



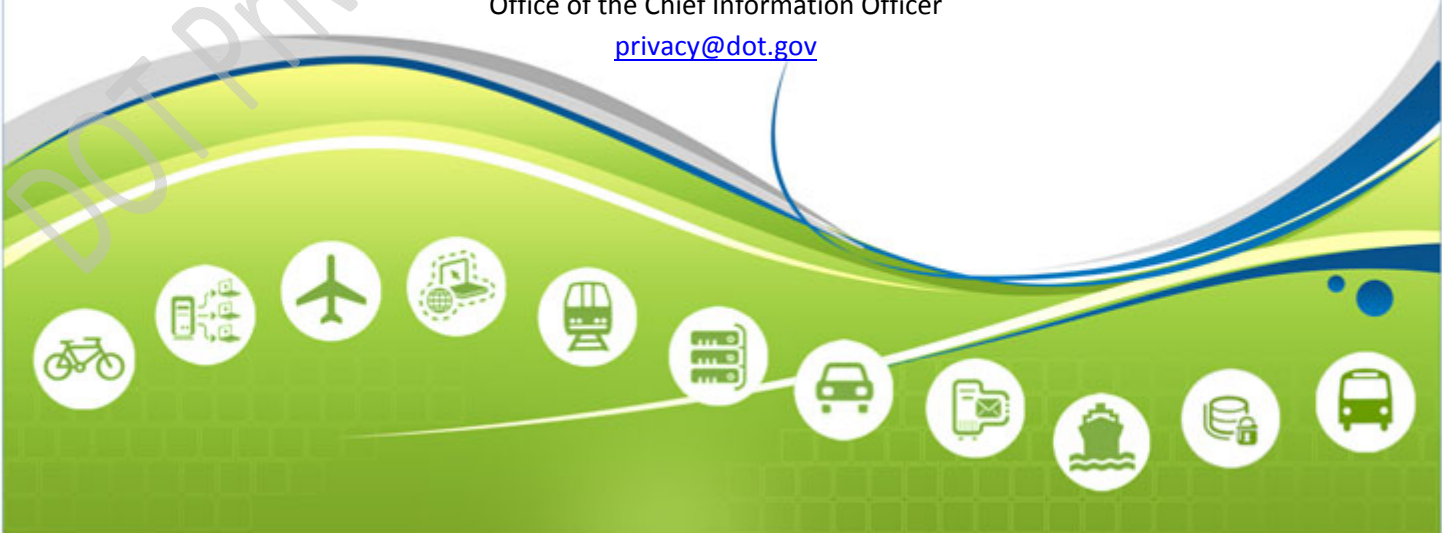
**U.S. Department of Transportation**  
**Privacy Impact Assessment**  
**Federal Railroad Administration (FRA)**  
**Locomotive Recording Devices for Passenger Trains**  
**Notice of Proposed Rulemaking**

**Responsible Official**

Christian Holt  
Operating Practices Specialist  
Office of Safety Assurance and Compliance  
Federal Railroad Administration  
202-366-0978

**Reviewing Official**

Claire W. Barrett  
Chief Privacy & Information Asset Officer  
Office of the Chief Information Officer  
[privacy@dot.gov](mailto:privacy@dot.gov)



## Executive Summary

Section 11411 of the Fixing America's Surface Transportation Act, Pub. L. 114-94, 129 Stat. 1686 (Dec. 4, 2015) (FAST Act), codified in the Federal railroad safety laws at 49 U.S.C. 20168, requires FRA (as the Secretary of Transportation's delegate) to promulgate regulations requiring each railroad carrier that provides regularly scheduled intercity rail passenger or commuter rail passenger transportation to the public to install inward- and outward-facing image recording devices (cameras) in all controlling locomotives of passenger trains. In light of the FAST Act mandate and consistent with the Federal railroad safety laws at 49 U.S.C. 20103, relevant National Transportation Safety Board (NTSB) recommendations, discussions of the Railroad Safety Advisory Committee (RSAC) Recording Devices Working Group, and recent accidents and other railroad safety incidents, FRA is proposing to require the installation of inward- and outward-facing recording devices in all lead locomotives of passenger trains to promote railroad safety. In addition, FRA is proposing to require that these devices record while a lead locomotive is in motion, and retain the data in a crashworthy memory module. The notice of proposed rulemaking (NPRM) does not propose to require recording devices in freight locomotives.<sup>1</sup> For a summary of the proposed camera functions in the NPRM, see Appendix A to this Privacy Impact Assessment.

