



U.S. Department
of Transportation
**Federal Transit
Administration**

Fatigue Management Survey Results: State Safety Oversight and Rail Transit Agencies Affected by 49 CFR Part 659

Prepared by:
Federal Transit Administration
Office of Safety and Security
Washington, DC 20590

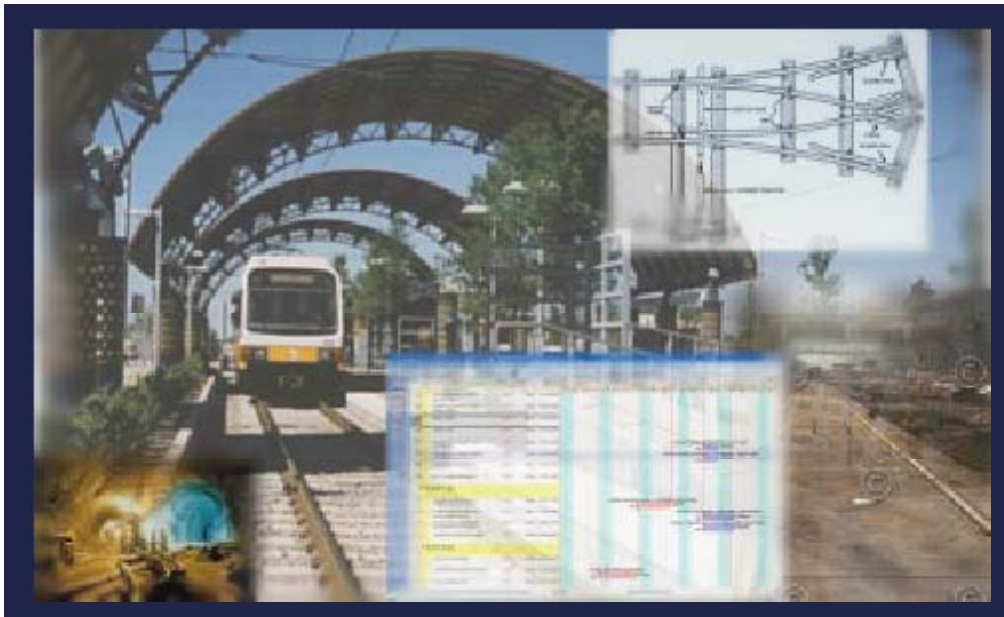


Table of Contents

Chapter 1: Introduction	3
Report Organization.....	3
Chapter 2: Background	4
Purpose of Survey	4
Survey Organization	5
Survey Respondents.....	5
Chapter 3: Narrative Summary of Results	6
SSO Agencies	6
Requirements for Hours of Service.....	6
Hazard Management/Accident Investigation to Assess Impacts of Fatigue.....	6
Significance of Fatigue in Rail Transit Industry.....	7
Recommendations to FTA	7
Rail Transit Agencies.....	7
Rail Transit Operators.....	7
Work Scheduling Practices	8
Labor Relations	9
Human Resources	10
Medical Programs	11
System Safety Issues.....	11
Recommendations to FTA	12
Chapter 4: Results-At-A-Glance.....	13
Authority of SSO Agencies Regarding Hours of Service Requirements	13
SSO Agency Opinions on Need for Hours of Service Requirements.....	14
Rail Transit Agency Experience with Fatigue as a Cause of Accidents.....	15
How Fatigue Management Is Addressed in 49 CFR Part 659	16
SSO and Rail Transit Agency Use of Hazard Analysis Techniques	17
Limits on Hours Worked by Rail Transit Operators by Day and Week.....	18
Length of Shifts Worked by Rail Transit Operators.....	19
Management of Overtime Assignments.....	20
Required Hours Off-Duty between Shifts.....	21
Options for Secondary Employment.....	22
Training on Fatigue Awareness Issues	23
Performing Fitness for Duty Checks.....	24
Labor Relations Issues	25
Rail Transit Operator Napping Opportunities (while not on active duty)	26
Screening for Sleep Disorders	27
Medical Policies for Managing Sleep Disorders	28
Appendix A – Survey Results.....	29

Chapter 1: Introduction

This report has been prepared to present the results of the Federal Transit Administration's (FTA) *Fatigue Management Survey*. FTA administered this survey over the six-week period between **June 19 and July 31, 2006**.

FTA conducted this survey to identify and categorize the fatigue management practices of rail transit agencies and State Safety Oversight (SSO) agencies affected by 49 CFR Part 659. FTA is providing information obtained from this survey to the National Transportation Safety Board (NTSB) as part of its response to Safety Recommendation R-06-3.

FTA administered this survey as a periodic submission request through authority provided in 49 CFR Part 659.39(d). In conducting this survey through the SSO program, FTA ensured that:

- An independent review of the rail transit agency responses was performed by the SSO agencies, and
- The SSO agencies were aware of the current practices at the rail transit agencies in their jurisdictions regarding work scheduling and fatigue management issues.

FTA delivered the survey to SSO agency program managers in hard-copy and electronic form, and followed-up with respondents via email and telephone. Surveys were emailed and faxed back to FTA by SSO agency program managers, and the results were entered into an Excel worksheet for analysis.

Report Organization

This report includes the following four chapters and one appendix:

- *Chapter 1 -- Introduction* explains the survey and describes the organization of the report.
- *Chapter 2 – Background* provides additional information on NTSB Safety Recommendation R-06-3, the purpose of FTA's survey, its organization, and the survey respondents.
- *Chapter 3 – Narrative Summary of Results* contains a written summary of survey results as reported by SSO agencies and rail transit agencies.
- *Chapter 4 – Results-At-A-Glance* provides graphics to illustrate key findings from the survey.
- *Appendix A – Survey Results* contains the full survey results in a tabular format.

Chapter 2: Background

On March 23, 2006, NTSB made the following recommendation to FTA:

- **R-06-3** – Require transit agencies, through the system safety program and hazard management process if necessary, to ensure that the time off between daily tours of duty including regular and overtime assignments, allows train operators to obtain at least 8 hours of uninterrupted sleep.

This recommendation was officially transmitted to FTA on April 19, 2006 as a result of NTSB's investigation of a collision which occurred on Wednesday, November 3, 2004 between two Washington Metropolitan Area Transit Authority (WMATA) trains at the Woodley Park-Zoo/Adams Morgan station. NTSB determined that the probable cause of the collision was the failure of one of the operators to apply the brakes to stop the train, likely due to his reduced alertness. Contributing to the accident was the lack of a rollback protection feature to stop the train when operated in the manual mode.



During its investigation, NTSB determined that WMATA, like many other rail transit agencies, only requires 8 hours off between the end of one shift and the beginning of another. For the majority of rail transit operators, who work a single daily 8- or 9-hour shift, or a single 10- to-12-hour split shift, this is not an issue. However, some rail transit operators are eligible for overtime, through collective bargaining agreements and/or on a “first come, first serve” basis. Eligible operators may work for 14 to 16 hours, and then report for their regularly scheduled shifts, with only 8 hours mandated off-duty. In this situation, the rail transit operator most likely will not have the opportunity to receive 8 uninterrupted hours of sleep, which research has determined is necessary for optimal waking performance and alertness.

In its recommendation to FTA, NTSB recognizes that assigning overtime shifts is not necessarily an unsafe practice. After a detailed review of the monthly work schedule for the operator of train 703, NTSB determined that he could have worked the same number of assignments without jeopardizing his sleep. Thus, NTSB concluded that train operators can safely work extra assignments if their work time is not exceedingly long and if their time off is adequate for them to receive sufficient rest before the start of their next shift.

Purpose of Survey

To obtain additional information to support its response to Safety Recommendation R-06-3, FTA conducted a detailed survey regarding current work scheduling practices in the rail transit industry, especially existing policies for hours off-duty and managing on-call/extraboard assignments, fatigue-related programs and training, and practices in place to ensure rail transit operator alertness. FTA also collected information regarding existing practices of State Safety Oversight (SSO) agencies in addressing fatigue management issues with the rail transit agencies in their jurisdictions through FTA's SSO program (49 CFR Part 659).

Survey Organization

The survey was administered as a Microsoft Word document with check boxes and space for narrative responses. The survey, which is presented in *Appendix A*, contained two parts. **Part 1** was completed by the SSO agencies, and provided information regarding their current authorities, concerns, policies and capabilities in addressing fatigue management issues.

Part 2 was completed by each rail transit agency affected by 49 CFR Part 659, and provided detailed information regarding:

- the definition of “rail transit operator” and the functions they provide for the rail transit agency;
- work scheduling practices for “rail transit operators,” including hours off-duty, the use of split shifts, and the assignment and management of overtime;
- labor relations issues related to the assignment and scheduling of overtime;
- human resources issues regarding policies for napping while not on active duty, discipline for inattentive operators, fitness-for-duty checks, and training provided on fatigue management issues;
- medical policies related to screening for sleep disorders during pre-employment and annual physicals and available programs to support operators with diagnosed sleep disorders; and
- activities performed by the rail transit agency during accident investigations and hazard management activities to assess the impacts of fatigue on operational safety.

Survey Respondents

Of the 26 SSO agencies affected by 49 CFR Part 659, two SSO agencies were exempt from the survey: the Michigan Department of Transportation, because its only rail transit agency, the Detroit People Mover, provides fully automated service, and the North Carolina Department of Transportation, because service for the Charlotte Trolley System has been suspended due to the construction of the Charlotte Area Transit System (CATS) light rail system.

Of the 24 required submissions, FTA received **22 responses from SSO agencies**. The Tennessee Department of Transportation was unable to complete its submission on-time, and St. Clair County Transit District reported that it had nothing to add to the submission made by the Missouri Department of Transportation (both agencies share oversight of St. Louis Metrolink).

There are 43 rail transit agencies affected by 49 CFR Part 659. Of these 43 agencies, five were exempt from the survey because they provide automated operations or because their systems are not in revenue service. These systems include the Charlotte Trolley, the Detroit People Mover, the Jacksonville Transportation Authority, the Cambria County Transit Authority, and the Chattanooga Area Rapid Transit Authority. Of the 38 required submissions, FTA received **37 rail transit agency responses**. The Memphis Area Transit Authority was unable to complete its submission on time.

Chapter 3: Narrative Summary of Results

This chapter provides a narrative summary of the survey results from SSO agencies and rail transit agencies. *Chapter 4 – Results-At-A-Glance* provides a visual representation of key findings from the survey, and *Appendix A – Survey Results* provides the responses to each of the questions asked in a tabular format.

SSO Agencies

Requirements for Hours of Service

Seventeen of the 22 responding SSO agencies (77 percent) do not have requirements in place for the rail transit agencies in their jurisdiction addressing hours that may be worked by rail transit operators or required time off-duty. Of these 17 responding SSO agencies: Nine SSO agencies (53 percent) report that they do not have the authority to mandate these requirements, five SSO agencies (29 percent) do not know if they have the authority to mandate these requirements, and three SOAs (18 percent) do have the authority to mandate these requirements.

Five of the 22 responding SSO agencies (23 percent) place some requirements on hours worked or time off-duty for rail transit operators. These SSO agencies include: the California Public Utilities Commission, the Florida Department of Transportation, the Massachusetts Department of Telecommunications and Energy, the Missouri Department of Transportation, and the Utah Department of Transportation. Only two SSO agencies (9 percent) have requirements in place that meet the NTSB recommendation R-3-06 under most circumstances. The California Public Utilities Commission limits on-duty time to no more than 12 hours in a 24-hour period (or an aggregate of 12 hours spread over a 16 hour period). The Utah Department of Transportation requires compliance with FRA's Hours of Service rule 49 CFR Part 228 for the rail transit agency in its jurisdiction.

Hazard Management/Accident Investigation to Assess Impacts of Fatigue

Seventeen of the 22 responding SSO agencies (77 percent) have not used the hazard management process or the accident investigation process to address the impacts of the rail transit agency's work scheduling practices on operational safety. *In the vast majority of instances, SSO agencies have not conducted these analyses because the rail transit agencies in their jurisdictions have not experienced accidents where fatigue was a primary or contributing cause.*

Five SSO agencies (23 percent) have used the hazard management or accident investigation process to assess the impacts of fatigue on the safety of the rail transit agencies in their jurisdictions. For three of these SSO agencies, fatigue was not determined as a primary cause of accidents/hazards, but was identified as a contributing cause. For the remaining two SSO agencies, corrective actions were required from the affected rail transit agencies to develop hours of service policies that expanded the required time off-duty.

Significance of Fatigue in Rail Transit Industry

The vast majority of SSO agencies responding to survey (90 percent) either do not believe that the work scheduling practices used by the rail transit agencies in their jurisdictions contribute to fatigue and reduced alertness for rail transit operators, or do not have enough evidence to draw a conclusion one way or the other. Only two SSO agencies (10 percent) believe that the work scheduling practices used by their rail transit agencies contribute to fatigue and reduced alertness.

Ten of the 22 responding SSO agencies (46 percent) do not believe that they have access to the expertise required to perform hazard analysis sufficient to justify a determination regarding whether an hours of service policy is necessary. Nine of the 22 responding SSO agencies (41 percent) do have access to this level of expertise. Three of the responding 22 SSO agencies (14 percent) are not sure if their current technical expertise could support this activity.

Recommendations to FTA

In addressing NTSB Safety Recommendation R-06-3, the vast majority of SSO agencies believe that, if FTA decides it is necessary to impose an hours of service requirement on the rail transit industry, then FTA should mandate this requirement based upon its own Congressional authority. The SSO agencies do not believe that an hours of service policy should be implemented through the SSO rule (49 CFR Part 659), but rather through a separate FTA rule, just as hours of service regulations have been issued by other U.S. Department of Transportation modal administrations, such as the Federal Railroad Administration (FRA), the Federal Motor Carrier Safety Administration (FMSCA) and the Federal Aviation Administration (FAA).

Further, a number of SSO agencies are concerned that detailed hazard analyses would not provide the results desired by the NTSB. Oversight agencies for several of the nation's largest rail transit agencies have already conducted assessments and found no correlation between hours worked by rail transit operators and accidents for which the operator was determined to be at-fault.

