



[Revisable Template]
Biosolids Management Program
Manual
[Town of Anytown, State]

[DATE]

Acknowledgement: Portions of the Madison, WI Metropolitan Sewerage District's NBP EMS manual were used in the development of this small organization template

Element 1: *[Insert Organization Name]* BMP Manual

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

[Insert Organization Name] provides wastewater treatment to *[Describe size of community/service area]*. Wastewater treatment meets state *[insert treatment level]* treatment requirements. Two valuable end products result from these treatment processes: highly treated effluent and biosolids. Effluent is discharged to *[Insert name(s) of receiving waters]*. Biosolids are recycled *[Describe how biosolids are recycled – land application, composting, etc.]*.

[Give a short background of your biosolids recycling program. Include: how long it has been in operation, type of operation (land applied Class B, Class A, etc.) and how successful it has been, for example, if land application is saving farmers from having to fertilize.]

Biosolids transportation and *[insert biosolids end uses such as land application, composting, etc.]* is accomplished using *[explain role of organization and any contractors. Include level of control your organization has over site selection, approval and scheduling; monitoring; recordkeeping; reporting; regulatory interactions; planning and communication and what is under contractor control.]*

[Insert Organization Name] biosolids program *[describe history of changes or stability of program]*. *[Insert Organization Name]* modifies its biosolids program as needed in response to factors such as new state regulations.

[Insert Organization Name] is committed to proactively addressing the challenges that will be encountered with respect to biosolids management in the future, especially *[Insert challenges facing your program]*. We are committed to continually improving all aspects of our biosolids program. On *[Insert Date]*, *[Insert Organization Name]* *[Insert Title]* signed a Letter of Understanding with the National Biosolids Partnership (NBP) in which *[Insert Organization Name]* agreed to become an NBP participant with the intent to improve its existing biosolids program to achieve national recognition. *[Insert Organization Name]* specifically committed to meet the national requirements for an excellent biosolids program; committed to implement an NBP Biosolids Management Program (BMP); and committed to the NBP *National Code of Good Practice*.

This BMP Manual describes *[Insert Organization Name]* NBP Biosolids Management Program.

Procedure

1. The BMP Manual is intended to be a “living” document. Revisions are expected as new information is obtained, changes to existing systems occur, and as experience is gained in managing the biosolids program.
2. ***[Insert Organization Name] [Insert Title]*** will make revisions to the BMP Manual on an “as needed” basis.
3. ***[Insert Title]*** will inform ***[Insert Title]*** of significant revisions to the biosolids program.
4. ***[Insert Title]*** will provide notification of significant changes to the biosolids program to interested parties such as ***[Insert any interested parties such as state regulatory agencies]***.

Element 2: Biosolids Management Policy

Created/Approved: [Insert Date] By: [Insert Name and Title] Date issued: [Insert Date]
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Introduction

[Insert Organization Name] formally adopted the following Biosolids Management Policy on **[Insert Date]**. The policy establishes guiding principles for **[Insert Organization Name]** Biosolids Management Program.

Biosolids Management Policy Statement

[Insert Organization Name] will pursue beneficial biosolids reuse options that protect human health and environmental quality, are cost effective, and provide flexibility with respect to end use.

[Insert Organization Name] will implement this policy by:

- Following the *Code of Good Practice* for biosolids developed by the National Biosolids Partnership.
- Periodically evaluating beneficial reuse options that provide potential for improved efficiencies or better meet the needs of the community.
- Providing adequate training opportunities to personnel associated with the biosolids management programs.

The *Code of Good Practice* is included in the BMP Manual as Attachment 2.1.

Procedure

1. The **[Insert Title]** is responsible for ensuring that the biosolids management policy is implemented and communicated to **[Insert key personnel such as employees and contractors]** and other interested parties, using one or more of the communication tools listed under the Communication procedure.
2. Methods used to accomplish Procedure 1 include, but are not limited to the following:
 - a. **[Delete this if you do not use contractors]** meeting with the contractor to discuss how the policy affects activities conducted by the contractor
 - b. **[Delete this if you do not use contractors]** revising the contract, upon agreement with the contractor or at the next renewal cycle, to reflect the provisions of biosolids management policy
 - c. **[Delete this if you do not land apply]** meeting with farmers to discuss how the policy guides actions of **[Insert Organization Name]** and the contractor

- d. communications with interested parties are addressed in the Communications procedure.
3. If revisions to the current policy statement are needed because of changing conditions, the ***[Insert Title]*** will notify ***[Insert Title]*** of the issue and suggested changes.
4. The ***[Insert Title]*** will bring the revisions to the ***[Insert Title]*** for consideration. Recommended revisions to the policy may also be included in the annual BMP Management Review.
5. If revisions to the policy are approved by the ***[Insert Title]***, the ***[Insert Title]*** will communicate the revised policy as per Step 1 above. The ***[Insert Title]*** will also replace the revised policy in the BMP Manual.

Element 3: Critical Control Points

Created/Approved: [Insert Date] By: [Insert Name and Title] Date issued: [Insert Date]
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Introduction

Critical Control Points (or *key processes*) are those biosolids management activities that are under the direct control or influence of **[Insert Organization Name]** that have the potential, if not managed effectively, to create significant changes to the quality of its biosolids and could create negative environmental impacts. Critical control points include activities that can affect the quality of biosolids, how biosolids are managed, or how **[Insert Organization Name]** biosolids program is viewed by the general public and regulators.

Table 3.1 identifies **[Insert Organization Name]** critical control points that need to be managed to avoid problems with the biosolids quality and potential environmental impacts. The critical control points were selected by **[Insert Organization Name]** **[Insert Title]** after reviewing information contained in the *National Manual of Good Practice*.

