



OST

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September 20, 2022

DOT Can Improve Processes for Evaluating the Impact of Time Zone Changes and Promoting Uniform Time Observance



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Self-Initiated

Department of Transportation | ST2022037 | September 20, 2022

What We Looked At

The Department of Transportation (DOT) is responsible for fostering and promoting uniform time observance—including Daylight Saving Time (DST)—as well as evaluating requests to change time zones. Since 2015, at least 45 States have proposed legislation either to change their observance of DST or to establish permanent standard time. Recent Federal interest, such as the March 2022 U.S. House of Representatives Committee on Energy and Commerce hearing on DST and the Sunshine Protection Act of 2021, highlights the importance of DST and time zone changes to impacted communities. Given the recent interest and potential impact of time zone changes on transportation, we initiated this audit with a limited scope to assess DOT's processes for evaluating and responding to requests from States and localities for time zone changes and DST exemptions.

What We Found

While DOT is responsible for evaluating and processing time zone change petitions from States and localities, it does not have written guidance in place specifically addressing how the petitions should be evaluated and validated. Instead, if it were to receive a petition, the Department would process the petition according to the general rulemaking procedures and DOT Order already in place. However, it has been roughly 12 years since the Department last processed a petition and officials currently responsible for this area were not involved in the process the last time it took place. In addition, although DOT does not have the authority to grant exemptions from DST, it is responsible for fostering and promoting uniform time observance. Yet, it does not have processes for monitoring localities that are not observing DST or their assigned time zone and may not be aware of possible instances of non-uniform time observance. In addition, the Department does not provide sufficiently detailed information for the public to promptly and accurately identify non-compliant localities.

Our Recommendations

The Office of the Secretary of Transportation concurred with all five of our recommendations to improve DOT's evaluation of time zone changes and promotion of uniform time observance and provided appropriate actions and completion dates. We consider these recommendations resolved but open, pending completion of planned actions.

Contents


| | |
|---|----|
| Memorandum | 1 |
| Results in Brief | 2 |
| Background | 3 |
| DOT Has General Rulemaking Procedures in Place, But They Do Not Address Evaluating Time Zone Change Impacts | 5 |
| DOT Has No Role in DST Exemptions but Can Do More To Foster and Promote Uniform Time Observance | 10 |
| Conclusion | 13 |
| Recommendations | 13 |
| Agency Comments and OIG Response | 14 |
| Actions Required | 14 |
| Exhibit A. Scope and Methodology | 15 |
| Exhibit B. Organizations Visited or Contacted | 17 |
| Exhibit C. List of Acronyms | 18 |
| Exhibit D. Major Contributors to This Report | 19 |
| Exhibit E. Time Zone Rulemakings Since 1999 | 20 |
| Exhibit F. BTS Unofficial Time Zone Map | 21 |
| Exhibit G. County-Level Time Zone Boundary Map | 22 |
| Appendix. Agency Comments | 23 |



Memorandum

Date: September 20, 2022

Subject: ACTION: DOT Can Improve Processes for Evaluating the Impact of Time Zone Changes and Promoting Uniform Time Observance | Report No. ST2022037

From: David Pouliott 
Assistant Inspector General for Surface Transportation Audits

To: General Counsel

Since 2015, at least 45 States have proposed legislation either to change their observance of Daylight Saving Time (DST) or to establish permanent standard time. For example, three States recently introduced bills to effectively adopt year-round DST by seeking to move to an earlier standard time zone. At the Federal level, the U.S. House of Representatives Committee on Energy and Commerce held a hearing on the costs and benefits of DST on March 9, 2022, and the U.S. Senate passed the Sunshine Protection Act of 2021, which proposes to eliminate DST and advance standard time, on March 15, 2022. The most recent petition for a time zone change was submitted by a single county in North Dakota to the Department of Transportation (DOT) in 2009 and the related final rule was issued over 10 years ago, in 2010. Given the recent interest and potential impact of time zone changes on transportation, we initiated this audit with a limited scope to assess DOT's processes for evaluating and responding to requests from States and localities for (1) time zone changes and (2) DST exemptions.

We conducted this audit in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology. Exhibit B lists the organizations we visited or contacted, and exhibit C lists the acronyms used in this report.

We appreciate the courtesies and cooperation of DOT representatives during this audit. If you have any questions concerning this report, please contact me or Wendy Harris, Program Director.

cc: The Secretary
DOT Audit Liaison, M-1

Results in Brief

DOT has general rulemaking processes in place, but they do not address evaluating time zone change impacts.

DOT is responsible for evaluating whether requests to change time zones serve the convenience of commerce. It has been roughly 12 years since DOT processed a time zone change petition. This most recent time zone change petition was submitted in 2009. DOT officials said if they receive a petition for a time zone change, they would process the petition following rulemaking procedures in regulations and a DOT Order. These procedures came into effect since the last time zone-related rulemaking was completed. DOT officials would also usually hold a public hearing in the affected area. For time zone petitions, DOT officials must also evaluate the impact of proposed time zone changes based on the “convenience of commerce” as required under the Uniform Time Act of 1966. However, aside from a set of “convenience of commerce” questions that date to at least 1990, there is no written guidance for how DOT officials should validate the information provided by petitioners. There also is no documentation that demonstrates how it was done for previous rulings. In addition, none of the officials currently assigned to this area participated in these earlier time zone change rulemakings. As a result, DOT cannot have reasonable assurance that the information used to evaluate the impact of future time zone changes will be the best and most relevant evidence and data, as required by current rulemaking procedures.¹ If DOT does not ensure its decisions are based on high-quality data, time zone changes may have unanticipated negative effects on residents and businesses in the affected area.

DOT has no role in DST exemptions but can do more to foster and promote uniform time observance.

