
**EMS Sub-Workgroup
On
EMS Purpose, Definitions and Language**

The objective of this workgroup is to better define the scope, purpose and range of federal Environmental Management Systems (EMS). This includes the establishment a common language (terminology) to be used in addressing Environmental Management Systems in the federal sector.

GOAL is to allow federal facilities to achieve continual improvement in environmental management in a cost effective and simple way.

PURPOSE: To assist federal agencies in the development of an Environmental Management System (EMS) protocol that is consistent with the general principles of ISO 14001 Standard, CEMP, and other EMS methods, and improves overall environmental performance within the federal sector. Because each federal agency is different, this document should be specific enough to set up and implement unique EMS needs, but still general enough to allow the flexibility for addressing agency characteristics.

SCOPE: An EMS should encompass all significant activities of an organization or facility that could contribute to impacting the environment.

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COMMON APPROACH COMMON NEEDS ENVIRONMENTAL MANAGEMENT SYSTEM TEMPLATE

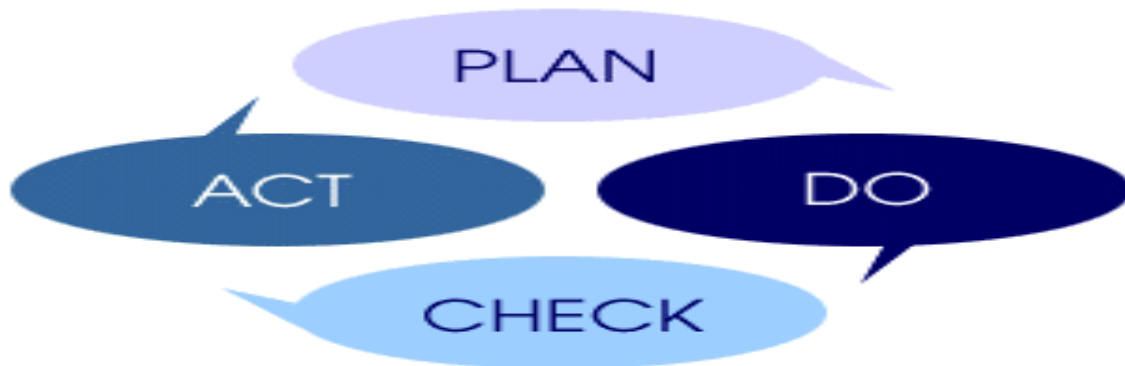
- Clearer definition of EMS
- More common approach/EMS template
- Identify common needs
- Definition of “appropriate facility”
- Institutional guidance
- EMS toolbox (maintenance)

DEFINITIONS:

- a) An **Environmental Management System** (EMS) is that component of any organization's (agency, service, bureau, mode, district, region, facility, unit, installation, etc) overall management systems that takes into account ***Organizational Structure, Planning, Activities, Procedures, Processes, and Resources*** for developing, implementing, achieving, reviewing and maintaining their environmental programs and policy.
- Serves as a tool to improve environmental performance
 - Provides a systematic way of managing an organization's environmental affairs
 - Is the aspect of the organization's overall management structure that addresses immediate and long-term impacts of its products, services and processes on the environment
 - Gives order and consistency for organizations to address environmental concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures and processes
 - Focuses on continual improvement of the system
- b) **Environmental Policy** - A statement by the organization and/or facility of its intent to take environment concerns into account and proof of **Top Management's Commitment** to this cause.
- c) **Continual Improvement**: - Process of improving an organization/facility's
- d) **Environmental Aspects** - That element of an organization's/facility's activities or mission that can impact the environmental
- e) **Environmental Impact** - Any change (completely or partial) to the environment, whether adverse or beneficial, resulting from an organization's/facility's functional mission or activities
- f) **Organization** - For the purposes of this EMS guidance an "organization" is any Federal Agency (DOT), Service (USCG, FAA), Department, etc with overall policy and budget authority An Organizational EMS is highly recommend, but not required.
- g) **Facility** - For the purposes of this EMS guidance a "facility" is any property or properties (i.e. installation, compound, park, equipment, etc... (traditional fence line concept)), owned or operated by a federal agency, that conducts activities or operations, related to the agency's role, that can have a significant impact on the environment, either directly or indirectly, individually or cumulatively, due to normal operations of that facilities mission, process or function.

