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Agency Environmental Management System (EMS) Metrics – 2009 and Beyond

Steven Woodbury (Dept. of Energy)

Mike Green (NASA)

for the EMS Metrics Sub-Workgroup of the
Interagency Environmental Leadership Workgroup

Federal Environmental Symposium East & West

June 2, 2009

June 16, 2009



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Why EMS Metrics

- **External reporting**
 - Required for Annual Report and Office of Management and Budget (OMB) scorecard
 - Provides feedback on goals to Administration, OMB, and Council of Environmental Quality (CEQ)
- **Internal feedback**
 - Provides Agencies and facilities with definitive feedback
 - Allows managers to make better resource allocation decisions based on prioritized needs
 - Provides resource sustaining data on value/benefit and rational for continual improvement of the EMS
- **“What gets measured gets done”**



EMS Reporting Process

- **Annual Department / Agency EMS Report is due in December for previous fiscal year**
 - Provides summary data (not facility-specific)
 - Data are used for:
 - OMB Scorecard
 - Biennial report to the President (data and narratives)
- **Site reporting options:**
 - Facilities enter data electronically into FedCenter (*www.FedCenter.gov*) for Agencies to 'roll up' for Agency report to EPA, *OR*
 - Agencies collect and tabulate data on their own



EMS Status in OMB Scorecard

- **OMB issues scorecards semi-annually to each Department / Agency in 3 areas:**
 - Environmental Stewardship
 - Energy
 - Transportation
- **EMS is currently one of 4 elements in the ‘Environmental Stewardship’ scorecard**
 - EMS Report Card
 - Green Purchasing
 - Sustainable design/green buildings
 - Electronics Stewardship



Rules for Development of EMS Metrics

- Data collection questions must be relevant to EMS implementation
- Collection of data must serve a purpose and be useful
- Question and collection of data must recognize reporting burden on facility/organization
- Metrics must not make policy but may recognize emerging issues or historic deficiencies



Developing EMS Metrics – Challenges

- Define the metric
- Establish a performance level that is
 - Clearly and fully defined
 - Tough but attainable – Must pass OMB & external scrutiny, *e.g.*, environmental interest groups
- Make clear what the metric represents
- Focus on individual EMS (facility or organization-level), not on Agency
- Establish metrics applicable across the Federal government
 - Organizations/facilities vary in size, staffing, and activities
 - Environmental aspects and impacts vary considerably



Developing EMS Metrics – Overall Goals

- Update OMB Scorecard Metrics
 - Review and retain/revise previous EMS metrics
 - Propose new EMS metrics to address new EO 13423 requirements
- Propose new data collection questions to assess implementation of sustainable practices
- Update open-ended questions on EMS Experience
- Update protocol for aggregating individual responses into red/yellow/green score for the Agency
- Update FedCenter so that all data can be submitted and rolled up at the Agency level
 - Note: FedCenter data are only available to an Agency unless released by that Agency



Developing EMS Metrics – New Requirements

- New metrics need to address three new requirements in EO 13423
 - Conducting external audit, and declaring EMS to be “fully implemented” (Declaration of Conformance)
 - Integrating sustainable practices into EMS (including energy, water, vehicle fleet management)
 - Managing compliance
- EO 13423 also directs Federal agencies to implement EMSs at all appropriate organizational levels



EMS Reporting Format in FedCenter

- Part I: Facility/Organization-level Information
- Part II: EMS External Audit and Declaration of Conformance
- Part III: EMS Performance Metrics for EMS Scorecard
- Part IV: EMS Implementation Information
- Part V: EMS Experiences



EMS “At All Appropriate Organizational Levels”

- EO 13423 requires agencies to implement EMSs “at all appropriate organizational levels” [§ 3.(b)]
- Agencies have identified their strategies to address this requirement
- The OFEE, in cooperation with a subgroup of the Federal Interagency Environmental Leadership Workgroup, has clarified three types of EMS
 1. Facility EMS
 2. Multi-site Organization EMS
 3. Higher Tier EMS



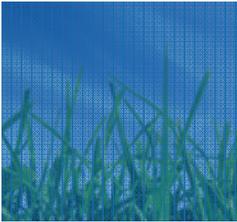
Reporting for Multi-Site Organization EMSs

- A Multi-Site Organization EMS is treated as a single EMS for reporting and scoring purposes.
- In addition, an agency may choose to have the individual sites (within a multi-site organization EMS) report individually through FedCenter to provide information for agency use.