Finally, resources for addressing safety issues are very limited in the rail transit environment. In developing a potentially expensive hours of service requirement to address Safety Recommendation R-06-3, FTA would be forcing rail transit agencies to direct limited resources to a safety issue that may not be as significant as others monitored by SSO agencies, such as proficiency and efficiency testing, internal safety audits, preventive maintenance, and training.

Rail Transit Agencies

Rail Transit Operators

The majority of rail transit agencies responding to the survey define "rail transit operator" according to agency policy and/or definitions used by the Federal Railroad Administration or other Federal agencies. For all 37 responding rail transit agencies, "rail transit operators" move passenger trains. For more than 90 percent of the responding agencies, "rail transit operators"

also perform yard operations and deadhead/vehicle movements. For roughly one-third of responding agencies, “rail transit operators” also perform other activities, such as operating trains for system integration tests; emergency train movements to push a train; operating trains for track and maintenance tests; operating work cars and track equipment vehicles; and performing special movements for charter and staff trains.

Twenty-nine rail transit agencies responding to the survey have less than 250 rail transit operators employed by their agencies; the eight remaining rail transit agencies that responded to the survey have more than 250 rail transit operators employed at their agencies. Twenty-eight rail transit agencies require the services of rail transit operators to support the movement of passengers and the performance of maintenance activities between 19 and 24 hours per day. Six rail transit agencies require services from rail transit operators between 13 and 18 hours per day. The remaining three rail transit agencies responding to the survey require services from rail transit operators 12 hours or less per day.

Work Scheduling Practices

The survey results confirm earlier findings by the NTSB regarding the time required off-duty for rail transit operators. Based on historical precedence and the need for rail transit operators during emergency conditions and special events, twenty-nine rail transit agencies (78 percent) reported having formal policies in place that require eight or fewer hours off between shifts for rail transit operators. Twenty-seven rail transit agencies (73 percent) allow operators to work between 56 and in excess of 70 hours per week. The remaining 10 responding agencies (27 percent) allow rail transit operators to work between 40 and 55 hours per week.

In interpreting these results, the survey provided the following additional information:

- Under normal circumstances, 24 of the 37 rail transit agencies submitting responses (65 percent) limit the hours that can be worked by a rail transit operator in a given day to 14 hours or less, ensuring at least 10 hours off between shifts.
- Thirteen of the 37 responding rail transit agencies (35 percent) report allowing rail transit operators to work up to 16 hours per day. For the most part, these 13 agencies comprise the nation’s largest heavy and light rail systems.
- Of the thirteen rail transit agencies allowing their operators to work up to 16 hours per day, the average length of time for an overtime assignment is four hours, meaning that in many instances, rail transit operators working overtime are on duty between 12 and 15 hours per day, providing at least 9 hours off between shifts.
- For the thirteen agencies that allow rail transit operators to work up to 16 hours per day, between 10 and 30 percent of rail operators actually receive overtime assignments, meaning that the vast majority of rail transit operators at these agencies are working considerably less than 16 hours per day.
- While overtime assignments are structured through collective bargaining agreements to be distributed according to seniority, many transit agencies must supplement this practice with “first come, first serve” policies. Many rail transit agencies responding to the survey reported a number of challenges in obtaining operators willing to work overtime shifts.

- More than half of the thirteen rail transit agencies that allow operators to work up to 16 hours per day have established napping policies and “quiet rooms” available to rail transit operators when not on active duty.

FTA’s survey also collected information on other work scheduling practices used in industry. Twenty-seven rail transit agencies responding the survey (73 percent) use shifts where rail transit operations employees have a break of more than one hour (sometimes referred to as split-shifts or swing assignments). At these twenty-seven agencies, approximately 25 percent of their rail transit operator assignments, on average, are comprised of split-shifts. The average length for the longest of these shifts is 11.32 hours, while the average length for a routine split-shift assignment is 10.70 hours. The average length of the break on these assignments is 2.36 hours. Almost all split-shift assignments (99 percent) occur during daytime and early evening hours. Approximately half of the rail transit agencies with split-shift assignments provide “quiet rooms” and other facilities for napping or relaxing during breaks.

Finally, information was collected regarding the days off to which rail transit operators are entitled. On average, for the 37 responding rail transit agencies, rail transit operators may receive 2 days off per week and 7 days off per month. For 23 rail transit agencies (62 percent), rail transit operators are entitled to receive consecutive days off each week. Twenty-four rail transit agencies responding to the survey (65 percent) do not have an official policy regarding the number of continuous days worked by rail transit operators without a day off – meaning that rail transit operators may choose to forgo their days off based on their own discretion. Policies at the remaining 35 percent of rail transit agencies responding to the survey limit continuous days worked by rail transit operators to between 5 days and 13 days.

Labor Relations

Twenty-nine of the 37 rail transit agencies responding the survey (78 percent) have contractual requirements for overtime distribution. For the vast majority of these rail transit agencies (27 out of 37, or 73 percent), requirements from collective bargaining agreements and union contracts do not limit the number of rail transit operators eligible to receive overtime assignments. Based on narrative comments provided in the survey, while, in many cases, the terms of union contracts specify how overtime must be assigned and to whom, once these requirements are filled, these contracts do not restrict the ability of rail transit agencies to assign additional overtime on a “first come, first serve” policy or through other means.

Twenty-six of the 37 responding rail transit agencies (70 percent) report discussing fatigue with their unions. Seventy percent of the responding rail transit agencies also allow rail transit operators working on-call/extraboard (not including hold-down assignments) to have relief days guaranteed by labor agreement. Over the last ten years, only five rail transit agencies report fatigue management as having been an element of the union or rail transit agency’s position during collective bargaining disputes.

Human Resources

Sixteen of the responding 37 rail transit agencies (43 percent) permit rail transit operators to nap on the property during their assignments or shifts when not actively engaged in work activities. Thirteen of these 16 agencies provide “quiet rooms” or other facilities where operators can nap.

Twenty-nine of the 37 responding rail transit agencies (78 percent) have formal policies in place to address inattentive operators caught sleeping or engaged in other activities while on active duty. In most instances, violations of this policy are treated with an immediate fitness-for-duty evaluation and discipline. Offending operators may be sent home, suspended or even terminated. Where agencies have Employee Assistance Programs (EAPs) that support the diagnosis and treatment of sleep disorders, operators may receive medical referrals or counseling. Re-training on fatigue management issues may also be provided.

At 26 of the 37 responding rail transit agencies (70 percent), supervisors have received specific training on identifying fatigue as part of a fitness-for-duty check. The vast majority of these checks involve visual examination of the operator prior to his or her shift and at unannounced intervals along his or her tour. Technology available to assess an operator’s alertness, including the wrist-worn SleepWatch® (Precision Control Design, Inc.), the Copilot® system (Attention Technologies, Inc.), Accident Prevention Plus (AP+), and the Psychomotor Vigilance Task (PVT) system, is not currently used in the rail transit industry.

Only two of the responding 37 rail transit agencies (5.5 percent) track the effect that fatigue has on liability insurance or workman’s compensation premiums, and only one of the 37 responding agencies (2.7 percent) has a budget line item specific to fatigue-related initiatives.

Twenty-eight of the responding 37 rail transit agencies (76 percent) provide “initial” training or education to operations personnel regarding alertness, fatigue, and sleep, including information on lifestyle choices, coping with family issues, managing social responsibilities, ensuring a proper sleep environment, performing self-evaluations of sleep environments and length and quality of sleep, caffeine use, the benefits of napping and other practices.

Rail transit agencies use the following methods to convey information on fatigue management to rail transit operators: lecture/seminars, newsletters, posters, take-home materials, video tapes/DVDs, in-house materials and computer-based training. Seventeen of the 37 responding agencies (46 percent) provide on-going refresher training to operators.

Twenty-seven of the 37 responding agencies (73 percent) allow secondary employment for rail transit operators. These rail transit agencies take a number of approaches to enforcing this provision, ranging from no official policies in place, to requiring rail transit operators to report secondary employment and/or obtain departmental approval, to internal investigations regarding how many operators have secondary jobs, and discussions with supervisory personnel.

Medical Programs

Twenty-eight of the 37 responding agencies (76 percent) require rail transit operators to have periodic physicals. At 11 of the 37 responding rail transit agencies (30 percent), these periodic physicals include screening for sleep disorders. In addition, 13 of the 37 responding rail transit agencies (35 percent) require screening for sleep disorders as a condition of the pre-employment physical given to rail transit operators.

Seven responding rail transit agencies offer a confidential, third-party screening and diagnosis program for sleep disorders available to rail transit operators. Thirty-five of the 37 responding rail transit agencies (95 percent) have health care plans that cover the diagnosis and/or treatment of sleep disorders. Only eight of the responding rail transit agencies (22 percent) have contracted medical providers that conduct awareness programs regarding sleep disorders and fatigue. At 10 responding rail transit agencies (27 percent), medical programs contain a reference to the handling and disposition of rail transit operators with sleep disorders.

Response varies considerably in the rail transit industry regarding the diagnosis of a sleep disorder for a rail transit operator. Ten responding rail transit agencies (27 percent) would medically disqualify the operator; seven responding rail transit agencies (19 percent) would allow the operator to continue to work with monitoring. Nine responding rail transit agencies (24 percent) have no official policies in place regarding the management of a rail transit operator with a diagnosed sleep disorder.

Thirty-five of the 37 responding rail transit agencies (95 percent) have a policy addressing the use of prescription medications that may impact alertness. Thirty-three of the 37 responding agencies (90 percent) have a policy that addresses the use of over-the-counter medications that may impact alertness. At 27 of the responding agencies (73 percent), agency personnel or the medical providers conduct awareness programs that provide employees with information on the possible side effects resulting from the use of over-the-counter medications.

System Safety Issues

In investigations of rail transit accidents/incidents, rail transit agency safety and operations personnel ask any questions regarding the following:

- Hours on duty (35 of 37 responding agencies, 95 percent)
- Hours slept prior to work (22 of 37 responding agencies, 60 percent)
- Hours worked in week prior (28 of 37 responding agencies, 76 percent)
- Hours slept in week prior (13 of 37 responding agencies, 35 percent)
- Quality of rest (15 of 37 responding agencies, 41 percent)
- Medical conditions that may affect sleep (18 of 37 responding agencies, 49 percent)
- Hours worked in previous month (8 of 37 responding agencies, 22 percent)
- Other questions asked by 5 responding agencies (14 percent) involve family issues, food consumed during the day of the accident, consistency in shifts and overtime work, normal days off.

Twenty-seven of the responding 37 rail transit agencies (73 percent) reported that, over the last three years, fatigue has not been determined to be a primary or contributing factor during investigations into rail transit accidents, injuries, or incidents. Ten agencies (27 percent) reporting that fatigue had been identified as a cause during accident investigations conducted over the last three (3) years. These 10 agencies reported that fatigue was determined to be a primary cause for 0.44 percent of all investigations conducted over the last three years, and a contributing cause in 2.04 percent of investigations.

Fatigue management is not a section of the System Safety Program Plan (SSPP) required by FTA in 49 CFR Part 659. Nine (9) rail transit agencies responding to the survey (24 percent) reported addressing fatigue management in their SSPPs, while 28 responding agencies (76 percent) do not currently address this subject in their SSPPs.

Safety departments at four (4) responding rail transit agencies (11 percent) reported conducting regular audits of operators' performance with specific attention to diminished performance resulting from fatigue-related causes. Safety departments at five (5) responding rail transit agencies (14 percent) have performed hazard analysis studies to assess the impacts of work scheduling practices on operational safety. Results from these assessments indicated either that the number of hours worked could not be proven as a significant factor in operator-at-fault incidents, or supported discussions leading to the development of specific elements of the rail transit agency's fatigue management program. Nineteen responding rail transit agencies (51 percent) report having discussed fatigue-related issues and their impacts on operational safety with their SSO Agency.

Recommendations to FTA

Like the SSO agencies, in narrative comments provided on the survey, rail transit agencies requested that if FTA is going to mandate an hours of service rule, that it do so through its own authority and a formal rulemaking process, not through the SSO program (49 CFR Part 659).

According to narrative responses provided on the survey, for most rail transit agencies, and certainly for the thirteen rail transit agencies that report allowing rail transit operators to work up to 16 hours per day, changes to work scheduling practices to ensure at least 10 hours off between shifts would require hiring additional full-time or part-time operators, extending split-shift practices, and increasing disciplinary measures associated with operators who cannot make their scheduled runs.

Each of these actions has associated consequences to the transit agency in terms of reducing resources available to support other functions, such as maintenance and training, reducing operator morale, and potentially reducing the level of transit service provided. Rail transit agencies urged FTA to consider these consequences in preparing its response to NTSB Safety Recommendations R-06-3.

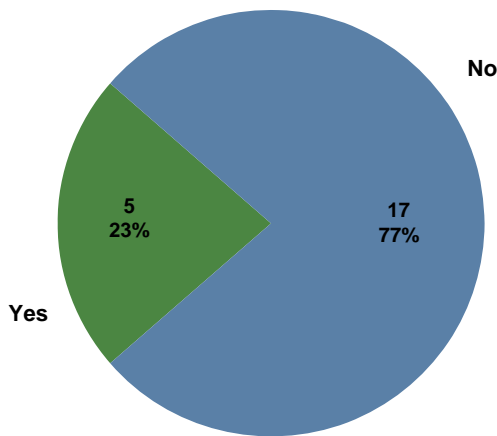
Chapter 4: Results-At-A-Glance

Authority of SSO Agencies Regarding Hours of Service Requirements

State Oversight Agency Authority

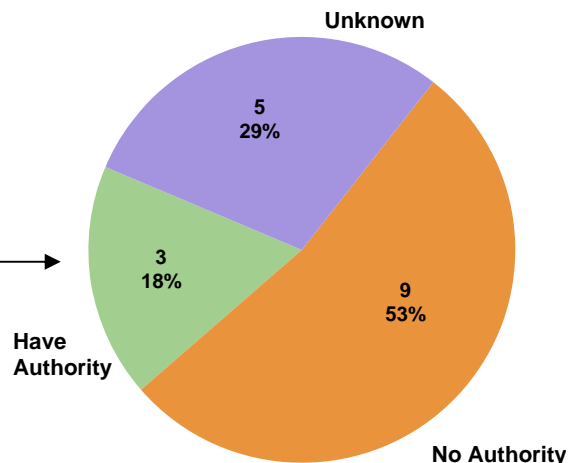
Does your State Oversight Agency currently place any requirements on the rail transit agencies within your jurisdiction to ensure that rail transit operators obtain at least 8 hours of uninterrupted sleep between shifts?