DOT has no role in DST exemptions. While it does not have the authority to grant petitions for exemptions from DST, it is responsible for fostering and promoting uniform time observance, including DST. Despite this responsibility, DOT has no processes for tracking or monitoring localities that are not properly observing DST or their assigned time zones. DOT has the authority to apply to a Federal court for relief if a State or locality is not observing DST in line with Federal law. The Department requested legal action once since 1999 to correct time observance in a locality. A DOT official said they rely on news reports and the public to notify them of non-uniform observance of DST, but were not familiar

¹ The 2020 update to 49 C.F.R. Part 5 has new requirements for information used as a basis for final rules. This information must align with the Information Quality Act (Section 515 of Pub. L. No. 106-554, Appendix C, 114 Stat. 2763A-153-54 (2001)).

with recent media reports of four localities in an area not properly observing the time in their assigned zone. We also found that the public does not have easy access to accurate, detailed information from DOT that it could use to report time observance issues. For example, there is no official repository of detailed maps² showing accurate time zone boundaries or DST observance. As a result, DOT does not collect information on improper observance from its own monitoring or provide the public with tools it can use to readily identify non-uniform time observance. Without this information, DOT may not be aware of instances of non-uniform adoption or observance of time zones or DST and cannot take corrective action.

We made five recommendations to improve the Department's processes for evaluating the impact of time zone changes on the convenience of commerce and fostering and promoting uniform adoption and observance of standard time.

Background

Major railroad companies introduced time zones in 1883 to eliminate local times that led to confusion and contributed to train crashes. Congress passed the Standard Time Act in 1918, which established standard time in the United States and gave the Interstate Commerce Commission (ICC) the responsibility for establishing boundaries between the standard time zones in the United States. The act also established the first DST, though it was abolished at the Federal level in 1919. DST observance continued on a State-by-State basis, and as a result, confusion and collisions caused by different local times once again became a transportation issue.

In 1961, ICC recommended Congress reexamine the entire field of standard time with the growing inconvenience, confusion, and danger caused by a decentralized approach to standard time. This resulted in passage of the Uniform Time Act of 1966. The act mandated standard time within the existing U.S. time zones and established a permanent system of uniform DST throughout the U.S. and its possessions, specifying dates and times for twice yearly DST transitions.

In 1966, DOT was founded to serve as a focal point of responsibility for transportation safety and was given certain authorities over time zones and DST. The original five U.S. time-zones expanded to nine over the years. The current

² The official boundaries are narratively delineated, not mapped, in DOT regulations at 49 C.F.R. Part 71.

U.S. time zones are: Atlantic, eastern, central, mountain, Pacific, Alaska, Hawaii-Aleutian, Samoa, and Chamorro.³

States may not independently change time zones or alter the length of DST, which still begins and ends on statutorily mandated dates. Only Congress has the authority to change the duration of DST. However, States and territories may exempt themselves, in part or in whole, from DST. A State can move from one time zone to another by DOT regulation or by Federal statute; however, Congress has not enacted a statute changing a State's time zone in over 60 years.

The Sunshine Protection Act of 2021 proposes to eliminate DST and move the country's standard time zones forward by one hour. This essentially makes DST permanent. If a State has exempted itself from DST prior to when the law potentially goes into effect, the State may keep that time as its standard time. The bill passed the U.S. Senate, as amended, on March 15, 2022, and was received in the U.S. House of Representatives the following day, where it is pending consideration.

DOT maintains the time zone boundaries in 49 Code of Federal Regulations (C.F.R.) Part 71, and according to DOT officials, this regulation contains the only official description of the boundaries. Under 15 U.S.C § 261(a), the limits of each zone shall be defined by an order from the Secretary of Transportation, with regard for the convenience of commerce and the existing junction points and division points of common carriers engaged in interstate or foreign commerce. DOT changes the boundaries of time zones through its rulemaking process, which is governed by the Administrative Procedure Act and related legal requirements, DOT regulation, and a DOT Order.

According to DOT, only the highest political authorities in States and localities may petition DOT for a time zone change. DOT defines its principal standard for deciding whether to change a time zone—the convenience of commerce—broadly to include consideration of all the impacts on a community resulting from a change in its standard time. DOT developed a series of questions pertaining to the convenience of commerce to assist communities and DOT with determining the impacts of a time zone change. If a petition includes enough information to conclude a change may serve the convenience of commerce, DOT issues a proposed rule to seek public comment on the change and normally holds a public hearing in the affected community. All public comments are reviewed whether provided at the hearing or submitted in writing. If DOT's General Counsel decides based on the information presented that a time zone change would in fact serve the convenience of commerce, they recommend a

³ The spelling and capitalization of the time zone names match the terminology used in 15 United States Code (U.S.C.) § 263.

change to the Secretary, who alone has authority to change a time zone. If approved, the Department issues a final rule that redefines the boundaries.

DOT's Bureau of Transportation Statistics (BTS) develops geospatial information and visualization tools and publishes the National Transportation Atlas Database (NTAD). A new map of the Nation's time zones was featured in BTS' 2019 fall release of the NTAD. According to BTS, the current NTAD databases are designed for use within a geographic information system (GIS); however, the attribute data for each dataset can be accessed in a database, spreadsheet, or other software package. GIS is a system that creates, manages, analyzes, and maps different types of data. It can also connect data to a map, integrating where things are with different types of descriptive information.

DOT Has General Rulemaking Procedures in Place, But They Do Not Address Evaluating Time Zone Change Impacts

According to DOT officials⁴ responsible for overseeing time zone change petitions, they would process future time zone change petitions under the Department's general rulemaking procedures.⁵ Current rulemaking procedures require that decisions in final rules be based on the best and most relevant evidence and data. This information must be clearly identified in the preamble to the final rule and be available to the public in the rulemaking record. However, these general rulemaking procedures do not specifically address how DOT officials should evaluate time zone change impacts or validate the information provided by petitioners about the impact of time zone changes on the convenience of commerce.