The NPRM proposes that within four years of the final rule's publication, intercity passenger and commuter railroads (passenger railroads) will be required to install compliant camera systems on the lead locomotives of all their passenger trains. As required by statute, this NPRM also proposes that the last twelve hours of data recorded by such devices on passenger train lead locomotives must be stored in a memory module that meets the existing crashworthiness requirements in FRA's locomotive event recorder regulation at 49 CFR part 229. This recorded data may be used by passenger railroads to investigate accidents and to ensure employee compliance with relevant railroad safety rules and regulations. In addition, FRA and other Federal investigative agencies may use this data during railroad accident investigations and investigations of railroad safety violations. The data may also be used in investigations of criminal incidents. For example, it is possible that inward-facing cameras could capture intentional criminal acts, such as vandalism, theft of property, or interference with the passenger train operations, including terrorist acts. Railroads would provide such recordings to Federal and State agencies with authority to investigate and prosecute such criminal incidents. The image recordings proposed to be made and retained by the railroad carriers may allow them to identify persons occupying the cabs of locomotives (or in some instances persons located outside the locomotive cab) by facial or other physical features. Facial images are considered Personally Identifiable Information (PII). FRA may gather these images during investigations about such persons or during investigations into accidents/incidents. This privacy impact assessment (PIA) is necessary to provide information about the NPRM's proposed requirement to install and use inward- and outward-facing cameras in all lead locomotives of passenger trains. This PIA will discuss why and how PII will be stored and used, to fulfill the requirements of Section 552 of the Consolidated Appropriations Act of 2005 (codified at 42 U.S.C. 2000ee-2). This PIA is available in the public docket for the NPRM (Docket No. FRA 2016-0036) and on the Department's privacy Web site at <https://www.transportation.gov/privacy>.

---

<sup>1</sup> [Locomotive Image and Audio Recording Devices for Passenger Trains](#), 84 FR 35712, July 24, 2019.

## What is a Privacy Impact Assessment?

*The Privacy Act of 1974 articulates concepts for how the federal government should treat individuals and their information and imposes duties upon federal agencies regarding the collection, use, dissemination, and maintenance of PII. The E-Government Act of 2002, Section 208, establishes the requirement for agencies to conduct PIAs for electronic information systems and collections. The assessment is a practical method for evaluating privacy in information systems and collections, and documented assurance that privacy issues have been identified and adequately addressed. The PIA is an analysis of how information is handled to—i) ensure handling conforms to applicable legal, regulatory, and policy requirements regarding privacy; ii) determine the risks and effects of collecting, maintaining and disseminating information in identifiable form in an electronic information system; and iii) examine and evaluate protections and alternative processes for handling information to mitigate potential privacy risks.<sup>2</sup>*

*Conducting a PIA ensures compliance with laws and regulations governing privacy and demonstrates the U.S. Department of Transportation's (DOT) commitment to protect the privacy of any personal information we collect, store, retrieve, use and share. It is a comprehensive analysis of how the DOT's electronic information systems and collections handle PII. The goals accomplished in completing a PIA include:*

- Making informed policy and system design or procurement decisions. These decisions must be based on an understanding of privacy risk, and of options available for mitigating that risk;*
- Accountability for privacy issues;*
- Analyzing both technical and legal compliance with applicable privacy law and regulations, as well as accepted privacy policy; and*
- Providing documentation on the flow of personal information and information requirements within DOT systems.*

*Upon reviewing the PIA, one should have a broad understanding of the risks and potential effects associated with the Department's activities, processes, and systems described and approaches taken to mitigate any potential privacy risks.*

## Introduction & Overview

### Overview: Federal Railroad Safety Regulations

FRA's primary mission is to enable the safe, reliable, and efficient movement of people and goods in the United States. One of the ways in which FRA does so is by developing and enforcing data-driven regulations that balance railroad safety with industry efficiency to reduce railroad accidents, damage to property, environmental damage, injuries, and fatalities. FRA promulgates and enforces a comprehensive regulatory program under Federal railroad safety laws.

---

<sup>2</sup>Office of Management and Budget's (OMB) definition of the PIA taken from guidance on implementing the privacy provisions of the E-Government Act of 2002 (see OMB memo of M-03-22 dated September 26, 2003).

The accompanying NPRM proposes to require the installation and use of inward- and outward-facing recording devices in all passenger train lead locomotives to promote railroad safety. FRA has become increasingly concerned about railroad accidents involving human factors where there is a lack of information to conclusively determine what caused or contributed to an accident. FRA has increasing concern about railroad accidents and safety violations caused by distracted electronic device usage while performing safety-related duties, such as operating a moving train, when fellow crewmembers are performing on ground functions around a train, riding rolling equipment during a switching operation, or when any railroad employee is assisting in the preparation of the train for movement. These incidents continue to occur even after Federal and industry efforts to prohibit on-duty operating employees from using such distracting devices. The NTSB has characterized the use of personal electronic devices in the railroad industry as pervasive.

