FTA

FEDERAL TRANSIT ADMINISTRATION

Transit Asset Management (TAM) Workshop

Sept. 14, 2016

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U.S. Department of Transportation

Federal Transit Administration

The TAM webinar series is sponsored by the Federal Transit Administration, U.S. Department of Transportation

Today's Presentation

Background

I. State of Good Repair

II. TAM Plans

III. Performance Measures and Targets

IV. Reporting

V. Technical Assistance

MAP-21 Performance Management Framework

FTA

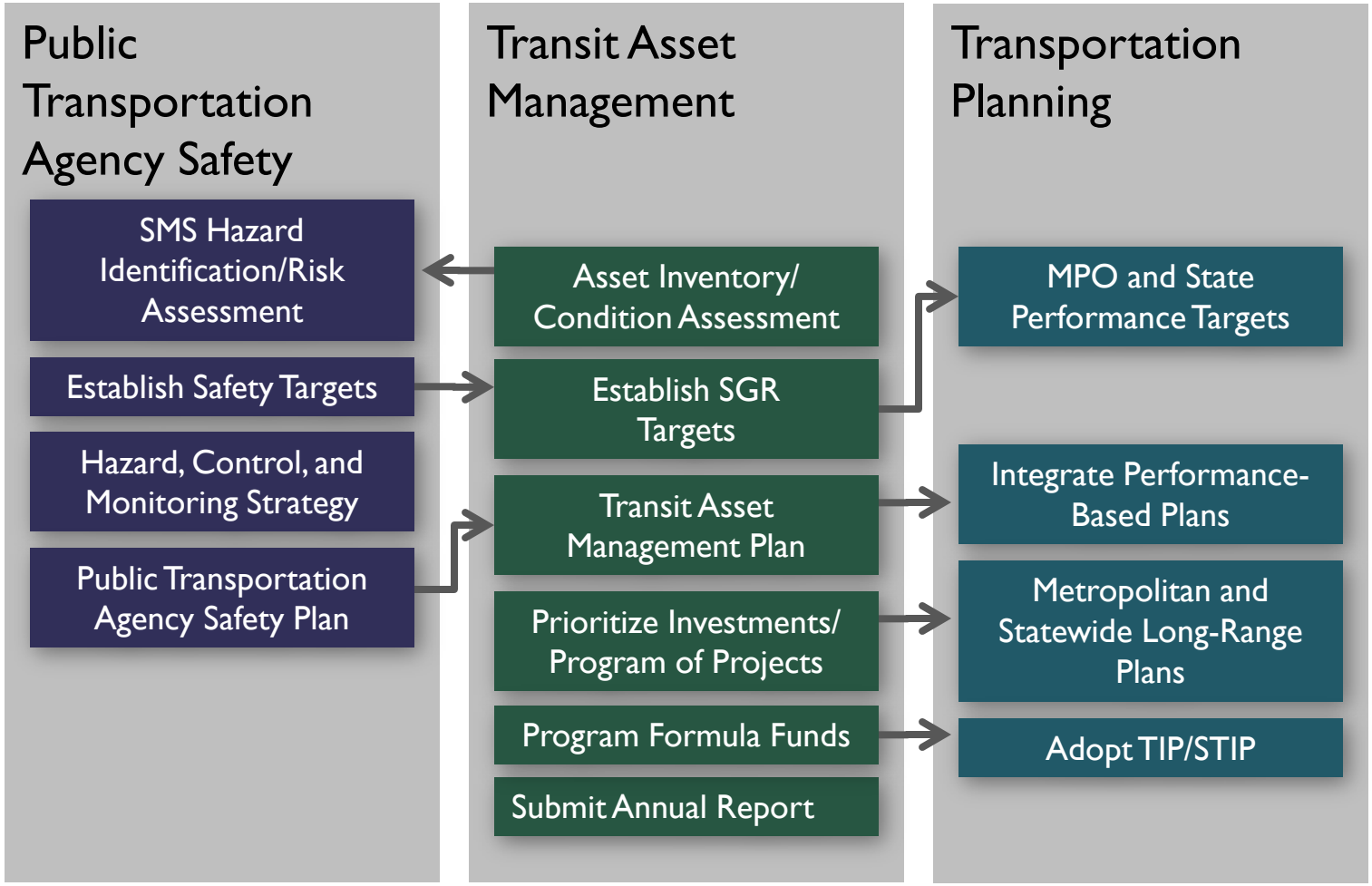
- Transit Asset Management
- National Public Transit Safety Plan
- Public Transportation Agency Safety Plan