DOT Order 2100.6A, updated in 2021, applies to all DOT regulations and details items such as the responsibilities of individuals, components, and operating administrations, as well as the Departmental review process. DOT's Information Dissemination Quality Guidelines,⁶ updated in 2019, apply to influential information used in supporting rulemakings—specifically, information that is one of the major factors in the resolution of issues in a significant rulemaking. According to a DOT official, all non-significant rulemakings issued by the Office

⁴ These officials are in DOT's Office of General Counsel, Office of Regulation.

⁵ Administrative Procedure Act (see 5 U.S.C. § 551 *et seq.*), 49 C.F.R. Part 5, and DOT Order 2100.6A.

⁶ Docket Item DOT-OST-2019-0135 from <https://www.regulations.gov/docket/DOT-OST-2019-0135>.

of the Secretary of Transportation (OST) are processed the same way as significant rulemakings issued by OST.

The procedures in DOT Order 2100.6A include coordinating with other departmental offices and agencies to review draft decisions and related data. Time zone change rulemakings may include a public hearing in the impacted community to gather additional information in accordance with general administrative procedures. DOT manages the rulemaking process using DOT's Rulemaking Management System (RMS). Departmental officials said they also take steps specific to time zone petitions,⁷ including ensuring that each petition includes a certification that the petition comes from the State's or locality's highest political authority. Additionally, DOT officials must⁸ base their time zone change decisions on whether the change serves the convenience of commerce. DOT defines this standard broadly to include consideration of all the impacts on a community that would result from a change in its standard time. According to DOT officials, the Department developed eight convenience of commerce questions many years ago (see table 1 for these eight questions). The questions are examples of some of the considerations that petitioners should address in their time zone change petitions. A DOT official said petitioners are not limited to answering the eight questions and can present any other evidence for consideration relevant to the convenience of commerce.

⁷ The description of how DOT handles aspects of the petition review and rulemaking process specific to time zone petitions is provided at DOT's website *Procedure for Moving an Area from One Time Zone to Another*. <https://www.transportation.gov/regulations/procedure-moving-area-one-time-zone-another>.

⁸ 15 U.S.C. § 261(a).

Table 1. DOT's Convenience of Commerce Questions

| Convenience of Commerce |
|--|
| Where do businesses in the community get their supplies and to where do they ship their goods or products? |
| Where does the community receive television and radio broadcasts from? |
| Where are the newspapers published that serve the community? |
| Where does the community get its bus and passenger rail services; if there is no scheduled bus or passenger rail service in the community, where must residents go to obtain these services? |
| Where is the nearest airport; if it is a local service airport, to what major airport does it carry passengers? |
| What percentage of residents of the community work outside of the community; where do these residents work? |
| What are the major elements of the community's economy; is the community's economy improving or declining; what Federal, State, or local plans, if any, are there for economic development in the community? |
| 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? |

Source: DOT website. *Procedure for Moving an Area from One Time Zone to Another*.

<https://www.transportation.gov/regulations/procedure-moving-area-one-time-zone-another>

To evaluate the relevance of the convenience of commerce questions, we requested documentation of the questions' development. However, DOT officials stated that they do not know when or how the questions were developed or by whom in the Department. DOT used similar questions in decisions as early as 1990. According to DOT officials, they have not considered evaluating the questions to determine whether the questions should be updated because it has been a long time without any time zone change petitions.

The Government Accountability Office's (GAO) *Standards for Internal Control in the Federal Government* recommends that management periodically review policies and procedures for continued relevance and effectiveness. Given the technological and economic changes of the past few decades, the existing convenience of commerce questions may no longer be the most relevant examples of activities impacted by time zone changes. For example, the location of cell phone towers is not covered in the list of questions, but a DOT official said a community may present such information if it is relevant to the convenience of commerce. These challenges are illustrated in a March 2022 news article

reporting that some residents living along time zone borders face issues with the accuracy of cell phone times.

When we asked about the specific processes for evaluating the impact of a proposed time zone change on the convenience of commerce, we learned that none of the Office of Regulation officials currently assigned to this area have been involved in a time zone change rulemaking. The last rulemaking was completed roughly 12 years ago in September 2010, and, according to a DOT official, none of the current staff were working in the Office of Regulation at that time. DOT officials said that if a petition were to arrive now, they would look at the petitioner's responses to the questions and gather additional information about the impact of proposed changes through public comments, but could not explain specifically what information would be collected or how it would be validated. DOT officials clarified that they would not affirmatively collect any information beyond that provided in the public comment process.

In the absence of experience with time zone change rulemakings at DOT or specific procedures for deciding whether a time zone change serves the convenience of commerce, DOT officials told us to look at the preambles of past Final Rules since they should contain the bases for previous time zone change decisions. Since 1999, DOT completed 10 time zone-related rulemakings comprised of 9 final rules to change time zones and 1 denial of a petition (see exhibit E for details). Some of these rules included consideration of changes in multiple counties. For example, in October 2003, DOT moved 3 counties in South Dakota from mountain to central time. A total of 16 localities in 5 States have changed time zones since 1999.

We reviewed the decisions in all of the Department's time zone change rulemakings since 1999 to identify their basis. We found that documentation of the basis for decisions varied depending on the particular petition. For instance, the Department did not specifically address its evaluation of the impact of a time zone change on convenience of commerce when discussing its decisions in the preambles of 3 of the 10 Final Rules.⁹ Other than the 10 Final Rules published in the Federal Register, DOT could not provide additional documentation showing how it evaluated the impact of these time zone changes on the convenience of commerce.

We also interviewed economists from the Department's Office of Chief Economist, who said they have never worked on a time zone change petition. One of these officials told us the economists have no criteria to evaluate answers to DOT's convenience of commerce questions because the current staff have never been asked to participate in a time zone rulemaking. Office of Chief

⁹ The three final rules for time zone changes applied to West Wendover, NV in 1999; Sioux County, ND in 2003; and Jones, Mellette, and Todd Counties in SD in 2003.

Economist staff we interviewed said they started in their current positions in 2016 and 2017, but no time zone rulemakings have taken place in over 10 years.