The purpose of image and audio recordings is to deter conduct that may lead to railroad accidents, to aid in railroad accident investigations, and to identify action(s) necessary to prevent accidents in the future. The railroad industry is a highly regulated industry. Passenger train accidents can have catastrophic consequences affecting the safety of the public, railroad passengers, passenger railroad employees and contractors, and the environment. As such, many Federal statutes and regulations already govern railroad carrier employees' performance of safety-related duties when they occupy the cab of a lead locomotive. FRA has concluded that the use of inward- and outward-facing image recording devices is necessary to combat practices that endanger public safety. Moreover, the FAST Act mandated FRA promulgate regulations requiring the installation of inward- and outward-facing recording devices on lead passenger train locomotives. FRA believes that the need to address this continuing safety risk outweighs any concerns of railroad crewmembers for personal privacy while they are operating passenger trains or performing other safety-related functions while in the cab of a lead locomotive cab. The expectation of privacy of covered employees (train crewmembers) is diminished because of their participation in an industry that is heavily regulated in order to ensure the safety of the American public.

The proposed camera requirements would supplement FRA's existing locomotive event recorder regulation at 49 CFR part 229. Locomotive event recorders are required on the lead locomotives of trains traveling over 30 mph and record numerous operational parameters that assist in accident/incident investigations and prevention. Through 49 CFR 229.135, FRA has long required locomotive event recorders to be able to record the operational parameters of the controlling locomotive of a train traveling over 30 mph. Event recorders are an important tool in accident/incident investigations and prevention and are required by 49 U.S.C. 20137. An image of the locomotive engineer from an inward-facing camera will supplement the event recorder requirement by providing railroad carriers and Federal and State accident investigators information regarding an engineer's actual manipulation of locomotive controls and other actions, the operating environment, and other factors that could affect a train's operation prior to an accident. Importantly, such recordings should also act to further deter train crews from the prohibited use of personal electronic devices.

#### **Collection of PII**

The NPRM will require that recordings from inward-facing cameras record images and/or audio of passenger railroad employees or any other persons in the lead locomotive cab (e.g., FRA railroad safety inspectors). Outward-facing cameras may also record images of individuals outside a lead locomotive cab (e.g., pedestrians or motorists at highway-rail grade crossings). The employer, FRA, NTSB or law enforcement may use these images or audio recordings to identify individuals.

In conformity with the FAST Act, the NPRM proposes that these devices record while a lead locomotive is in motion and that at least the last twelve hours of recorded data be retained in a crashworthy memory module. The NPRM also will require passenger railroads to retain recordings for one year from the date of an accident. During that time, FRA, the NTSB, or other local, State, or Federal law enforcement officials may take possession of the recordings for investigative purposes. In addition to the video and/or audio recording, information such as the name, date of birth, address, telephone number, railroad carrier employee identification number, etc. of individuals may be collected by FRA pursuant to an investigation.

### **Privacy Concerns and Consideration by FRA**

The FAST Act mandates that FRA (as the Secretary of Transportation's delegate) promulgate regulations requiring the installation of inward- and outward- facing cameras on passenger train lead locomotives. The recording of the inward-facing camera is done only in the lead locomotive cab, which may be occupied by other crew members in addition to the engineer during an on-duty period. The FAST Act prohibits railroad carriers from using in-cab audio or image recordings to retaliate against an employee (49 U.S.C. 20168(i)). If these recordings were used to retaliate against an employee, it would also be a violation of 49 U.S.C. 20109 (a railroad employee whistleblower law). While enforcement of prohibited retaliation against employees does not lie with FRA, but rather with other Federal and state agencies or the courts in private causes of action, FRA strongly recommends passenger railroads adopt and adhere to policies that strictly prohibit such potential non-safety related abuses of locomotive recordings.

The proposed outward-facing image recording device requirements are intended to fulfill the safety-related investigation purposes of recording: (1) events leading up to a train collision; (2) highway-rail grade crossing or trespasser accidents, including motor vehicle carrier actions leading up to such accidents and the functioning of any visible active grade crossing warning devices; (3) wayside signal indications; (4) visible condition of structures and track (e.g., position of switch points, broken rails where visible, bridge conditions, washouts, etc.) that an equipped locomotive approaches and travels over; and (5) any other events relevant to a collision or derailment. FRA developed the proposed text of 49 CFR 229.136(b) with the goal of recording devices capturing images to provide information to help the safety-related investigations of the above-listed events and conditions. As stated above, FRA is aware that these cameras may capture images of pedestrians and motorists at highway rail grade crossings. FRA will only obtain this information from passenger railroads pursuant to an accident investigation.

Recordings of graphic and violent content are particularly of concern. In 49 U.S.C. 1114(d) and 1154(a), Congress required NTSB to take possession of graphic or violent recordings during the course of its investigations. When the NTSB takes possession of such locomotive recordings, it is prohibited from publicly releasing their graphic content. NTSB may only release transcripts of the recordings. Additionally, 49 U.S.C. 20168(h) precludes the release of audio, images, or transcripts of oral communications. The FAST Act also prohibits FRA from publicly disclosing locomotive audio and image recordings.

