



Fleet Performance Metrics Update
2016 National Equipment Fleet
Management Conference
June 29, 2016

Sonja Scheurer, Administrator
Scott Ratterree, Fleet Manager
Scott Poyer, Fleet Specialist
Andrew W. Bannasch, Analyst

Agenda

- Timeline/History
- 2014 National Conference Recap
 - 2016 Goal
 - Action Items
- “Champions”/National Fleet Metrics Team Discussion
- M5 Fleet Management System (Webinars)
- MDOT Assistance
- Region Reporting Status
- EMTSP Website/DOT Contact List/Reporting Requirements

Agenda (Continued)

- ❑ Why Report?/DOT benefits
- ❑ Fleet Metrics Survey
- ❑ On Going Efforts
- ❑ Suggested Next Steps/Future Goals
 - Team/Process to develop additional metric(s)
 - Contractor assistance/Additional research project
 - Fleet Management System vendor development of interfaces/modules to assist with metrics reporting
 - Improve MAP-21 alignment
- ❑ Open Discussion/Questions

Timeline/History

- 10/2009: Initial Implementation of Fleet Management System
- 06/2010: Attended Southeast States Conference (Austin, TX)
- 09/2010: Midwest/Northeast States Conference (Pittsburgh, PA)
 - Initiation of Performance Metrics initiative/Conduct Survey
- 07/2011: MAASTO
 - Several concurrent sessions on “performance measures”
- 08/2011: Midwest/Northeast States Conference (Kansas City, KS)
 - Performance metrics presentation and briefing/roundtable
 - Issue Statements on Four Key Performance Metrics
 - Initiation of Conference Calls
- 06/2012: First National Fleet Conference (Mobile, AL)
 - Performance metrics presentation/round table
 - 40 States attended – majority vote to adopt four national metrics
 - Initiate/participate work groups via webinars (Metrics, NCSFA, M5)
- 08/2012: Team Webinar (13 States)
- 09/2012: AASHTO Subcommittee on Maintenance Adopts Resolution 12-03 (Equipment Fleet Management Performance Metrics)

Timeline/History (Continued)

- ❑ 09/2012: AASHTO Subcommittee on Maintenance Adopts Resolution 12-04 (Schedule for Alternating Biennial Regional and National AASHTO EMTSP Partnership meetings)
- ❑ 10/2012: Team Webinar (11 States)
- ❑ 11/2012: Team Webinar (13 States & Canadian Province)
- ❑ 11/2012: AASHTO Standing Committee on Highways (SCOH) adopts/approves Resolutions 12-03 and 12-04
- ❑ 12/2012: Team Webinar (9 States & Canadian Province)
- ❑ 01/2013: TRB “Spotlight” presentation
- ❑ 05/2013: Team Webinar (9 States & Canadian Province)
- ❑ 05/2013: EMTSP website operational
- ❑ 06/2013: Southeast States presentation
- ❑ 06/2013: Northeast/Midwest States presentation
- ❑ 07/2013: Initial submission of metrics for web site posting
- ❑ 07/2013: NAFA coding approved and posted on website
- ❑ 10/2013: Team Webinar (11 States & Canadian Province)
- ❑ 01/2014: TRB presentation – Committee on Maintenance Equipment
- ❑ 02/2014: Team Webinar (8 States)

Timeline/History (Continued)

- ❑ 05/2014: Team Webinar (8 States & Canadian Province)
- ❑ 06/2014: National Equipment Managers' Conference (Orlando, Florida)
- ❑ 07/2014: AASHTO Subcommittee on Maintenance (Charleston, West Virginia)
- ❑ 09/2014: "Champions" Webinar
- ❑ 10/2014: M5 Webinar (8 States)
- ❑ 12/2014: "Champions" Webinar
- ❑ 02/2015: Team Webinar (9 States & Canadian Province)
- ❑ 02/2015: M5 Webinar (6 States)
- ❑ 03/2015: "Champions" Webinar (scheduled did not occur)
- ❑ 04/2015: M5 Webinar (5 States)
- ❑ 05/2015: "Champions" Webinar
- ❑ 05/2015: Team Webinar (scheduled did not occur)
- ❑ 06/2015: Northeast/Midwest Equipment Managers' Conference (St. Louis, MO)
- ❑ 07/2015: AASHTO Subcommittee on Maintenance (Des Moines, Iowa)
- ❑ 10/2015: M5 Webinar (7 States)
- ❑ 01/2016: Team Webinar (15 States)
- ❑ 03/2016: Fleet Metrics Survey
- ❑ 03/2016: M5 Webinar (7 States)
- ❑ 05/2016: Team Webinar (17 States)