Reporting for Higher-Tier EMSs

- There are currently no metrics for Higher-Tier EMSs
- At this time, Higher-Tier EMSs will not be listed in the FedCenter database
- The Agency EMS Report for FY 2009 will include
 - A narrative description of the Agency’s strategy for implementing EMS “at all appropriate organizational levels”
 - Identification of the (existing or planned) “higher tier” EMSs at the agency, along with their scope and status



FedCenter Report: Part 1

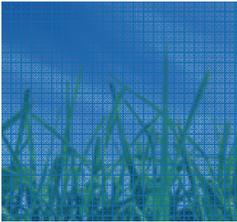
Part I: Facility/Organization-level Information

- Review existing information
If you reported previously through FedCenter, the previous information will be automatically entered (For example: Department/Agency, point-of-contact, date of implementation, types of EMS recognition, inception date, ISO status)
- Review description of EMS Scope,
 - If the EMS includes multiple facilities, identify these.
 - Describe EMS's scope with respect to:
 - Contractors and subcontractors responsible for EMS implementation (e.g., GOCO facilities)
 - Tenants and concessionaires
 - Other EMSs on the same or adjoining sites



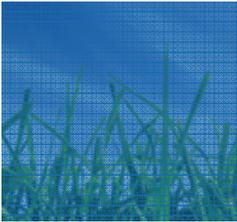
External Audit and Declaration of Conformance

- CEQ *Instructions* establish requirement for a ‘fully implemented’ EMS under EO 13423 [*§ II.C.(1)*]
 1. Has been the subject of a formal audit by a qualified party outside the control or scope of the EMS,
 2. Audit findings have been recognized by the appropriate level of the organization implementing the EMS, and
 3. Appropriate senior manager accountable for implementation of the EMS has declared conformance to EMS requirements.
- Outside audits (2nd party) every 3 years
 - Auditors outside the organization being audited, but do not need to be ISO auditors
- Renewal of “declaration of conformance” as determined by Agency EMS policy



External Audit and Declaration of Conformance

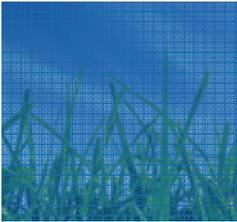
- The EMS Declaration of Conformance requirement varies according to circumstances
 - For existing EMSs, implementation date was December 31, 2008
 - New EMSs may have varying implementation dates
 - Renewal of “declaration” established by agency
 - Renewal may or may not be on an annual basis
- Metrics Workgroup recommended that it be tabulated and reported separately



External Audit and Declaration of Conformance

Part II: EMS External Audit and Declaration of Conformance

- Currently In Conformance: The EMS is “fully implemented” in accordance with the requirements of the CEQ Implementing Instructions (cited above).
- Supplementary Data:
 - Date of Declaration of Conformance _____
 - Declaration issued by
(name) _____
 - *(Title)* _____
 - Date of completion of most recent EMS audit by a qualified party outside the control or scope of the EMS



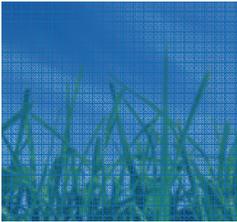
New EMS Metrics – Revise 7 Previous EMS Metrics

- Environmental Aspects – minor changes
- Objectives, Goals and Targets – minor changes, combined with programs
- Operational Controls – minor changes
- Environmental Training – minor changes
- Contracts – revised to reflect new wording in CEQ *Instructions*
- EMS Audit/Evaluation Procedures – Replaced with new metric on Evaluation of Compliance
- Management Review – minor changes
 - annual senior leadership review
 - reflect ISO 14001:2004



Part III: EMS Performance Metrics for EMS Scorecard

1. Environmental Aspects
2. Sustainable Practices (New)
3. Objectives, Targets and Programs
4. Environmental Training
5. Operational Controls
6. Contracts and Concessionaire Agreements
7. Evaluation of Compliance with Regulatory Requirements (New)
8. Management Review



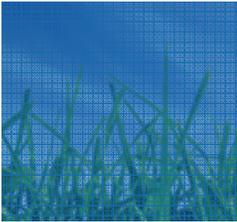
New EMS Metrics – Sustainable Practices

- E.O. 13423 requires that EMSs shall address the environmental aspects of agency transportation and energy functions.
- The agency shall implement sustainable practices for
 - Improvement in energy efficiency and reduction in greenhouse gas emissions,
 - Use of renewable energy
 - Reduction in water consumption
 - Sustainable acquisition
 - Reduction of the use and disposal of toxic and hazardous chemicals and materials
 - Waste prevention and recycling programs
 - High performance and sustainable buildings
 - Vehicle fleet management
 - Electronics stewardship.