What is an EMS ? (Environmental Management System)

An EMS is a continual cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its business and environmental goals. Most EMSs are built on the "Plan, Do, Check, Act" model. This model leads to continual improvement based upon:



- **Planning**, including identifying environmental aspects and establishing goals [**plan**];
- **Implementing**, including training and operational controls [**do**];
- **Checking**, including monitoring and corrective action [**check**]; and
- **Reviewing**, including progress reviews and acting to make needed changes to the EMS [**act**].

FIRST, THE GOOD NEWS... *Your facility or organization probably already has many of the EMS components in place ...Most of these ongoing and existing environmental management activities can be integrated or refocused into an EMS.*

An EMS is flexible and does not require organizations to necessarily "retool" their existing activities. An EMS establishes a management framework by which an organization's impacts on the environment can be systematically identified and reduced. For example, many federal agencies and organizations, similar to counties and municipalities, have active and effective pollution prevention programs and activities already underway. These could be incorporated into an overall EMS.

The focus on quality principles

You have probably heard of **Total Quality Management (TQM)**. Many Federal organizations currently apply TQM principles to some of their operations and activities.

An effective EMS is built on TQM concepts. To improve environmental management, your organization needs to focus not only on **what** things happen but also on **why** they happen. Over time, the systematic identification and correction of system deficiencies leads to better environmental (and overall organizational) performance.

Some of the **keys** to a successful EMS include

KEYS TO A SUCCESSFUL EMS

1. *Top Management Commitment*
2. *Focus on Continual Improvement*
3. *Flexibility*
4. *Compatibility with Organizational Culture*
5. *Employee Awareness and Involvement*

1 Top Management Commitment

Applying TQM principles to the environmental area and providing adequate resources are the job of **top management**. To initiate and sustain the EMS effort, top management must communicate to all employees the importance of:

- **making the environment an organizational priority** (thinking of effective environmental management as fundamental to the organization's survival)
- **integrating environmental management throughout the organization** (thinking about the environment as part of product/service and process development and delivery, among other activities)
- **looking at problems as opportunities** (identifying problems, determining root causes and preventing problem recurrence)

2 Focus on Continual Improvement

No organization is perfect. The concept of continual improvement recognizes that problems will occur. A committed organization **learns from its mistakes** and **prevents** similar problems from recurring.

3. **Flexibility**

An effective EMS must be **dynamic** to allow your organization to adapt to a quickly changing environment. For this reason, you should keep your EMS flexible and simple. This also helps make your EMS **understandable for the people who must implement it** - your organization's managers and other employees.

4 **Compatibility with Organizational Culture**

The EMS approach and an organization's culture should be compatible. For some organizations, this involves a choice: (1) tailoring the EMS to the culture, or (2) changing the culture to be compatible with the EMS approach. Bear in mind that changing an organization's culture can be a long-term process. Keeping this compatibility issue in mind will help you ensure that the EMS meets your organization's needs.

5 **Employee Awareness and Involvement**

As you design and implement an EMS, roadblocks may be encountered. Some people may view an EMS as bureaucracy or extra expense. There also may be resistance to change or fear of new responsibilities. To overcome potential roadblocks, make sure that everyone understands **why** the organization needs an effective EMS, **what** their role is and **how** an EMS will help to control environmental impacts in a cost-effective manner. Employee involvement helps to demonstrate the organization's commitment to the environment **and** helps to ensure that the EMS is realistic, practical and adds value.

Building or improving an EMS (with the help of this Guide) provides an opportunity to assess how your organization manages environmental obligations and to find better (and more cost-effective) solutions. While you will probably identify some areas where your current EMS can be improved, this does **not** mean that you should change things that are working well! By reviewing what your organization does and how well it works, you can ensure that your EMS will be viable and effective, both now and in the future.

Don't get discouraged if your system has some bugs at first - the focus is on **continual improvement!**

Most EMS models (including the ISO 14001 standard and CEMP) are built on the "Plan, Do, Check, Act" model. Both endorse the idea of **continual improvement**.

In the EMS model described, the "Plan, Do, Check, Act" steps have been expanded into seventeen elements that are **linked together**.