FHWA

- Safety Performance
- Pavement and Bridge Condition
- System Performance & CMAQ
- Highway Safety Improvement Program
- Highway Asset Management Plan

- Statewide and Metropolitan Planning

Linking Proposed Regulations



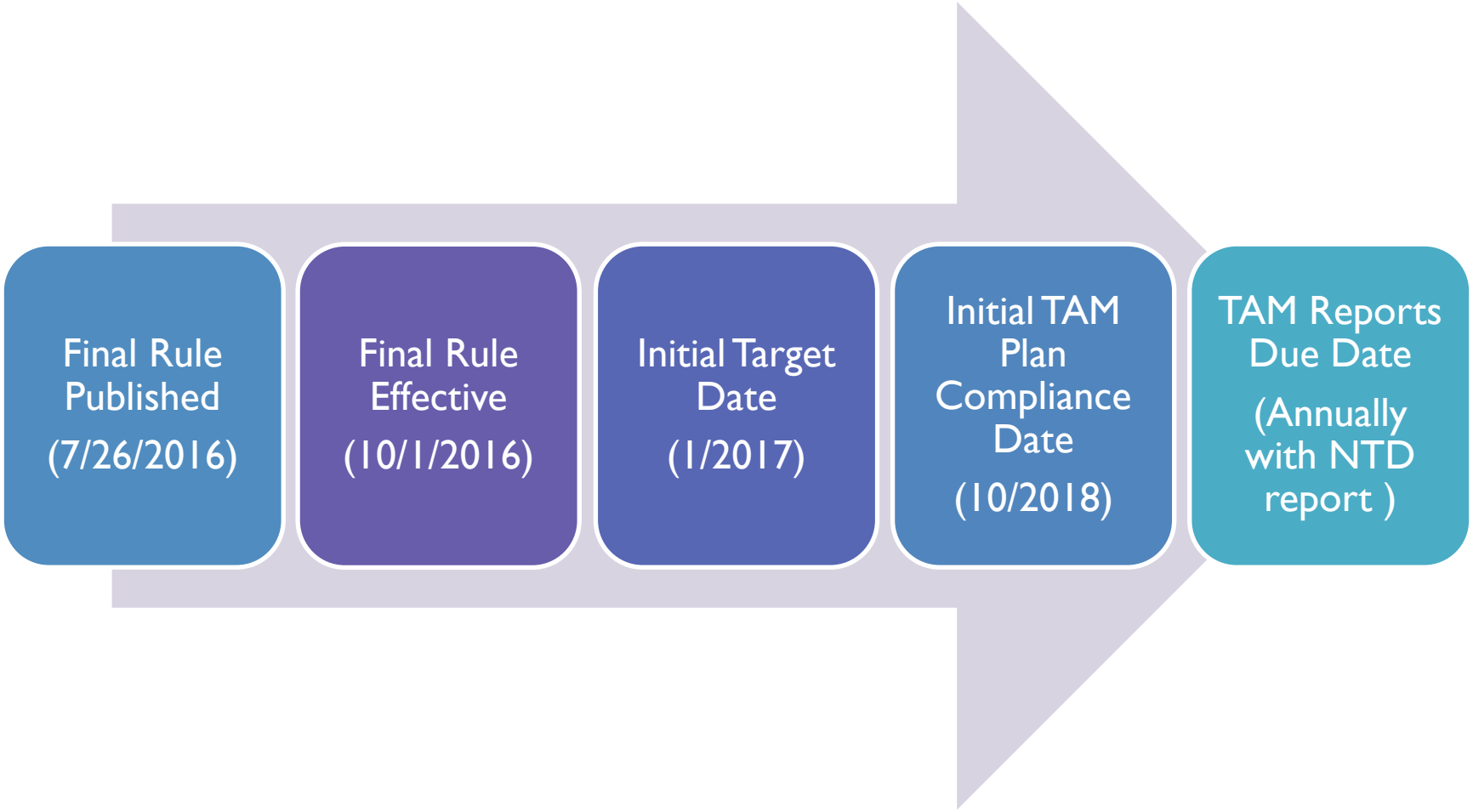
What is Transit Asset Management?