The NPRM does not propose audio recording devices, but is requesting comment on whether to require such devices in a final rule. Although such devices could be useful for conducting post-accident investigations. FRA has concerns about audio recordings aboard locomotives made during periods when no safety-related duties are actively being performed (e.g., sitting at a stop signal in a siding). Recordings during such time periods would likely include personal conversations between employees and might have much more potential for abuse than do inward-facing image recordings. It should be noted that nothing proposed in the NPRM would preclude a railroad carrier from voluntarily installing audio recording devices in its locomotives.

## Fair Information Practice Principles (FIPPs) Analysis

*The DOT PIA template is based on the fair information practice principles (FIPPs). The FIPPs, rooted in the tenets of the Privacy Act of 1974, 5 U.S.C.552a, are mirrored in the laws of many U.S. States, as well as many foreign nations and international organizations. The FIPPs provide a framework that will support DOT's efforts to appropriately identify and mitigate privacy risk. The FIPPs-based analysis conducted by DOT is predicated on the privacy control families articulated in National Institute of Standards and Technology (NIST) Special Publication 800-122, Guide to Protecting the Confidentiality of Personally Identifiable Information (PII), and the Privacy Controls articulated in Appendix J of NIST Special Publication 800-53, Security and Privacy Controls for Federal Information Systems and Organizations.<sup>3</sup>*

### Transparency

*Sections 522a(e)(3) and (e)(4) of the Privacy Act and Section 208 of the E-Government Act. 44 U.S.C. 3501 and 3601 et seq., require public notice of an organization's information practices and the privacy impact of government programs and activities. Accordingly, DOT is open and transparent about policies, procedures, and technologies that directly affect individuals and/or their PII. Additionally, the Department should not maintain any system of records the existence of which is not known to the public.*

FRA announced at a May 2015 meeting of the Railroad Safety and Advisory Committee (RSAC) that it intended to draft an NPRM that would propose the installation of locomotive recording devices in freight and passenger train locomotives. RSAC is composed of representatives from all facets of the railroad industry, from railroad carriers to labor to industry associations. The RSAC established the Recording Devices Working Group (Working Group) to recommend specific actions regarding the installation and use of locomotive-mounted recording devices, such as inward- and outward-facing video and audio recorders. Working Group discussions addressed the privacy concerns of inward- and outward-facing cameras.

In an effort to be transparent about privacy concerns generated using these cameras, FRA published a "Privacy Concerns" section in the preamble to the NPRM. The NPRM will be posted on regulations.gov for public review and comment. Along with this PIA, the NPRM may be found under Docket No. FRA 2016-0036. Comments received in response to the NPRM will also be posted to the NPRM's docket without change for public review. Additionally, the NPRM will be published in the Federal Register for public review and comment. The final rulemaking will be published in the Federal Register. The final rule will detail the comment received, and FRA's resultant actions. To further bolster FRA's attempts at transparency, FRA has published this PIA to the DOT Privacy Website.

### Individual Participation and Redress

*DOT should provide a reasonable opportunity and capability for individuals to make informed decisions about the collection, use, and disclosure of their PII. As required by the Privacy Act, individuals should be active participants in the decision making process regarding the collection and use of their PII and be*

<sup>3</sup> <http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r4.pdf>

*provided reasonable access to their PII and the opportunity to have their PII corrected, amended, or deleted, as appropriate.*

The FAST Act requires that FRA promulgate a rule that requires the use of inward- and outward-facing cameras. FRA will only take possession of recordings generated by these cameras in the event of an incident or accident. This means that FRA will not possess most of the images captured by these recordings. These recordings will be the property of the passenger railroads.

If FRA takes possession of image or audio recordings, it will be because an incident or accident has occurred. The FAST Act requires that FRA not publicly disclose these recordings, or transcripts of oral communications between train, operating, and communication center employees related to an accident FRA is investigating. FRA may make public a transcript or a written description of visual information it deems relevant to the accident at the time other factual reports on the accident are released to the public.

Individuals may request access to their own records maintained in a records system under FRA control by complying with DOT Privacy Act regulations found in 49 CFR part 10. Privacy Act requests for access to an individual's records must be in writing, and may be mailed, faxed, or emailed.