[Insert Organization Name] manages its biosolids to: **[The following are examples of common biosolids management efforts. Keep those that apply to your program, delete those that do not apply and add any others that are specific to your program.]**

- meet the regulatory requirements for metal concentrations for land application
- meet the regulatory requirements for pathogen reduction for land application
- maintain minimal content for plastics and debris in the biosolids
- generate product that doesn't create objectionable odors

Table 3.1 also contains information on operational controls and monitoring/measurement activities.

Procedure

The following procedure will be used to review and update the selection of critical control points:

1. **[Insert Organization Name]** **[Insert Title]** will review information in Table 3.1 on an annual basis, when there are regulatory changes or whenever major operational changes occur. The annual review will be conducted by **[Insert Date]**.
2. Revisions to Table 3.1 (if any) will be documented in writing by **[Insert Organization Name]** **[Insert Title]**, who will then be responsible for ensuring that any necessary changes are made to Table 3.1 in the BMP Manual. At a minimum, documentation will occur through notation in the annual biosolids program report.

3. If revisions to the critical control points are made by **[Insert Title]**, information related to roles/responsibilities, operational controls, monitoring/measurement and any other relevant areas of the BMP (including potential environmental impacts listed in Table 3.1) will also be reviewed and modified as appropriate. Documentation will be consistent with the approach in Procedure 2 above.
4. Following an operational change that requires revisions to the critical control points or their associated environmental impacts, the **[Insert Title]** will inform the NBP and the third-party verification auditor in writing of the changes.

NOTE: THAT ANY CRITICAL CONTROL POINTS OR OPERATIONAL CONTROLS IDENTIFIED IN APPENDIX F OF THE NBP'S NATIONAL MANUAL OF GOOD PRACTICE BUT NOT SHOWN HERE WERE CONSIDERED BUT DETERMINED, THROUGH EXAMINATION OF FACILITY OPERATIONS, TO NOT BE RELEVANT TO THE PROCESSES USED AT THIS FACILITY

Table 3.1: Critical Control Points, Operational Controls, SOPs, Monitoring/Measurements and Environmental Impacts

Biosolids Value Chain (Operational Area)	Critical Control Points (Key Processes)	Operational Controls (Control Points)	Standard Operating Procedures (SOPs)	Monitoring & Measurements	Potential Environmental Impacts
Wastewater Collection and Pretreatment	Industrial Users	Industrial discharge permit			
	Commercial Users	Commercial discharge permit			
	Septage Receiving Tank	Service contracts			
Feed rate					
Wastewater Treatment and Solids Generation	Solids screening / grit collection	Screen cleaning and maintenance			<ul style="list-style-type: none"> • Plastics in biosolids • Attraction of vectors (e.g. flies) • Odors
	Scum blanket	Blanket thickness			
	Primary treatment	WAS line maintenance			
	Secondary treatment	WAS line maintenance			
Solids Stabilization, Conditioning and Handling	Aerobic Digestion	Loading rates			<ul style="list-style-type: none"> • Odors • Attraction of vectors • Incomplete destruction of pathogens
		Digester Mixing			
		Aeration requirements			
		“End product” permits			
	Anaerobic Digestion	Temperature			
		Detention time			
		Digester mixing procedure			
		“End product” permits			
	Chemical Stabilization – Class B product	Quality of add mix of chemicals/lime			
		Mixture consistency			
		Mixture pH and temperature			
		Mixture detention time			
	Chemical Stabilization – Class A product	Quality of add mix of chemicals/lime			
		Mixture consistency			
		Mixture pH and temperature			
		Mixture detention time			
	“End product” permits				

		Location of facility – air emissions management			
	Composting	Quality of add mix of bulking agent			
		Mixture consistency			
		Mixture temperature			
		Mixture turning			
		Mixture detention time			
		“End product” permits			
	Air drying system	Location of facility			
		Mixture turning			
		Mixture temperature			
		Mixture detention time			
		“End product” permits			
	Thermal drying system	Location of facility – air emission management			
		Temperature			
		Detention time			
		Stack emissions			
		Storage bin / silo			
“End product” permits					
Dewatering	Location of facility				
	“End product” permits				
Drying bed location	Regulatory requirements				
Thickening	Location of facility				
	“End product” permits				
Biosolids Storage, Loading and Transportation	Solids storage	Site location			<ul style="list-style-type: none"> • Spills • Roadway accidents • Truck noise and dust • Odors
		Distance to neighbors			
	Loading site	Loading procedures			
		Emergency response procedures			
	Transportation	Truck cover			
		Routing requirements			
Truck cleaning					
Biosolids End Use, Disposal or Beneficial Reuse	Land Application Site Selection	State Regulations			<ol style="list-style-type: none"> 1. Negative impacts on groundwater or surface water resources 2. Odors
		Management of interim storage/staging area			

	Location of truck unloading (land application)	Truck loading/unloading procedures			
	Depth to Groundwater (land application)	Land application site selection procedures			
	Agronomic Rate (land application)	State Regulations			
	Perimeter of application site (land application)	State Regulations			
	Set back distance from surface water/neighbors (land application)	State Regulations			
	Class A/EQ product sale and distribution	Product and packaging specifications			
		Product application rates			
		Product transportation requirements			
		"End product" permits			
	Landfill	Landfill regulations			
		"End product" permits			

Note - The Critical Control Points listed above are consistent with those listed in Appendix F of the NBP's *National Manual of Good Practice*.

Element 4: Legal and Other Requirements

Created/Approved: <i>[Insert Date]</i> By: <i>[Insert Name and Title]</i> Date issued: <i>[Insert Date]</i>
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Introduction

Identifying existing legal and other requirements that impact the various aspects of *[Insert Organization Name]* biosolids program is extremely important. Most of the existing requirements are defined by state and federal regulations and are reflected in *[Insert Organization Name]* *[Insert permit title]* permit and the Federal Part 503 regulations. However, when new or revised regulations are proposed *[Insert Organization Name]* identifies, tracks, and assesses the potential effects on the Biosolids Management Program.