2014 National Conference Recap

- National Conference June 8-12, 2014 in Orlando, Florida
 - Fleet Performance Metrics Briefing Update + Discussion
 - Numerous States indicated ongoing efforts to report metrics
 - Roadblocks included: education/understanding, lack of available resources, Fleet Management System challenges, developing methodology/reports to retrieve information

- Goal

- Action Items

Goal/Action Items

- ❑ **2016 Goal:** Increase number of States reporting at least one fleet performance metric by 100% (17 to 34 States) by the 2016 National Conference
- ❑ **Action Items:**
 - *Each Region designate a “Champion”*
 - ❖ Midwest – Scott Ratterree (Michigan)
 - ❖ Southeast – John White (South Carolina)
 - ❖ West – Greg Hansen (Washington)
 - ❖ Northeast – Jim Schmidt (New Jersey)
 - *Quarterly “Champion” conference calls*
 - *Quarterly Fleet Management System (M5) conference calls*
 - *Michigan DOT to assist other State DOTs, as needed, with reporting of fleet metrics*

“Champions”/Team Discussion

- ❑ Team Purpose: Region “Champions” to assist and collaborate with member States not yet reporting Fleet Performance Metrics and provide support, advice, education, and tools necessary to allow for capturing and reporting metrics information

- ❑ Quarterly “Champion” conference calls (September 2014, December 2014, March 2015 – scheduled but did not occur, & May 2015)
 - Approach
 - Retention Metric (reporting)
 - Metric Parameters
 - Region Reporting Status
 - M5 webinars (October 2014, February 2015, April 2015, October 2015, & March 2016)
 - MDOT Assistance
 - Incentive to Report
 - Better define benefits/impact to Management

“Champions”/Team Discussion (Continued)

- ❑ Suggestions for “outreach” and collaboration with States not reporting:
 - Region/State webinars
 - Phone calls/e-mails
 - Site visits
 - More surveys
 - Include all State DOTs in “Champions” webinar

- ❑ Identify specific reasons States are not reporting metrics:
 - Lack of resources/too labor intensive
 - Unable to compile data or develop methodology
 - Need education and/or training
 - Need to align fleet data with NAFA Codes
 - Need sample reports
 - Fleet Management System (FMS) issue(s)/Converting to new FMS
 - Don’t plan to report metrics
 - Concern with sharing “confidential” data

- ❑ Target “low hanging fruit” (which of four metrics is more easily reported)
 - Obtain commitment and timeline from State to report just one metric

M5 Fleet System Webinars

- ❑ Purpose to collaborate and share M5 best practices between State DOTs.
 - Maximize use of Fleet Management System
 - Facilitate/promote national efforts such as reporting of fleet performance metrics

- ❑ Webinars: 10/09/14, 2/26/15, 4/30/15, 10/08/15, & 3/31/16
 - Eight States participated (Michigan, Virginia, Minnesota, Washington, Vermont, Iowa, Delaware, & Texas) @ 10/09/14 webinar
 - Six States participated (Michigan, Virginia, Minnesota, Vermont, New Hampshire, & Texas) @ 2/26/15 webinar
 - Five States participated (Michigan, Washington, Texas, Delaware, & New Hampshire) @ 4/30/15 webinar
 - Seven States participated (Delaware, Michigan, Washington, Virginia, Indiana, Maine, & Texas) @ 10/08/15 webinar
 - Seven States participated (Delaware, Michigan, Washington, Virginia, Iowa, Vermont, & Texas) @ 3/31/16 webinar

M5 Fleet System Webinars (Continued)

- ❑ Discussion items
 - Web-based Inventory Checkout System
 - Meters and expected usage
 - Garage reports/dashboards
 - Custom Reports
 - MDOT assistance
 - Annual Inventory
 - Software version 14 & 15 plus frequency of updates
 - EMTSP website
 - M5 Interfaces
 - Tracking rental equipment
 - Tracking transactions
 - Tracking vehicle and equipment build-up
 - Standardization of PM Intervals
 - Capital Asset Management Initiative (CAM) Initiative
 - Downtime reporting
 - Job codes