State Safety Oversight Agency authority for mandating hours of service requirements



Number of Respondents - 22

Knowledge of authority to mandate hours of service requirements by remaining 17 SOAs



Number of Respondents - 17

State Oversight Agency

California PUC

Florida DOT

Massachusetts DTE

Missouri DOT

Utah DOT

State requirements for Hours of Service

LRT¹ systems shall not require or permit any safety sensitive employees to remain on duty for more than 12 consecutive hours or more than an aggregate of 12 hours spread over a period of 16 hours.

FDOT has established operating/driving hours standards for all bus transit systems, which are also rail systems, of 12 hr. driving in a 24 hr. period with mandatory 8 consecutive hr. off duty or max 72 hr. on duty in 7 consecutive days with required 24 hr. off duty. It is our understanding that these standards are equally applied to the rail operators by the 2 affected bus/rail transit systems.

(DPU Order #19810 – Jan. 7, 1980) That the Massachusetts Bay Transportation Authority shall not require or permit a Rapid Transit Lines Motorman or an Operator of Surface Rail Lines to continue on-duty, when such an employee has been on-duty sixteen (16) consecutive hours, until the employee has had at least eight (8) hours off-duty.

The MBTA shall not require or permit a Rapid Transit Lines Motorman or an Operator of Surface Rail Lines to perform more than sixty (60) actual work hours in a seven day week, nor to be on-duty more than forty-four (44) hours in any seventy-two (72) hour period.

Missouri has an Hours-of Service regulation for RFGS's (7CSR 265-9.070). It provides 8 consecutive hours off duty under normal circumstances. It does not use the term "uninterrupted sleep".

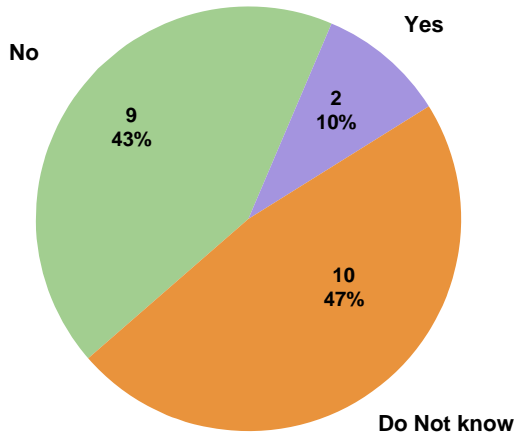
Utah has shared tracks and UTA has to follow FRA's standard under 49 CFR Part 228, regarding Hours of Service.

¹ Light rail transit

SSO Agency Opinions on Need for Hours of Service Requirements

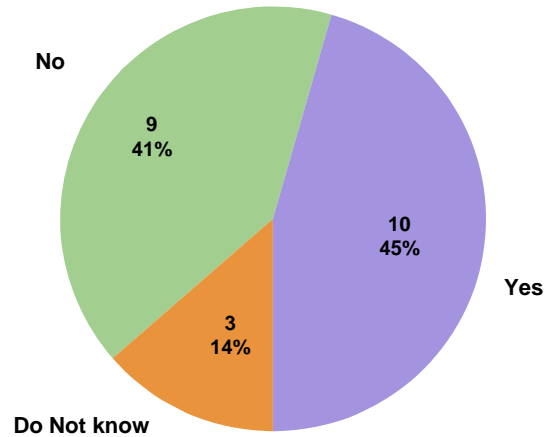
Perspectives on Hours of Service Needs and Capabilities

Based on your oversight experience, does your agency believe that current work scheduling practices contribute to fatigue and reduced alertness in rail transit operators at the agencies under your jurisdiction?



Number of Respondents - 21

Does your agency have access to the expertise required to perform and/or review hazard analysis studies conducted to assess the impacts of current work scheduling practices on the operational safety of the rail transit agencies under your jurisdiction?



Number of Respondents - 22

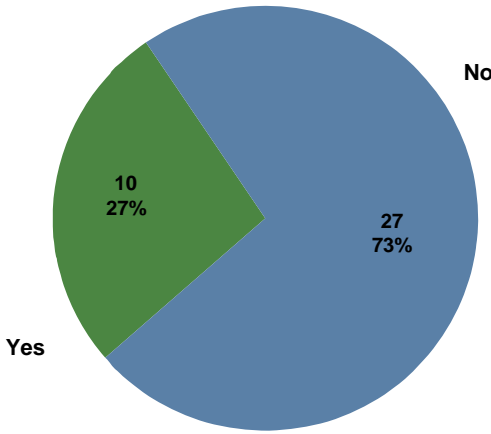
Feasibility of an Hours of Service Rule

Opinion/Comment	Number of State Oversight Agencies sharing this opinion
Feasible through Hazard Management Process	1
Current policies are sufficient or rule not necessary	3
Feasible through Federal mandate or standards	6
Feasible, but too difficult to enforce in practical terms (i.e., how to enforce rail transit operator actually sleeps)	1
Feasible and currently regulated at state level	5
Feasible, but process is too lengthy or too costly	2
Feasible with appropriate training	1
Accident data and hazard analysis results do not justify rule	2

Rail Transit Agency Experience with Fatigue as a Cause of Accidents

Determination of Fatigue as Cause or Contributing Factor in Accidents

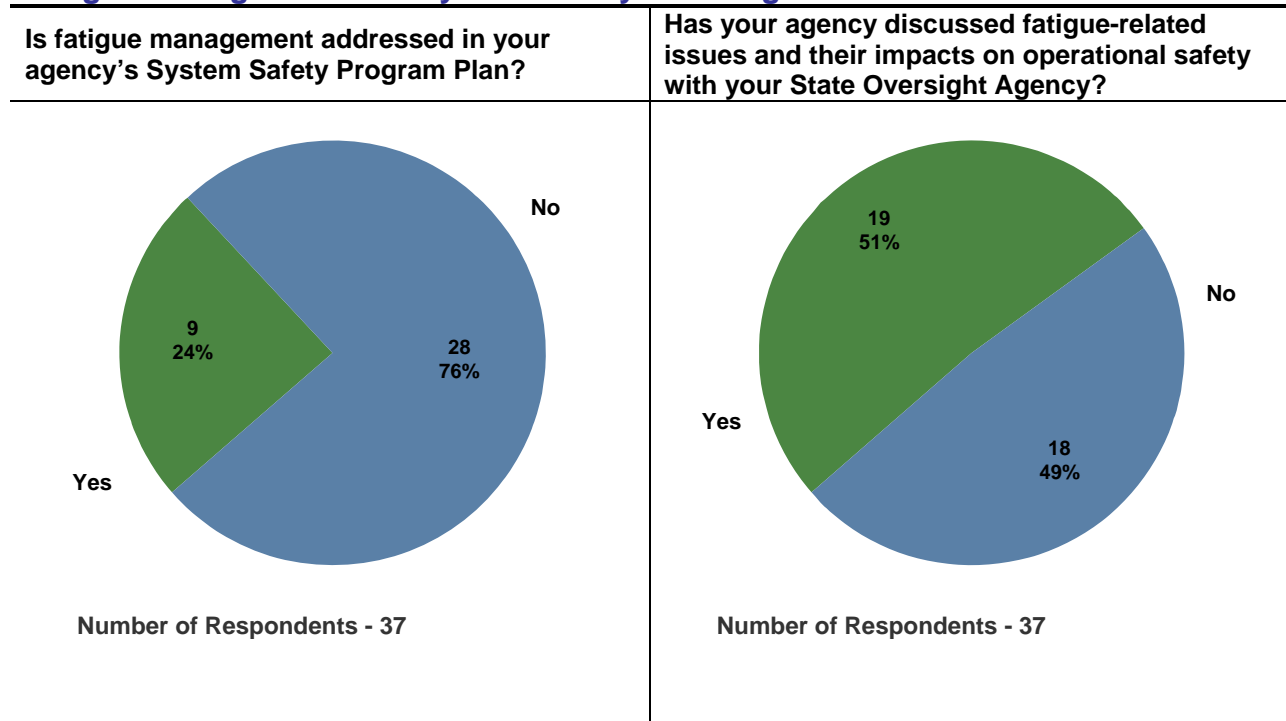
Over the last three years, have any of your agency's investigations into rail transit accidents, injuries, or incidents suggested that fatigue was a contributing factor?

Contributing Factor in Investigation Findings	Primary or Secondary Factor as a % of Findings
 <p data-bbox="243 913 584 955">Number of Respondents - 37</p>	<p data-bbox="841 451 950 483">Primary</p> <ul data-bbox="885 483 1429 640" style="list-style-type: none"> • 2% - Greater Cleveland Regional Transit Authority • 1% - Massachusetts Bay Transportation Authority • 1% - San Francisco Municipal Railway <p data-bbox="841 661 982 693">Secondary</p> <ul data-bbox="885 693 1429 934" style="list-style-type: none"> • 12% - Hiawatha Metro Transit (2 of 17) • 2.5% - New York City Transit • 1% - Bi-State Development Agency • 1% - Dallas Area Rapid Transit • 1% - Metropolitan Atlanta Rapid Transit Authority • .9% - Chicago Transit Authority <p data-bbox="933 1018 1258 1050">Number of Respondents - 9</p>

- During an accident/incident investigation, 36 agencies responded that they ask at least one of the following questions regarding fatigue:
 - 35 ask for the number of hours on duty
 - 22 ask for the number of hours slept prior to reporting for work
 - 28 ask for the number of hours worked in prior week
 - 13 ask for the number of hours slept in prior week
 - 15 inquire about the quality of rest
 - 18 inquire about medical conditions that may affect sleep
 - 8 ask the number of hours worked in previous month

How Fatigue Management Is Addressed in 49 CFR Part 659

Fatigue Management and System Safety Planning

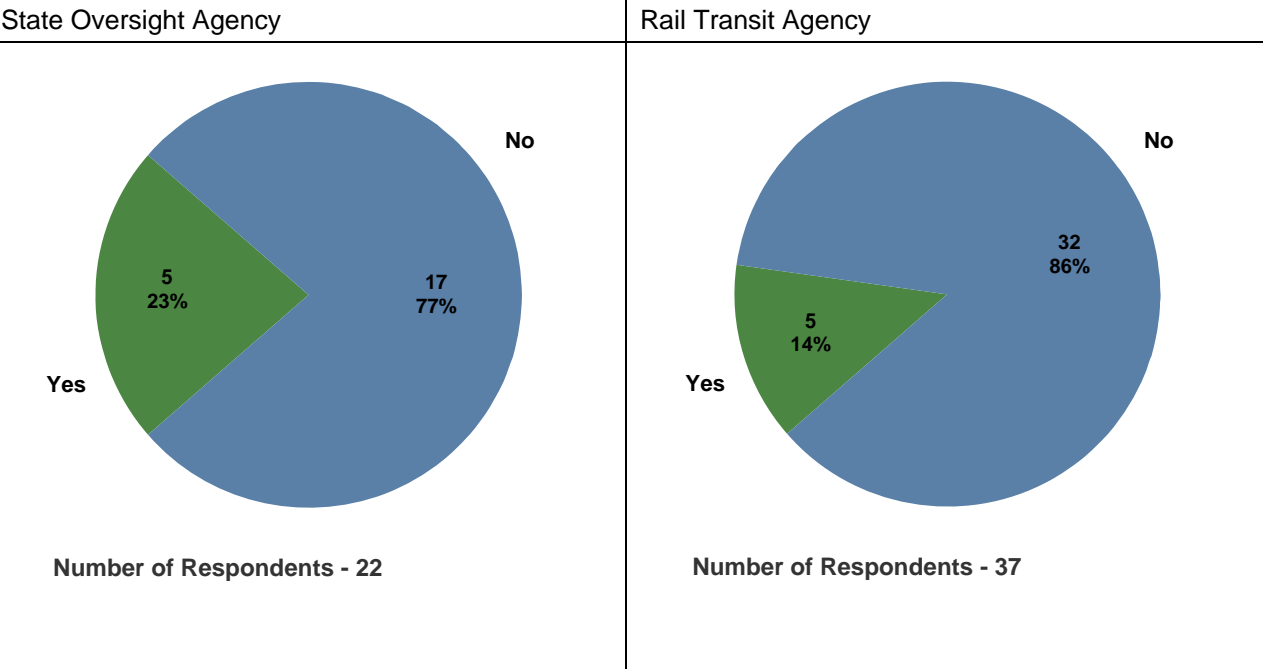


- Only two (2) state oversight agencies reported that they believe that current work scheduling practices at rail transit agencies, within their jurisdiction, contribute to fatigue and reduced alertness in rail transit operators
- Four (4) rail transit agencies indicated that the safety department conducts regular audits of operator performance with specific attention to diminished performance resulting from fatigue-related causes

SSO and Rail Transit Agency Use of Hazard Analysis Techniques

Use of Hazard Management Process

Has your [agency] ever used [analysis] to assess the impacts of the [rail transit agency's] work scheduling practices on operational safety?