Transit Asset Management (TAM) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep our transit networks in a State of Good Repair (SGR).

Anticipated Benefits of TAM

1. Improved transparency and accountability
2. Optimized capital investment and maintenance decisions
3. More data-driven maintenance decisions
4. Potential safety benefits

Where do we go from here?



National Transit Asset Management System

Define *state of good repair*

Require *TAM Plans for all recipients and sub-recipients*

Establish *SGR perfor-mance measures*

Report *data to the NTD*

Receive *Technical assistance from FTA*

Changes from NPRM to Final Rule

- 5310 Applicability – Subpart A
  - Rule applies to “Public Transportation” providers
- Definitions – Subpart A
  - Tier II Provider
- Asset Tracking – Subpart C
  - Third party assets
  - Equipment
- Performance Measures – Subpart D
  - Allows more than one target per asset class

1. State of Good Repair

State of Good Repair

The condition in which a capital asset is able to operate at a **full level of performance**. This means the asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its lifecycle investments have been met or recovered.

General Provisions – Subpart A

- Purpose
  - To help achieve and maintain a state of good repair for the nation's public transportation systems
- Applicability
  - All recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used in the provision of public transportation
- Definitions

Definition of 'Public Transportation'

The term "public transportation" is defined at 49 U.S.C. 5302 and means regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income.

II. Transit Asset Management Plans

Applicability – Tier I or Tier II

Tier I

Operates Rail

OR

≥ 101 vehicles across **all fixed route** modes

OR

≥ 101 vehicles in **one non-fixed route** mode

Tier II

Sub-recipient of 5311 Funds

OR

American Indian Tribe

OR

≤ 100 vehicles across **all fixed route** modes

OR

≤ 100 vehicles in **one non-fixed route** mode

Responsibility for TAM Plan Development

- Each transit provider must designate an Accountable Executive
- Plan Coordination
  - A Tier I provider must develop its own TAM Plan
  - A Tier II provider may participate in a single Group Plan or opt out and develop its own TAM Plan
  - A Group Plan participant must collaborate with the sponsor in the development of the plan
- Eligible activity under 5337, 5307 & 5311

Group Plans

- Group Plans compiled by a sponsor
  - Generally the State DOT or Designated/Direct Recipient
  - Sponsor is not the Accountable Executive for its Group TAM Plan participants
  - Small urban operators (5307 Recipients) are not required to be offered a group plan but CAN be based on mutual agreement between sponsor and operator.

TAM Plan Elements

1. Inventory of Capital Assets
2. Condition Assessment
3. Decision Support Tools
4. Investment Prioritization

All Providers
(Tier I & II)

I II

5. TAM and SGR Policy
6. Implementation Strategy
7. List of Key Annual Activities
8. Identification of Resources
9. Evaluation Plan

Tier I only

I

1. Inventory of Capital Assets

- A listing of all capital assets (including non-FTA funded):
  1. Owned by the transit provider
  2. Third-party exclusive-use assets
  3. Equipment Assets:
     - all non-revenue service vehicles regardless of cost,
     - other owned assets over $50,000,
     - no third-party equipment assets.
  - Level of detail is same as in Capital Program of Projects