Michigan DOT Assistance

- ❑ Michigan DOT will assist other State DOTs in reporting metrics on as needed basis
 - Provide access to database
 - Schedule training webinars
 - Sites visits (would need to discuss funding travel)
 - Send sample reports for those States utilizing the same FMS (have done for at least three States)

- ❑ Already provided assistance to Delaware (reporting), Iowa (reporting) Minnesota (reporting), Ohio (reporting), Texas, Tennessee, Vermont (reporting), and Virginia (reporting)

- ❑ Reinitiated M5 Fleet Management System webinars in October 2014
 - Allows for sharing of reports
 - Enhances collaboration
 - Better understand concerns of States not reporting

Region Reporting Status

- ❑ Currently 27 of 50 States (54%) are reporting at least one fleet performance metric
 - Improvement from 17 States (34%) in June 2014
 - Nine States (33% of those reporting data) are reporting all four metrics
 - Nine States (33% of those reporting data) are reporting three metrics
 - Five States (19% of those reporting data) are reporting two metrics
 - Three States (11% of those reporting data) are reporting one metric
 - One State + Saskatchewan is reporting part of one metric
 - Twenty-two States have reported within the last 12 months
 - Goal: 34 States to report at least one metric by June 2016

Region Reporting Status (Continued)

☐ **Region status:**

- **Northeast** – 5 of 11 States (45%) reporting metrics
 - ❖ Delaware/Maryland/New Jersey/Pennsylvania/Vermont reporting
 - ❖ Maine/Rhode Island/New Hampshire/New York/Connecticut/Massachusetts not reporting

- **Midwest** – 7 of 13 States (54%) reporting metrics
 - ❖ Indiana/Iowa/Michigan/Minnesota/Missouri/Ohio/South Dakota reporting
 - ❖ Illinois/Wisconsin/Oklahoma/Kansas/Nebraska/North Dakota not reporting

Region Reporting Status (Continued)

- **Southeast** – 6 of 13 States (46%) reporting metrics
 - ❖ Arkansas/Florida/North Carolina/South Carolina/Virginia/West Virginia reporting
 - ❖ Texas/Kentucky/Louisiana/Mississippi/Georgia/Alabama/Tennessee not reporting.

- **West** – 9 of 13 States (69%) reporting metrics
 - ❖ Alaska/Arizona/California/Hawaii/Oregon/New Mexico/Utah/Washington/Wyoming reporting
 - ❖ Idaho/Colorado/Nevada/Montana not reporting

- Eight States working to report prior to 2016 National Conference
- One State unable to report due to NAFA Codes
- One State vacant Fleet Manager position
- No response from ten States since last webinar
- Three States – various reasons (FMS problems, reviewing material/NAFA Codes, etc.)

EMTSP Website

- ❑ Individual metrics by region/state
- ❑ Information and Forms section
- ❑ State folders for supporting documentation
- ❑ Access/updates
- ❑ Demonstration/link - <http://www.emtsp.org/>