Procedure

The procedure used by *[Insert Organization Name]* to identify, track, and assess the potential effects of new or revised regulations that may affect *[Insert Organization Name]* BMP is described below.

1. The following sources of information are used, as appropriate, to identify and track potential changes to regulations: *[The following initiatives are some common approaches and tools for tracking legal and other requirements. Keep those that are applicable to your program, delete those that are not applicable and add any others you may have.]*
 - Check with state biosolids coordinator at least annually
 - Check with state Rural Water Association at least annually
 - NACWA Regulatory and Legislative Updates
 - Water Environment Federation Fact Sheets
 - NBP Weekly Biosolids Updates
 - State Administrative Register for regulatory/legislative updates issued by the State DEP and other state agencies
 - Personal contacts with key individuals at local, state and federal agencies
 - Workshop, seminar and technical conference attendance (e.g. Spring Biosolids Symposium, WEF-TEC, NACWA)
 - *[Insert any other approaches or tools your organization uses for tracking legal and other requirements.]*
2. The *[Insert Title]* is responsible for ensuring that *[Insert Organization Name]* is aware of potential changes to regulations. The *[Insert Title]* will:
 - a. Identify potential changes to regulations through review of information from various sources identified in Procedure 1 above.
 - b. Evaluate potential effects on *[Insert Organization Name]* biosolids program.

- c. Determine the appropriate actions and schedule, including the need to involve other ***[Insert Organization Name]*** staff.
3. The following procedure is used to ensure that new legal and other requirements are appropriately communicated and implemented:
 - a. The ***[Insert Title]*** will follow Procedure 2 above
 - b. The ***[Insert Title]*** will be responsible for communicating new requirements (for example, monitoring and reporting requirements) to the contractor and farmers on whose land biosolids are applied.
 - c. The ***[Insert Title]*** will make any necessary changes to the BMP Manual and related documents.

Table 4.1 identifies legal and other requirements specific to ***[Insert Organization Name]*** BMP. ***[Insert Organization Name]*** ***[Insert permit title]*** permit contains very specific regulatory and legal requirements.

Table 4.1: Legal Requirements and Guidance Specific To *[Insert Organization Name]* Biosolids Land Application Program *[or replace with appropriate biosolids end use/disposal method]*

Regulation	Brief Description	Hard Copy (if available)
Federal Regulations		
<i>[Insert Federal Regulations]</i>	<i>[Insert brief description]</i>	<i>[Insert Location]</i>
State Regulations		
<i>[Insert State Regulations and Permits]</i>	<i>[Insert brief description]</i>	<i>[Insert Location]</i>
Local (City/County) Regulations		
<i>[Insert Local Regulations and Permits]</i>	<i>[Insert brief description]</i>	<i>[Insert Location]</i>

Element 5: Goals and Objectives for Continual Improvement

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

[Insert Organization Name]'s Biosolids Management Policy states that it “*will pursue beneficial biosolids reuse options that protect human health and environmental quality, are cost effective, and provide flexibility with respect to end use*” by:

- Following the *Code of Good Practice* for biosolids developed by the National Biosolids Partnership;
- Periodically evaluating beneficial reuse options that provide potential for improved efficiencies or better meet the needs of the community; and
- Providing adequate training opportunities to personnel associated with biosolids operations and the BMP.

[Insert Organization Name] will set or revise goals to support its policy on an annual basis using the following procedure.

Procedure

1. *[Insert Organization Name]* will set or revise goals and objectives for its BMP on an annual basis. The goals and objectives will be finalized no later than *[Insert Date]*.
2. The *[Insert Title]* will draft a set of goals and objectives considering:
 - a. *[Insert Organization Name]* Biosolids Management Policy;
 - b. input (if any) received throughout the year from the general public, regulators, elected officials, and other interested parties; and
 - c. input from *[Insert Organization Name]* staff.

Each goal will include a short statement identifying its benefit to overall biosolids management activities.

3. Goals will be established using SMART criteria (Specific, Measurable, Achievable, Relevant and Time-bounded).
4. Goals and Objectives will be set considering each of the following-- Environmental Performance, Regulatory Compliance, Quality Management Practices and Relations with Interested Parties
5. The *[Insert Title]* will review and approve goals and objectives; drafts may be revised by the *[Insert Title]*
6. New or revised goals and objectives will be included in the annual BMP report

7. Final goals and objectives will be posted ***[Insert location]***
8. The ***[Insert Title]*** will prepare an action plan to support each goal, consistent with the template shown below, that contains schedules, milestones and necessary resources
9. The ***[Insert Title]*** will be responsible for tracking progress toward each goal on a regular basis.

Action Plan and Tracking Template

Goal/Objective	Target Date	Person Responsible	Resources Available	Interim Status	Date Completed
Goal #1 <i>[Insert goal]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #1.1 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #1.2 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Goal #2 <i>[Insert goal]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #2.1 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #2.2 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Goal #3 <i>[Insert goal]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #3.1 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		
Objective #3.2 <i>[Insert objective]</i>	<i>[Insert date]</i>	<i>[Insert Title]</i>	<i>[Insert resources]</i>		

Element 6: Public Participation in Planning

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

[Insert Organization Name] has a well managed biosolids program which has been in operation for over *[Insert number of years]* years. *[Briefly, in 2-3 sentences describe the history of public perception of you biosolids program. Include if public perception has improved or declined over time and why.]*

Public confidence continues to remain *[Insert high, low or indifferent based on your situation]* and public interest in participating in the planning processes is relatively *[Insert high or low based upon your situation]*. *[Insert Organization Name]* proactive approach to providing the public with meaningful opportunities to provide input in the planning processes is consistent with legal requirements, the degree of current public interest, historical levels of public involvement and related local circumstances.

