent Sleep, School Start Times, and Teen Motor Vehicle Crashes*

conditions that make morning commutes dangerous. Northeastern Indiana and the Ohio River valley have high frequencies of foggy conditions which are dissipated by the rise in temperatures.

On Central Time the latest sunrise would be 7:15 a.m. instead of 8:15 a.m. This extra hour of sunlight in the morning would make driving conditions safer for all of Indiana's 5.2 million citizens who live in Indiana's Eastern Time counties.

**Grievance 14** Eastern Time's late sunrise schedule causes inconveniences for Indiana's construction workers.

### **Explanation**

Indiana's approximately 90,000 construction workers comprise a large group of people who frequently live in one community and travel to different communities where job sites are located. For very practical reasons, construction trades prefer a 7 a.m. - 3:30 p.m. workday. It is cooler early in the morning and this schedule allows them to avoid rush-hour traffic, thus shortening their travel time to and from the job site. It allows more time for family and personal activities after they return home. The daily start-time for most construction projects is dictated by the crafts 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 workday could start at 7 a.m. year-round.

**Grievance 15** Eastern Time's late sunrise schedule causes inconveniences that impose hardships on Indiana's farmers and their families.

### **Explanation**

Start of fieldwork on farms is delayed until the sun has dried-out soil in fields waiting to be planted and crops waiting to be harvested. Eastern Time's late sunrises shift the farmer's workday late into the evening. This interferes with his participation in his community and his family's activities. When farm equipment breaks in the late afternoon or evening, work has to stop because farm implement dealers and repair shops are closed.

**Grievance 16** Eastern Daylight Time's late sunrise schedule has been financially costly for Indiana's golf courses and causes inconveniences for lawn maintenance businesses.

### **Explanation**

Mowing activities at golf courses cannot begin until sunrise. The adoption of Daylight Saving Time in Indiana's Eastern Time counties means that maintenance activities start one hour later which, in turn, means that one hour of morning tee times are lost every day. This has caused loss of income for golf courses because morning tee times are the most sought-after and those fees are the highest. While an

increase in twilight play was anticipated, it has not materialized. Besides, twilight fees are at reduced rates but still require employee staffing to serve those players.<sup>20</sup>

The start of the workday for the lawn maintenance business is dependent on sun to lift morning dew. Eastern Daylight Time delays the start time and shortens workers' time in the evening for personal and family activities.

**Grievance 17** Eastern's sunlight schedule (especially Eastern Daylight Time) imposes hardships on Indiana's Amish who embrace a simple lifestyle that is dependent for light from the sun but who also need to interact within the parameters of their community's civil sunlight schedule.

### **Explanation**

The 2010 Federal Population Census revealed that Indiana has 45,000 adherents to the Amish religion giving Indiana the 3<sup>rd</sup> largest population of Amish in the U.S. Amish leaders have contacted the Central Time Coalition asking that we share their concerns about the hardships Eastern Time's sunlight schedule imposes on them. The Amish primarily are farmers, leading an agrarian lifestyle that functions on the earth's natural sunlight schedule; however, they must also be able to interact with the local economy. On Amish farms, all family members learn to work together for the well-being of the family by taking responsibility for certain chores, which, on a daily basis, mostly relate to care of livestock and poultry. During eight months each year, sunrise and sunset on Eastern Daylight Time's civil clocks are two hours later than Indiana's solar sunlight schedule. The 2-hour discrepancy in morning sunlight means that the entire family is often rushed in the morning to get these chores taken care of by the time children leave for school and the family leaves for church. Artificial lighting provided by kerosene lanterns is frequently necessary in homes and barns. Kerosene is expensive and lanterns can be a fire hazard. One additional hour of sunlight in the morning and one less in the evening would be of great benefit to the Amish.

**Grievance 18** Traditional family summertime activities that are dependent on darkness are either diminished or eliminated by Eastern Daylight Time's late sunlight.

### **Explanation**

It does not get dark in mid-summer in Indiana on Eastern Time until around 10 p.m. Proponents of Eastern Time'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 in Indiana's Eastern Time Zone 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 is still daylight outside. Going to bed early is also difficult for adults.

**Campfires** – While campers enjoy a wide variety of activities, it is the fond memories of the evening campfire that stays with a person and draws him back to the campfire experience as an adult. The memories of camaraderie and laughter, singing of songs, telling of stories, performance of skits, and delighting in the hidden talents that seem to come out, make the campfire experience so very special.

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<sup>20</sup> Richards -*Golf Courses Aren't Cashing in Like Expected*

Evening darkness is an essential ingredient of the campfire atmosphere. Eastern Time's late summer daylight has diminished the unique essence 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 recession. Campgrounds don't quiet down until it gets dark and it is almost impossible to get children in bed until it gets dark outside. Summer camps provide some of the most positive growth experiences of a young person's life. Eastern Time's late evening sunlight has negatively affected the youth and family camping experience in Indiana.

**Stars Gazing**– Stars are not visible 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 is time to relax and unwind. Everyone needs this. Quiet conversations on a dark patio are special because the distractions are gone. Eastern Time has robbed Hoosiers of evening darkness.

**July 4<sup>th</sup> Fireworks** – Since Daylight Saving Time went into effect in 2006, fireworks on July 4<sup>th</sup> in Indiana's Eastern Time counties cannot be held until 10 p.m. After a full day of celebration, this late hour is neither family nor community friendly.

**Summer concerts** – The audience at summer concerts does not quiet down to absorb the music until it gets dark. Outdoor movies require darkness. Since adoption of Eastern Daylight Time in 2006, many community evening events are starting later, which results in declined participation of families with children.

**Later dining** – Since Daylight Saving Time was adopted in 2006, restaurant business has declined in the summer because people are not going out to dine while it is still broad daylight outside. More often, people tend to get out the snacks and have a beverage while waiting for “dinnertime” to arrive. By dark it is getting too late to go out to a restaurant, people are tired and don't want to prepare a meal followed by the kitchen clean-up 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 8<sup>th</sup> most obese state in the U.S.<sup>21</sup>

## Conclusion - Indiana belongs in the Central Time Zone.



Indiana is the only US state that totally belongs in one time zone and has been moved to a differ time zone.



Number of days of sunrise by 7 a.m.

<sup>21</sup>Berggoetz – *Indiana Still 8<sup>th</sup> Most Obese State in U.S.*

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