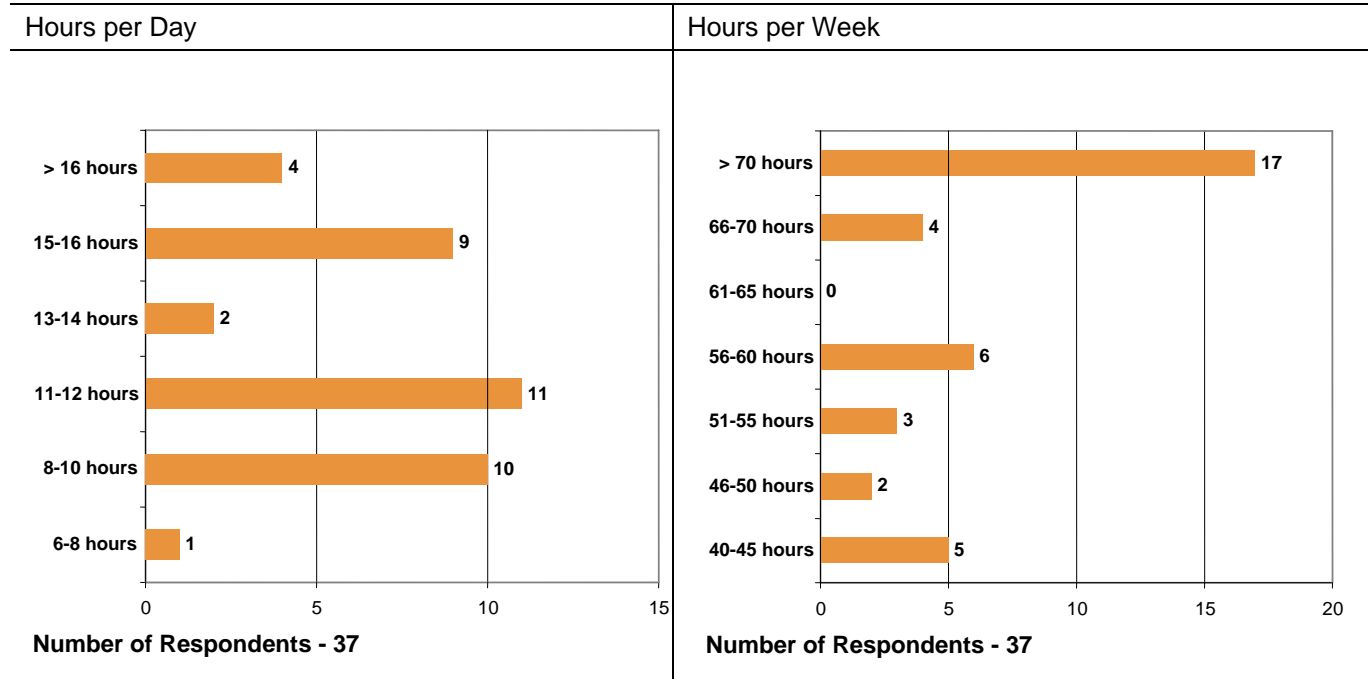


- While five SOAs answered positively to this question, only two actually performed hazard analysis as a result of accident investigations. The other three, made findings from reviews of rail transit agency practices regarding the need for the rail transit agency to develop an hours of service policy.
- Five rail transit agencies have conducted – or are in the process of conducting – analysis to establish hours of service policies.
- One rail transit agency's analysis led to the determination that number of hours worked could not be necessarily linked to causes of operator-at-fault accidents.

Limits on Hours Worked by Rail Transit Operators by Day and Week

Service Limits

How many hours per day/per week may rail transit operators perform service at your agency?

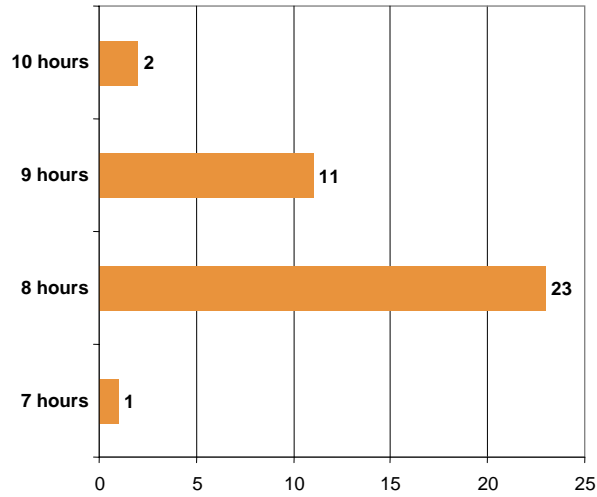


- 24 of the 37 agencies reported that they do not have limits on the number of hours that may be worked by a rail transit operator per month.
- 2 of the 13 agencies that limit monthly hours worked, reported that the limit was 450 hours or more.

Length of Shifts Worked by Rail Transit Operators

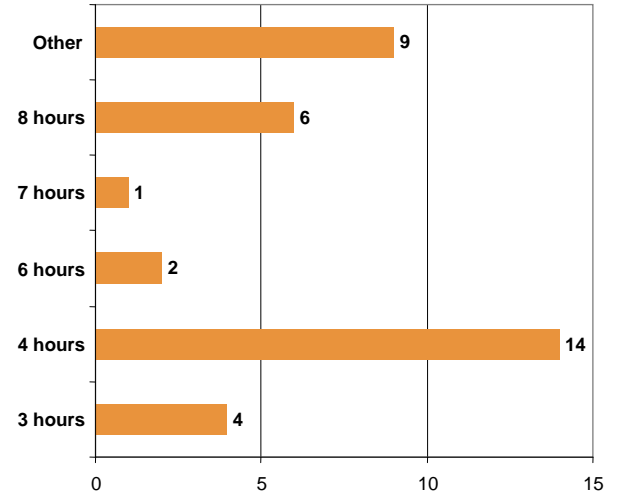
Average Shift Lengths

How long is the average “normal” shift for rail transit operators at your agency?



Number of Respondents - 37

How long is the average “overtime” shift for rail transit operators at your agency?



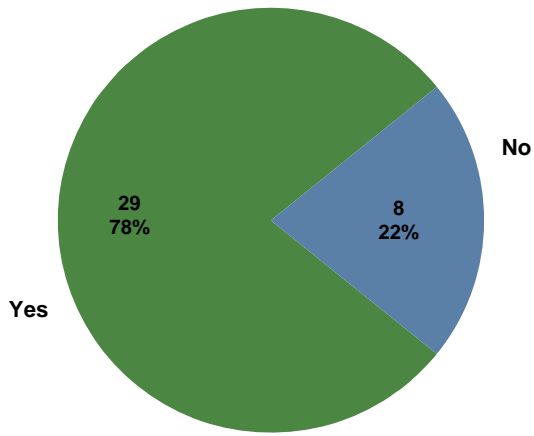
Number of Respondents - 37

- Three rail transit agencies reported average overtime shifts of less than 3 hours

Management of Overtime Assignments

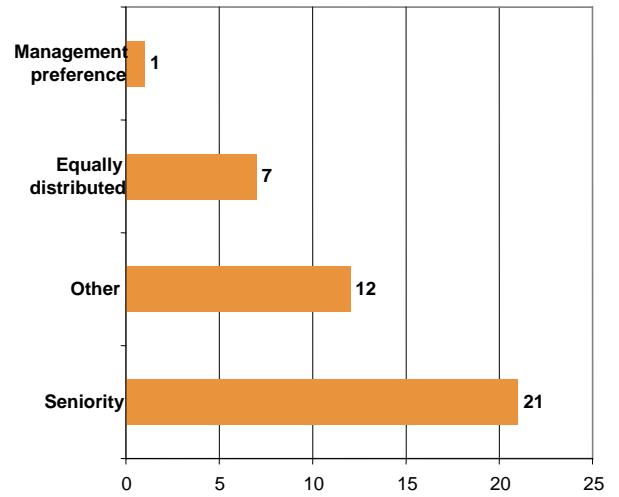
Overtime Practices

Does your agency have contractual requirements for overtime distribution?



Number of Respondents - 37

How is unscheduled overtime usually assigned?



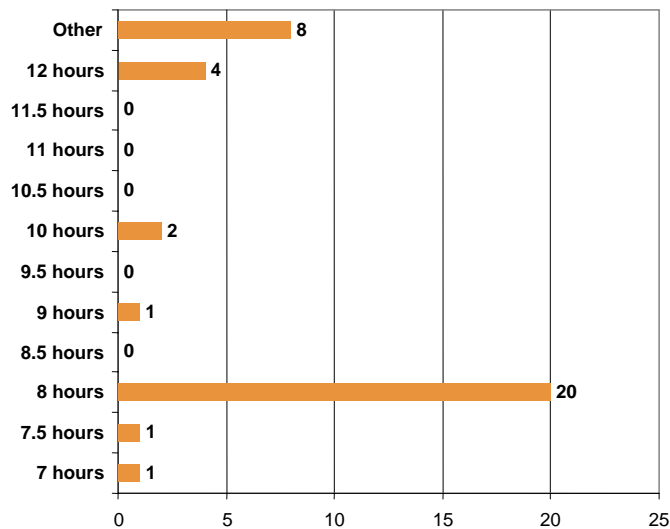
Number of Respondents - 37

- Of the 12 agencies that reported “other,” the highest frequency answer was “First come/First serve basis” (3).

Required Hours Off-Duty between Shifts

Time-off Between Shifts

How many hours must a rail transit operator at your agency have off between the end of his/her shift (including overtime) and the start of his/her next shift (including overtime)?



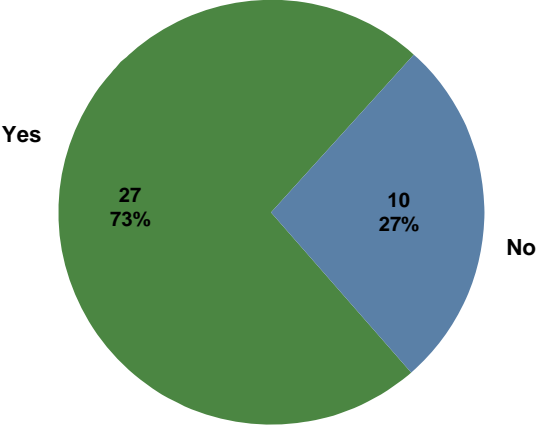
Number of Respondents - 37

- 7 of 8 rail transit agencies that responded as "other" have no policies in place to *require* more than 6 hours off between shifts²
- 2 of the 7 rail transit agencies that do not *require* more than 6 hours off between shifts have policies in place, but the operator may waive the fatigue policy

² Two agencies require time off between "scheduled" shifts, but allow for less time off if the rail transit operator works an "overtime" shift

Options for Secondary Employment

Secondary Employment

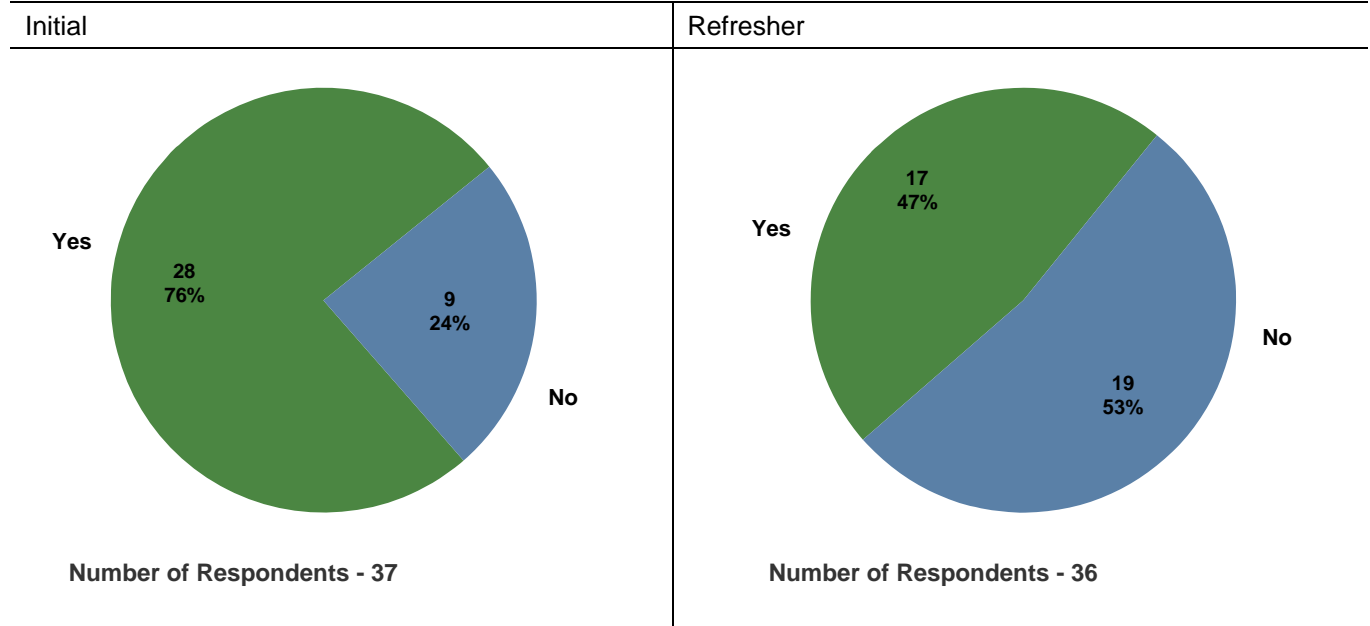
Does your agency allow secondary employment for full-time rail transit operators?	If yes, how is your secondary employment policy enforced?	
 <p data-bbox="227 535 267 556">Yes</p> <p data-bbox="332 598 381 640">27 73%</p> <p data-bbox="592 598 641 640">10 27%</p> <p data-bbox="722 640 763 661">No</p> <p data-bbox="235 882 576 913">Number of Respondents - 37</p>	No Policy/not enforced	12
	Allowed with proper department approval	5
	Must be reported	5
	Secondary employment hours are logged	1
	Internal investigations	1
	Three agencies did not provide its enforcement method	

- 16 of the 27 agencies that allow secondary employment have policies in place that require at least 8 hours time off in between shifts (including overtime).
- However, 6 of these 16 agencies do not have policies in place to monitor and enforce secondary employment activities.

Training on Fatigue Awareness Issues

Fatigue Awareness Training

Does your agency provide “initial” training or education to operations personnel regarding alertness, fatigue, and sleep? “Refresher training?”