Procedure

1. *[Insert Organization Name]* will use a combination of both formal and informal mechanisms to provide opportunities for the public to participate in the planning process.
2. Where reasonable and appropriate or when legally required, opportunities will be provided for the public to formally participate in planning processes. This determination will generally be made by the *[Insert Title]*.
3. Opportunities are available for the public to provide input through informal avenues.
4. Formal and informal participation mechanisms used by *[Insert Organization Name]* are listed in Table 6.1
5. Information regarding the third party verification process will be shared with interested parties using any of the formal or informal participation opportunities identified below, as deemed appropriate by the *[Insert Title]*.
6. *[Insert Organization Name]* will record and respond to significant input received from interested parties. An inquiry/complaint form will be used to record, when possible, the names, addresses, phone numbers and e-mail addresses of interested parties.

Participation Mechanisms *[In the following table are examples of formal and informal participation opportunities. Keep the opportunities that are applicable to your organization, delete those that are not applicable and add any others for your organization that are missing.]*

Table 6.1 *[Insert Organization Name]* Public Participation Mechanisms

Formal Participation Mechanisms	Description
Public Hearings	<i>[Insert regulatory requirement reference]</i> requires that municipalities hold public hearings in the event of <i>[insert items related to your biosolids program that would require a public hearing]</i> .
Commission Meetings	The commission generally meets <i>[Insert frequency of meetings]</i> and the meetings are open to the public. Public notice of each meeting is published <i>[Insert where meeting notices are published.]</i> and includes a copy of agenda.
Public informational meetings	Public meetings are held on selected projects as a means of soliciting input. There are no statutory requirements to hold public informational meetings. District sponsorship of informational meetings is generally determined on a project specific basis based on recommendations from <i>[Insert Organization Name]</i> commission and/or determinations made by the <i>[Insert appropriate staff titles]</i> , with input being solicited from <i>[Insert Organization Name]</i> staff. <i>[Insert Organization Name]</i> staff also participate in informational meetings held by other parties when requested.
Formation of citizen’s advisory committees	<i>[Insert Organization Name]</i> forms citizen’s advisory committees for selected projects which, in the <i>[Insert Organization Name]</i> judgment, may be precedent setting, address issues outside of areas traditionally considered <i>[Insert Organization Name]</i> “core” business, or address issues that are viewed as potentially generating a great deal of public interest. <i>[Insert Organization Name]</i> commission may request that advisory committees be formed for particular projects. Alternatively, <i>[Insert appropriate staff titles]</i> may determine that forming an advisory committee for a specific project is in the best interest of

	<i>[Insert Organization Name]</i> . Examples include <i>[Include any examples.]</i>
Town meetings	<i>[Insert Organization Name]</i> sends written notification to each town in which <i>[Insert Organization Name]</i> conducted <i>[Insert land application, landfill, composting or other end use as appropriate]</i> activities during the previous year, summarizing those activities and offering to attend a town meeting to discuss concerns and/or answer questions that town officials or the general public may have regarding <i>[Insert Organization Name]</i> operations (town mailing list). Additional information on activities associated with <i>[Insert Organization Name]</i> biosolids operations, including the BMP is also provided.
Informal Participation Mechanisms	Description
Informational letters	Letters are sent to elected officials each year. Letters are also sent to participating farmers in the spring of each year, providing information on such topics as nutrient management, land availability, biosolids quality and <i>[Insert Organization Name]</i> 's BMP. Participating farmers are encouraged to call with questions or comments.
Website	<i>[Insert Organization Name]</i> maintains a website that contains information on a variety of <i>[Insert Organization Name]</i> related activities, including <i>[Insert Organization Name]'s</i> biosolids operations and BMP. Included on the web site is a contact button that people can use to email <i>[Insert Organization Name]</i> with specific questions/comments regarding any aspect of <i>[Insert Organization Name]</i> operations. <i>[Insert appropriate staff titles]</i> are responsible for maintaining the website.
Fact sheets	Fact sheets are prepared by <i>[Insert Organization Name]</i> staff and are used primarily as a form of internal communication. They are available in hard copy format and electronically on the <i>[Insert Organization Name]</i> intranet site. Information associated with <i>[Insert Organization Name]</i> biosolids operations and the BMP is placed in the fact sheets on a periodic basis.

<p>Intranet</p>	<p><i>[Insert Organization Name]</i> maintains an intranet site where pertinent information about <i>[Insert Organization Name]</i> activities is conveyed to employees.</p>
<p>Information packets</p>	<p>These packets contain general information on the <i>[Insert Organization Name]</i> biosolids operations. The <i>[Insert appropriate title]</i> is responsible for distributing these packets, which are placed on the doors or mailboxes of homes that are adjacent to <i>[Insert land application, landfill, composting or other end use as appropriate]</i> sites. The packets contain contact information for people who are interested in knowing more about <i>[Insert Organization Name]</i> and/or have specific concerns that they would like to voice.</p>
<p>Newspaper, radio and television</p>	<p><i>[Insert Organization Name]</i> staff work cooperatively with the media and have in many cases been proactive in encouraging stories, articles, etc. Feedback (if any) from these stories/articles can be useful in helping the <i>[Insert Organization Name]</i> make minor adjustments to various aspects of its operations.</p>
<p>Plant tours and presentations to school/community groups</p>	<p><i>[Insert Organization Name]</i> provides general plant tours to a wide variety of school/community groups and other interested parties. In addition, presentations (both general and issue specific) are made to these groups, usually in response to invitations issued to these groups. Feedback received during these presentations has at times been useful in helping <i>[Insert Organization Name]</i> make minor adjustments to various aspects of its operations.</p>

Element 7: Roles and Responsibilities

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

Clearly identifying roles and responsibilities is important to the success of both the biosolids operations and the BMP. Without a clear definition of roles and responsibilities, the likelihood of failing to comply with operational and regulatory requirements significantly increases.