Title 49 CFR part 10 requires the request to include a description of the records sought, the requester's full name, current address, and date and place of birth. The request must be signed and either notarized or submitted under penalty of perjury. Additional information and guidance regarding DOT's Freedom of Information Act/Privacy Act program may be found on the DOT Web site <https://www.transportation.gov/privacy> or by writing to this address or e-mail:

Federal Railroad Administration  
Attn: FOIA/PA Team  
1200 New Jersey Avenue SE  
Washington, DC 20590  
Fax: (202) 493-6068

or

E-mail: [FRAFOIA@dot.gov](mailto:FRAFOIA@dot.gov)

## **Statutory Authority and Purpose Specification**

*DOT should (i) identify the legal bases that authorize a particular PII collection, activity, or technology that impacts privacy; and (ii) specify the purpose(s) for which it collects, uses, maintains, or disseminates PII.*

FRA has the statutory responsibility to conduct railroad accident investigations by 49 U.S.C. 20107(a) and 20902. The FAST Act, Pub.L. 114–94, mandated that FRA (as the Secretary of Transportation's delegate) promulgate regulations requiring each railroad carrier that provides regularly scheduled intercity rail passenger or commuter rail passenger transportation to the public to install inward- and outward-facing cameras in all controlling locomotives of passenger trains.

The FAST Act expressly provides three permissible uses of locomotive image recordings on passenger trains. The three purposes stated in the FAST Act are: (1) verifying that train crew actions are in accordance with applicable safety laws and the railroad carrier's operating rules and procedures; (2) assisting in an investigation into the

causation of a reportable accident or incident; and (3) to document a criminal act or monitoring unauthorized occupancy of the controlling locomotive cab or car operating compartment. FRA has incorporated these limited uses into the NPRM to ensure the proposed regulation closely follows the FAST Act's requirements.

As previously stated, FRA is proposing to require the installation of inward- and outward-facing locomotive image recording devices on all lead locomotives in passenger trains. These devices will record while a lead locomotive is in motion and retain at least the last twelve hours of recorded data in a crashworthy memory module. Locomotive-mounted image recording devices (and potentially audio recording devices), will supplement locomotive event recorders by providing railroads and Federal and State accident investigators information regarding an engineer's use of locomotive controls, information about the engineer's actions and environment, and other relevant factors prior to an accident. Such recordings, when regularly reviewed by passenger railroads, may also provide a deterrent to train crews' distracting use of personal electronic devices, which the NTSB cites as the cause of several railroad accidents. The recordings would provide necessary evidence to railroad management and FRA, so appropriate corrective or enforcement actions can be taken.

### Data Minimization & Retention

*DOT should collect, use, and retain only PII that is relevant and necessary for the specified purpose for which it was originally collected. DOT should retain PII for only as long as necessary to fulfill the specified purpose(s) and in accordance with a National Archives and Records Administration (NARA)-approved record disposition schedule. Forms used for the purposes of collecting PII shall be authorized by the Office of Management and Budget (OMB).*

FRA is proposing to require installation of inward- and outward-facing locomotive image recording devices on all lead locomotives in passenger trains. This recorded data may be used by railroads only to investigate accidents and to ensure employee compliance with relevant railroad safety rules and regulations. Aside from uses by the railroad, the rulemaking limits the distribution of the data to FRA and other Federal investigative agencies. These agencies use this data during railroad accident investigations and in the investigation of railroad safety violations or criminal incidents. Such criminal incidents could include, but are not limited to, vandalism, theft of property, interference with passenger train operations, or even acts of terrorism. FRA will provide inward- and outward-facing camera footage to Federal and State authorities with appropriate jurisdictional and legal authority for such data.

The proposed rule is silent on the issue of a specific recording device run-time after a locomotive has stopped moving, and is also silent on any shut-off requirements after a locomotive has stopped moving. Under this NPRM, passenger railroads will have discretion to decide whether locomotive recording devices will continue to record when a locomotive is not in motion (as long as the railroad retains the last 12 hours of operation of the locomotive on a memory module). FRA has requested public comment addressing the privacy implications regarding recordings being made during down times where no safety-related duties might be actively performed by a train crew. FRA has also requested public comment on whether passenger railroads should be exempt from any requirement to stop locomotive-mounted recording devices from recording when a train is stopped.

In conformance with the FAST Act, the NPRM requires that railroads preserve and maintain incident or accident data for one year after the occurrence of the event to allow FRA, and other Federal investigative agencies such as the NTSB, to take possession of locomotive recordings after reportable railroad accidents/incidents under 49 CFR part 225 occur. FRA and other Federal investigative agencies may also take possession of recordings to investigate violations of Federal railroad safety regulations, laws, or orders.



FRA may take possession of locomotive image recordings when FRA staff are conducting accident investigations or investigating violations of Federal rail safety requirements. Recordings taken into possession by FRA will be governed by FRA's existing chain-of-custody procedures. These procedures apply to the handling of all evidence during railroad accident investigations. Such recordings may also ultimately be stored on FRA's computer systems, to include the Factual Accident Reporting System (FARS), the Railroad Enforcement System (RES), and the Railroad Compliance System (RCS). Image recordings in FRA's possession may be used as evidence in FRA enforcement actions. FRA will retain these records based on how FRA uses the recording and the agency's current record retention schedules.<sup>4</sup>

## Use Limitation

*DOT shall limit the scope of its PII use to ensure that the Department does not use PII in any manner that is not specified in notices, incompatible with the specified purposes for which the information was collected, or for any purpose not otherwise permitted by law.*

FRA minimizes its data collection to that necessary to meet the agency's mission. As previously stated, data collected may be used in criminal or accident investigations, or during investigations of violations of any Federal railroad safety law.

