

Element 1: Environmental Management System Manual

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NATIONAL BIOSOLIDS PARTNERSHIP (NBP)

The National Biosolids Partnership (NBP) was formed in 1997. Its members are the National Association of Clean Water Agencies (NACWA), and the Water Environmental Federation (WEF), with advisory support from the U.S. Environmental Protection Agency (EPA). Other participants in the NBP include municipal wastewater treatment facilities, service contractors, biosolids users, stakeholders for regulatory agencies, universities, the farming community, and environmental organizations. The goal of the NBP is to advance environmentally sound and accepted management practices for the treatment, handling, and use or disposal of biosolids, as well as to positively affect public perception of biosolids programs by demonstrating a commitment to enhance the environment and to perform beyond mandatory regulations. This goal was the thrust behind the creation of the Environmental Management System (EMS) for Biosolids program.

ENVIRONMENTAL MANAGEMENT SYSTEM FOR BIOSOLIDS (EMS)

The EMS is an organized management system comprised of elements organized in five categories. These elements are the guidelines for achieving the biosolids management policy requirements and for developing, implementing, reviewing, and maintaining effective biosolids management programs, procedures, and practices. The EMS manages all critical control points associated with biosolids activities where there is a potential to create significant negative environmental impacts. The EMS will provide oversight for management processes from planning through the final disposition of biosolids.

The following is a list of the five categories and the individual management elements on which the District's EMS program is based:

Policy

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Planning

- Element 2: Biosolids Management Policy
- Element 3: Biosolids Value Chain and Critical Control Points
- Element 4: Legal and Other Requirements
- Element 5: Goals and Objectives
- Element 6 and 9: Public Participation and Communication

Implementation

- Element 7: Roles and Responsibilities
- Element 8: Training
- Element 10: Operational Control of Critical Control Points
- Element 11: Emergency Preparedness and Response
- Element 12: Documentation, Document Control and Recordkeeping

Measure and Corrective Action/Management Review

- Element 13: Monitoring and Measurement
- Element 14: Nonconformance: Preventive and Corrective Action
- Element 15 and 17: EMS Program Performance and Management Review Report
- Element 16: Internal EMS Audit

How does it work?

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In summary, the five categories of the EMS are structured so that an organization can develop a management policy that reflects the main principles of the National Biosolids Partnership's *Code of Good Practice*, as outlined under Element #2. Following the suggested guidelines of the individual Elements, an organization will plan and document environmental impacts, legal requirements, and goals and objectives for its biosolids-related activities. The program incorporates structure, responsibility, communication, training, operational control, emergency preparedness and response, and documentation. A successful EMS will incorporate corrective and preventative actions involving monitoring and measurement tools, internal audits and a thorough periodic review of the system by management.

METRO DISTRICT PARTICIPATION

To ensure that all areas of the Biosolids Value Chain are represented in the implementation and management of the EMS for Biosolids Program, employees from various Departments have been designated as members of the EMS Workgroup as a core or resource member, to act as liaisons. All EMS Workgroup members are identified in Element 7 of this manual.

The EMS program can help to improve regulatory compliance, enhance environmental performance, increase efficiency, reduce cost, better pollution prevention, improve consistency and quality of biosolids, and strengthen the District's relations with the local community. Although the District has done a good job in all of these areas, there is always room for improvement.

The District has developed an Environmental Management System program that reflects the main principles of the National Biosolids Partnership's *Code of Good Practice* and the best management practices as outlined in the *National Manual of Good Practice*. To ensure that the District's EMS for Biosolids program is environmentally sound, meets requirements set forth by the NBP EMS Guidelines, and is being practiced, the District will participate in an independent third-party audit process as established by the NBP. As part of this independent audit, the District will acknowledge and address those gaps identified by the third party.

By adopting the EMS Elements, the District has improved biosolids management activities, assured compliance with applicable federal, state, and local regulatory requirements, and addressed other environmental issues, such as odor, that could cause community concerns. The District's EMS for Biosolids Manual and Program is available for review by all interested parties, promoting open and honest communication that, in turn, promotes a more informed public opinion.

Some of the public's concerns in the past have been the effect that biosolids has on the environment and human health, odors, and traffic, as well as how land application close to residential development will impact property values. The District believes that its EMS for Biosolids addresses these concerns and has improved public outreach by providing a mechanism to build good relations between the District and the communities in which biosolids are applied.

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The EMS demonstrates the District's commitment to a strong, solid, all-encompassing biosolids management program. It also ensures the biosolids are processed appropriately and safely, proper documentation and reporting requirements for the reuse of the product are met, and the agency's overall management of the program is efficient and environmentally sound.

One of the District's main goals in implementing an EMS is to allow for continuous improvement. This involves constant evaluation of the processes and our ability to meet established goals on an ongoing basis. Specifically, the District's EMS includes the following components:

- Overall objectives of the Biosolids Management Program
- Management practices to meet the objectives of the EMS
- Critical control points at which the effectiveness of management practices can be monitored and measured
- Corrective and preventative measures if the management practices are not operating effectively
- Provisions for an internal audit of the Biosolids Management Program, as well as an independent third-party audit
- Commitment to periodically evaluate and revise the EMS