Examples of Asset Categories and Classes

Category	Class	
Equipment	▪ Construction ▪ Service Vehicles	▪ Maintenance
Rolling Stock	▪ Railcars ▪ Buses ▪ Other Passenger Vehicles	▪ Ferries
Infrastructure	▪ Fixed Guideway ▪ Signal Systems ▪ Structures	▪ Power
Facilities	▪Maintenance Facilities ▪ Passenger Facilities	▪ Parking Facilities ▪Administrative Facilities

2. Condition Assessment

- A rating of the inventoried assets
  - E.g., age; good/fair/poor; percentage of residual life
- Ratings should be sufficiently detailed to monitor performance and plan capital investment
- Condition assessments may be collected at the individual or asset class level
- Condition assessments may include vulnerabilities to natural/climate hazards
- Condition assessments are only required for assets with direct capital responsibility

Assessing Condition by Asset Class

Category	Asset Inventory	Assessing Condition
Equipment	▪ **All** non-revenue service vehicles and equipment > $50K used in the provision of public transit, except 3rd-party equipment assets	▪ Only equipment with **direct** capital responsibility, no third party assets
Rolling Stock	▪ **All** revenue vehicles used in the provision of public transit	▪ Only revenue vehicles with **direct** capital responsibility
Infrastructure	▪ **All** infrastructure used in the provision of public transit	▪ Only infrastructure with **direct** capital responsibility
Facilities	▪ **All** facilities used in the provision of public transit (excluding bus shelters)	▪ Only facilities with **direct** capital responsibility (excluding bus shelters)

TAM Plan Example

1. Inventory Capital Assets

Six 30-foot buses

2. Assess Condition

- Age/ULB:

Bus	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6	ULB
Age	17	15	15	7	7	2	14

- **3 of 6 buses are below the default useful life benchmark**

3. Decision Support Tools

- List analytical process(es) used to make investment prioritization
  - To estimate capital investment needs over time
  - To assist in prioritization
- The tool does <u>not</u> have to be specialized software

4. Investment Prioritization

- A ranked listing of proposed projects and programs ordered by year of planned implementation
- Prioritization locally determined based on policy and need
- Must adequately consider
  - Identified unacceptable safety risks
  - Accessibility requirements
- Fiscally constrained based on estimated funding levels

TAM Plan Example

3. Decision Support Tools

Criteria	Weight	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6
Poses safety risk (0-5)	8	5	0	1	2	4	0
Age (years)	.5	17	15	15	7	7	2
Poor reliability (0-5)	5	2	3	3	4	2	1
Poor appearance (0-5)	1	1	3	2	4	2	1
Totals		59.5	25.5	32.5	43.5	47.5	7

4. Investment Prioritization

Score ≥ 50…… Replace this year
30 ≤ Score < 50… Replace in year 3
Score < 30…… No immediate remedial action

5. TAM and SGR Policy

I

- Transit provider's vision
- Executive-level direction to support the goals of the TAM program
- Documented commitment to achieving SGR
- Defined TAM objectives
- Defined and assigned roles and responsibilities

S pecific
M easurable
A ttainable
R elevant
T emporally constrained

TAM Plan Example

5. TAM and SGR Policy

"We have 1 objective:

- To ensure all vehicles are no more than 6 months behind in deferred maintenance

Roles & Responsibilities:

- Chief of Maintenance – keeps asset condition inventory up to date
- Chief Financial Officer – provides cost estimates for …"

I, the accountable executive, am committed to achieving a state of good repair. Our agency's goal is …

6. Implementation Strategy

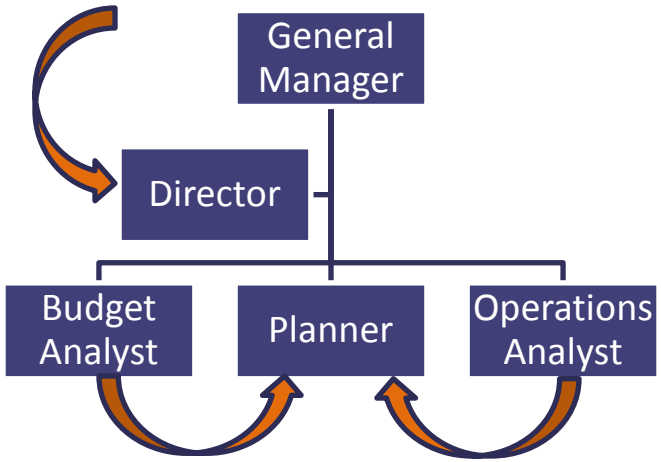
- Operational level process for implementing TAM Plan