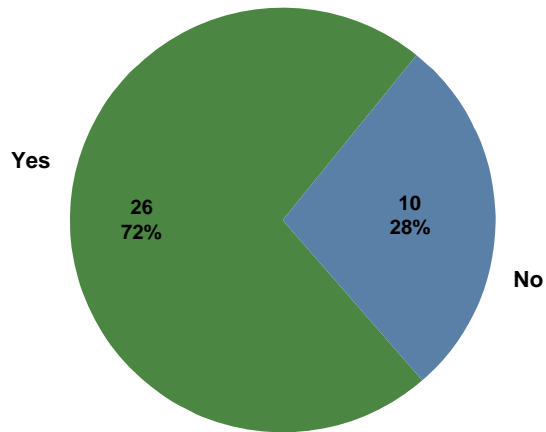
Refresher Training Frequency and Means through which it is Provided

Every 3 Months	Annually	Biennial	Other
1 Agency <ul style="list-style-type: none"> Classroom 	7 Agencies <ul style="list-style-type: none"> 3 – Classroom 2 – Annual Rules Training 1 – Seminar 1 – Multimedia 	5 Agencies <ul style="list-style-type: none"> 2 – Classroom 3 – Annual Rules Training or Recertification 	4 Agencies <ul style="list-style-type: none"> Upon Request Other training modules (2) Ad hoc

Performing Fitness for Duty Checks

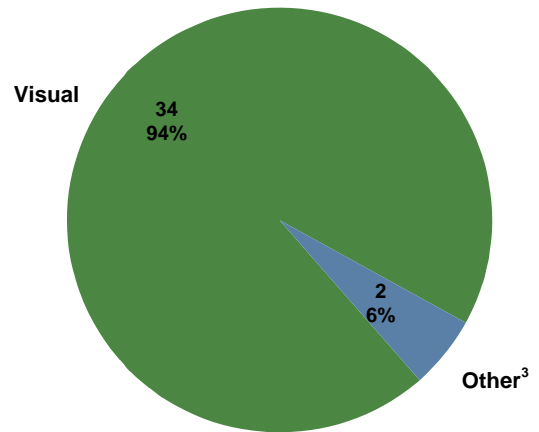
Fitness for Duty Checks

Have supervisors who conduct “fitness for duty” checks for rail transit operators received training or instruction to recognize symptoms of fatigue?



Number of Respondents - 36

How is the “fitness for duty” check performed to identify fatigue at your agency?



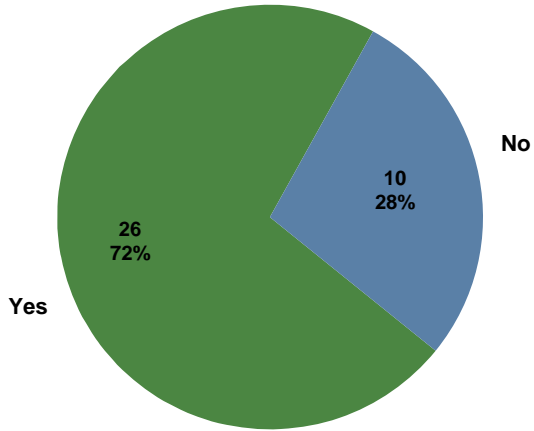
Number of Respondents - 36

³ Two rail transit agencies did not provide its methodology

Labor Relations Issues

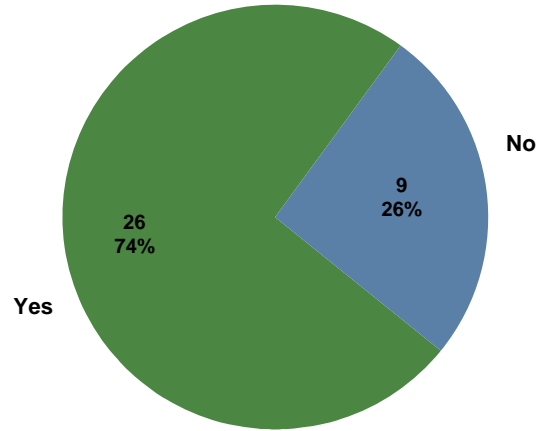
Labor Relations

Does your agency discuss issues of fatigue with your unions?



Number of Respondents - 36

Do the rail transit operators working on-call/extra board (not including hold-down assignments) have relief days guaranteed by labor agreement?



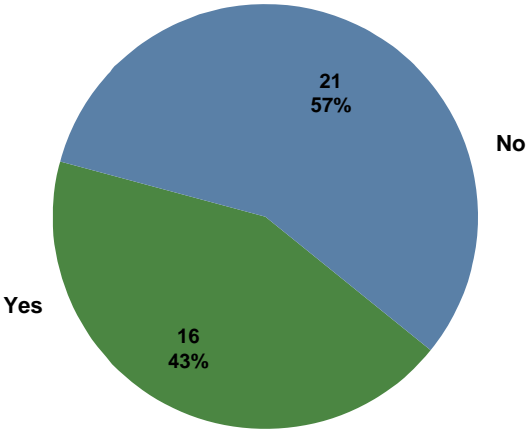
Number of Respondents - 35

Rail Transit Operator Napping Opportunities (while not on active duty)

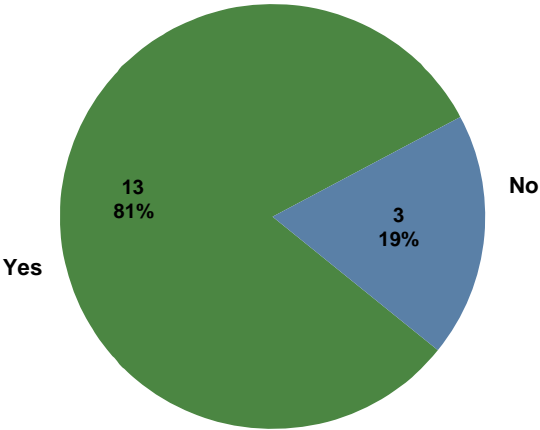
Napping Policies

Does your agency permit rail transit operators to nap on the property during their assignments or shifts when not actively engaged in work activities?

If yes, does your agency program a place where rail transit operators can nap?



Number of Respondents - 37



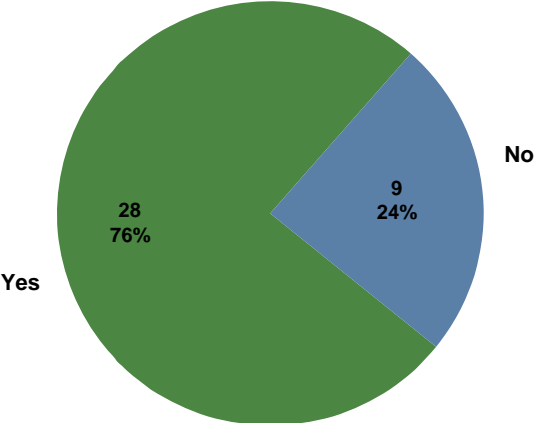
Number of Respondents - 16

- 29 agencies reported that with the exception of the situations addressed above, they have rules in place that prohibit napping
- Agencies enforce these napping rules differently
 - 4 - Discipline, Counseling and Medical
 - 9 - Discipline and Counseling
 - 5 - Discipline only

Screening for Sleep Disorders

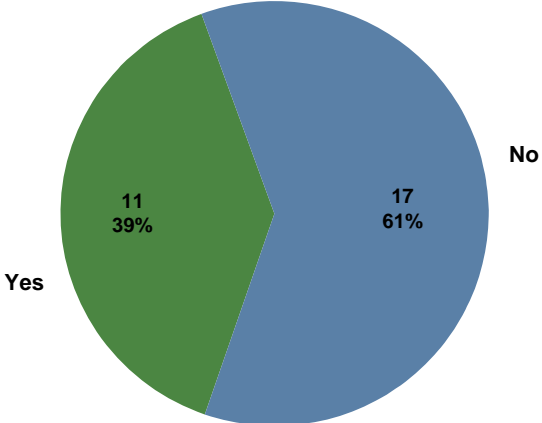
Operator Screening

Does your agency require rail transit operators to have periodic physicals?



Number of Respondents - 37

Do the periodic physicals include any screening for sleep disorders?



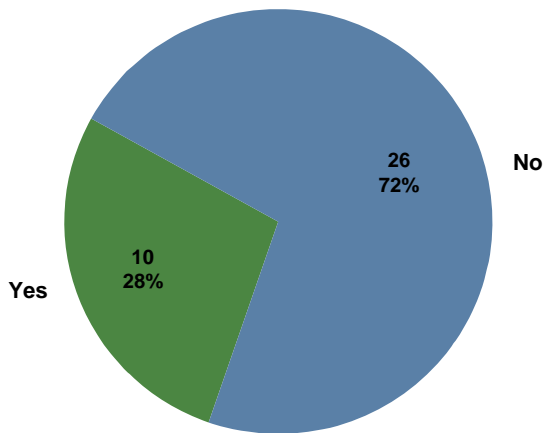
Number of Respondents - 28

- 8 of the 11 rail transit agencies that screen for sleep disorders during periodic physicals also have policies in place to screen for sleep disorder during pre-placement physicals

Medical Policies for Managing Sleep Disorders

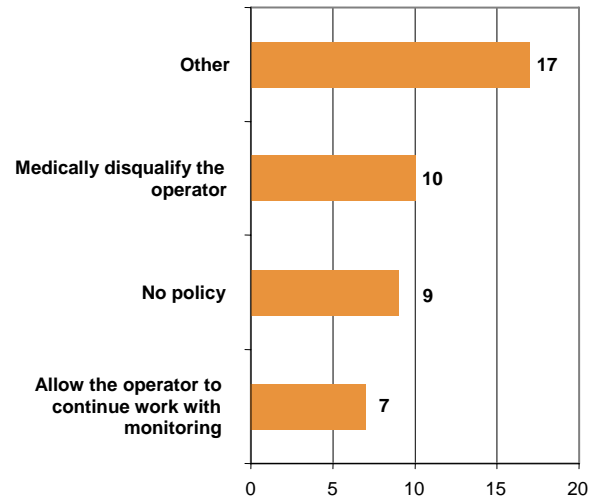
Medical Policies for Handling Diagnosed Sleep Disorders

Does your agency's Medical Policy have a reference to the handling and disposition of rail transit operators with sleep disorders?



Number of Respondents - 36

If a rail transit operator were to inform your agency's Medical Department, contracted provider, or anyone at your agency that he/she has been diagnosed with a sleep disorder, what action would your agency take?



Number of Respondents - 37

Appendix A – Survey Results

Part 1: State Oversight Agency

Question 1

Does your State Oversight Agency currently place any requirements on the rail transit agencies within your jurisdiction to ensure that rail transit operators obtain at least 8 hours of uninterrupted sleep between shifts?	Yes	No
	5	17

Question 2

If yes, please cite and describe your State’s requirements.

State Oversight Agency	Answer
California PUC	CPUC General Order 143-B, § 12.04, HOURS OF SERVICE-SAFETY SENSITIVE EMPLOYEES. LRT systems shall not require or permit any safety sensitive employees to remain on duty for more than twelve (12) consecutive hours or more than an aggregate of twelve (12) hours spread over a period of sixteen (16) hours.
Florida DOT	FDOT has established operating/driving hours standards for all bus transit systems, which are also rail systems, of 12 hr. driving in a 24 hr. period with mandatory 8 consecutive hr. off duty or max 72 hr. on duty in 7 consecutive days with required 24 hr. off duty. It is our understanding that these standards are equally applied to the rail operators by the 2 affected bus/rail transit systems.
Massachusetts DTE	(DPU Order #19810 – Jan. 7, 1980) That the Massachusetts Bay Transportation Authority shall not require or permit a Rapid Transit Lines Motorman or an Operator of Surface Rail Lines to continue on-duty, when such an employee has been on-duty sixteen (16) consecutive hours, until the employee has had at least eight (8) hours off-duty. That the Massachusetts Bay Transportation Authority shall not require or permit a Rapid Transit Lines Motorman or an Operator of Surface Rail Lines to perform more than sixty (60) actual work hours in a seven day week, nor to be on-duty more than forty-four (44) hours in any seventy-two (72) hour period.
Missouri DOT	Missouri has an Hours-of Service regulation for RFGS’s (7CSR 265-9.070). It provides 8 consecutive hours off duty under normal circumstances. It does not use the term “uninterrupted sleep”
Utah DOT	Utah has shared tracks and UTA has to follow FRA’s standard under 49 CFR Part 228, regarding Hours of Service.

Question 3

If no, does your State Oversight Agency have the existing authority to issue such a requirement?	Yes	No	Don’t Know
	3	9	5

Question 4

Has your State Oversight Agency ever used the hazard management process or the accident investigation process to assess the impacts of the rail transit agency's work scheduling practices on operational safety?	Yes	No
	5	17

Question 5

If yes, please briefly describe the type of analysis performed and the results.

State Oversight Agency	Answer
Maryland Department of Transportation	Previous MDOT Triennial reviews and accident investigations have commented upon the need for "industry appropriate" HOS rules for rail transit employees.
New Jersey Department of Transportation	Failure Mode and Effects Analysis. As part of accident investigations and rule violations, an incident is reviewed as a failure of the operator to respond properly. Probable causes are reviewed such as over-speed, hard braking, lapse of memory, inattentiveness, and other indicators to prove or disprove how the operator responded. This is in addition to the Drug and Alcohol Tests that are required by the transit agency following a serious event or violation.
New York Public Transportation Safety Board	During the course of an investigation, we conduct the operator's hours of service for last seven days and focus on last eight hours off duty activity.
Pennsylvania Department of Transportation	Rail transit agency accident investigations performed on behalf of the Pennsylvania RTSRP often include assessments of hours-of-service issues. Most investigations have not concluded that such issues were a primary cause, however in some cases they have been contributory causes. As part of its formal safety reviews at both major transit systems under its jurisdiction, the Pennsylvania RTSRP has identified formal findings associated with hours-of-service and fitness-for-duty issues.
Tri-State Oversight Committee	There is an existing finding from the past TOC Triennial review of WMATA (2004) regarding the need for WMATA to develop a comprehensive hours of service policy which is more restrictive than its current policy. WMATA is still working on developing and implementing a CAP for this Finding. Due to the need for WMATA to engage in collective bargaining with its union, it is likely that this CAP will require a significant amount of time to be addressed.

Question 6

Based on your oversight experience, does your agency believe that current work scheduling practices contribute to fatigue and reduced alertness in rail transit operators at the agencies under your jurisdiction?	Yes	No	Don't Know
	2	9	10

Question 7

Does your agency have access to the expertise required to perform and/or review hazard analysis studies conducted to assess the impacts of current work scheduling practices on the operational safety of the rail transit agencies under your jurisdiction?	Yes	No	Don't Know
		10	9

Question 8

Please describe your opinion regarding the feasibility of mandating an hours of service requirement for rail transit operators through the hazard management process?