In practice, FRA will rarely take possession of recordings. For serious accidents, FRA anticipates the NTSB will take possession of them and provide FRA with the opportunity to view or listen to the recordings, and FRA may conduct its own parallel investigation. When NTSB takes possession of locomotive recordings, it is prohibited from releasing the recordings' contents. Only transcripts may be released as part of NTSB's accident investigation proceedings.

For other accidents or incidents where only FRA is investigating, FRA inspectors may choose to view the recordings while they remain in the custody of the passenger railroad without taking possession of them. However, in instances where FRA has a legal or evidentiary need to take physical possession of a recording after an accident, the FAST Act, at 49 U.S.C. 20168(h), provides an exemption from disclosure.

FRA will not publicly disclose locomotive audio and image recordings, or transcripts, of communications between train crews, operating, and communication center employees related to an accident FRA is investigating. FRA may publicly release a transcript or a written depiction of visual information that FRA deems relevant to the accident at the time other factual reports on the accident are released to the public.

## Data Quality and Integrity

*In accordance with Section 552a(e)(2) of the Privacy Act of 1974, DOT should ensure that any PII collected and maintained by the organization is accurate, relevant, timely, and complete for the purpose for which it is to be used, as specified in the Department's public notice(s).*

---

<sup>4</sup> For example, recordings used as part of a major FRA accident investigation would be a permanent record, and transferred to the National Archives and Records Administration no later than 15 years after closure of the investigation (record series 6110.1). A minor accident investigation would be a temporary record, and retained by FRA not more than 5 years before being destroyed (record series 6110.2). Finally, a recording used as part of a violation report in RES would be a temporary recording and be retained not more than 3 years (record series 2160.1).

The NPRM proposes that passenger railroads adopt and comply with a chain-of-custody procedure governing the handling and the release of locomotive recordings (49 CFR 229.136(f)) for post accident/incident recordings provided to FRA or other Federal agencies. The chain-of-custody procedure must specifically address the preservation and handling requirements for post-accident/incident recordings that are provided to FRA or other Federal agencies during an accident/incident investigation. A passenger railroad's failure to comply with its procedures would be a violation of the Federal railroad safety regulations, if the proposed section is adopted in the final rule. This requirement will further protect locomotive image recordings from inappropriate use, unauthorized release, potential for abuse, and the loss of personal privacy. In addition, the NPRM specifies that the passenger train lead locomotive recording devices should: (1) have a minimum 12-hour continuous recording capability; (2) record on a certified crashworthy memory module; and (3) have recordings that are accessible for review during an accident or incident investigation.

The FAST Act allows railroads to take enforcement or administrative action against employees who tamper with or disable an audio or inward- or outward-facing image recording device installed by the railroad. 49 U.S.C. 20168(f).

## Security

*DOT shall implement administrative, technical, and physical measures to protect PII collected or maintained by the Department against loss, unauthorized access, or disclosure, as required by the Privacy Act, and to ensure that organizational planning and responses to privacy incidents comply with OMB policies and guidance.*

According to best business practices, FRA will require data transferred to authorized FRA safety officials to be secured, encrypted, or, in the case of a display or print-out, physically protected, reducing the likelihood of the unauthorized disclosure of sensitive data.

FRA has proposed that wired or wireless connections provided on a locomotive be equipped to ensure only authorized passenger railroad employees can download image and audio recordings from the certified crashworthy memory module or any other standard memory module. Due to potential for locomotive image and audio recording systems misuse, FRA proposes that passenger railroads use electronic security measures to ensure only authorized railroad personnel can download recordings. Such security measures could include password or passcode protection to access a memory module. FRA is seeking comment as to whether appropriate electronic download and security features, such as encryption, should be specified in the final rule, or whether such features are better addressed by individual passenger railroads or an industry-adopted standard.

All FRA IT systems comply with all prevailing DOT, FRA, and Federal IT security standards, policies, and reporting requirements. Data collected by FRA will be protected by reasonable security safeguards against loss or unauthorized access, destruction, usage, modification, or disclosure during transmission and when stored or processed.

FRA personnel and contractors are required to attend security awareness and privacy training offered by DOT/FRA. Additionally, FRA personnel and contractors with significant security responsibilities and privileged access to systems that store PII data are given role-based specialized training in their core competency areas. This allows individuals with varying roles to understand how privacy and security impacts their roles and retain knowledge of how to properly and securely act in situations where they may use business information while performing their duties.

Access to these systems will be automatically restricted by systems and policies, with oversight conducted by the DOT/FRA CyberSecurity Office and management-level government personnel for FRA systems. No access will be allowed to FRA systems prior to receiving the necessary clearances and training as required by DOT/FRA.