Time zone change decisions are dependent on the quality of the information petitioners provide and DOT may otherwise collect. Current rulemaking procedures require final rules¹⁰ to be based on the best and most relevant reasonably obtainable evidence and data. Information used as a basis for a final rule decision must also follow DOT's Information Dissemination Quality Guidelines to ensure disseminated information is accurate, clear, complete, and unbiased in substance and presentation, and presented in a proper context. A DOT official said the Department relies on the petitioners to provide information regarding the impact of the proposed change on the convenience of commerce and on the public to fact-check this information. Rulemakings involving Mercer County, ND, and several Indiana counties provide examples of the complexities facing DOT officials when identifying the impacts of time zone changes. They also highlight the importance of validating information and documenting analyses.

- Mercer County, North Dakota petitioned for a change in 2000, which, DOT noted, was controversial in the community. DOT denied the petition in 2003 and provided no substantial explanation of the analysis underlying its decision. In 2009, the county submitted a new petition to change the time zone again. In the 2010 Final Rule, DOT described its detailed analysis of the convenience of commerce standard and concluded it should make the change.
- Between 2005 and 2007, DOT conducted multiple time zone change rulemakings for several Indiana counties. In a 2005-2006 rulemaking, the counties submitted information to support their contention that moving from the eastern time zone to the central time zone would serve the convenience of commerce. Based on that information and public comment and hearings, DOT moved several Indiana counties to central time. About 7 months after they began to observe central time, these counties submitted a new petition to move back to eastern time with additional convenience of commerce information that stated the previous petitions "were incomplete...and not backed by substantial and verifiable evidence." After DOT reviewed additional public comment, it moved some of the petitioning counties back to eastern time in its 2006-2007 rulemaking.

Given that the Department infrequently receives time zone change petitions, current staff have never been involved in a time zone change rulemaking, and

¹⁰ DOT Order 2100.6A states that "If the rule rests on scientific, technical, economic, or other specialized factual information, the OA or OST component should base the final rule on the best and most relevant reasonably obtainable evidence and data..."

time zone change decisions must be based on a type of impact evaluation not addressed by specific rulemaking procedures, DOT does not have controls in place to ensure that future time zone change decisions will be based on information that meets enhanced quality requirements. Time zone changes may have unanticipated, negative effects on residents and businesses if DOT does not ensure its decisions are based on the best and most relevant data.

DOT Has No Role in DST Exemptions but Can Do More To Foster and Promote Uniform Time Observance

DOT does not have the authority to grant petitions for exemptions from DST but is authorized and directed¹¹ to foster and promote widespread and uniform adoption and observance of the same standard of time within and throughout each such standard time zone. As part of this authorization, DOT issues the regulations¹² that define the boundaries of the standard time zones. However, the Department has no role in deciding which States or localities observe or are exempted from DST since this is determined by State governments pursuant to Federal law. DOT's role with regard to DST is overseeing compliance. Accordingly, DOT may request legal action if a State or locality is not observing DST in accordance with Federal law.¹³

Time zone and DST issues are important areas of DOT oversight because of their impacts on communities. Nevertheless, according to a DOT official, DOT does not actively monitor States or localities exempted from observing DST because the Department has no role in granting DST exemptions. Instead, a DOT official said they rely on the public and news reports to notify them of non-uniform observance of DST. This process is ad hoc and may also include reports of localities not following their designated standard time. However, when we asked about four localities in one area that the media recently reported are not following their designated time zone, the DOT official was not aware of them.

DOT has made one request to the U.S. Department of Justice (DOJ) since 1999 for legal action to correct DST observance and, therefore, time zone observance. DOT was unable to provide supporting documentation regarding the status of this legal action, but the action was triggered by a county's governing body informing the Department it would not observe its designated standard time. In

¹¹ 15 U.S.C. § 260.

¹² 49 C.F.R. Part 71 (2020).

¹³ 15 U.S.C. § 260a(c).

this 2006 request, DOT argued the locality would be in violation of the Federal law¹⁴ on DST observance when residents advanced their clocks for DST because that advancement would be based on the wrong time zone.

Moreover, DOT does not have an authoritative source of detailed time zone maps or DST observance information that members of the public could use to promptly and accurately identify areas of non-compliance. There are four publicly accessible DOT websites that contain substantial time zone or DST-related information, but they are not always accurate. Specifically:

1. A DOT website¹⁵ includes a list of DST-exempt locations, but this list is incomplete since it does not include the Northern Mariana Islands.
2. Eight of the nine U.S. time zones are listed on DOT's Uniform Time website,¹⁶ but this list does not include the Alaska time zone.
3. BTS includes a map it developed in response to requests from the public showing the four contiguous U.S. time zones on its "History of Time Zones" website¹⁷ (see exhibit F). However, a reader would likely view this only as a general visual aid since there is no indication on the website that this map is a verified depiction of the official boundaries in 49 C.F.R. Part 71. A DOT official explained how BTS coordinated with the Office of General Counsel, Office of Regulation to develop this visual representation of the time zones using the official time zone boundaries described in regulations. The official boundaries are narratively described with various types of coordinates and geographic features such as lines of longitude, State or county lines, and rivers. An example of a narrative boundary that is hard to visualize is provided in exhibit G, note 5. To generate a detailed map, BTS had to use other sources of information, including a locality's official cartographic file, to visualize the boundaries. A DOT official said the map went through an internal review process. However, there is no formal process for updating this map should the official boundaries change. Even with careful development, we identified two errors on this map. It does not show that Perry County, IN changed time zones during the period shown. Also, Elko County, NV is shown as the location that changed time zones rather than the correct location, the city of West Wendover. As a result of these inaccuracies, the title of the map and the related website text is incorrect. In fact, 15 counties and 1 locality—16 communities, not 15—have changed time zones since 1999.

¹⁴ 15 U.S.C. § 260a(a).

¹⁵ DOT. *Daylight Saving Time*. <https://www.transportation.gov/regulations/daylight-saving-time>.