State Oversight Agency	Answer
Arkansas Department of Transportation	The River Rail System in Little Rock is an historical trolley that has limited hours of operation at low speeds with frequent stops and the operator interacts with riders. This system should not be considered "at risk" when compared to trains operating at high speeds with the operator isolated from any interactions with passengers.
California Public Utilities Commission	CPUC's current requirement (General Order 143-B, § 12.04) satisfies NTSB Recommendation R-06-3.
Colorado Public Utilities Commission	It will likely be more feasible to implement a mandatory hours of service requirement if such requirement were included in the FTA Part 659 – SSO rules. Without an FTA mandate, such a requirement in a proposed PUC rule may not make it through the rulemaking process.
Florida Department of Transportation	I believe there will need to be specific parameters in order for states to adequately establish any mandated hours of service standards.
Georgia Department of Transportation	It is certainly feasible to mandate an hours of service requirement; haven't the FAA and FRA been doing this for years?
Louisiana Department of Transportation and Development	Feasible, but not necessarily through an 'emergency management process'.
Maryland Department of Transportation	It would be extremely difficult for MDOT to mandate HOS requirements through the HMP, based upon the non-regulatory nature of the MDOT SSO program. The best approach is for the MTA to develop appropriate HOS rules or for the FTA to issue such requirements for rail transit agencies who receive FTA funds
Massachusetts Department of Telecommunications and Energy	Mandating maximum hours of service for rail transit operators should be identical nationwide where the work hour limits should be derived based on case studies and scientific data relative to fatigue-related accidents.
Missouri Department of Transportation	MoDot has had an Hours-of-Service in effect since 1993. It has not presented any hardships to the RFGS.
Minnesota Department of Public Safety	It has been our experience that Metro Transit (the sole rail transit agency under Minnesota Rail Safety Oversight Program jurisdiction) has a solid hazard management process. It has not been necessary to utilize that process to dictate hours of service thresholds, however. Metro Transit has organized an appropriate internal standard without prompt of accident or hazard. Metro Transit's hours of service parameters may not be perfect, but they are limited to some extent by labor agreements. Any state mandates for further hours of service restrictions would likely require changes in those agreements.

Question 8

Please describe your opinion regarding the feasibility of mandating an hours of service requirement for rail transit operators through the hazard management process?

State Oversight Agency	Answer
New Jersey Department of Transportation	Hours of service does not, at the surface, appear to be a problem area (refer to (6a.and surveys from transit agencies) within the transit agencies operating in the State). At this time, there appears to be adequate controls and procedures within the transit agencies.
New York Public Transportation Safety Board	Relative to the two properties under our oversight jurisdiction, we believe that both have procedures in place to minimize the fatigue issue and thereby do not believe it is necessary to 'mandate' hours or service. Mandating is feasible and not difficult; enforcing those mandates is what makes it difficult because common sense can not be regulated.
Ohio Department of Transportation	Fatigue has never been identified as a causal factor for any of the FTA reportable accidents at GCRTA under our program. In fact, only six of the total of 16 FTA reportable accidents in the past three years may be associated with fatigue (preventable due to violation of a procedure). It would be extremely difficult to justify a mandate for GCRTA to implement an hours of service policy based on SSO accident data. It is also unclear whether we should assume that violations of procedure (preventable accidents) are necessarily caused by fatigue.
Oregon Department of Transportation	Oregon currently requires rail transit agencies to have an approved policy for hours of service. If using the hazard management process would demonstrate the policy to be too lenient, then we would most definitely agree with mandating the use of the process.
Pennsylvania Department of Transportation	At both SEPTA and the Port Authority of Allegheny County, safety personnel have conducted hazard analyses regarding employee fitness-for-duty in general and hours-of-service in particular. These analyses were prompted in part by Pennsylvania RTSRP findings, and were reviewed by the RTSRP. The analyses concluded that the respective agencies should implement comprehensive fitness-for-duty policies to address hours-of-service and other issues. Both SEPTA and PAAC drafted policies, however both agencies found that agency management was not willing to implement the policies due to cost concerns.
Puerto Rico State Emergency and Disaster Management Agency	In My opinion, thru surveys such as this one; and using the hazard management process, an Agency can implement a hours of service requirement. The HMP can be used by gathering information from other transit agencies to input fatigue incidents an established hours worked requirements.
Regional Transportation Authority (Illinois)	In order to ensure compliance with such a mandate, significant training would be needed to implement consistent methods and procedures across SSO and rail transit agencies.
Texas Department of Transportation	FTA should consider mandating an hours of service requirement for both rail and bus operators. I believe a back-door approach to implement an hours of service policy such as the hazard management process will prove to be an exercise in futility. In order to bring order and uniformity to this issue it is FTA's responsibility to assert itself as a regulatory agency and mandate an hours of service policy just as FAA, FRA, FMCSA, etc. has done.
Tri-State Oversight Committee	At WMATA Metrorail, safety personnel have conducted hazard analyses regarding employee fitness-for-duty in general and hours-of-service in particular. The analyses concluded that there should be policies to address hours-of-service issues. While WMATA is cognizant of the issue, the timeframe for resolution will likely be lengthy (see #5 above).

Question 9

Please share with FTA any ideas or suggestions you have for addressing the NTSB recommendation.

State Oversight Agency	Answer
Arkansas Department of Transportation	The type of service should be given some consideration. Ridership and Hours of Operations thresholds could be factors in determining if fatigue is an issue.
Colorado Public Utilities Commission	Any recommendations that FTA is interested in addressing or implementing should be part of the FTA Part 659 – SSO rules.
Florida Department of Transportation	FTA must establish specific parameters and criteria that will provide states the needed authority for adoption and teeth for enforcement. Does FTA have the regulatory powers to propose these type of specific operating standards? The requirement for specific standards should not be passed on to the state for them to determine.
Maryland Department of Transportation	Since the FTA lacks the regulatory authority to implement national HOS requirements, absent statutory authority granted by Congress, it should seek to receive this authority and issue national standards for rail transit employees. This should not be a responsibility of the states.
Massachusetts Department of Telecommunications and Energy	With respect to rail transit operators requiring a minimum of 8-hours of uninterrupted sleep (as opposed to 8-hours of off-duty time), the NTSB recommendation should have carried over to rail transit dispatchers in the operation control centers as well.
Missouri Department of Transportation	It is not practical to require 8 hour of uninterrupted sleep. FTA should proceed with a rulemaking that would impose an Hours-of Service requirement for rail transit and bus transit.
Minnesota Department of Public Safety	Our analysis indicates that FTA does not have the regulatory authority to mandate hours of service requirements. We do believe, however, that advisory standards from FTA or APTA would be beneficial.
New Jersey Department of Transportation	We concur with the NTSB that Fatigue Management – Hours of Service should be managed through the Hazard Management Process. The FTA's 49 CFR Part 659 can be amended to include a requirement for Fatigue Management to be included in the safety oversight agency(s) program standard and procedures. The appropriate place to add the provision appears to be in the requirements that relate to the system safety program plan (SSPP). The actual requirement would most likely belong in the supporting documents to the SSPP, in particular, the operations plan where training, work procedures, work rules and practices, and other operations type matters appear. Although, it is not proposed to include the Fatigue Management in the Hazard Management Process; it is recommended that the hazard management process be used to investigate and control, and to find cause or defend any unsafe acts that may be associated with unsafe events.
New York Public Transportation Safety Board	Relative to the two properties under our oversight jurisdiction, we believe that both have procedures in place to minimize the fatigue issue and thereby do not believe it is necessary to 'mandate' hours or service. Mandating is feasible and not difficult; enforcing those mandates is what makes it difficult because common sense can not be regulated.
Ohio Department of Transportation	Training, training and more training not just for the operators but also for management. Teaching self awareness and the importance of rest can not be overemphasized. Reviewing scheduling practices may help in reducing the potential for fatigue.

Question 9

Please share with FTA any ideas or suggestions you have for addressing the NTSB recommendation.

State Oversight Agency	Answer
Oregon Department of Transportation	FTA should conduct the survey and collect the data from the systems. FTA should analyze the data and determine if there is justification for the requirement. If so, the requirement should be added to 49 CFR Part 659.
Pennsylvania Department of Transportation	I agree with it. There needs to be some form of assurance that operators get the necessary rest. Even with 12 hours off, does not guarantee 8 hours of uninterrupted rest, but should. I would recommend 12 on and 12 off.
Puerto Rico State Emergency and Disaster Management Agency	Our informal analysis concludes that, despite NTSB statements to the contrary, FTA does not have regulatory authority to impose hours of service requirements on transit systems in the United States. In our experience, relying on the “system safety program and hazard management process” does not seem to result in adoption of appropriate hours-of-service policies. Transit agency concerns about additional costs (incurred due to less Operator availability) seem to be a primary concern.
Regional Transportation Authority (Illinois)	Establish thru the FTA a “Transit Maximum Hours” that safety sensitive employees are allowed to work.
Texas Department of Transportation	FTA should enact an hours of service requirement for rail and bus operators receiving federal funds.
Tri-State Oversight Committee	Since the FTA lacks the regulatory authority to implement national HOS requirements, absent statutory authority granted by Congress, it should seek to receive this authority and issue national standards for rail transit employees. This should not be a responsibility of the states.
Utah Department of Transportation	1. There is no way to monitor whether a person has an 8 hours uninterrupted sleep, but you can prohibit a person to work no to exceed a certain number of hours (or a certain hours of break), 2. The technology is available in the market on monitoring train operator’s fatigue condition (by monitoring their eye blinking, for example) or by other verification process by the operator (similar to the freight train operator).

Part 2: Rail Transit Agency

Question 1

How does your agency define “rail transit operator?”

12	According to Federal regulations
7	According to state regulations
3	According to local regulations
29	According to agency policy

Question 2

What specific types of train movements are performed by “rail transit operators” at your agency?

37	Movement of passenger trains
36	Yard operations
36	Deadhead/vehicle movements
12	Other

Question 2

Other – Please describe...

Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	Testing
Hiawatha Metro Transit	Any need that would arise on the main line
Metro-Dade Transit Authority	Mainline test train
Niagara Frontier Transit Authority	Emergency movement- pushing a train
Port Authority of Allegheny County	Inclined Plane Operator
Portland Tri-Met	Track Testing, Construction Clearance Tests, etc.
Sacramento Regional Transit District	Charters/Historic Streetcar Operation
Southeastern Pennsylvania Transit Authority	Work Car Operator, Track Equipment Operator
Tren Urbano	Movement of staff train

Question 3

What other activities are performed by “rail transit operators” at your agency?

37	Conducting pre-operational vehicle inspections
21	Operating disability access lifts and securement systems
12	Collection of fares from passengers
9	Issuing of transfers to passengers
35	Using the vehicle’s intercom system to communicate instructions to passengers and to call out vehicle stops and transfer points
35	Responding to customers’ questions regarding routes, directions, fares and transfers
22	Post-operational vehicle inspection
37	Contacting the rail transit control center regarding various emergencies such as medical emergencies, vehicle malfunctions, vehicle evacuations and/or circumstances that may affect service such as heavy traffic, road hazards, road obstructions etc.

Question 3

What other activities are performed by “rail transit operators” at your agency?

35	Completing accident, incident and/or miscellaneous reports to document unusual occurrences.
36	Performing related duties as assigned.
6	Other

Question 3

Other – Please describe...

Rail Transit Agency	Answer
Greater Cleveland Regional Transit Authority	Operate Switches; Troubleshooting mechanical problems
Massachusetts Bay Transportation Authority	Flagging Assignments – Days Off & Overtime Shifts; Customer Service Agents for AFC – Days Off & Overtime Shifts
San Francisco Municipal Railway	Cable car & historic streetcar conductor
Southeastern Pennsylvania Transit Authority	Ground Inspections; Limited Vehicle Troubleshooting
Utah Transit Authority	On Report will result in performing duties as needed by the Control center. They are various and may not involve operating a train during the shift

Question 4

How many “rail transit operators” are employed by your agency?

11	Less than 50
5	51 to 70
6	71 to 100
5	101 to 150
1	151 to 200
1	201 to 250
8	More than 251

Question 4

If more than 251 please provide:

Rail Transit Agency	Answer
Chicago Transit Authority	374
Massachusetts Bay Transportation Authority	Heavy Rail - 195, Light Rail - 350, Heavy Rail Yard MotorPersons – 53, Lt. Rail Shifters – 11, Total - 609
New Jersey Transit – Newark City Subway	2500+

Question 4

If more than 251 please provide:

Rail Transit Agency	Answer
San Francisco Municipal Railway	414
Southeastern Pennsylvania Transit Authority	386

Question 5

How many hours per day does your rail transit agency provide passenger service?

3	12 hours or less
2	13 to 15 hours
4	16 to 18 hours
15	19 to 21 hours
13	22 to 24 hours

Scheduling

Question 1

How many hours per day may rail transit operators perform service at your agency?

1	6-8 hours
10	8-10 hours
11	11-12 hours
2	13-14 hours
9	15-16 hours
4	More than 16 hours

Question 2

How many hours per week may rail transit operators perform service at your agency?

5	40-45 hours
2	46-50 hours
3	51-55 hours
6	56-60 hours
0	61-65 hours
4	66-70 hours
17	More than 70 hours

Question 3

How long is the average “normal” shift for rail transit operators at your agency?

1	7 hours
23	8 hours
11	9 hours
2	10 hours
0	11 hours
0	12 hours
0	Other – please specify:

Question 4

How long is the average “overtime” shift for rail transit operators at your agency?

4	3 hours
14	4 hours
0	5 hours
2	6 hours
1	7 hours
6	8 hours
9	Other – please specify:

Question 5

Does your agency have shifts where rail transit operations employees have a break of more than one hour (sometimes referred to as split shifts or swing assignments)?

Yes	No
27	10

Question 6

If yes to Question 5, please answer the following additional questions:

2.36	Average Hours	What is the average length of the break for split shift/swing assignments?
10.70	Average Hours	What is the average length of a split shift/swing assignment (total from start to finish)?
11.32	Average Hours	What is the longest length of a split shift/swing assignment (total from start to finish)?
25.46%	Average %	What percentage of the total number of assignments for rail transit operators are comprised of swing shifts?
0.13%	Average %	What percentage of the total number of assignments for rail transit operators are comprised of overnight split shift/swing assignments?