FRA will not publicly disclose locomotive audio and image recordings or transcripts of communications by or among train employees or other operating employees, related to an accident or incident FRA is investigating, in accordance with 49 U.S.C. 20168(h). FRA may make public a transcript or a written depiction of visual information it deems relevant to the accident at the time other factual reports on the accident are released to the public.

## Accountability and Auditing

*DOT shall implement effective governance controls, monitoring controls, risk management, and assessment controls to demonstrate that the Department is complying with all applicable privacy protection requirements and minimizing the privacy risk to individuals.*

In most instances, FRA will only receive recorded data from passenger railroads during accident investigations or investigations of railroad safety violations or criminal incidents. In accordance with Federal cyber security and privacy regulations and DOT Cyber Security Policies, FRA will conduct regular periodic security and privacy assessments of the FRA system that will store the records collected as proposed by the NPRM. FRA is responsible for identifying, training, and holding agency personnel accountable for adhering to FRA's privacy and security policies as well as Federal regulations. In addition to these practices, other security and privacy policies and procedures will be consistently applied, especially as they relate to record protection, transmission, retention, and destruction. Federal and contract employees will be given clear guidance in their duties as they relate to collecting, using, processing, and securing this data. Guidance will be provided in the form of mandatory annual security and privacy awareness training as well as acceptable rules of behavior. FRA will follow the Fair Information Practice Principles (FIPPS) as best practices for the protection of data that will be collected from the passenger railroads associated with the inward- and outward-facing image recording devices.

## Responsible Official

Christian Holt  
Operating Practices Specialist  
Office of Safety Assurance and Compliance  
Federal Railroad Administration  
202-366-0978

## Reviewing Official

Claire W. Barrett  
Chief Privacy & Information Asset Officer  
Office of the Chief Information Officer  
[privacy@dot.gov](mailto:privacy@dot.gov)

## Appendix A – Recording Device Specifications

### Proposed Locomotive Image Recording Device Functions:

The NPRM proposes the technical specification of locomotive image recording systems on passenger train controlling locomotives. The NPRM explains what must be captured by outward-facing image recording devices, and has proposed general functional requirements instead of equipment specifications to accommodate the development of future technologies capable of fulfilling the image recorder requirements.

The proposed outward-facing image recording device requirements are intended to fulfill the safety-related investigation purposes of recording: (1) events leading up to a train collision; (2) highway-rail grade crossing or trespasser accidents, including motor vehicle operator actions leading up to such accidents and the functioning of any visible active grade crossing warning devices; (3) wayside signal indications; (4) visible condition of structures and track (e.g., position of switch points, broken rails where visible, bridge conditions, washouts, etc.) that an equipped locomotive approaches and travels over; and (5) any other events relevant to a collision or derailment. FRA developed the proposed text of 49 CFR 229.136(b) with the goal of recording devices capturing images to provide information to help the safety-related investigations of the above-listed events and conditions.

Specifically, the NPRM proposes that the outward-facing image recording device system consist of one or more image recording device(s) (camera(s)) which must be aligned to point parallel to the centerline of tangent track on which the locomotive is traveling. FRA has specified that the recordings made will have to be able to distinguish different wayside signal aspects. FRA believes this feature of outward-facing image recordings would be critical in post-accident investigations in determining whether signal systems were properly functioning, properly displayed, and complied with by train crews.

Next, the NPRM proposes that outward-facing image recording devices on lead passenger train locomotives must be able to function in both day and lowlight/nighttime conditions with illumination from the equipped locomotive's headlight. FRA also proposes that outward-facing image recording devices must record at a minimum recording rate of 15 frames per second (fps) (or its equivalent). FRA believes a minimum 15 fps requirement will provide accident investigators and railroads a sufficient image recording to analyze the events leading up to a grade crossing collision or other collisions, while balancing cost concerns. FRA also proposes to require that an accurate time and date stamp be on outward-facing image recordings.

The FAST Act establishes that a railroad carrier is not required to cease or restrict operations upon a technical failure of an inward- or outward-facing image recording device, but that such device shall be repaired or replaced "as soon as practicable." 49 U.S.C. 20168(j). FRA has specified in the accompanying NPRM that "as soon as practicable" would mean that if a passenger train's lead locomotive's outward-facing image recording system fails, it could not be used as a passenger train's lead locomotive after the next calendar day's inspection of the locomotive required by § 229.21 unless a railroad has first replaced or repaired the recording system.

