



City of Grand Rapids  
Environmental Services Department  
Policies and Procedures

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| <b>Title:</b> Element 8 - Training        | <b>Created by:</b> Dave Harris<br><b>Approved by:</b> William R. Kaiser |
| <b>Policy Number:</b> 1103-8 Version: 7.0 | <b>Effective:</b> 10/26/2017  |

### General

Training is essential to effectively implement, manage, and maintain the City's Biosolids BMP. All employees and contractors will receive training that includes:

- Employee general awareness training<sup>A</sup> on the Biosolids BMP which shows employees what their roles and responsibilities are and how they relate to the biosolids value chain.
- Standard operating procedures and work instructions that are necessary for employees to successfully perform their assigned tasks in a competent manner.
- Training on how roles and responsibilities relate to the entire biosolids value chain.
- Most internal BMP team<sup>B</sup> members have attended each of the National Biosolids Partnership (NBP) BMP series BMP 101, 201, 301, 401 two day training workshops.

### Procedures

- 1) The City has developed an employee general awareness training program which introduces employees to the concepts of the Biosolids BMP and identifies roles and responsibilities by job classification<sup>C</sup>.
- 2) Existing employees and contractors will participate and new or transferred employees will receive this training as part of their orientation.
- 3) Employees regularly receive a variety of training needed for them to successfully complete their assigned tasks and duties. This is provided in various forms ranging from hands on, classroom, internet, etc.
- 4) Most of the City's wastewater employees hold State of Michigan wastewater operators licenses or laboratory analyst licenses. The State of Michigan mandates ongoing training as a condition of license renewal.
- 5) All training received by City employees is documented and records are maintained not only for biosolids related training but any other training employees receive as part of their jobs<sup>D</sup>. These records are maintained by the SW Maintenance Supervisor.
- 6) The BMP coordinator will be responsible for ensuring that all employees and contractors receive the "Employee General Awareness Training."

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- 7) New and transferred employees are trained as soon as possible during their orientation period.
- 8) At a minimum of quarterly, City work groups shall participate in BMP training and/or informational activities which may include; lectures, training, quiz, online presentation and/or tours.
- 9) Annually, City and Contractor employees will receive refresher training. This will help reinforce the BMP for Biosolids program and provide a forum for sharing key outcome results with employees. It will also enable employees to participate in discussion of any nonconformance items and receipt of input on ways to improve.
- 10) Training schedules by job classification have been developed which cover recommended and mandatory training for employees.
- 11) Contractors are required to train employees on SOPs covering operation and maintenance of all equipment operated and maintained by the contractor<sup>E</sup>. All training must be documented by the contractor.

## **References**

Appendix A Glossary

Appendix B Tables, Figures, Forms

Appendix C CCP Postings

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<sup>A</sup> Reference Figure 8.1 “Employee Orientation Training”

<sup>B</sup> Reference Element 7 Roles and Responsibilities – Table 7.3 “Internal BMP Team Name and Contact Information”

<sup>C</sup> Reference Element 7 Roles and Responsibilities – Table 7.2 “Employee Roles and Responsibilities grouped by Biosolids Value Chain Component”

<sup>D</sup> Reference Element 12 BMP Documentation and Document Control – Table 12.1 “Record Documentation Systems” and Table 12.2 “Biosolids BMP Related Documentation and Retention” Reference Figure 8.2 “Employee Orientation Training Attendance Sheet”

<sup>E</sup> Reference Element 3 Critical Control Points – Table 3.1 “Critical Control Points”

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Figure 8.1 Employee General Awareness Training



### Biosolids Mission Statement

“It is the goal of the Grand Rapids Wastewater Treatment Plant to manage Biosolids processing, handling, and final disposal in a manner which meets public acceptance; and to produce a product that meets all State and Federal regulatory requirements”

Key points to remember:

- Public acceptance
- Meet regulatory requirements

### City of Grand Rapids Environmental Services

## “National Biosolids Partnership”

**Biosolids Management Program**

Employee Awareness Training

### Who will participate?

Department Employees

### Policy statement that commits use to the Code of Good Practice

**Code of Good Practice**

The Code of Good Practice (the Code) is a broad framework of goals and commitments to guide the production, management, transportation, storage, and use or disposal of biosolids. It is a comprehensive environmental management system for biosolids (EOMS). Those who endorse the Code and participate in the EOMS commit to “do the right thing” specifically, to follow the Code and EOMS performance plan to apply the following principles of conduct:

|  |   |
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| <p><b>COMPLIANCE</b> To ensure compliance with all applicable local, state, and federal requirements regarding production at the wastewater treatment plant, and management, transportation, storage, and use or disposal of biosolids throughout the facility.</p> <p><b>PRODUCTION</b> To produce biosolids that meet the applicable regulatory standards for use or disposal.</p> <p><b>TRANSPORTATION</b> To ensure that biosolids are transported in a safe and secure manner to the appropriate management and use or disposal site.</p> <p><b>MANAGEMENT</b> To ensure that biosolids are managed in a safe and secure manner throughout the entire process, from production to final use or disposal.</p> <p><b>USE OR DISPOSAL</b> To ensure that biosolids are used or disposed of in a safe and secure manner, in accordance with all applicable regulatory requirements.</p> | <p><b>CONSCIOUSNESS AND RESPONSIBILITY</b> TO PLAN: To develop a performance plan for each significant event that is associated with the production, management, transportation, storage, and use or disposal of biosolids.</p> <p><b>REGULATORY COMPLIANCE</b> TO PROTECT: To ensure that biosolids are managed in a safe and secure manner throughout the entire process, from production to final use or disposal.</p> <p><b>PREVENTIVE MAINTENANCE</b> TO PREVENT: To ensure that biosolids are managed in a safe and secure manner throughout the entire process, from production to final use or disposal.</p> <p><b>CONTINGENCY PLANNING</b> TO PREPARE: To ensure that biosolids are managed in a safe and secure manner throughout the entire process, from production to final use or disposal.</p> <p><b>COMMUNICATION</b> TO PROMOTE: To ensure that biosolids are managed in a safe and secure manner throughout the entire process, from production to final use or disposal.</p> |
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The Code of Good Practice (the Code) is a broad framework of goals and commitments to guide the production, management, transportation, storage, and use or disposal of biosolids.