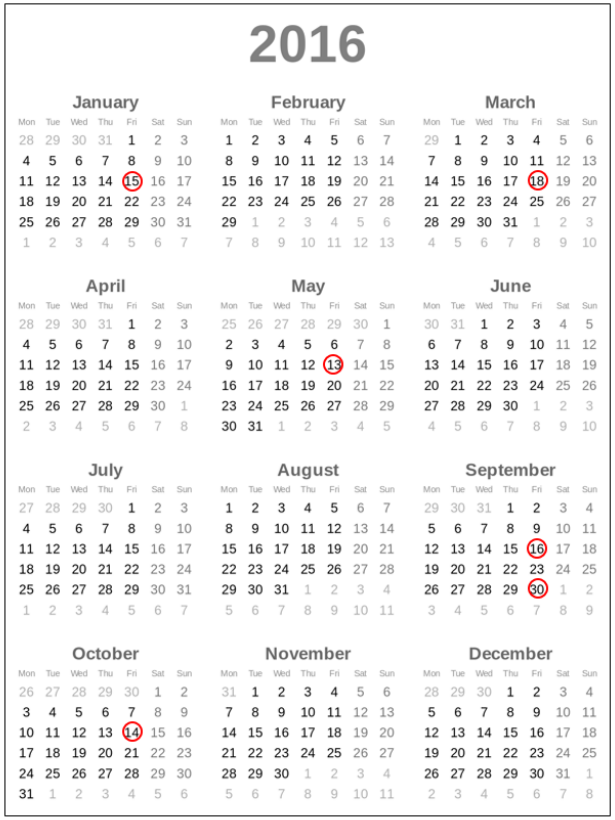
7. List of Key Annual Activities

- Description of actions needed to implement TAM Plan for each year of the plan's horizon
  - E.g., software development, coordination between maintenance and finance offices

TAM Plan Example

6. Implementation Strategy





7. Key TAM Activities

1. Link asset inventory to decision support tool (Due: May)
2. Improve coordination between maintenance and finance staff (meet Quarterly)

8. Identification of Resources

- E.g., staff time, technology requirements, funding, etc.

9. Evaluation Plan

- How TAM activities will be monitored, evaluated, and updated to ensure the continuous improvement of TAM practices

TAM Plan Example

8. Identify Resources

	Finance	Planning	Operations
Staff needs	.25 FTE	.5 FTE	.25 FTE
Total	$25K	$15K	$20K

Total = $60K

9. Develop Evaluation Plan

TAM Plan Timeframes

- Plans would be updated in their entirety at least every 4 years
  - Coincide with relevant (Statewide) Transportation Improvement Program
  - Cover at least 4 years
  - Should be amended during the horizon period when there is a significant change
- Initial TAM Plans completed no later than 2 years after effective date (October 2018)

III. Performance Measures and Targets

Performance Measures

- Equipment
  - Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)
- Rolling Stock
  - Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB
- Infrastructure
  - Percentage of track segments with performance restrictions by class
- Facilities
  - Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale *(1=Poor to 5=Excellent)*

Analyzing Assets

Category	Assessing Condition	Performance Targets	Measure
Equipment	▪Age based	▪ Only non-revenue service vehicles	ULB
Rolling Stock	▪Age based	▪ Only revenue vehicles by vehicle class/mode	ULB
Infrastructure	▪ Only infrastructure with direct capital responsibility	▪ Only rail fixed guideway	Slow-zone
Facilities	▪ Only facilities with direct capital responsibility (not bus shelters)	▪ Maintenance, Administrative, Passenger, and Parking Facilities	TERM