Major Components of an EMS are:

- **Policy**
- **Planning**
- **Implementation and Operation**
- **Checking and Corrective Action**
- **Management Review**

Seventeen Key Elements of an EMS:

♦ Environmental policy	♦ Document control
♦ Environmental aspects.	♦ Operational control
♦ Legal and other requirements	♦ Emergency preparedness and response
♦ Objectives and targets	♦ Monitoring and measurement –
♦ Environmental management program	♦ Nonconformance & corrective & preventive action
♦ Structure and responsibility	♦ Records
♦ Training, awareness and competence	♦ EMS audit
♦ Communication	♦ Management review
♦ EMS documentation	♦

- 1. Environmental policy** – Develop a statement of your organization's commitment to the environment. Use this policy as a framework for planning and action.
- 2. Environmental aspects** – Identify environmental attributes of your products, activities and services. Determine those that could have significant impacts on the environment.
- 3. Legal and other requirements** – Identify and ensure access to relevant laws and regulations, as well as other requirements to which your organization adheres. \
- 4. Objectives and targets** – Establish environmental goals for your organization, in line with your policy, environmental impacts, the views of interested parties and other factors.
- 5. Environmental management program** – Plan actions necessary to achieve your objectives and targets.
- 6. Structure and responsibility** – Establish roles and responsibilities for environmental management and provide appropriate resources.
- 7. Training, awareness and competence** – Ensure that your employees are trained and capable of carrying out their environmental responsibilities.
- 8. Communication** – Establish processes for internal and external communications on environmental management issues.
- 9. EMS documentation** – Maintain information on your EMS and related documents.
- 10. Document control** – Ensure effective management of procedures and other system documents.

11. **Operational control** – Identify, plan and manage your operations and activities in line with your policy, objectives and targets.
12. **Emergency preparedness and response** – Identify potential emergencies and develop procedures for preventing and responding to them.
13. **Monitoring and measurement** – Monitor key activities and track performance. Conduct periodic assessments of compliance with legal requirements.
14. **Nonconformance and corrective and preventive action** – Identify and correct problems and prevent their recurrence.
15. **Records** – Maintain and manage records of EMS performance.
16. **EMS audit** – Periodically verify that your EMS is operating as intended.
17. **Management review** – Periodically review your EMS with an eye to continual improvement

What does an EMS consist of?

How are the elements linked together?

As mentioned earlier, your EMS should be built on the "Plan, Do, Check, Act" model to ensure that environmental matters are systematically **identified, controlled, and monitored**. Using this approach will help to ensure that performance of your EMS **improves** over time and that you meet your goals for implementing an EMS in the first place.

This section describes seventeen EMS elements that are common to most EMS models. This section also notes the **key linkages** among these elements. While there are several good EMS models available, this Guide generally uses the ISO 14001 Standard as a starting point for describing EMS elements. This has been done for several reasons:

- ISO 14001 is a widely accepted international standard for EMS that focuses on continual improvement;
- Companies may be asked to demonstrate conformance with ISO 14001 as a condition of doing business in some markets; and
- The Standard is consistent with the key elements found in many EMS models, including the European Union's Eco-Management and Audit Scheme, EPA's Performance Track and the Code of Environmental Management Principles for Federal Agencies, among others.

Why Develop EMSs?

EMSs allow organizations to systematically manage their environmental and health safety matters. EMSs can result in both business and environmental benefits. It is important to note, however, that there are pros and cons to consider when determining whether to develop an EMS for your organization.

EMS Pros and Cons

Environmental Management Systems can result in both business and environmental benefits. For example, an EMS may help you:

- Improve environmental performance;
- Enhance compliance;
- Prevent pollution and conserve resources;
- Reduce/Mitigate Risks;
- Attract new customers and markets (or at least retain access to customers and markets with EMS requirements);
- Increase efficiency/reduced costs;
- Enhance employee morale, also possibility of enhanced recruitment of new employees;
- Enhance image with public, regulators, lenders, investors;

Achieve/Improve Employee awareness of environmental issues and responsibilities; and

However, it should be noted that developing and implementing an EMS requires a significant investment of time and effort. Additional information on the [benefits and costs of developing EMSs](#) is available

Qualify for recognition/incentive programs such as the EPA [Performance Track Program](#)

STEPS TO GETTING AN EMS FOR YOUR FACILITY (From EPA EMS Website)

www.epa.gov/ems