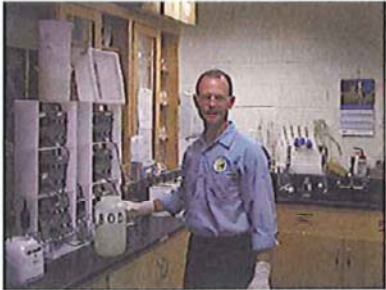
### Who will participate?

Department Employees



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Who will participate?



Department Employees

Who will participate?




Department Employees

Who will participate?




Department Employees

Who will participate?



Department Employees

Who will participate?



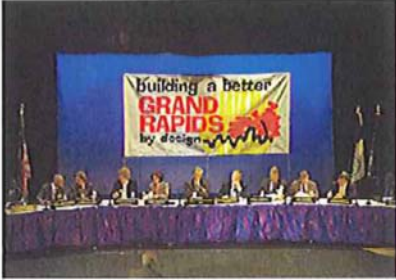
Department Employees

Who will participate?



Department Employees

**Who will participate?**




City Policy Makers

**Biosolids BMP Promotes Four Key Outcomes**

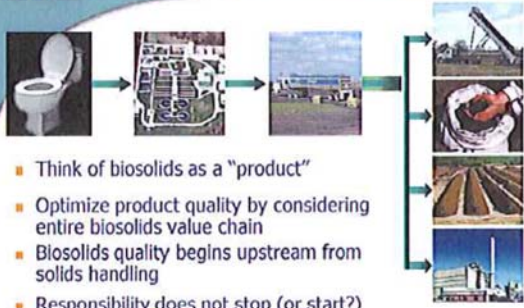
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| <b>Quality Management Practices</b><br>Ensure consistent product quality               | <b>Relations with Interested parties</b><br>Establish and maintain credibility     |
| <b>Regulatory Compliance</b><br>Meet or exceed compliance with regulatory requirements | <b>Environmental Performance</b><br>Protect the environment for future generations |

**Who will participate?**




Contractors

**Focus on the Biosolids Value Chain**



- Think of biosolids as a “product”
- Optimize product quality by considering entire biosolids value chain
- Biosolids quality begins upstream from solids handling
- Responsibility does not stop (or start?) when biosolids leave the plant

**Who will participate?**



Landfill & Compost Facility

**Mapping Critical Control Points and Operational Controls**

|  |   |  |
|--|---|--|
| <b>What?</b><br>Product quality requirements<br>Pathogens<br>Metals<br>Organic pollutants<br>Odor<br>Percent solids<br>pH<br>Paint filter test<br>TCLP | <b>Where?</b><br>Critical Control Points<br>What you need to manage to meet biosolids quality, compliance, and public acceptance objectives | <b>How?</b><br>Operational Controls<br>How you manage your critical control points to achieve quality, compliance, and public acceptance objectives and prevent mistakes |
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Mapping Critical Control Points and Operational Controls

Collection System Maintenance




Mapping Critical Control Points and Operational Controls

Primary Treatment




Mapping Critical Control Points and Operational Controls

Bar Screens




Mapping Critical Control Points and Operational Controls

Secondary Treatment/ Activated Sludge




Mapping Critical Control Points and Operational Controls

Grit Removal




Mapping Critical Control Points and Operational Controls

Waste Activated Sludge Thickening



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**Mapping Critical Control Points and Operational Controls**




Centrifuge Dewatering

**Program “Elements”**


Table 1 EMS Elements

|                         |                                 | EMS Elements  |
|-------------------------|---------------------------------|---|
| PLAN - DO - CHECK - ACT | Policy                          | 1 Documentation of Goals for EMS                    |
|                         |                                 | 2 Biosolids Management Policy                       |
|                         | Planning                        | 3 Critical Control Points                           |
|                         |                                 | 4 Legal and Other Requirements                      |
|                         |                                 | 5 Goals and Objectives                              |
|                         |                                 | 6 Public Participation in Planning                  |
|                         | Implementation                  | 7 Roles and Responsibilities                        |
|                         |                                 | 8 Training  |
|                         |                                 | 9 Communication and Public Outreach                 |
|                         |                                 | 10 Operation Control of Critical Control Points     |
|                         |                                 | 11 Emergency Preparedness and Response              |
|                         | Measurement & Corrective Action | 12 Documentation and Document Control               |
|                         |                                 | 13 Monitoring and Measurement                       |
|                         |                                 | 14 Nonconformance: Preventive and Corrective Action |
|                         |                                 | 15 Periodic Biosolids Program Performance Review    |
|                         | Management Review               | 17 Periodic Management Review of Performance        |

**Mapping Critical Control Points and Operational Controls**




Transport to Compost Facility or Landfill



**Questions ?**

**Mapping Critical Control Points and Operational Controls**



Landfill or Compost Facility