Targets for Performance Measures

- Set targets annually for each asset class
- Supported by data
  - Most recent condition data
  - Reasonable financial projections
- Targets for Group Plans apply to the group as a whole
- Reported annually to National Transit Database (NTD)
  - www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

Useful Life Benchmark (ULB)

- ULB ≠ Useful life for FTA grant programs
- Useful Life Benchmark is defined as the expected lifecycle of a capital asset for a particular Transit Provider's operating environment, or the acceptable period of use in service for a particular Transit Provider's operating environment.
- ULB takes into account a provider's unique operating environment (i.e. geography, service frequency, etc.)
- There are default ULB values, but agencies are welcome to develop their own

Sample Default ULBs

Revenue Vehicle Type	Default Useful Life Benchmark	Useful Life in Grant Programs *
Automated Guideway Vehicle (AG)	31	12
Bus (BU)	14	12
Cutaway Bus (CU)	10	10
Ferryboat (FB)	42	25
Heavy Rail Passenger Car (HR)	31	30
Light Rail Vehicle (LR)	31	25
Commuter Rail Locomotive (RL)	39	30
Trolleybus (TB)	14	12
Van (VN)	8	7

* Always refer to guidance in Circular 5010.D to determine this value

IV. Recordkeeping and Reporting Requirements

TAM Reporting to NTD

1. Data Reports
   - Projected performance targets for next fiscal year
   - System Condition and Performance Reports
     - ULBs for Rolling Stock & Equipment
     - Condition Assessments for Facilities
     - Slowzones for Infrastructure (rail fixed guideway)
2. Narrative Report
   - Change in condition
   - Progress toward targets

- Group Plan Sponsors submit consolidated reports on behalf of their participants

National Transit Database Webpage

ps://www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

United States Department of Transportation | About DOT | Our Activities | Areas of Focus

Federal Transit Administration

About | Funding | Regulations & Guidance

Home » National Transit Database

- National Transit Database
- About the NTD
- NTD Data
- Reference Materials
- Manuals
- Asset Inventory Module
- Trainings and Conferences
- Reporting Forms
- Presentations and Webinars
- Rules and Regulations
- NTD Glossary
- Reporting Login

NTD Asset Inventory Modules and Information

The Asset Inventory Modules for the National Transit Database

- Asset Reporting Manual
- Asset Module Reporting Template (Excel)
- Asset Inventory Expansion Federal Register Notice
- Asset Inventory Expansion Overview Webinar
- Asset Inventory Expansion Webinar Presentation (PDF)
- Webinar Q&A Transcript - 12/16/15 (PDF)
- Webinar Q&A Transcript - 12/18/15 (PDF)

Updated: Wednesday, March 9, 2016

Related Links

- NTD Internet Reporting System Forms
- Manuals
- Federal Register Notices, Rules & Regulations
- Census Updates
- Presentations and Webinars

Asset Module Reporting Template

Accessibility Contact

National Transit Database
1200 New Jersey Avenue, SE
Federal Transit Authority
Washington, DC 20590
United States
NTDhelp@dot.gov

https://www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

Reporting Requirements

Performance Measures and Targets

a) Calculate condition information

b) Set targets for next fiscal year

35% of 30-foot buses will exceed the 12-year ULB.

	ULB	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6	Bus 7	Exceed ULB
Year 1	*12*	17	15	15	7	7	2		50%
Year 2	*12*	retired	16	16	8	8	3	1	33%

Recordkeeping Requirements

- Maintain records supporting TAM Plan
- Share with State and metropolitan planning organization (MPO) planning agencies
  - TAM Plan
  - Performance targets
  - Investment strategies
  - Annual condition assessments

Certification

- TAM Plans are Self-Certified by the Accountable Executive
- FTA will update Certifications and Assurances to reflect TAM Plan requirements
- FTA will review Plans and Progress during Triennial and State Management Reviews, as well as during MPO Certification Reviews

