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Agriculture Environmental Management Systems

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Agriculture Environmental Management Systems¹

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Implementation of an **Agriculture Environmental Management System (AEMS)** should result in improved **business and environmental performance**. The AEMS specification is based on the ANSI/ISO 14001 standard, which is based on the concept that producers will periodically review and evaluate their AEMS in order to identify opportunities for improvement and their implementation. Improvements in an operations' AEMS should result in additional improvements in environmental performance.

The AEMS provides a structured process for the achievement of continual improvement, the rate and extent of which the producer should determine, in light of economic, social and ecological circumstances. Although some improvement in environmental performance can be expected due to the adoption of a systematic approach, it should be understood that the AEMS is a tool, which enables the operator to achieve and systematically control the level of environmental performance that the producers set themselves. The establishment and operation of an AEMS will not, in itself, necessarily result in an immediate reduction of adverse environmental impact.

Operators have the freedom and flexibility to define their own boundaries and may choose to implement an AEMS with respect to the entire operation, or to specific activities. If an AEMS is implemented for a specific activity of an operation, policies and procedures developed for other parts of the operation can be used to meet the requirements of an AEMS, provided that they are applicable to the specific activity that will be subject to the AEMS. The level of detail and complexity of the AEMS, the extent of documentation and the resources devoted to it are dependent on the size of an operation and the nature of its activities. This may be the case in particular for small and medium-sized operations. Integration of environmental matters with the overall management system can contribute to the effective implementation of an AEMS, as well as to efficiency and to clarity of roles.

¹ Adopted from the American National Standard, Environmental management systems – Specification with guidance for use. Milwaukee, WI: American Society for Quality, 1996.

The AEMS management system requirements are based on the dynamic cyclical process of plan, do, check, and act (PDCA).



The system should enable an operator to:

- Establish an environmental policy appropriate to the operation;
- Identify the environmental aspects arising from the operation’s past, existing or planned activities, products, or services to determine the environmental impacts of significance;
- Identify the relevant legislative and regulatory requirements;
- Identify priorities and set appropriate environmental objectives and targets;
- Establish a structure and corresponding methods to implement the policy and achieve objectives and targets;
- Facilitate planning, control, monitoring, corrective action, auditing and review activities to ensure both that the policy is complied with and that the agriculture environmental management system remains appropriate; and
- Be capable of adapting to changing circumstances.

What Are the Steps in Developing an AEMS?²

An AEMS implementation guide is currently being co-developed by Utah producers and USU Extension. Each module in the guide will explain a step in the AEMS development process. The modules will also contain worksheets to assist you in completing this work. The figure on the next page is an expansion of the PDCA cycle into a flow chart showing the steps in the AEMS process.