¹⁶ DOT. *Uniform Time*. <https://www.transportation.gov/regulations/time-act>.

¹⁷ BTS. *History of Time Zones*. <https://www.bts.gov/geospatial/time-zones>.

4. BTS maintains a History of Daylight Savings Time website¹⁸ that describes background on this topic, but includes factual errors. Specifically, the term Daylight “Savings” Time is used in the title, first paragraphs, and map label on the page. The correct term is Daylight Saving Time. More importantly, the website incorrectly states: “[t]he authority to change DST...ultimately lies with the Department of Transportation, a power it has held since its foundation in 1966.” This is not accurate, as the authority to change the duration of DST remains with Congress. Additionally, this list of areas that do not observe DST is incomplete because it does not include non-observant U.S. territories.

Given the shortcomings of the time zone and DST-related information on DOT’s public websites, we reviewed other time zone information provided to the public by other Federal agencies. None of these sources were detailed enough to provide the level of information needed to easily identify specific time zone boundaries or DST observance. For example, the National Institute of Standards and Technology has a time zone map but it does not show detailed boundaries at the county or city level.

DOT also includes a time zone dataset¹⁹ in its publicly available NTAD. Skilled members of the public can use the geospatial data sets in NTAD to build detailed maps using geographic information system software to show specific transportation data. BTS maintains NTAD and datasets are updated quarterly. However, similar to the BTS time zone map, the NTAD time zone data set is only a representation of the official boundaries described in the regulations. A DOT official said there is no formal process for notifying BTS when the time zone boundary regulations are changed.

In the absence of a detailed, authoritative map of time zone boundaries from DOT, we used the only publicly available Federal Government county-level geospatial data set we could identify from the U.S. National Weather Service²⁰ (NWS) to develop a county-level time zone map (see exhibit G). But we found no authoritative Government source against which we could validate it. As shown in the notes in exhibit G, errors generated during the map creation process indicate that in some areas the data are not detailed enough to show counties in two different time zones. The map we generated from NWS data also shows Culberson County, TX is in two time zones, but it is not; lists Newport News, VA as not observing DST, although it does; and does not accurately show the DST observance boundaries in northeastern Arizona. To make the map we generated accurate so that DOT officials or the public can use it to identify non-uniform

¹⁸ BTS. *History of Daylight Savings Time*. <https://www.bts.gov/geospatial/daylight-savings-time>.

¹⁹ USDOT BTS ArcGIS Online. *Time Zones*. <https://data-usdot.opendata.arcgis.com/datasets/usdot::time-zones/explore>.

²⁰ NWS. *Zone-county Correlation File*. <https://www.weather.gov/gis/ZoneCounty>.

time observance within specific counties, we would have to compare the map boundaries with the detailed time zone boundary regulations DOT issues—as BTS did for its time zone map.

DOT is responsible for fostering and promoting widespread and uniform adoption and observance of the same standard of time and also issues the regulations that define the boundaries of standard time zones. However, currently the Department has not provided easy-to-use descriptions and visual representations of the official time zone boundaries. Without an authoritative DOT time zone map or geospatial data set and accurate web-based information, the American public does not have prompt access to detailed, reliable information on time-related authorities, time zone boundaries, and DST observance. As a result, DOT does not have the necessary information from its own monitoring or the public to identify and correct non-uniform time observance.

Conclusion

The American public relies on the Nation’s system of time zones and DST to safely travel and conduct commerce. Recent State and Federal legislation may change time zones or DST, underlining the need for DOT to be prepared for a potential increase in petitions for time zone changes and time-related oversight activities. However, without improved processes for evaluating time zone change impacts and processes for DST oversight, DOT cannot be sure it is prepared to execute its time zone and DST responsibilities effectively. Given the impact of these issues on communities, DOT oversight of these issues is essential for fostering and promoting uniform time observance, and granting those petitions for time zone changes that serve the convenience of commerce.

Recommendations

To improve the Department’s processes for evaluating the impact of time zone changes on the convenience of commerce and fostering uniform adoption and observance of standard time, we recommend that the General Counsel:

1. Evaluate the convenience of commerce questions to determine whether they reflect modern commerce-related impacts of time zone changes and, if necessary, update them.

2. Develop and implement guidance for collecting and validating information on the impact of proposed time zone changes that constitutes the best and most relevant evidence.
3. Conduct a study and provide a summary of findings to the public on whether non-uniform adoption and observance of time zones and DST is a problem Nationwide.
4. Review time zone and DST-related content on the following DOT websites to identify errors and make corrections.
 - DOT website "Daylight Saving Time"
 - DOT website "Uniform Time"
 - BTS website "History of Time Zones"
 - BTS website "History of Daylight Savings Time"
5. Develop and implement a process for maintaining and, when boundaries in the regulations change, updating a publicly available map and GIS dataset showing precise time zone boundaries.

Agency Comments and OIG Response

We provided OST with our draft report on July 21, 2022, and received its formal response dated August 19, 2022. OST's response is included in its entirety as an appendix to this report. OST concurred with all five of our recommendations and proposed appropriate actions and completion dates. Accordingly, we consider all recommendations as resolved but open pending completion of the planned actions.

Actions Required

We consider recommendations 1 through 5 resolved but open pending completion of planned actions.

Exhibit A. Scope and Methodology

This performance audit was conducted between March 2022 and July 2022. We conducted this audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our objective was to assess DOT's processes for evaluating and responding to requests from States and localities for (1) time zone changes and (2) DST exemptions. Early in the audit, we found DOT has no role in DST exemptions, but it is responsible for fostering and promoting uniform time observance, including DST. As a result, we focused our review on DOT's processes for evaluating petitions for time zone changes from 1999 to present, and its oversight of DST. As a limited scope audit we assessed available criteria and DOT documentation and conducted interviews with DOT staff during an abbreviated fieldwork phase.