TAM Timelines

Items in blue Submitted to NTD

Activity	Initial Due Date	Ongoing Submittal Frequency
Final Rule Effective Date	October 1, 2016	n/a
SGR Targets	*Set by 1/1/17*	*Annually within 4 months of end of provider's FY as part of NTD Report*
TAM Plan	October 1, 2018	Every 4 years
Asset Inventory and Condition Reporting*	*Within 4 months of end of provider's FY 2018*	*As part of NTD Report*
Narrative Report	*Within 4 months of end of provider's FY 2019*	*Annually within 4 months of end of provider's FY*

** Only 1/3 of facilities condition assessments are due in NTD report year 2018*

V. Technical Assistance

Technical Assistance from FTA

- TERM-Lite
- Transit Asset Management Guide
- TCRP Products
- TAM News & Noteworthy Practices
- Small Provider Guide and Template
- Asset Inventory Development & Integration Guide
- Training & Webinars
- Facility Condition & Rail Guideway Guidebooks

https://www.transit.dot.gov/TAM

Online Resources www.transit.dot.gov/TAM

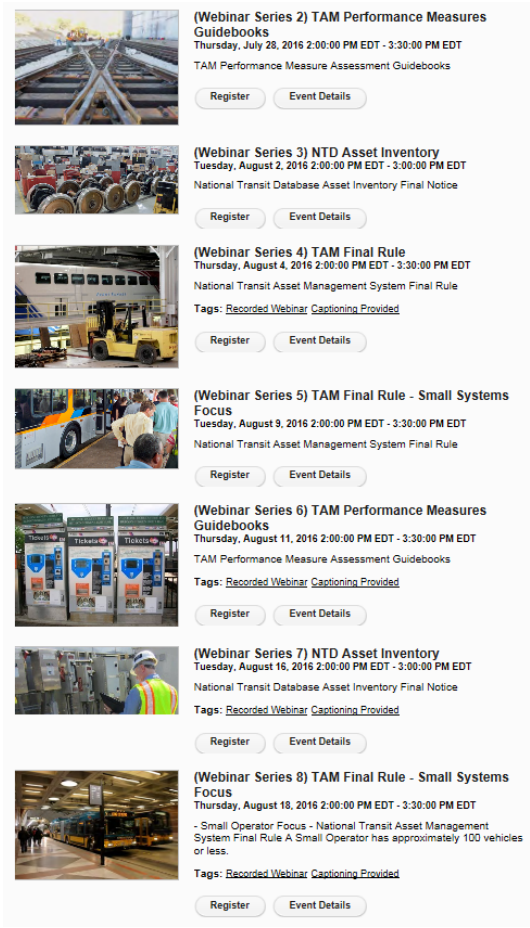
- TAM Compliance Checklists
  - Tier Determination
  - Sponsor/Participant
  - Compliance
- Final Rule Factsheet
- FAQs
- Revamped Website
  - Getting Started Page
  - Resources by topic and type

Sixth TAM/SGR Roundtable

- Held July 13th 2016 in Minneapolis, MN
- Held in conjunction with TRB Asset Management Conference
- Cross-section of over 40 transit stakeholders
- Peer exchange of TAM activities and implementation
- Proceedings at www.blsmeetings.net/SGR/