New EMS Metrics – Evaluation of Compliance

- E.O. 13423 requires each agency to establish a program for environmental compliance review and audit [§ 3.(c)]
 - Compliance audit and EMS audit are different
- The CEQ *Instructions* establish that the EMS shall be used to support compliance with environmental and energy regulations [§ 11.A.(1)]
- ISO 14001:2004 established a new element for “Evaluation of Compliance” [¶ 4.5.2]



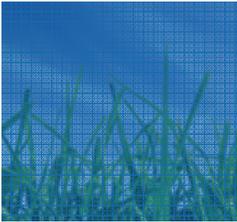
Scoring Methodology – EMS Scoring Approach

- Scored A – D similar to 2006 - 2008
 - **Response A** = Missing EMS element, basically just getting started
 - **Response B** = EMS element in-place, but not fully implemented
 - **Response C** = EMS element implemented, but not updated in past year or minor non-conformance
 - **Response D** = Highest rating where EMS is fully functional with continual improvement evident



Scoring Methodology – Understanding the Color Rating

-  Green: All elements of the EMS are in place and working
-  Yellow: Most elements are in place, but one or two areas need focused attention
-  Red: Two or more elements are not functioning or may not be present



Scoring Methodology – Factors Considered in update

- **Achieving a “D” score on 8 metrics more difficult**
 - New metrics, particularly sustainable practices, have raised the difficulty level
 - Old metrics were updated resulting in more rigor
- **New rating methodology should be on par with 2008**
 - Facility/Organization-level roll-up of the scores for the 8 metrics similar to 2008
 - Facility/Organization-level rating of “green” also requires current Declaration of Conformance and external audit in past 3 years
 - Department level roll-up same as 2008
 - Rating methodology recommended to be constant for 3 years to 2011

Scoring Methodology – New Facility/ Organization-Level Rating

Constant From 2009-2011
For Green, a Facility Needs:

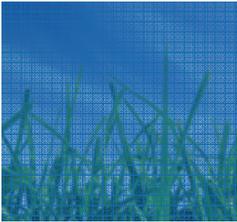
At Least 4 D's
No More than 1 B, No A's, a current
“Declaration of Conformance”, and an
External audit within last 3 years

For Yellow, a Facility Needs:

At Least 4 C's (or D's)
No More than 1 A

For Red, a Facility is:

Neither Green nor Yellow



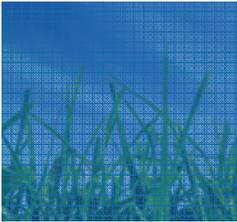
Scoring Methodology – Site Metrics Roll Up to Department

- EMS metrics are addressed at the level of the individual EMS (facility or organization-level)
- Responses roll up to a “green/yellow/red” score for each EMS
- These scores then roll up to give a “green/yellow/red” score at the Department / Agency level

Scoring Methodology – Department-Level EMS Rating

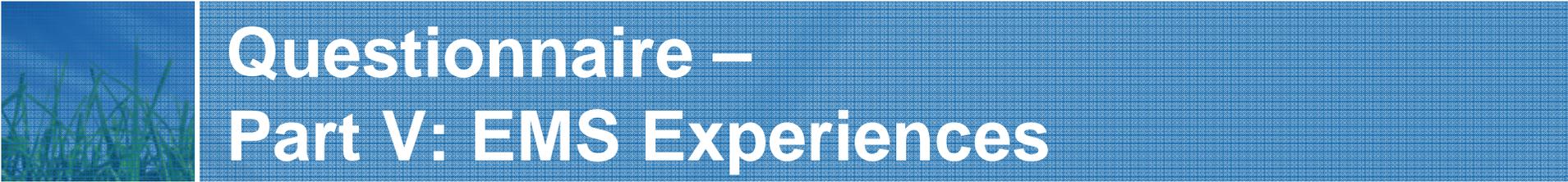
Constant From 2009 - 2011

G	At least 80% of reporting EMSs are “Green” No more than 5% of reporting EMSs are “Red”
Y	No More than 10% of reporting EMSs are “Red”
R	Neither “Green” nor “Yellow”