The NPRM also proposes functional requirements for the inward-facing image recording device on a passenger train lead locomotive. These requirements do not apply to inward-facing image recorders installed on freight trains. FRA's proposal does not specify the number of inward-facing recording devices that would be required in a passenger train's lead locomotive, but rather that the installed devices must provide complete coverage of all areas of the locomotive cab where a person typically may be positioned, including an unobstructed view of the instruments and

controls required to operate the controlling locomotive in normal use. This would include image recording coverage of extra permanent seats in the cab and any jump seats. Multiple in-cab image recording devices would be permissible if necessary to comply with the rule or for the railroad's own purposes. FRA proposes that a recording device be equipped with sufficient resolution to record train crew actions, including whether a train crew member is physically incapacitated or is not complying with signal system or other operational control system indications. FRA believes one of the best, proactive safety uses of an inward-facing camera system is to conduct operational tests to ensure operating employees' compliance with the restrictions on the use of personal electronic devices under part 220, subpart C.

FRA has proposed that inward-facing recording device recording must record images at a rate of at least 5 fps (or its equivalent), since motion in the cab occurs at a much lower rate than in front of the lead locomotive and this frame rate can adequately record typical walking-speed actions. The NRPM also proposes that the inward-facing image recording system be able to record the desired actions using the ambient light in the cab. And, if ambient light levels drop too low for normal operation, the image recorder(s) should automatically switch to infrared or other operation that gives the recording sufficient clarity to comply with this rule's requirements.

Next, parallel to the proposals for outward-facing image recording devices, FRA is also proposing that any inward-facing image recordings in passenger train lead locomotives have an accurate date and time stamp. FRA believes an accurate time and date stamp is essential to the usefulness of the recordings, especially for post-accident investigations. Also mirroring the proposal for outward-facing cameras, FRA is proposing that when there is an en route failure of a passenger locomotive's inward-facing image recording device, the locomotive could not be used as a train's lead locomotive after the next calendar day's inspection of the locomotive as required by § 229.21 if the recording device is not first repaired or replaced.

FRA has also proposed in the NPRM that no recordings be made of any activities within a passenger locomotive's sanitation compartment as defined by existing 49 CFR 229.5. A locomotive's sanitation compartment is an enclosed compartment that contains a toilet facility for employee use. FRA believes such recordings would be an unwarranted invasion of personal privacy and would likely be illegal.

The NPRM proposals would also require specified inspection, testing, and maintenance of locomotive image and audio recording device systems on passenger train lead locomotives similar to those found in FRA's locomotive event recorder regulation. The NPRM proposes that a locomotive's image recording system (and any installed audio recording system) have self-monitoring features. This means the recording system can monitor its own operation and display an indication to a passenger train's crew when any data required to be stored is not stored, or when the stored data does not match the data received from the image recording devices. At a minimum, the self-monitoring features must indicate to the locomotive's crew whether the system is turned on, and, in some fashion, that power is available to the system. This proposal leaves to the discretion of the passenger railroads which self-monitoring features to install to avoid inhibiting future changes in available technology that could be used for system self-monitoring. FRA believes the proposed requirement for downloading sample recordings at the periodic inspection intervals as discussed in the accompanying NPRM will serve as an appropriate back-up test, similar to the periodic and annual inspection requirements in existing 49 CFR 229.135 for locomotive event recorders.

Finally, in accordance with the FAST Act, FRA has also proposed that for passenger locomotives that image recordings be retained on a crashworthy memory module. FRA has proposed to amend existing part 229, appendix D to state the existing crashworthiness standards in that appendix for locomotive event recorders also apply to a memory module used to store the data recorded by the image recording devices on lead passenger train

locomotives proposed by the NPRM, and any audio recording devices a passenger railroad installs. FRA believes the existing crashworthy memory module requirements in appendix D intended to protect the microprocessor-based data recorded by a locomotive's event recorder are also the appropriate standards for microprocessor data a lead passenger locomotive's image and audio recording system's record. Appendix D establishes the general requirements, testing sequence, and required marking for memory modules certified by their manufacturers as crashworthy. Any device meeting the performance criteria in appendix D would comply with the crashworthiness proposal in this NPRM. FRA has not proposed to require that image recording devices in freight locomotives be equipped with a crashworthy memory module.

#### **Enforcement Procedures - Protections Against Retaliation or Harassment**

The FAST Act prohibits passenger railroads from using an in-cab audio or image recording to retaliate against an employee. 49 U.S.C. 20168(i). This section addresses illegal retaliation implicated by existing statutes such as the railroad employee whistleblower law at 49 U.S.C. 20109, which are addressed by the grievance process remedies for wrongful discharge under the Railway Labor Act(45 U.S.C. 151 et seq.). However, FRA has attempted to address Congress' intent regarding retaliation in the rule text proposed in the NPRM by limiting the permitted uses of locomotive recordings.

While enforcement of prohibited retaliation against employees does not lie with FRA, but rather with other Federal and state agencies or the courts in private causes of action, FRA believes passenger railroads should adopt and adhere to policies that strictly prohibit such potential non-safety related abuses of locomotive recordings in violation of the FAST Act's prohibition.