Procedure

1. Roles and responsibilities for various individuals (including contractors) that are specific to the BMP are assigned by *[Insert Title]*. They are reviewed and updated as necessary on an annual basis (by *[Insert Date]* of each year).
2. The *[Insert Title]* will also review existing roles/responsibilities whenever significant operation changes are made to ensure that roles/responsibilities are appropriately defined. Revisions to the roles and responsibilities tables are made by the *[Insert Title]*.
3. General descriptions of the roles/responsibilities for various positions are provided below.

[The following are examples of common responsibilities at wastewater treatment organizations. Please edit the following to fit the responsibilities and positions at your organization. Add as many responsibility titles as necessary to capture who is responsible for the management of your biosolids.]

[Insert Title]

The *[Insert Title]* is responsible for the overall operation of *[Insert Organization Name]* municipal services.

[Insert Title]

The ***[Insert Title]*** reports to the ***[Insert Title]*** and has overall management responsibility for the wastewater treatment plant and the biosolids reuse program. The ***[Insert Title]*** is responsible for coordinating activities within the wastewater treatment operation, for establishing overall direction, determining priorities, and ensuring that all aspects of the operation and maintenance of the treatment facility are conducted in an efficient, cost effective manner and are compliant with existing rules and regulations. The ***[Insert Title]*** is also responsible for ensuring that the contractor performs hauling and land application tasks in accordance with the terms of the contract and any other operation agreements.

Operations Staff

The Operations Staff report directly to the ***[Insert Title]*** and are responsible for the day to day management of the liquid and solids treatment system and for ensuring compliance with all regulatory reporting requirements. The Operations Staff are responsible for performing the daily operations necessary to ensure that the plant performs in a satisfactory manner.

Contractor [Delete if you do not use a contractor.]

[Insert Organization Name] uses a contractor to ***[describe contractor's responsibilities]***. The contractor supplies ***[describe what the contractor is responsible for providing]***. The contractor is responsible for following instructions necessary to ensure that operations are conducted in a safe and environmentally sound manner. In addition, contract operators are responsible for ***[describe and contractor reporting responsibilities such as tickets documenting load sizes, application locations, etc.]***. Additional responsibilities are identified in the contract document. ***[Edit the following sentence to be appropriate for your organization.]*** It is important to note that ***[Insert Organization Name]*** structures contracts such that it ultimately maintains all responsibility for siting, monitoring/sampling and regulatory reporting.

Element 8: Training

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

Training is important for ensuring good job performance. *[Insert Organization Name]* demonstrates the importance it places on training through the following statement:

[Insert any existing organization statements about the importance of training.]

Training occurs through a variety of mechanisms, including (but not limited to): *[The following are examples of common training activities. Keep those that are applicable to your organization, delete those that are not applicable, and add any others for your organization that are missing.]*

- Crew meetings
- On the job training
- Review of internal reports
- Review of external publications
- Safety and emergency response training sessions
- Plant meetings

Procedure

1. Training is generally based on performance needs as determined by the *[Insert Title]*.
2. Formal training hours are documented in *[Insert where these records are kept]*.
3. The following process will be used to ensure that the contractor has a general awareness of the biosolids value chain, the BMP, and how they relate to their areas of responsibility. The *[Insert Title]* is responsible for implementing these steps:
 - a. At least one meeting addressing the BMP will be held with the contractor.
 - b. Contractor participation in training activities is required per contract language.
4. The *[Insert Title]* will identify relevant training opportunities for the contractors providing biosolids services to *[Insert Organization Name]*. This will include general BMP awareness training.

Element 9: Communication

Created/Approved: <i>[Insert Date]</i> By: <i>[Insert Name and Title]</i> Date issued: <i>[Insert Date]</i>
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Introduction

[Insert Organization Name] is committed to proactively communicating information on *[Insert Organization Name]* biosolids operations (including the BMP) both internally and to interested external individuals and agencies. Public confidence in *[Insert Organization Name]* biosolids program is *[Insert high, low or indifferent]* due in part to *[Insert Organization Name]* *[Explain organization history]*. *[Insert Organization Name]* communication efforts are consistent with legal requirements, the degree of current public interest, historical levels of public involvement and related local circumstances. Given the structure of *[Insert Organization Name]* service contract, contractors *[Insert “do” or “do not” accordingly]* play a formal role in *[Insert Organization Name]* communications effort.

[If your organization has contractors with a role in communications, describe that role here.]

Procedure

Identification of interested individuals/organizations

1. A list (or lists) of individuals interested in *[Insert Organization Name]* biosolids program and/or BMP related activities has been developed and is maintained by the *[Insert Title]*. Current “interested individuals” include: *[The following are examples of interested parties. Keep those that apply to your program, delete those that don’t, and add any others for your program that are missing.]*
 - Farmers who own land where biosolids are applied
 - Residents next to land application fields
 - Neighbors of the treatment plant
 - State Biosolids Regulator
 - City Council
 - State Rural Water Association
2. Contact information for interested individuals is currently contained in *[Explain how contacts are maintained – Microsoft Word file, Microsoft Excel spreadsheet, etc.]* that is maintained and updated by the *[Insert Title]*. Individuals are added to this list, if they provide contact details, when they contact *[Insert Organization Name]* *[Insert Title]*.