Question 7

How many hours must a rail transit operator at your agency have off between the end of his/her shift (including overtime) and the start of his/her next shift (including overtime)?

1	7 hours
1	7.5 hours
20	8 hours (SRTD Double)
0	8.5 hours
1	9 hours (SRTD Double)
0	9.5 hours
2	10 hours
0	10.5 hours
0	11 hours
0	11.5 hours
4	12 hours
8	Other – please specify:

Question 8

On average, what percentage of the rail transit operators at your agency work overtime shifts in a given week?

14	0 to 20 percent
9	21 to 30 percent
3	31 to 40 percent
4	41 to 50 percent
3	51 to 60 percent
1	61 to 70 percent
1	71 to 80 percent
0	81 to 90 percent
1	91 to 100 percent

Question 9

In the event that you did not answer “h” or “i” to Question 8 above, what obstacles does your agency face in making a larger percentage of your rail transit operators eligible for overtime?

Rail Transit Agency	Answer
Chicago Transit Authority	Overtime work is voluntary
Galveston Island Transit	Hours of Operation
Hiawatha Metro Transit	ATU labor agreement does not allow for mandatory overtime. Therefore, available work goes to those people willing to work it regardless of who might be more rested or otherwise better suited to fill the need.

Question 9

In the event that you did not answer “h” or “i” to Question 8 above, what obstacles does your agency face in making a larger percentage of your rail transit operators eligible for overtime?

Rail Transit Agency	Answer
Little Rock River Rail	None
Massachusetts Bay Transportation Authority	All full time rail transit operators are eligible for overtime.
Metro-Dade Transit Authority	Budgetary constraints.
Metropolitan Atlanta Rapid Transit Authority	The greater percentage of operators are unwilling or unable to work overtime due to family obligations. They are eligible but do not sign-up for overtime.
Metropolitan Transit Authority of Harris County	Operators not wanting to work overtime.
New Jersey Transit – Hudson-Bergen	All Operators are eligible for overtime but acceptance of overtime is seniority based.
New Jersey Transit – River Line	We face minimal, if any obstacles. All operators are eligible in order of seniority.
New Orleans Regional Transit Authority	Budget constraints
Niagara Frontier Transit Authority	Either the operator’s inability, due to run schedule, or an employee’s unwillingness to work over time.
Port Authority of Allegheny County	Overtime is at the operators discretion
Port Authority Transit Corporation	Overtime is elected and not forced
Portland Tri-Met	The Working and Wage Agreement with ATU requires that extra work be assigned to “extraboard Operators.” Regular Operators are offered overtime only after extraboard Operators have been used to utilized to maximum extent.
Sacramento Regional Transit District	None
San Francisco Municipal Railway	We have a limited budget for overtime and if we go over that budget we will face a deficit, which is illegal under local ordinance.
Santa Clara Valley Transit Authority	They’re all eligible, but most choose not to work overtime.
Seattle Center Monorail	All of Seattle Monorail Services Operators are eligible for overtime. Seattle Monorail Services employs a sufficient number of Operators to avoid the need to require overtime work as much as possible. Excessive assignment of overtime work leads to Operator fatigue.
Southeastern Pennsylvania Transit Authority	No obstacles – All operators are “eligible” for overtime. Overtime needs vary by mode and district manpower shortages (sick, vacation, etc.). Overtime is apportioned on a First Come / First Served basis: Each modal District assigns overtime from its respective overtime list / book. Employees must contact the District and request placement on the OT list / book – one (1) week in advance of each day that they wish to work OT, should it become available. OT is then assigned “first come/first serve” from the daily list.
Tren Urbano	The Union collective bargain agreement.
Utah Transit Authority	Everyone is eligible for overtime, some operators do not desire to work overtime.

Question 10

Does your agency have limits on the number of hours that may be worked by a rail transit operator per month?	Yes	No
	13	24

Question 11

If you answered yes to Question 10, what is the monthly limit on hours worked by rail transit operators?

Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	240 per month
Denver Regional Transit District	Not more than 70 hours per week
Galveston Island Transit	192
Hillsborough Area Regional Transit	450 per month; 12 hours driving / 15 hours on duty per day
Kenosha Transit	175
Massachusetts Bay Transportation Authority	All rail transit operators are eligible to work 40 hours of flat time and 20 hours of overtime per week
Metro-Dade Transit Authority	288 per month
Portland Streetcar	Operators are not allowed more than 70 hours per week, or 13 consecutive days
Portland Tri-Met	493
San Francisco Municipal Railway	We use 80 hours in an 8 day period.
Southeastern Pennsylvania Transit Authority	No specific "monthly" limit. De facto monthly limit based on HOS Program Requirements (See Scheduling #1 & #2)
Tren Urbano	360

Question 12

Are rail transit operators at your agency entitled to have a certain number of days off per week or per month?	Yes	No
	33	4

Question 13

If you answered yes to Question 12, how many days off are rail transit operators entitled to per week or per month?

1.98	Average days off per week
7.14	Average days off per month

Question 14

What is the maximum allowable number of continuous days worked without a day off for rail transit operators at your agency?

1	5 days
3	6 days
3	7 days
0	8 days
0	9 days
1	10 days
5	Other – please specify:
24	No policy

Question 14

Other – please specify:

Rail Transit Agency	Answer
Chicago Transit Authority	1 off day in 7 days or 2 off days in 14 days
Portland Streetcar	13 days
Portland TriMet	13 days
San Diego Trolley, Inc	12 days is the maximum for allowable consecutive days worked.

Question 15

	Yes	No
Are rail transit operators at your agency entitled to have days off that are consecutive?	23	14

Question 16

	Yes	No
Must a rail transit operator at your agency take his/her regular day off?	10	27

Question 17

	Yes	No
Does your agency use relief assignments (e.g., 2-day shifts, 2-mid shifts, 1-late shift) to cover regular vacancies?	25	12

Question 18

If your agency does use relief assignments, do they progress clockwise or counterclockwise, both, or neither? (e.g., clockwise=day tours followed by afternoon followed by night)?

7	Clockwise
0	Counterclockwise
5	Both
12	Neither

Question 19

Do the "rail transit operators" working on-call/extraboard (not including hold-down assignments) have assigned relief days?	Yes	No
	24	12

Question 20

Do the "rail transit operators" working on-call/extraboard (not including hold-down assignments) have relief days available based on needs of service?	Yes	No
	22	13

Question 21

Do "rail transit operators" working on-call assignments have predictable starting times (i.e. work windows)?	Yes	No
	19	15

Question 22

How far can the call window be moved when "rail transit operators" working on-call assignments have predictable starting times?

Rail Transit Agency	Answer
Bay Area Rapid Transit	4
Bi-State Development Agency (Saint Louis Metro)	2
Chicago Transit Authority	12
Denver Regional Transit District	Days start between midnight and nights start between noon and midnight
Hiawatha Metro Transit	0
Kenosha Transit	1
Maryland Transit Administration	8

Question 22

How far can the call window be moved when “rail transit operators” working on-call assignments have predictable starting times?

Rail Transit Agency	Answer
Massachusetts Bay Transportation Authority	11
Metro-Dade Transit Authority	0.5
Metropolitan Atlanta Rapid Transit Authority	1500 hours
New Jersey Transit – Newark City Subway	8
New York City Transit	varies
Niagara Frontier Transit Authority	0
Port Authority of Allegheny County	0
Tren Urbano	4
Washington Metropolitan Area Transit Authority	8

Question 23

How much notification is given for such changes?

Rail Transit Agency	Answer
Bay Area Rapid Transit	24 hours
Bi-State Development Agency (Saint Louis Metro)	1.5 hours
Chicago Transit Authority	8 hours
Denver Regional Transit District	24 hours
Kenosha Transit	1 hour
Los Angeles County Metropolitan Transportation Authority	Operators are notified by 3 pm the day before
Maryland Transit Administration	1
Massachusetts Bay Transportation Authority	17
Metro-Dade Transit Authority	24
Metropolitan Atlanta Rapid Transit Authority	3 to 10
New Jersey Transit – Newark City Subway	8
New York City Transit	2-7 days

Question 23

How much notification is given for such changes?

Rail Transit Agency	Answer
Port Authority Transit Corporation	3
Tren Urbano	4
Washington Metropolitan Area Transit Authority	8

Labor Relations

Question 1

	Yes	No
Does your agency have contractual requirements for overtime distribution?	29	8

Question 2

	Yes	No
Do these requirements limit the percentage or number of rail transit operators eligible to receive overtime assignments?	4	27

Question 3

	Yes	No
Does your agency discuss issues of fatigue with your unions?	26	10

Question 4

	Yes	No
Do the rail transit operators working on-call/extraboard (not including hold-down assignments) have relief days guaranteed by labor agreement?	26	9

Question 5

Since 1997, how many collective bargaining disputes have arisen that included fatigue as an element of the union/agency's position?

18	None
5	1-3
0	4-6
0	7-10

Question 5

Since 1997, how many collective bargaining disputes have arisen that included fatigue as an element of the union/agency's position?

2	More than 10
11	Unknown

Question 6

How is unscheduled overtime usually assigned, according to: seniority, management preference, or is it equally distributed? If other, please explain.

21	Seniority
7	Equally distributed
1	Management preference
12	Other

Question 6

Other – Please describe...

Rail Transit Agency	Answer
Bay Area Rapid Transit	Number of OT hours worked
Chicago Transit Authority	Use of a Work Book or Double-up-Book whereby operating employees volunteer for overtime. It is assigned on a first come first served basis.
Greater Cleveland Regional Transit Authority	Operators will noted during the pick if they want to be considered for OT by placing a "w" by their name.
Hiawatha Metro Transit	As there is no provision for mandatory overtime, it goes to whomever is willing to work the shift.
Metro-Dade Transit Authority	Unscheduled Overtime is distributed based on the call in procedures described in the Working Procedures-Extra Board Operators section of the Rail Addendum
New Orleans Regional Transit Authority	According to union contract
Niagara Frontier Transit Authority	Order of availability based on schedule
Santa Clara Valley Transit Authority	Extra-board Operators first (distributed equally), followed by regular run Operators.
Southeastern Pennsylvania Transit Authority	See #1 First Come / First Served basis: Each modal District assigns overtime from its respective overtime list / book. Employees must contract the District and request placement on the OT list / book – one (1) week in advance of each day that they wish to work OT, should it become available. OT is then assigned "first come" from the daily list.

Human Resources

Question 1

	Yes	No
Does your agency permit rail transit operators to nap on the property during their assignments or shifts when not actively engaged in work activities?	16	21

Question 2

	Yes	No
If yes, does your agency provide a place where rail transit operators can nap?	13	3

Question 3

	Yes	No
With the exception of the situations addressed in Questions 1 and 2, does your agency have rules prohibiting napping?	29	8

Question 4

If yes to Question 3, how are violations of your napping/fatigue policies treated? Please check all that apply.	
26	Discipline
10	Medical
16	Counseling
2	Other

Question 4

If Other, please describe...

Rail Transit Agency	Answer
Port Authority of Allegheny County	no issues

Question 5

What is your agency's policy or management philosophy regarding an employee citing fatigue as a reason for not performing his/her duties?	
Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	Immediately sent home. Must call in to make themselves available for work.

Question 5

What is your agency's policy or management philosophy regarding an employee citing fatigue as a reason for not performing his/her duties?	
Rail Transit Agency	Answer
Chicago Transit Authority	CTA Management must evaluate the level of alertness for all employees before allowing them to start or continue their work duties.
Dallas Area Rapid Transit	Inquire as reason for fatigue. Ensure employee is educated on 8 hours off.
Denver Regional Transit District	We ask the operator if they feel they are fit for duty. If the operator states they do not feel fit for duty, they are relieved of duty.
Galveston Island Transit	Operators who report for work will be assumed to be well and able to work and must accept any assignment, which they are given. Failure to perform all duties may be cause for discipline up to and including termination.
Greater Cleveland Regional Transit Authority	If they cannot complete their regular work assignment, they are relieved but there might be a medical or disciplinary follow-up conducted. If they have completed their regular assignment and are being told to work extra hours, we will relieve them if they cite fatigue. Disciplinary action may be taken if deemed appropriate.
Hiawatha Metro Transit	Would be evaluated on a case-by-case basis.
Hillsborough Area Regional Transit	If an employee cites fatigue as a reason for not driving, the Dispatcher would ask if they could safely drive the unit. If the employee answers no, the Dispatcher would relieve the employee from duty, booking the employee off as ill and the employee would receive an occurrence. The employee may also be sent for a fitness for duty examination.
Kenosha Transit	We have had no issues with fatigue, because all of our operators have plenty of time between their shifts to get plenty of rest.
Little Rock River Rail	Same as any other excused or sickness deserves.
Los Angeles County Metropolitan Transportation Authority	Rail transit operators are relieved of duty and charged with sick leave.
Maryland Transit Administration	We excuse from duty.
Metro-Dade Transit Authority	Employees with serious fatigue problems are sent for medical or fitness for duty evaluation
Metropolitan Atlanta Rapid Transit Authority	Investigation conducted to see if there was a violation in policy when issuing work. If employee's fatigue issue resulted from personal life, situation will be reviewed and appropriate action will be taken.
Metropolitan Transit Authority of Harris County	1) Send Home 2) Send for fitness duty exam 3) Allow use of sick leave
New Jersey Transit – Hudson-Bergen	Fatigue was never cited as a reason why an employee could not perform their duties
New Jersey Transit – Newark City Subway	Each case is independently examined
New Jersey Transit – River Line	All operators receive a minimum of 8 hours between shifts. It is expected that they arrive for their shifts well rested and able to perform their duties.
New Orleans Regional Transit Authority	Each matter is handled on a case by case basis.
New York City Transit	Referred for medical assessment
Niagara Frontier Transit Authority	No formal policy. An employee would have to "book sick" if they felt to fatigued while at work.
Port Authority of Allegheny	Employee can take report time off

Question 5

What is your agency’s policy or management philosophy regarding an employee citing fatigue as a reason for not performing his/her duties?

