

**Element 13: Monitoring and Measurement – Background**

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**BACKGROUND**

This element ensures that the Metro District will maintain regular monitoring and measurement practices to ensure that performance remains within acceptable bounds, and to assess where gaps and resources may be needed in the future.

The District has established monitoring and measurement procedures for all of its biosolids management activities and will:

- Assure compliance with applicable legal, regulatory, and other requirements as outlined in Element #4-Procedure.
- Measure biosolids management performance at critical control points as outlined in Element #3-Procedure.
- Measure biosolids management performance at operational controls as outlined in Element #10-Procedure.
- Track progress toward achieving long-term goals and objectives as outlined in Element #5-Procedure.

Monitoring and measurement results will be recorded and the records will be maintained as established in Element #12-Procedure.

All progress toward goals and objectives related to biosolids activities will be reviewed and updated on an annual basis following the guidelines as suggested in Element #5 of this manual.

Internal regulatory compliance audits are conducted periodically in each Department to ensure regulatory requirements are met throughout the District.

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**PURPOSE**

To ensure compliance with applicable legal and other requirements, measure biosolids program performance at critical control points, and track progress toward goals and objectives of the District's EMS for Biosolids program.

**SCOPE**

Steps in this procedure cover all monitoring and measurement SOPs for operational controls with SOPs including monitoring, testing, inspection and sampling activities.

**REFERENCES**

- NBP National Manual of Good Practice
- Element #3: Critical Control Points
- Element #4: Legal and Other Requirements
- Element #5: Goals and Objectives
- Element #10: Operational Control SOPs
- Element #12: Documentation, Document Control and Record Keeping
- Records Management Program Manual (Administrative)

**DEFINITIONS**

**Critical Control Points** – those locations, unit processes, events, and activities throughout the biosolids value chain under the organization's direct control or influence that require effective policies, programs, procedures, practices, monitoring and measurements to assure the biosolids activities meet applicable legal, quality and public acceptance requirements and do not have undesirable environmental impacts. Critical control points include all biosolids management activities that are covered under applicable legal and other requirements.

**Legal Requirements** – applicable environmental federal, state, and local regulations that related to an organization's biosolids management program activities.

**Measurement** – a systematic method for estimating, testing, or otherwise evaluating key parameters and characteristics of an organization's biosolids management activities to determine compliance with a specific standard, regulatory or other performance requirement, or to measure progress toward its biosolids program goals and objectives.

**Monitoring** – a systematic process of watching, checking, observing, inspecting, keeping track of, regulating or otherwise controlling key parameters and characteristics of an organization's biosolids management activities to determine compliance with a

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specific standard, regulatory or other performance requirement, or to measure progress toward its biosolids program goals and objectives.

**RESPONSIBLE PERSONS**

- EMS Coordinator
- Department Heads
- Supervisors and Staff

**RELATED TRAINING**

For related training, please refer to Element #8 of this manual.

**PROCEDURAL STEPS**

1. Each Department will establish and maintain up-to-date monitoring and measurement practices for biosolids management activities it is responsible for managing, as suggested in Element #10-Table. (**Note:** All progress toward goals and objectives as related to biosolids activities are addressed in Element #5 of this manual while Element #4 ensures compliance with legal and other requirements).
2. There are SOPs and other documents for monitoring, testing, inspection, and sampling activities performed to assure that requirements are being consistently met. They may also include monitoring and measurement activities required by permits and regulations, and reference other established District programs.
3. Employee(s) within each department are assigned document control responsibility as appropriate and follow document control guidelines in Records Management Program Manual (Administrative).