Communication approach

1. The **[Insert Title]** will have primary responsibility for ensuring effective communications on the part of **[Insert Organization Name]** as it relates to the biosolids operations and the BMP.
2. Information to be made available upon request to interested parties will include:
 - a. **[Insert Organization Name]** Biosolids Management Policy.
 - b. Information about legal and other requirements.
 - c. **[Insert Organization Name]** BMP goals and objectives.
 - d. Biosolids Management Performance Reports.
 - e. Information related to independent, third party BMP verification audit reports.
3. Specific approaches used to facilitate communication, and the frequency of their use, are left to the discretion of the **[Insert Title]**. Examples of communication include meetings, emails, letters, reports, tours, presentations, newspaper articles and radio programs.
4. **[Insert Organization Name]** recognizes that communication initiated by interested parties and other individuals may take a wide variety of forms including telephone calls, letters, email, meeting participation, internet contact or other forms. **[Insert Organization Name]** will give equal weight to all forms of communication.
5. An effort will be made to initially respond to all inquiries or requests for information within 24 hours of receipt of the inquiry or request. Complex inquiries/requests may require additional response time.
 - a. Simple inquiries or requests for information will not be documented. These may include phone calls related to routine questions, and other similar inquiries/requests. The **[Insert Title]** responding to an inquiry/request will use their best professional judgment to determine if inquiries/requests fall into this category.
 - b. Significant or detailed requests for information, inquiries or complaints will be documented. These may include detailed requests for information by interested parties, including homeowners, regulators and elected officials. Acceptable documentation methods include letters, memorandums, email records, telephone logs, written meeting summaries, notes to files, or other similar methods.

Element 10: Operational Controls

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

Operational controls include standard operating procedures, work practices, or other activities that are required to ensure that critical control points are effectively managed.

Elements 3 and 10 are closely linked. Table 3.1 in Element 3 contains detailed documentation of critical control points, related operational controls, standard operating procedures, monitoring and measurements and potential environmental impacts.

Procedures

1. Operational controls have been identified by *[Insert Organization Name]* *[Insert Title]*, based on consideration of information contained in the NBP *National Manual of Good Practice*, legal and other requirements, and state best practices; as well as personal experience of *[Insert Organization Name]* staff. Operational controls and related procedures include preventative maintenance procedures, work management systems and any relevant contracted procedures. Current operational controls are found in Table 3.1 of the BMP Manual.
2. Operational controls will be reviewed by *[Insert Title]* on an annual basis (by *[Insert Date]*) or whenever significant changes in plant processes and/or operations occur. Revisions (if any) to Table 3.1 and associated SOP's and monitoring/measurements will be made by the *[Insert Title]* following these reviews.
3. Changes will be documented in writing and will be noted in the annual biosolids program report.

Element 11: Emergency Preparedness & Response

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

Having well-defined Emergency Preparedness and Response procedures are an important aspect of biosolids management activities. These procedures help to minimize the risk associated with unusual or emergency situations that can potentially impact human health or environmental quality.

Procedure

1. *[Insert Organization Name]* has an *[Insert the name of your emergency response plan]* which is formally reviewed and updated a minimum of once every *[Insert frequency]* years. Interim revisions to specific sections of the *[Insert the name of your emergency response plan]* are made on an “as needed” basis.
2. The *[Insert the name of your emergency response plan]* establishes clear protocol for how a wide variety of situations should be handled. Copies of the *[Insert the name of your emergency response plan]* are kept in the *[Insert location]*. Important emergency contact information is kept in all vehicles used in *[Insert Organization Name]* biosolids operations, including contractor vehicles.
3. Testing and training with respect to safety and emergency response procedures is conducted on a periodic basis as determined by *[Insert Title(s)]*.
4. The need to require contractors performing work related to *[Insert Organization Name]* biosolids activities to develop Emergency Response and Preparedness Plans will be determined on a case-by-case basis. Generally, contracted activities are limited to *[Insert contracted activities]*. Therefore, relevant portions of *[Insert Organization Name]* *[Insert the name of your emergency response plan]* are applicable to these contracted activities, and the contractor has incorporated these into their own Emergency Response and Preparedness Plans.
5. The *[Insert contracted activities]* is performed by a contractor to *[Insert Organization Name]*. Relevant portions of *[Insert the name of your emergency response plan]* are applicable to these contracted activities and the contractor is has incorporated these into their own Emergency Response and Preparedness Plans.

Element 12: Documentation, Document Control & Recordkeeping

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

[Insert Organization Name] has established and maintains documentation for the biosolids management program, including the 17 elements of its BMP. Procedures have been established to ensure that BMP documentation is reasonably available, has been created following established document creation protocol, is kept up to date through periodic reviews and revision (if applicable), and is properly documented with version information, effective dates and references to replaced or superseded versions. Record retention periods are also established.

Procedure

1. The following documents related to *[Insert Organization Name]* BMP or relevant biosolids management activities are considered “controlled” documents:
 - a. Policy statements
 - b. The BMP Manual
 - c. SOPs
2. A master document is the controlled document and will be maintained *[Insert hard or electronic copy and where it will be located]*. The master document will contain a header or a footer stating that it is the master version and the controlled document.
3. Standard operating procedures and the BMP Manual will contain the following document control information:

Created/Approved:	By:	
Date issued:		
Date last reviewed:	By:	(as relevant)
Date last revised:	By:	(as relevant)

4. All BMP documents, including policy statements, process control SOPs, equipment maintenance SOPs and all other relevant SOPs and the BMP Manual will be maintained in the *[Insert location]*.
5. Version and revision history will be maintained for all controlled documents.
6. Record retention periods will be consistent with *[Insert Organization Name]* records retention policy. When documents have reached the retention date, the document

will be reviewed by the **[Insert Title]** to determine whether the retention period needs to be extended.