We identified criteria related to DOT's processes for evaluating and responding to petitions for time zone changes and oversight of DST. We reviewed the Uniform Time Act of 1966, 15 U.S.C. §§ 260-267; the Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.*; 49 C.F.R. Part 71, *Standard Time Zone Boundaries*; 49 C.F.R. Part 5, *Administrative Rulemaking, Guidance, and Enforcement Procedures*; DOT Order 2100.6A, *Rulemaking and Guidance Procedures*; and DOT-OST-2019-0135, *DOT Information Dissemination Quality Guidelines*. We reviewed DOT's webpages on its rulemaking process and procedure for moving time zones. We also reviewed GAO's *Standards for Internal Control in the Federal Government*.

To assess DOT's processes for evaluating petitions for time zone changes, we reviewed the Federal Register for rulemakings and notices related to time zone changes. We confirmed the list of nine final rules and one denial of time zone change petitions between 1999 and 2010 with officials from the Office of General Counsel, Office of Regulation. We then reviewed these rulemakings for documentation of the Department's basis for its time zone change decisions. We also requested from the Department and reviewed additional documentation regarding these rulemakings, including to determine whether DOT officials ensured petitions included a certification that the request came from the locality's highest political authority, as required. To identify how Department officials would review petitions, especially with regard to the convenience of commerce, we interviewed officials from the Office of General Counsel, Office of Regulation and Office of the Chief Economist. We also requested documentation on the development of the convenience of commerce questions DOT uses to

guide its review of time zone change petitions but DOT could not provide any beyond a document with an older version of the questions.

To assess DOT's responsibilities for DST oversight, we interviewed officials from the Office of General Counsel, Office of Regulation. We collected media reports of counties and communities engaging in non-uniform observation of standard time. We also reviewed a 2006 request from DOT to DOJ for legal action to correct DST observance in a locality. We also requested documentation showing the disposition of the 2006 request but DOT could not produce any.

To assess the time zone and DST information DOT provides to the public, we reviewed five public DOT websites that contain substantial time zone or DST-related information. To understand the development of DOT's time zone maps and geospatial data sets, we interviewed officials from BTS. We also reviewed a time zone map maintained by the National Institute of Standards and Technology.

To develop a county-level time zone map, Office of Inspector General (OIG) statisticians performed an internet search for county-level time zone geospatial data maintained by a U.S. government organization. We reviewed the BTS website, but BTS did not have a dataset with time zone information at the county level and its time zone map specifically focused on the time zone boundary line and counties who have changed time zones recently. To create the map in exhibit G, we used the U.S. National Weather Service's county dataset, which included each county's time zone and whether the county is split between multiple time zones. OIG's search did not uncover other available government data sources at the county level. The map was created using R version 4.1.1 and the ggplot2 package. The audit team decided to label all counties split between multiple time zones as a "Counties Divided by a Time Zone Boundary" and show them as the same color.

We conducted limited data reliability testing on DOT's system of record for rulemakings, RMS, during a demonstration of the system. One of two time zone rulemakings we asked DOT officials to search for were not found in the system. We also identified two unrelated time zone rulemakings with the same Regulation Identifier Number, which should be unique to each rulemaking. Although a RMS user's manual indicated the system had some controls, it did not enable us to identify the cause of these errors. Based on that testing, we found that RMS data is not a reliable source of time zone change rulemaking documentation. However, DOT supplemented RMS documentation with documents pulled from other sources within DOT, such as a shared computer drive, and previous and current versions of OST's controlled correspondence system. OIG relied on this documentation and documentation published in the public dockets for time zone change rulemakings for its analysis.

Exhibit B. Organizations Visited or Contacted

Office of the Secretary of Transportation

OST Headquarters

Bureau of Transportation Statistics

Office of the Chief Economist

Office of General Counsel, Office of Regulation

Exhibit C. List of Acronyms

| | |
|--------|---|
| BTS | Bureau of Transportation Statistics |
| C.F.R. | Code of Federal Regulations |
| DST | Daylight Saving Time |
| DOJ | Department of Justice |
| DOT | Department of Transportation |
| GAO | Government Accountability Office |
| GIS | Geographic Information System |
| ICC | Interstate Commerce Commission |
| NTAD | National Transportation Atlas Database |
| NWS | National Weather Service |
| OIG | Office of Inspector General |
| OST | Office of the Secretary of Transportation |
| RMS | Rulemaking Management System |
| U.S.C. | United States Code |

Exhibit D. Major Contributors to This Report

| | |
|-----------------|--|
| WENDY HARRIS | PROGRAM DIRECTOR |
| REGAN GOLDSTEIN | PROJECT MANAGER |
| JULIA WASCOM | SENIOR ANALYST |
| JEROME WEI | SENIOR ANALYST |
| JULIO RODRIGUEZ | ANALYST |
| GEORGE ZIPF | SUPERVISORY MATHEMATICAL STATISTICIAN |
| GRACE ENTWISTLE | STATISTICIAN |
| ALLISON DUKAVAS | WRITER-EDITOR |
| SETH KAUFMAN | DEPUTY CHIEF COUNSEL |