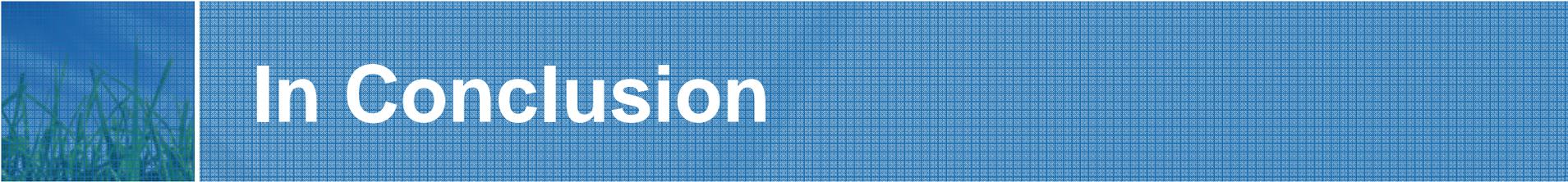
Questionnaire – Part IV: EMS Implementation Information

- The Metrics Workgroup proposed new information questions (non-scorecard) to address integration of 11 specific aspects into the EMS
 - Energy Use
 - Renewable Energy
 - Purchasing
 - Buildings
 - Electronic Equipment
 - Regulatory Compliance
 - Greenhouse Gas Emissions
 - Water Use
 - Solid Waste Generation
 - Toxic & Hazardous Chemicals
 - Vehicle Fleet/Petroleum Use
- Set of 6 questions
 - From: Has an assessment been conducted?
 - To: Are plans and programs included in the EMS?
 - Responses: “Yes,” “No,” or “Not Applicable”



Questionnaire – Part V: EMS Experiences

- The Metrics Workgroup revised the open-ended narrative questions to address
 1. EMS best practices / lessons learned
 2. EMS challenges
 3. External communication (New)
 4. Highest priority aspects (New)
 5. EMS benefits to agency mission



In Conclusion

EMS metrics

- Continue to evolve to reflect new requirements
- Intended to measure progress, but also to support implementation of key elements
- Developed by a participatory inter-agency process
- Reflected in OMB scorecards to Agencies

Go Green! – Score Green!



For More Information:

Mike Green

National Aeronautics and Space Administration

202-358-1097

michael.j.green-1@nasa.gov

Steven Woodbury

Department of Energy

202-586-4371

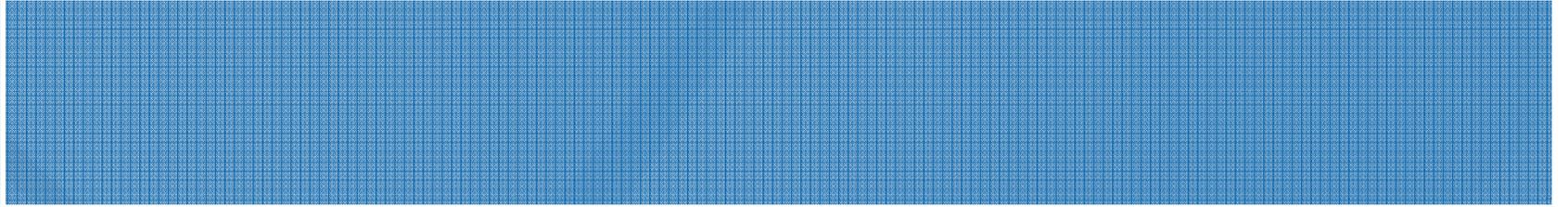
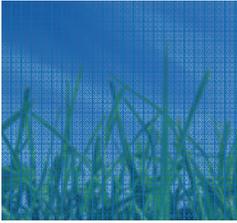
steven.woodbury@hq.doe.gov