7. Data resulting from monitoring and measurement activities is retained in **[Insert location]**. This information is retained for **[Insert duration]** and then discarded.
8. **[Insert Title]** has sole responsibility for updating/revising the BMP Manual to reflect current practices. Minor grammatical edits, links to new or revised documents, etc. are not considered significant changes. Updates/revisions will generally be made in response to one or more of the following:
 - a. Internal audits
 - b. External audits
 - c. Operational changes
 - d. Annual reviews of Critical Control Points, Operational Controls and BMP goals and objectives
 - e. Annual Biosolids Management Program Performance Report

Element 13 – Monitoring and Measurement

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

Monitoring and measurement activities conducted by *[Insert Organization Name]* generally fall into one of the following three categories:

- Activities conducted to demonstrate compliance with legal/regulatory requirements.
- Activities conducted to document performance at critical control and operational control points.
- Activities conducted to track progress toward achieving biosolids program goals and objectives.

[Insert Organization Name] [Insert permit name] permit identifies monitoring, measurement and reporting requirements for solids and biosolids by *[Insert state regulatory organization]* and/or EPA, and addressed here as essential to the overall quality of treatment plant operations. *[Insert Organization Name]* also conducts additional monitoring to measure performance at critical control points. Table 3.1 contains a comprehensive listing of monitoring and measurements.

[Explain how data is stored – paper hard copies or electronic files and where the files are stored. Also explain how long data is stored.]

Procedure

1. Monitoring and measurement activities will be reviewed by *[Insert Title]* on an annual basis (by *[Insert date]*) or whenever significant changes in plant processes and/or operations occur. Revisions (if any) to Tables 3.1 and associated SOPs and monitoring/measurement documents will be made by the *[Insert Title]*.
2. Analytical or instrumentation data is stored *[Explain how data is stored – paper hard copies or electronic files and where the files are stored. Also explain how long data is stored.]*
3. Progress towards meeting goals and objectives will be tracked at intervals deemed appropriate by the *[Insert Title]*. Progress will be noted on the Goals and Objectives Action Plan Template.

4. The ***[Insert Title]*** is responsible for evaluating the need for monitoring and measurement activities (if any) on the part of the contractor and incorporating necessary language into the service agreement(s). The ***[Insert Title]*** will be responsible for making any necessary changes to the BMP Manual and supporting material to reflect monitoring and measurement responsibilities required on the part of the contractor.

Element 14: Nonconformances – Preventive & Corrective Action

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

The purpose of this element is to establish, document and maintain procedures for investigating noncompliance with BMP protocols, legal/regulatory and other requirements, including conformance issues that may arise from monitoring/measurement activities, or nonconformances noted as a result of internal or external BMP audits.

Procedure

1) *[Insert permit title]* Related Legal/Regulatory Nonconformances

Legal/Regulatory Requirements are either specifically identified in *[Insert Organization Name]* *[Insert permit title]* Discharge Permit, Biosolids permit, or are incorporated by reference. The permit(s) contains procedures for investigating nonconformances of legal/regulatory requirements identified in the permit.

2) BMP Nonconformances Identified During Internal Audits

- a. Internal BMP audits will be conducted in accordance with procedures developed under Element 16.
- b. An audit worksheet will be completed for each element audited. The worksheet will contain the following information:
 - i. Element #
 - ii. Audit type (for example, internal or external audit)
 - iii. Auditor's name
 - iv. Time period being audited
 - v. Audit date(s)
 - vi. Summary of findings
 - vii. Nonconformances (if any) and cause
 - viii. Corrective actions already taken (if any)
 - ix. Recommended additional corrective actions (if any)
 - x. Person(s) responsible for implementing corrective action(s)
 - xi. Changes in policies, programs, plans, operational controls and monitoring/measurements needed to prevent reoccurrence (if any)
 - xii. Estimated completion date
 - xiii. Required resources
 - xiv. Tracking

- c. The auditor will complete (i) through (v) above, as well as all specific questions contained in the worksheets. A current copy of the NBP Third Party Auditor's Guidance document will be available as a resource to the internal audit team.
- d. Completed audit worksheets will then be submitted to **[Insert Title]**. **[Insert Title]** will complete (vi) through (xiv) on the worksheet. This may be done by completing the appropriate sections directly on the worksheet or addressing them through a separate written report.
- e. **[Insert Title]** is responsible for tracking progress. Progress will be tracked using methods that **[Insert Title]** deems appropriate. For minor nonconformances, progress will be tracked every **[Insert frequency]** weeks. For major nonconformances, progress will be checked every **[Insert frequency]** weeks. Tracking will be documented by completing the tracking sheet which is included as part of the audit worksheet.
- f. **[Insert Title]** will prepare and submit a written report to **[Insert Title]** by **[Insert date]** of each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken or will be taken to address any nonconformances. The audit report may be a stand alone document or may be included as part of other prepared reports (e.g. the Biosolids Management Performance Report). The audit report will be **[Explain how the report will be made available – paper copies upon request, web-site, etc.]**.

3) BMP Nonconformances Identified During 3rd Party Audits

- a. 3rd party audits will be conducted in accordance with the procedures identified by the National Biosolids Partnership.
- b. Audit reports will be submitted to **[Insert Organization Name]** **[Insert Title]**.
- c. If the auditor identifies nonconformances, **[Insert Title]** will follow the steps listed under Step #2b (ii-vi) above.
- d. Minor nonconformances will be corrected within a **[Insert frequency]** day period and major nonconformances will be corrected within a **[Insert frequency]** day period, unless the auditor and **[Insert Organization Name]** agree that these timeframes need to be extended.