Step 1: Lay the Groundwork

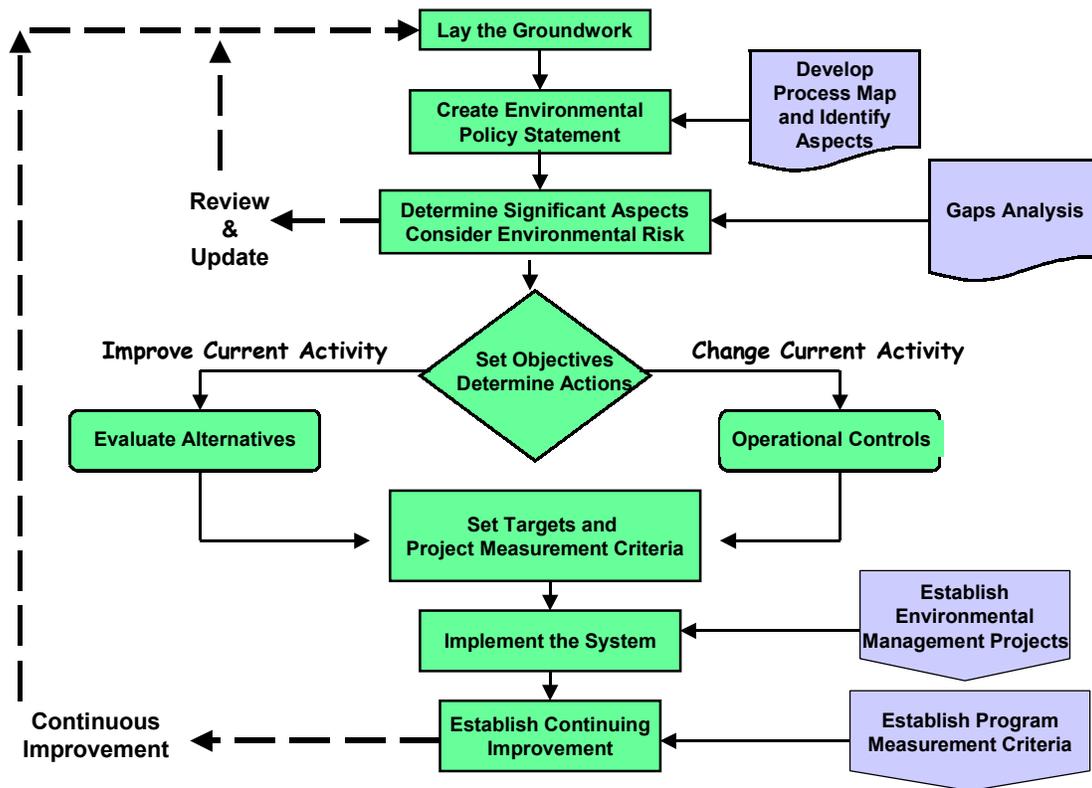
This module will provide a general discussion of what an AEMS contains. It will help you build understanding of and support for your AEMS among your operations employees and community, about what an AEMS is and why the operation is developing one. This module also will help you understand how your operation currently impacts the environment by identifying environmental impacts of your operation’s products, processes and services.

² Adopted from the Integrated Environmental Systems Management Implementation Guide. Washington, DC: Design for the Environment Program, U.S. Environmental Protection Agency

Step 2: Create an Environmental Policy

An early step in the process of developing an AEMS is reviewing your operation's current methods for managing environmental concerns. Next you will write your operation's environmental policy statement and decide on the scope of your AEMS. The environmental policy will be based on what is important to your operation. This module will contain some sample principles and policy statements.

Flow Chart of the Agriculture Environmental Management System Process



Step 3: Determine Significant Environmental Aspects and Setting Objectives

You will need to determine which environmental aspects are significant, and prioritize them to determine what you want to address first. This module will provide methods to estimate environmental risk to help you prioritize environmental aspects. The module then will help you to translate those priorities into objectives to reduce environmental impact.

Step 4: Evaluate Alternatives

Before deciding how you will meet your objectives, it is important to consider a wide array of approaches. This module will show how the AEMS methodology considers a hierarchy of alternatives, which include substitutes, pollution prevention, and wise resource management.

Step 5: Set Targets and Measuring Success

For those significant environmental aspects where you have set an objective, you will need to develop specific targets that describe how you will achieve your goal and you need to develop ways to measure that achievement.

Step 6: Develop Operational Controls

For some environmental aspects, you will need to write procedures to ensure that activities are performed in a way that reduces environmental impact. This module will show how to develop operational controls, measure for success of those controls, and provide corrective action when necessary.

Step 7: Implement Your AEMS

Effective implementation is essential to get your AEMS off to a good start. This module helps you plan the AEMS development process and set up environmental management projects for your objectives.

Step 8: Build Organizational Support

The long-term success of your AEMS will depend on solid organizational support. Such support includes developing documentation, meeting training needs, and implementing effective communication and stakeholder involvement processes.

Step 9: Establish Continuing Improvement

To ensure success and continuing improvement, regular reviews of your overall AEMS are needed. These reviews include progress made in communication, documentation and developing stakeholders as well as the specific environmental targets. The reviews provide critical information to ensure continuing improvement.

How much work each of the steps entails depends entirely on the scope of work that you decide to undertake. It is not necessary for your AEMS to include all your operations, especially for your first effort. As you gain experience in managing environmental concerns along with your daily operations, you will develop your AEMS further.

If you have comments or questions please contact John D. Harrison at jdh@cc.usu.edu or (435) 797-3396.