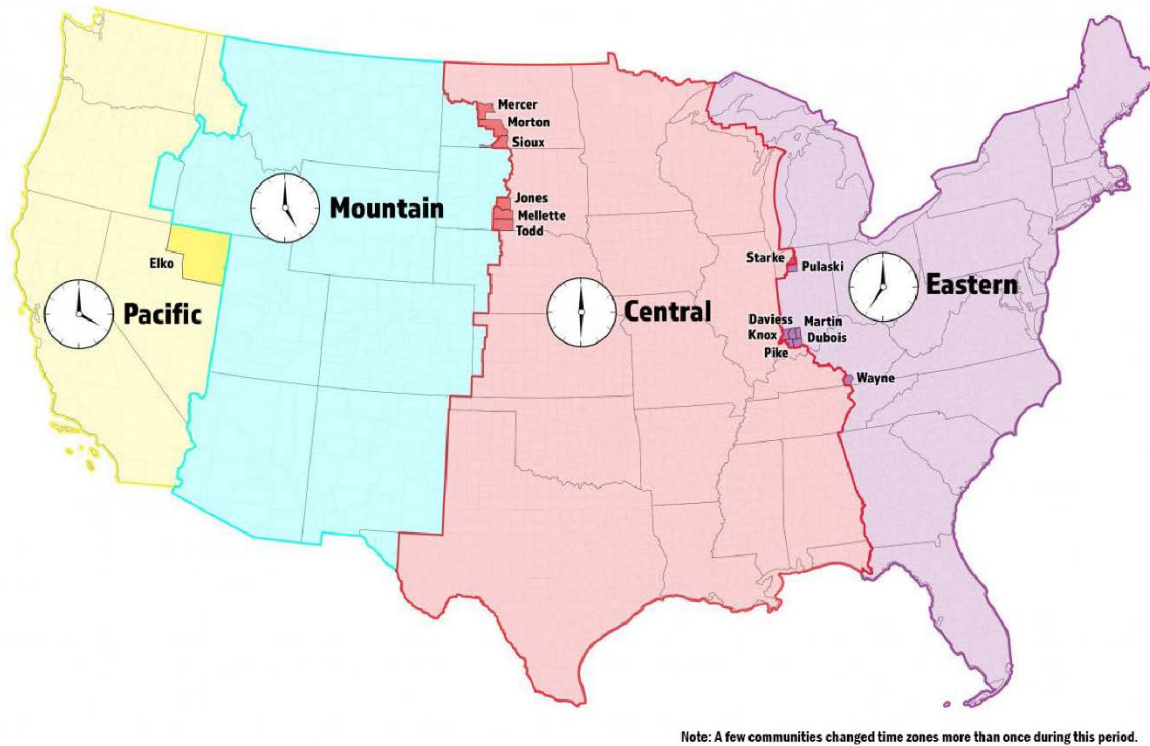
Exhibit E. Time Zone Rulemakings Since 1999

| Effective Date of the Final Rule | Regulation Identifier Number (RIN) and FR Citation | Result | Time Zone Change from: | Analysis of Convenience of Commerce Standard in DOT's Decision? |
|----------------------------------|--|--|------------------------|---|
| October 31, 1999 | 2105-AC80 64 FR 56705 | Changed: City of West Wendover, Nevada | Pacific to Mountain | No |
| October 29, 2000 | 2105-AC80 65 FR 50154 | Changed: Wayne County, Kentucky | Central to Eastern | Yes |
| October 26, 2003 | 2105-AD03 68 FR 43336 | Changed: Morton County, North Dakota | Mountain to Central | Yes |
| October 26, 2003 | 2105-AD17 68 FR 43334 | Changed: Sioux County, North Dakota | Mountain to Central | No |
| N/A* | None Posted 68 FR 53082 | Not Changed: Mercer County, North Dakota | N/A* | No |
| October 26, 2003 | 2105-AD30 68 FR 61371 | Changed: Jones, Mellette, and Todd counties, South Dakota | Mountain to Central | No |
| April 2, 2006 | 2105-AD53 71 FR 3228 | Changed: Starke, Pulaski, Knox, Daviess, Martin, Pike, Dubois, and Perry counties, Indiana | Eastern to Central | Yes |
| | | Not Changed: St. Joseph, Marshall, Fulton, Benton, White, Carroll, Cass, Vermilion, Sullivan, and Lawrence counties, Indiana | | |
| March 11, 2007 | 2105-AD65 72 FR 6170 | Changed: Pulaski County, Indiana | Central to Eastern | Yes |
| November 4, 2007 | 2105-AD71 72 FR 54367 | Changed: Knox, Daviess, Martin, Pike, and Dubois counties, Indiana | Central to Eastern | Yes |
| | | Not Changed: Perry County, Indiana | | |
| November 7, 2010 | None Posted 75 FR 60004 | Changed: Mercer County, North Dakota | Mountain to Central | Yes |

* Since DOT denied this county's petition to change time zones from Mountain to Central, there is no effective date. The denial of the petition for rulemaking was issued on August 29, 2003.

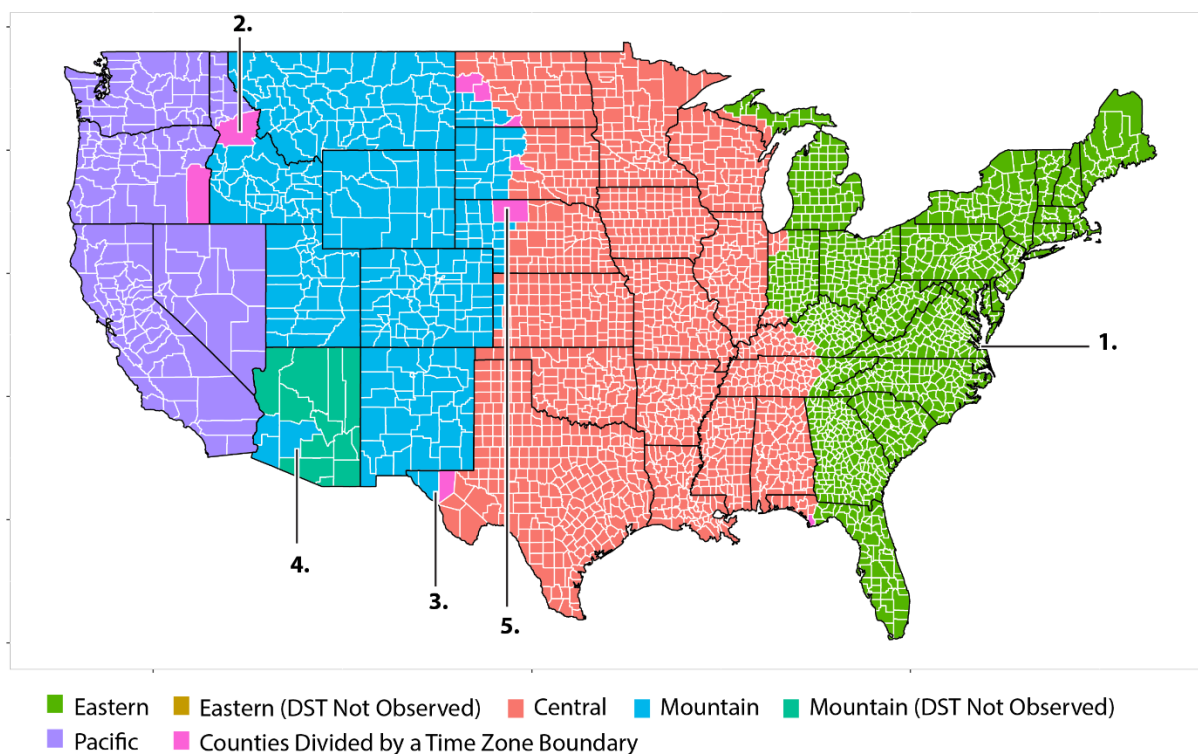
Source: OIG analysis of DOT's time zone rulemakings published in the Federal Register.