Rail Transit Agency	Answer
County	
Port Authority Transit Corporation	It is not tolerated in the workplace.
Portland Streetcar	the employee can mark off sick
Sacramento Regional Transit District	If the operator claims fatigue, then he/she can take sick leave.
San Diego Trolley, Inc.	Relieved of duty assignments for the remainder of the shift in safety sensitive positions. Counseled to be prepared and attentive on arrival to work at his/her next report time.
San Francisco Municipal Railway	We would place that employee on sick leave, send him/her home, and allow him/her to obtain the necessary rest. If the employee repeatedly was unable to perform due to fatigue, we would refer him to his personal physician, a physician specializing in sleep disorders, or employee assistance program.
Santa Clara Valley Transit Authority	The employee is responsible for a self-evaluation (condition check) prior to reporting to work. If the employee has reported to work it is an acknowledgement that they are in a condition to work (not fatigued).
Seattle Center Monorail	Another Operator is assigned until the employee citing fatigue is feeling better, or until the end of the shift if necessary.
Sound Transit – Tacoma Link	No policy
Southeastern Pennsylvania Transit Authority	This has not been an issue. There is no formal policy or philosophy regarding the disposition of personnel who may cite fatigue as an ameliorating factor in unsatisfactory job performance. Logically, if an employee were to advise their supervisor that they were too fatigued to perform duty (prior to any observed behavior), that employee could be referred to SEPTA Medical for evaluation. If the employee were to be observed “sleeping” on duty as a result of such fatigue, they would be subject to discipline (See #3 above).
Tren Urbano	No policy available.
Utah Transit Authority	Employee will be referred to medical screening and or treatment for sleep disorders, etc.

Question 6

Have supervisors who conduct “fitness for duty” checks for rail transit operators received training or instruction to recognize symptoms of fatigue?	Yes	No
	26	10

Question 7

How is the “fitness for duty” check performed to identify fatigue at your agency?	
34	Visual
0	Machine
2	Other

Question 8

Does your agency track the effect that fatigue has on liability insurance or workman’s compensation premiums?	Yes	No
	2	34

Question 9

Does your agency have any budget line items specific to fatigue-related initiatives?	Yes	No
	1	33

Question 10

Does your agency provide “initial” training or education to operations personnel regarding alertness, fatigue, and sleep?	Yes	No
	28	9

Question 11

If yes to Question 10, do you include information on any of the following? Please check all that apply.

23	Lifestyle
19	Coping with family issues
15	Social responsibilities
21	Proper sleeping environment
17	Self-evaluation of sleeping environment
18	Caffeine use
19	Napping
20	Employee work scheduling
7	Sleep logs and self-evaluation
5	Other

Question 11

Other – please specify ...

Rail Transit Agency	Answer
Greater Cleveland Regional Transit Authority	Shift work and hours of service
New Orleans Regional Transit Authority	Symptoms of fatigue behind wheel; Steps to reduce a fatigue related crash
Portland Tri-Met	Recognition of fatigue related issues
Santa Clara Valley Transit Authority	Self-evaluation of personal conditions prior to duty each day.
Southeastern Pennsylvania Transit Authority	Managing Stress Nutrition, Physical Fitness; Sleep Disorders – Insomnia, Sleep Apnea, Narcolepsy, Restless Legs, Sleep Walking, Bruxism

Question 12

Does your agency use any of the following communication methods to deliver fatigue-related training and/or education? Please check all that apply.

11	Newsletters –occasional articles may be written and distributed.
15	Take Home Material
10	Video Tape/DVD
21	Lecture/Seminar
8	Other

Question 12

Other – please specify ...

Rail Transit Agency	Answer
Chicago Transit Authority	Posters/Postings; Service Bulletins (Instruction)
Kenosha Transit	We have posters addressing fatigue
New Orleans Regional Transit Authority	In-house developed hand-outs
Port Authority of Allegheny County	Computer Based Training

Question 13

Does your agency provide “refresher” training or education regarding alertness, fatigue, and sleep?	Yes	No
	17	9

Question 14

If yes to Question 13, please briefly describe the frequency of refresher training

Rail Transit Agency	Answer
Bay Area Rapid Transit	Two Years - Recertification
Bi-State Development Agency (Saint Louis Metro)	Annual Review
Chicago Transit Authority	Every new class of Clerks, Supervisors, or Managers gets training on the signs and symptoms of fatigue. In addition, Employee Relations provide this training upon request to any garage or terminal.
Dallas Area Rapid Transit	Discussed during training.
Greater Cleveland Regional Transit Authority	Every two years in conjunction with the physical.
Hillsborough Area Regional Transit	Classroom setting, every three months.
Los Angeles County Metropolitan Transportation Authority	Every two years
Maryland Transit Administration	Every two years
Metro-Dade Transit Authority	Annually
New Jersey Transit – Newark City Subway	Annually
New Jersey Transit – River Line	Annually
New Orleans Regional Transit Authority	Annually
Port Authority Transit Corporation	Included as part of Train Operator Re-instruction however it is not included annually.
Sacramento Regional Transit District	During initial operator training w/ follow-ups every couple of years
San Francisco Municipal Railway	Annually
Sound Transit – Tacoma Link	Annually
Southeastern Pennsylvania Transit Authority	Ad Hoc

Question 14

If yes to Question 13, please briefly describe the method of providing refresher training

Rail Transit Agency	Answer
Bay Area Rapid Transit	Classroom
Bi-State Development Agency (Saint Louis Metro)	Classroom
Chicago Transit Authority	Formal classroom type of training with slides.

Question 14

If yes to Question 13, please briefly describe the method of providing refresher training

Greater Cleveland Regional Transit Authority	As part of requalification training for rail operators.
Hillsborough Area Regional Transit	Lecture, handout, power point presentation.
Los Angeles County Metropolitan Transportation Authority	Classroom
Maryland Transit Administration	As a segment piece and presented during the operator's recertification training.
Metro-Dade Transit Authority	Classroom/hands on
New Jersey Transit – Newark City Subway	Annual rules training
New Jersey Transit – River Line	Presentation/seminar format with take home notes
New Orleans Regional Transit Authority	Various – classroom lecture, hand-outs, role play
Sacramento Regional Transit District	Training department via lecture and handouts. Trainers are certified by TSI in fatigue awareness training
San Francisco Municipal Railway	Lecture/seminar during annual safety training
Sound Transit – Tacoma Link	Multimedia
Southeastern Pennsylvania Transit Authority	Presentation / take-home material as part of voluntary Wellness Seminars conducted by Medical Department.

Question 15

	Yes	No
Does your agency allow secondary employment for full-time rail transit operators?	27	10

Question 16

If yes to Question 15, how is your secondary employment policy enforced?

Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	Only if the secondary employment interferes with Metro responsibilities.
Chicago Transit Authority	CTA conducts internal investigations, if an employee is found to be in violation of the procedures, he/she is subject to discipline.
Dallas Area Rapid Transit	Difficult to enforce, but we require employees to inform management of secondary employment.
Denver Regional Transit District	Any hours worked in a reported 2nd job are logged.
Greater Cleveland Regional Transit Authority	No policy
Hiawatha Metro Transit	Operators are expected to report to this job as scheduled and perform the required duties.

Question 16

If yes to Question 15, how is your secondary employment policy enforced?

Hillsborough Area Regional Transit	Contractually, they must report job to the Authority.
Little Rock River Rail	It is allowed, no enforcement is necessary.
Maryland Transit Administration	We do not monitor operators secondary employment.
Massachusetts Bay Transportation Authority	Not enforced
Metro-Dade Transit Authority	Secondary employment is allowed through proper Departmental approval.
Metropolitan Transit Authority of Harris County	Employee must request, in writing, approval by department Director.
New Jersey Transit – Hudson-Bergen	No enforcement imposed
New Jersey Transit – Newark City Subway	Employees must complete a request to obtain additional employment outside of the Corporation. This request is reviewed and is either granted or denied.
New Jersey Transit – River Line	There is currently no secondary employment policy.
New Orleans Regional Transit Authority	There is no secondary employment policy
New York City Transit	Employees must file dual employment
Niagara Frontier Transit Authority	There is no policy that addresses this issue
Port Authority of Allegheny County	This question does not make sense
Port Authority Transit Corporation	Employees are required to inform their Directors of their secondary employment and must obtain their approval. This policy is in place for all employees, not only Train Operators.
Portland Tri-Met	NA
Santa Clara Valley Transit Authority	Employee must file a secondary employment declaration and conflicts are evaluated.
Seattle Center Monorail	No existing policy.
Southeastern Pennsylvania Transit Authority	No policy other than by Rule Book requirement: Authority Standard Rule ASR-2 [Acceptance of Employment] (A) (5) which states, “... <i>Employees must refrain from engaging in any outside business, occupation, or activity that in any way affects the performance of duty for the Authority...</i> ” There is no formal auditing of the rule. Enforcement is by exception.
Utah Transit Authority	off time is not regulated by UTA
Washington Metropolitan Area Transit Authority	The employee must have the opportunity for 8 consecutive hours off in a 24 consecutive hour period

Medical Department

Question 1

	Yes	No
Does your agency require rail transit operators to have periodic physicals?	28	9

Question 2

	Yes	No
Do the periodic physicals include any screening for sleep disorders?	11	18

Question 3

	Yes	No
Does your agency's pre-placement physical include screening for sleep disorders?	13	23

Question 4

	Yes	No
Is there a confidential, third-party screening and diagnosis program for sleep disorders that you encourage your rail transit operators to take advantage of?	7	30

Question 5

	Yes	No
Does your agency's health care plan cover the diagnosis and/or treatment of sleep disorders?	35	2

Question 6

	Yes	No
Does your agency's Medical Department/contracted medical provider conduct any awareness programs or provide rail transit operators with information (i.e. pamphlet, brochures, newsletters) on sleep disorders and/or fatigue?	8	28

Question 7

	Yes	No
Does your agency's Medical Policy have a reference to the handling and disposition of rail transit operators with sleep disorders?	10	26

Question 8

If a rail transit operator were to inform your agency's Medical Department, contracted provider, or anyone at your agency that he/she has been diagnosed with a sleep disorder, what action would your agency take? If other, please explain.

0	Allow the operator to continue work
10	Medically disqualify the operator
7	Allow the operator to continue work with monitoring
9	No policy
17	Other

Question 8

If other, please specify ...

Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	(with follow-up care)
Dallas Area Rapid Transit	INSTRUCT OPERATOR TO SEEK TREATMENT AND MONITOR IT.
Denver Regional Transit District	Removed from service until released by a DOT physician
Hillsborough Area Regional Transit	Based on doctors orders/instructions – removed from service until cleared.
Little Rock River Rail	Depends on situation
Maryland Transit Administration	Able to work with doctor release
Massachusetts Bay Transportation Authority	Fitness for Duty Medical Exam Request for Medical Info from Treating Physician, Medical Record Review, Medication Review, Determination for Fitness for Duty by M.D.
Metro-Dade Transit Authority	Pursue medical/fitness determination information.
Metropolitan Atlanta Rapid Transit Authority	cannot continue as 'operator'- subject to reassignment
New York City Transit	Employees must file dual employment
Port Authority of Allegheny County	Everyone is held off pending further documentation of condition
Portland Streetcar	Would have to have Doctors release
Portland Tri-Met	Follow Drs. Recommendations for returning Operator to work
San Diego Trolley, Inc.	Take Operator OOS, refer to company MD for evaluation/determination, follow physician's recommendation.
Washington Metropolitan Area Transit Authority	Hold operator off pending appropriate medical action

Question 9

Does your agency have a policy that addresses the use of prescription medications that may impact alertness?	Yes	No
	35	2

Question 10

Does your agency have a policy that addresses the use of over-the-counter medications that may impact alertness?	Yes	No
	33	4

Question 11

Does your agency/medical provider conduct any awareness programs or provide employees with information on the possible side effects resulting from the use of over-the-counter medications?	Yes	No
	27	10

Question 12

Does your agency have an employee assistance program (EAP) to address fatigue-related issues?	Yes	No
	32	5

System Safety

Question 1

In investigations of rail transit accidents/incidents, does your agency ask any questions regarding the following? Check all that apply. If other, please explain:	
35	Hours on duty?
22	Hours slept prior to reporting for work?
28	Hours worked in week prior?
13	Hours slept in week prior?
15	Quality of rest?
18	Medical conditions that may affect sleep?
8	Hours worked in previous month?
5	Other – please specify:

Question 1

If other, please explain:

Rail Transit Agency	Answer
Greater Cleveland Regional Transit Authority	Family issues; what they ate that day; Is the shift consistent? normal days off; overtime issues
Niagara Frontier Transit Authority	Drug & alcohol screening
Port Authority Transit Corporation	Start of shift

Question 2

Over the last three (3) years, have any of your agency's investigations into rail transit accidents, injuries, or incidents suggested that fatigue was a contributing factor?	Yes	No
	10	27

Question 3

If yes to Question 2, what percentage of total investigations over the last three (3) years conducted into rail transit incidents/accidents had fatigue as a primary or contributing factor?

0.44%	Primary factor (Average)
2.04%	Contributing factor (Average)

Question 4

Is fatigue management addressed in your agency's System Safety Program Plan?	Yes	No
	9	28

Question 5

Does your agency's safety department conduct regular audits of operators' performance with specific attention to diminished performance resulting from fatigue-related causes?	Yes	No
	4	33

Question 6

Has your agency performed hazard analysis studies to assess the impacts of work scheduling practices on operational safety?	Yes	No
	5	32

Question 7

If yes to Question 6, please provide a brief summary of the results.

Rail Transit Agency	Answer
Bi-State Development Agency (Saint Louis Metro)	Lead to discussion with Rail Operations in formulating a fatigue-hours of service policy
Dallas Area Rapid Transit	STUDY IS TAKING PLACE AT THIS TIME. RESULTS ARE PENDING
Greater Cleveland Regional Transit Authority	No summary given
New York City Transit	The number of hours worked could not be proven as a significant factor in operator at fault incidents.
Port Authority Transit Corporation	This was done prior to instituting the 10 hour requirement in 2001.

Question 8

Has your agency discussed fatigue-related issues and their impacts on operational safety with your State Oversight Agency?	Yes	No
	19	18