DOT Contact List

DOT NATIONAL METRICS CONTACT LIST

Updated on 1/29/2016

STATE	CONTACT			Description of Fleet Management System Used	COMMENTS
	NAME	Email	PHONE		
ALABAMA	Ronald Pruitt	pruitt@dot.state.al.us	334-242-6063	In-House	Fleet Manager/Bureau Chief
ALASKA	Diana Rotkis	diana.rotkis@alaska.gov	(907) 269-0787	Homegrown	Fleet Manager
ARIZONA	Gary Lowe	glowe@azdot.gov	602-712-7284	Asset Works M-4	Fleet Manager
ARKANSAS	Danny Keene	Danny.Keene@ahtd.ar.gov	(501) 569-2672	AHTD Equipment Mgmt. System	Division Head, Equipment & Procurement
CALIFORNIA	Lisa Kunzman	lisa.kunzman@dot.ca.gov	(916) 227-9705	AssetWorks - FA	Fleet Manager
COLORADO	Chris Volkert	chris.volkert@state.co.us	(303) 512-5513	SAP	Fleet Manager
CONNECTICUT	James Chupas	james.chupas@ct.gov	(401) 641-7234	Synergen	Equipment Manager
DELAWARE	Jamie Kavelak	Jamie.Kavelak@state.de.us	(302)760-2514	AssetWorks M5	Fiscal Management Analyst
FLORIDA	Angel Birriel	angel.birriel@dot.state.fl.us	850-410-5517	Homegrown	Fleet Manager
GEORGIA	Jim Leben	jleben@dot.ga.gov	(770) 484-3201	AssetWorks FA	Asst. State Equipment Administrator
HAWAII	Llewellyn Honda	llewellyn.honda@hawaii.gov	(808)587-2628	SPRINT GEOTAB G06 "PRO PLAN"	Equipment Supt./Safety Coord.
IDAHO	Steve Spoor	Steve.Spoor@itd.idaho.gov	(208) 334-8413	Agile Assets	Fleet Manager
ILLINOIS	Marty Morris	marty.morris@illinois.gov	(217) 785-7144	MMIS	Fleet Administration Unit Manager
INDIANA	Mark Shields	mshields@indot.in.gov	812-241-9594	Asset Works M-5	Fleet Manager
IOWA	David May	david.may@iowa.gov	(515) 239-1059	Home made mainframe based	Fleet Manager
KANSAS	Tim Cunningham	timc@ksdot.org	(785) 296-3853	Homegrown	Looking to purchase a commercial package
KENTUCKY	Rick Durham	Rick.Durham@ky.gov	502-564-3916	Agile Assets 6.8	Director, Division of Equipment
LOUISIANA	Leslie Mix	Leslie.Mix@la.gov	(225) 379-1796	SAP	Maintenance Management Administrator
MAINE	Donald Hutchins	Donald.Hutchins@maine.gov	(207) 592-7368	AssetWorks - M5	Fleet Manager
MARYLAND	Tim Lawler	tlawler@sha.state.md.us	(410)582-5530	Maximo 4.1.1	Chief, Equipment Division
MASSACHUSETTS	Chuck Labbee	Chuck.Labee@state.ma.us	(781)-431-5108		
MICHIGAN	Scott Ratterree	RatterreeS@Michigan.gov	(517)-284-6444	AssetWorks - M5	Fleet Manager
MINNESOTA	Bob Ellingsworth	Robert.Ellingsworth@state.mn.us	(651) 366-5704	AssetWorks - M5	Fleet Manager
				Financial Management System and Wennsoft-Based Equipment Management System	Asset Management Division Director
MISSISSIPPI	Julie Ethridge	jethridge@mdot.ms.gov	(601) 359-7930		
MISSOURI	Jeannie Wilson	jeannie.wilson@modot.mo.gov	(573) 526-1199	CCG FASTER	Fleet Manager
MONTANA	Jeff Gleason	jegleason@mt.gov	406-444-6151	Agile Assets 7.0	Fleet Manager
NEBRASKA	Janie Vrtiska	Janie.Vrtiska@nebraska.gov	(402) 479-4589	Enterprise Asset Mgt System	Fleet Manager
NEVADA	Kenneth Lee	Kwlee@dot.state.nv.us	(775) 834-8401		Equipment Superintendent
NEW HAMPSHIRE	William Dusavitch	wdusavitch@dot.state.nh.us	(603) 271-3721	AssetWorks - M5	Fleet Manager
NEW JERSEY	James Schmidt	jim.schmidt@dot.nj.gov	(609) 530-2200	AssetWorks M4	Manager, Bureau of Equipment
NEW MEXICO	John Kraul	john.kraul@state.nm.us	(505) 629-5565	AssetWorks - 6.3	Acting Equipment Manager
NEW YORK	Robert Martz	rmartz@dot.state.ny.us	(518) 457-2875	Fleet Anywhere	Director, Office of Fleet Admin and Support

DOT Contact List (Continued)