Catherine Johnson

Veterans Affairs

202-461-7775

catherine.johnson7@va.gov



Backup Slides



EMS Metrics Workgroup

- Organized in 2004 to develop original EMS metrics for 2006-2008
- Continued to revise EMS metrics under new Executive Order 13423 for 2009 and beyond
- Reports to full Interagency Environmental Leadership Work Group
- Also develops recommendations and guidance on EMS implementation
- Representatives from most Federal agencies



EMS Metrics Workgroup Members

Workgroup Members:

- Mike Green, NASA
- Catherine Johnson, VA
- Barton Barnhart, DOD
- Catherine Broad, DOD
- Ed Pfister, HHS
- Russelle McCollough, EPA
- Karen Waldvogel, USDA
- John Roland, USDA/USFS
- Pete Wixted, DHS
- James Wozniak, DLA
- Steven Woodbury, DOE
- TJ Granito, DHS/USCG

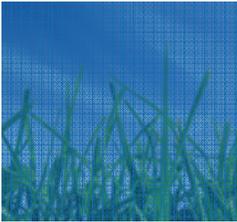
With the support of:

- Federal Environmental Executive
- Will Garvey, USEPA
- Steve Luzzi, FedCenter



New EMS Metrics – Level D Response Environmental Aspects

- Using an established procedure, both previously and newly identified **environmental aspects and *significant* environmental aspects were evaluated and updated** for all of the facility's/ organization's activities, products, and services (including transportation and energy related activities).



New EMS Metrics – Level D Response Sustainable Practices

- The facility/organization has **established and implemented programs** to address all applicable sustainable practices as required by Executive Order 13423 through its EMS, AND
- The facility/organization has **reviewed performance** of the EMS towards the objectives of E.O. sustainable practices through their EMS monitoring and management review processes.



New EMS Metrics – Level D Response Objectives, Targets and Programs

- Measurable environmental **objectives, targets, and programs were established and documented OR**
- **Previously established and documented objectives, targets, and programs were reviewed and updated AND**
- **80% or greater of established targets were on schedule to be met.**



New EMS Metrics – Level D Response Environmental Training

- **Procedures** to ensure that training requirements for individual competence and responsibility **were established**;
- **Training requirements** to ensure individual competence and responsibility **were identified or updated**;
- Training (including refresher training) was **available and carried out and documented**; and
- Training requirements for competence were **monitored and revised**.



New EMS Metrics – Level D Response Operational Controls

- Documented **operational controls** to address activities associated with significant aspects and consistent with objectives and targets **were established or updated** and **are fully implemented, AND**
- Previously documented **operational controls were formally reviewed and/or updated** (i.e., supplemented, revised, deleted) as appropriate to ensure their ongoing effectiveness



New EMS Metrics – Level D Response Contracts and Concessionaires

- The facility/organization **established a procedure** to identify appropriate contracts [to address in the EMS];
- **Identified appropriate contracts** and the contractors' roles and responsibilities under the EMS; and
- **EMS requirements and defined roles and responsibilities were included** in all appropriate contracts.
- The facility/organization **reviewed the contractor activities and determined the status of contractors' fulfillment** of their defined roles and responsibilities during this reporting period.



New EMS Metrics – Level D Response Evaluation of Compliance

- During this reporting period or previously, the facility/organization **established** as part of the facility/organization's EMS an **environmental compliance program** that includes:
 - (a) Procedures to identify and account for applicable legal and other requirements,
 - (b) Protocols to periodically evaluate compliance with those applicable legal and other requirements, including frequency of compliance evaluations, and
 - (c) A process or system for implementing corrective actions based on that evaluation. AND
- The facility/organization has **identified applicable legal and other requirements**. AND
- The facility/organization has **completed evaluations of compliance** with applicable legal and other requirements for the entire facility/organization, in accordance with the established frequency. AND
- **Corrective actions have been initiated, scheduled or completed.**



New EMS Metrics – Level D Response Management Review

- Formal senior leadership review of the EMS **was conducted**,
- Top management **responded to recommendations** [from the audit] or gave directions for continual improvement, and
- Appropriate actions including modifications to elements of the EMS have been **initiated, scheduled or completed**.

Comparison of Old & New Scoring Methodology

	Old Metrics: 2008		New Metrics: 09 - 11	
	Number of combinations	%	Number of combinations	%
Green	6	5.0	9	5.5
Yellow	38	31.7	52	31.5
Red	76	63.3	104	63.0
Total	120		165	