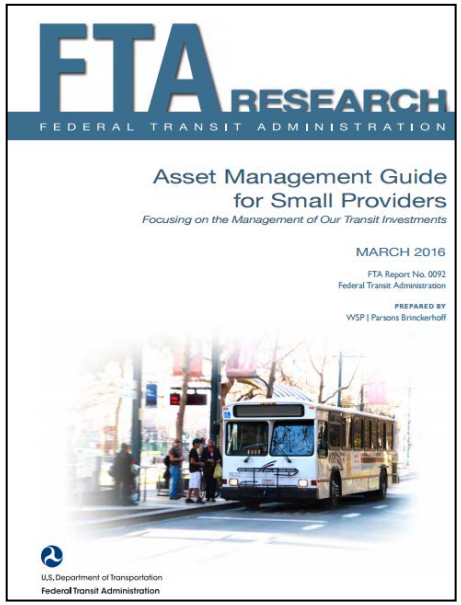
Final Rule Outreach

- Webinar series (9 total) - Complete
  - 4 TAM Final rule , 2 for small systems
  - 2 NTD Asset inventory
  - 2 Performance Measure Guidebooks
- Conferences
  - TRB TAM Conference (Minneapolis)
  - Transit Midwest/State Programs Meeting (Kansas City)
  - APTA Annual Meeting (Los Angeles)
  - Tribal Transit Conference (Anaheim)
  - TRB Rural and Intercity Bus Conference (Asheville)



Small Providers Guide

- Published May 2016
- Includes template for TAM plan
- Focused on small, bus-only operators
- Available online at TAM website



www.transit.dot.gov/TAM

Performance Measure Guidebooks

- Developed two guidebooks:
  - Facility Condition Assessments
  - Measuring Slow Zones on Infrastructure
- Includes methodologies for calculating the TAM Rule performance measures
- Available for notice and comment (9.26.16)
  - (www.regulations.gov/docket?D=FTA-2016-0030)

TAMNews Newsletters

U.S. Department of Transportation
Federal Transit Administration
Transit Asset Management Newsletter
Winter 2016

The purpose of FTA's Transit Asset Management (TAM) newsletter is twofold: to keep you up to date on our office's asset-management initiatives (as a complement to our web site and email alerts), and to create a forum for communication for all of us in the industry to share information, so that we can learn from each other.

The topic for the next edition is TAM at small providers. Please share any useful processes that your agency has adopted or let us know if there is any related topic that you would like to know more about. Email us at:

TAMNews@dot.gov

FTA Rulemaking Process

Informal Outreach
ANPRM Open for Comment
Comment Review
NPRM Open for Comment
Comment Review
Final Rule Issued
Final Rule Effective

The TAM rulemaking process is currently in the comment review stage, as shown in the diagram above.

Developing an Asset Inventory

The basis of any effective TAM plan is high quality data collected and updated through an asset inventory. This issue of TAMNews provides an introduction to asset inventories, highlights Greater Bridgeport (CT) Transit's asset inventory development, and provides useful resources for agencies considering their own asset inventory practices.

GBT multimodal transportation center

Federal transportation law requires transit agencies receiving federal funds to develop an inventory of capital assets. Transit agencies throughout the country are at varying stages of developing inventories, with some agencies struggling to navigate the process and make the necessary decisions about what data to collect and when and how to collect it.

Greater Bridgeport Transit (GBT) is developing a new asset inventory system in response to MAP-21 requirements, the proposed TAM rule, and a need for higher quality data to manage its assets effectively. On an average weekday, GBT provides approximately 21,000 unlinked trips, with 62 vehicles operating at peak service on fixed-route and demand responsive services. Based on the proposed rule,

- Ongoing external communication highlighting TAM implementation

- Audience is GovDelivery list for TAM
  - Can sign up for alerts on TAM webpage

- Five newsletters since 2014
  - Fifth newsletter focused on final rule (posted July)

TAM Training Course Development

- National Transit Institute (NTI)
  - TAM 101 course to aligned with Final Rule (Fall 2016)
  - Small Systems TAM course (Fall 2016)
- Transportation Safety Institute (TSI)
  - Performance Measures Training course to teach guidebook methodologies (Fall 2016)
- In Development
  - TAM 201 Implementation Course (Fall 2017)
  - Executive level TAM Overview Briefing (TBD)

Next Steps

- Finalize TAM Performance Measure Guidebooks [Docket FTA-2016-0030]
  - Comment period closes Sept, 26, 2016
- Training Course
  - Development and Delivery
- If you have questions, where do you go?
  - Website: www.transit.dot.gov/TAM
  - Regional Staff
  - Mshadoni Smith Mshadoni.Smith@dot.gov

Thank you for your participation!

Questions?