NORTH CAROLINA	Neil Brooks	nbrooks@ncdot.gov	(919) 835-8004	SAP	State Fleet Management Superintendent
NORTH DAKOTA	Robin Rehborg	rrehborg@nd.gov	(701) 328-2543	AssetWorks - FA	Director of Fleet
OHIO	Doug Burke	Doug.burke@dot.state.oh.us	(614) 351-2836	Agile Assets 6.9	Fleet Manager
OKLAHOMA	Clay Norrell	cnorrell@odot.org	(405) 521-2550	Agile Assets 6.2	Equipment Manager
OREGON	Bruce Erickson	bruce.d.erickson@odot.state.or.us	503-986-2734	AssetWorks - FA	Fleet Manager
PENNSYLVANIA	James Smith	WALSMITH@pa.gov	(717) 787-4299	SAP/Plant Maintenance	Fleet Manager
RHODE ISLAND	Alex Pacheco	apacheco@dot.ri.gov	(401) 734-4872	VUEWorks	Motor Pool Manager
SOUTH CAROLINA	John White	whitejf@scdot.org	803-737-6675	HMMS Customized Module	Director, Supply and Equipment
SOUTH DAKOTA	Brad Maupin	brad.maupin@state.sd.us	(605) 773-3690	Main Frame Application	Fleet Manager
TENNESSEE	Ken Hampton	Ken.Hampton@tn.gov	615-741-3458	AssetWorks M5	Contracts Manager
TEXAS	Dalton Pratt	dalton.pratt@txdot.gov	(817) 370-3681	AssetWorks M5	Director of Fleet Operations Division
UTAH	Jeff Casper	jeffcasper@utah.gov	(801)-965-4976	Fleet Focus 6.4	Equipment Operations Manager
VERMONT	Ken Valentine	ken.valentine@state.vt.us	(802) 828-2564	AssetWorks -M5	Superintendent
VIRGINIA	Dick Bonistalli	r.bonistalli@vdot.virginia.gov	804-786-0575	AssetWorks M5	Assistant State Equipment Manager
WASHINGTON	Greg Hansen	greg.hansen@wsdot.wa.gov	(360) 705-7862	AssetWorks - M5	Fleet Administrator
WEST VIRGINIA	Travis Ray	Travis.L.Ray@wv.gov	(304) 473-5500	In House	Director, Equipment Division
WISCONSIN	Bob Sawle	Bob.Sawle@dot.wi.gov	(608) 516-8769	Fleet Focus FA/home grown	Interim Fleet Manager
WYOMING	Bernie Kushnir	bernie.kushnir@wyo.gov	(307)777-4062	Agile Assets Fleet	State Equipment Manager
SASKATCHEWAN (CANADA)	Goran Saric	goran.saric@gov.sk.ca	(306 933-6217	FLEET MANAGEMENT INFORMATION SYSTEM (FMIS) – CUSTOMIZED COMPUTER APPLICATION	Director of Fleet

Reporting Requirements

- Twice a year to EMTSP--No later than January 10 & July 10
- Complete standard form and e-mail to ncpp@egr.msu.edu
- EMTSP will post to web site prior to end of month
- It is okay to report incremental progress

Form



Why Report?

- ❑ Sharing ideas, “benchmarking”, and collaborating nationally regarding “best practices”
 - Enhanced interactions and familiarity via webinars/conference calls with State DOT personnel
 - State Fleet DOT recognition/visibility on EMTSP website
 - Detailed State DOT information in supporting documentation folder on website

- ❑ MAP-21 initiative
 - Reporting of fleet metrics not required
 - Availability, reliability, and maintainability of vehicles and equipment impacts ability to maintain roads and bridges

- ❑ Reflection of State pride and a willingness to become engaged with other DOTs

Examples of DOT Benefits

- ❑ Improved visibility of fleet activities at management level
- ❑ Positive impact and improvement to PM Compliance Statewide (nearly 100% increase in 3 year period)
- ❑ Higher visibility for funding replacement units
- ❑ Improved ability to report seasonal impacts
- ❑ Pertinent fleet reductions/reassignments
- ❑ Improved networking/sharing on a national level

2011 Fleet Metrics Survey Results

- **Suggestions from 2011 Survey**
 - **Scheduled versus Unscheduled Repairs**
 - **In-House versus Outsourced Repair (Dollars/Work Orders)**
 - **Average Repair Costs (Overall/By Equipment Group)**
 - **Cost of Preventive Maintenance Services (A, B, C services)**
 - **Low/No Fuel Usage (Overall/By Equipment Group)**
 - **Cost per Labor Hour**
 - **Total Labor Productivity per Mechanic**
 - **Repair Cost versus Utilization (Overall/By Equipment Group)**
 - **Overall Unit Condition (Overall/By Equipment Group)**
 - **Work Order Turn Around Time (Overall/By Equipment Group)**
 - **Rework Percentage**
 - **Unit Idle Time (Overall/By Equipment Group)**