Exhibit F. BTS Unofficial Time Zone Map



Source: BTS. *History of Time Zones*.

Exhibit G. County-Level Time Zone Boundary Map



Examples of errors and inaccuracies shown on this map:

1. Newport News, VA is shown as "Eastern (DST Not Observed)" but this area observes DST.
2. The splits in divided counties are not shown. For example: Idaho County is partially split along the Salmon River.
3. Culberson County, TX is shown as a divided county, but the whole county is in the central time zone.
4. DST observance is noted incorrectly in Arizona. The State is in the mountain time zone, but some counties in the southwestern part of the State do not observe DST. The Navajo Nation in northeast Arizona observes DST.
5. One example of a time zone boundary line description OIG did not have sufficient information to verify on this map is the boundary line between the central and mountain time zones in South Dakota as described in 49 C.F.R. § 71.7 (b): "From the junction of the North Dakota-South Dakota boundary with the Missouri River southerly along the main channel of that river to the crossing of the original Chicago & North Western Railway near Pierre; thence southwesterly to the northern boundary of Jones County at the northeast corner of the NE 1, Sec. 6, T. 2 N., R. 30 E.; thence west along the northern boundary of Jones County; thence south along the western boundaries of Jones, Mellette and Todd Counties to the South Dakota-Nebraska boundary." The Chicago & North Western Railway went out of business in 1995.

Source: OIG analysis of National Weather Service geospatial data.

<https://www.weather.gov/gis/Counties>

Appendix. Agency Comments



**U.S. Department
of Transportation**

General Counsel

1200 New Jersey Ave., S.E.
Washington, D.C. 20590

Office of the Secretary
of Transportation

Subject: **INFORMATION:** Management Response to Office of
Inspector General Draft Report on DOT Process for
Evaluating the Impact of Time Zone Changes and
Promoting Uniform Time Observance

Date: August 19, 2022

From: John Putnam
General Counsel

A handwritten signature in blue ink, appearing to read "John Putnam", with a stylized flourish at the end.

To: David Pouliott
Assistant Inspector General for
Surface Transportation Audits

The U.S. Department of Transportation (DOT) has one of the Federal Government’s largest regulatory portfolios and one its most diverse—with responsibilities ranging from ensuring that our transportation system is safe, efficient, and inclusive, to addressing urgent challenges facing both the transportation system and the Nation, including the creation of good jobs, equity, consumer protection, and climate change. Congress has also vested the Office of the Secretary of Transportation (OST) with the oversight of the Nation’s time zones.

While DOT has not received a petition for a time zone rulemaking in almost 13 years, DOT has a robust history of responding to the unique needs of local communities seeking to change time zones. Historically, DOT staff have responded to these petitions by promptly analyzing them and the accompanying materials; publishing proposed rules; seeking written public comments on them; holding in-person, multi-day hearings in the affected local communities; analyzing and validating information provided by petitioners; and publishing final rules to document the Secretary’s determination of whether a time zone change served the “convenience of commerce.”

Like any of the other hundreds of important and timely matters in DOT’s regulatory portfolio, many controls exist to ensure that DOT’s time zone rulemakings meet the highest quality standards and are based on the most accurate and relevant data. DOT has codified in the Code of Federal Regulations (CFR) procedures that support the public’s ability to interact with the Department on rulemaking matters and activities. For example, in 49 CFR Part 5, DOT has promulgated procedures for the public to petition for rulemakings and exemptions. Those procedures define “rule” expansively, consistent with the Administrative Procedure Act, to ensure that the Department will consider a broad range of requests from the public regarding our regulatory programs. Further, DOT has issued internal procedures, such as DOT Order 2100.6A, “Rulemaking and Guidance Procedures” (June 7, 2021), which ensure that the diverse range of

issues DOT regulates—from critical safety matters to time zones—are supported by the best and most relevant evidence and data.¹

In addition to our existing rulemaking activities, OST has the following initiatives under way to address specific issues OIG described in its draft report:

- We have initiated an internal review of the example “convenience of commerce” questions posted on our website to determine whether they reflect modern commerce-related impacts of time zone changes.
- We have made two of the four edits requested to our website.
- We are developing an official DOT time zone map.

Based on our review of the draft report, we concur with OIG’s recommendations one, two, four and five as written. We also concur with OIG’s recommendation three and we will coordinate with the Office of the Assistant Secretary for Transportation Policy, which has agreed to perform the study. We plan to complete actions to address recommendations 1, 4, and 5 by December 31, 2022, and recommendations 2 and 3 by December 31, 2023.

We appreciate the opportunity to review the OIG draft report. Please contact Jill Laptosky, at 202-493-0308 with any questions.

¹ See e.g., DOT Order 2100.6A, DOT regulations housed in 49 CFR part 5, the Administrative Procedure Act, and related legal requirements governing the rulemaking process.

U.S. Department of Transportation
Office of Inspector General

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