Sample audit and corrective action worksheet

- i. Element #**
- ii. Audit type:**
- iii. Auditor's name:**
- iv. Period being audited:**
- v. Audit date(s):**
- vi. Summary of findings:**
- vii. Nonconformances (if any) and cause:**
- viii. Corrective actions already taken (if any):**
- ix. Recommended additional corrective actions (if any):**
- x. Person(s) responsible for implementing corrective action(s):**
- xi. Changes in policies, programs, plans, operational controls and monitoring/measurements needed to prevent reoccurrence (if any):**
- xii. Estimated completion date:**
- xiii. Required resources:**
- xiv. Tracking:**

Corrective action worksheet

Date	Status of corrective action	Supporting documentation

Element 15: Biosolids Management Program Report

Created/Approved: *[Insert Date]* By: *[Insert Name and Title]*
Date issued: *[Insert Date]*

Introduction

[Insert Organization Name] will periodically prepare a performance report that provides summary information on activities associated with the BMP.

Procedure

- 1) *[Insert Title]* will prepare a written report on an annual basis that summarizes the performance of the BMP. The performance report will be completed by *[Insert Date]* of each year will address performance during the previous calendar year. At a minimum, the report will contain the following information:
 - a. Summaries of monitoring data and other measurements that demonstrate the performance of *[Insert Organization Name]* biosolids program relative to established goals, objectives and legal requirements.
 - b. Summary of relevant contractor activities.
 - c. Summaries of actions that have been taken on a voluntary basis.
 - d. Progress towards achieving biosolids program goals and objectives.
 - e. A summary of internal audits.
 - f. A summary of independent third party audits (as applicable).

The performance report will be available *[Explain how the report will be made available – paper copies upon request, web-site, etc.]*.

Element 16: Internal BMP Audit

Created/Approved: <i>[Insert Date]</i> By: <i>[Insert Name and Title]</i> Date issued: <i>[Insert Date]</i>
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Introduction

[Insert Organization Name] will conduct periodic internal audits of the BMP in order to determine its effectiveness.

Procedure

- 1) *[Insert Organization Name]* will conduct annual internal audits of the BMP.
- 2) Internal audits will be completed by *[Insert date]* of each year and will address program activities completed during the previous operating period.
- 3) The audit will be conducted by *[Insert Organization Name]* BMP Internal Audit Team under the direction of *[Insert Title]*. The BMP Internal Audit Team will consist of *[Explain who will constitute the BMP Internal Audit Team]*.
- 4) The audit will evaluate the effectiveness of the BMP, including progress toward goals and objective, response to non-conformances, management review, public participation and communications. Specific BMP Elements may be evaluated as a part of this review, at the discretion of the *[Insert Title]*.
- 5) All documents and records related to internal audits will be maintained in *[Insert location]*.
- 6) The NBP BMP Guidance Manual and other appropriate documents will be made available as a resource to the audit team. The objective methods listed in the Guidance Manual are as follows:
 - i. Document and records review
 - ii. Interviews
 - iii. Direct observation
- 7) Nonconformances will be addressed using the procedure identified in Element 14.
- 8) *[Insert Title]* will prepare and submit a written report to *[Insert Title]* by *[Insert Date]* of each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken or will be taken to address any nonconformances. The audit report may be a stand alone document or may be included as part of other prepared reports (e.g. the Biosolids Management Performance Report). The audit report will be available *[Explain how audit report will be made available]*.
- 9) *[Insert Title]* will periodically evaluate the need to provide training or guidance to the internal auditors. *[Insert Title]* will be responsible for coordinating any subsequent activities related to training or guidance.

Sample audit and corrective action worksheet

- i. Element #**
- ii. Audit type:**
- iii. Auditor's name:**
- iv. Period being audited:**
- v. Audit date(s):**
- vi. Summary of findings:**
- vii. Nonconformances (if any) and cause:**
- viii. Corrective actions already taken (if any):**
- ix. Recommended additional corrective actions (if any):**
- x. Person(s) responsible for implementing corrective action(s):**
- xi. Changes in policies, programs, plans, operational controls and monitoring/measurements needed to prevent reoccurrence (if any):**
- xii. Estimated completion date:**
- xiii. Required resources:**
- xiv. Tracking:**

Tracking Worksheet

Date	Status of corrective action	Supporting documentation

Element 17: Management Review

Created/Approved: <i>[Insert Date]</i> By: <i>[Insert Name and Title]</i> Date issued: <i>[Insert Date]</i>
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Introduction

[Insert Organization Name] will conduct a management review of its BMP on an annual basis. The purpose of this review will be to address the possible need for changes to policy, goals and objectives, biosolids operations, and other BMP elements based on internal BMP audit results, third party verification audit results, changing circumstances, and *[Insert Organization Name]* commitment to continual improvement.

Procedures

- 1) *[Insert Title]* will review BMP and related biosolids management activities on an annual basis.
- 2) The review will be conducted by *[Insert date]* of each year and will cover activities conducted during the previous year.
- 3) The scope will include:
 - a. Review monitoring data and other measurements that demonstrate the performance of *[Insert Organization Name]* BMP relative to established goals, objectives and legal requirements.
 - b. Review progress towards achieving biosolids goals and objectives.
 - c. Review internal audit results.
 - d. Review of performance relative to each of the 17 elements of the BMP.
 - e. Review third party audit results.
 - f. Review the need for changes in existing policy or the adoption of new policy to support the BMP and biosolids related activities.
- 4) To facilitate the review, the *[Insert Title]* will prepare a written report that addresses each of the above areas. The report will include recommendations (if any) for changes that should be considered by the *[Insert Title]*.
- 5) The report and management review will be carried out in close coordination with the Biosolids Management Program Performance Report and the internal BMP audit. To the extent practicable, an effort will be made to develop a single report on an annual basis.
- 6) The *[Insert Title]* will have a meeting with the *[Insert Title]* to discuss the report.
- 7) Any changes to policies, goals and objectives, plans, procedures, work practices and other BMP elements deemed necessary as part of the management review will be documented in writing by the *[Insert Title]*.
- 8) The *[Insert Title]* will develop a schedule and action plan to address recommendations from the management review.