- **March 2016 Survey**

Fleet Metrics Survey Results

- New Survey recommended at 1/27/2016 webinar
- **PURPOSE:** To update the 2011 survey results and to identify additional fleet performance metrics for reporting by State DOTs. This is part of the strategic effort to expand reporting of fleet performance metrics and enhance benchmarking of best practices and data sharing. Collection of data from this survey will assist in this process.
- **HISTORY:** Since 2013 State DOTs have been reporting or working towards reporting the following key fleet performance metrics: Preventive Maintenance Compliance, Availability/Downtime, Utilization, and Replacement Recommended (also referred to as Retention or Life Cycle).

Fleet Metrics Survey Results

- Which of the following additional fleet performance metric(s) does your State DOT recommend for semi-annually reporting:
- **Percentage of scheduled equipment maintenance (i.e. annual inspections, preventive maintenance, etc.) services versus percentage of unscheduled equipment maintenance repairs (i.e. road breakdowns, any unplanned component failures, etc.). 30% of respondents recommended as an additional metric**
- **Rework percentage by equipment group in past 90 days (i.e. vehicles/equipment that breakdown or require repair for the same type of problem). 10% of respondents recommended as an additional metric**
- **Work order turnaround time (cumulative time in hours or days from work order open time to close time). 0% of respondents recommended as an additional metric**
- **In-house versus outsourced repairs – report total dollars or percentage of total work orders performed by the DOT versus outsourced to a commercial vendor. 70% of respondents recommended as an additional metric**

Fleet Metrics Survey Results

- **OTHER** - Provide a recommendation for an additional metric(s) here. Please include the following information if submitting a suggested metric:
 - Definition – briefly define/explain metric
 - ◇ “Quality Expectation”
 - ◇ An index to determine by visual inspection the condition of the Fleet Inventory using a numbering system
 - Explain how measurement is computed
 - ◇ Visual inspection
 - ◆ 7-10 – Good
 - ◆ 4-6 – Fair
 - ◆ 0-3 - Poor
 - Provide example (i.e. chart and/or detail) of the metric if your DOT is currently reporting. If not currently reporting the metric please provide an example of how the metric should be reported/depicted.
 - Please e-mail the details of items a, b, and c. to Scott Ratterree at RatterreeS@michigan.gov for sharing at the National Conference in June.

On Going Efforts

- Continue striving to achieve the goal of 34 States reporting one fleet metric
- Report/update metrics information semi-annually
- Continue periodic webinars
- Collaborate to assist states not reporting/or not able to report (Region Champions or MDOT work with member states)
- Encourage State DOTs to share “good news” stories or presentations regarding their metric efforts
- Solicit suggestions to improve/enhance metrics reporting/web site
- Concentrate focus to report one metric (i.e. Preventive Maintenance or Replacement Recommended)

Suggested Next Steps/Future Goals

- Identify/select future metrics to report
 - Form subcommittee to identify, select, and develop additional metrics
 - Need two volunteers from each region
 - Review survey results
 - Make recommendations

- Need for Contractor assistance/involvement
 - Evaluate necessity for current TRB Performance Measures Research Project or other NCHRP Projects

- Do we need to engage Executive Management for additional attention/support?

- Encourage Fleet Management System vendors to develop interfaces/modules for metrics reporting

- Suggestions to better align Fleet Performance Metrics with MAP-21 Initiative
 - Performance and outcome-based program
 - Establishes national goals for the Federal-aid highway program in seven areas/requires seven measurements
 - Initial reporting 1 October 2016 and every two years thereafter

- Establish a National Metrics Committee to develop long term goals/roadmap

- Other recommendations for next steps/future goals/new ideas?

Questions/Discussion

??????

Contact Information

- Scott Ratterree – Fleet Manager
- Michigan Department of Transportation
- Mailing address: 2522 West Main Street,
Lansing, Michigan 48917
- Phone: 517-284-6444
- Fax: 517-334-7840
- E-Mail: RatterreeS@michigan.gov
- Website address: www.michigan.gov/mdot