Santa Rosa Water is committed to customer service and protection of the environment by providing high quality biosolids treatment. This is accomplished by our Biosolids Management System, which ensures the safe and optimum beneficial use of this product.
## Log of Revisions to Manual

<table>
<thead>
<tr>
<th>Date</th>
<th>Element</th>
<th>Change/update</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/10/17</td>
<td>Element 3</td>
<td>Updated link to <a href="#">High Strength Waste Receiving Facility</a> procedures which had been under development. Page 3-2.</td>
</tr>
<tr>
<td>10/25/16</td>
<td>Element 3, 8, 9, 11</td>
<td>Updated links to <a href="#">Emergency Spill Plan</a> throughout BMS Manual (pages 3-5, 8-1 and 11-1.) Updated link to <a href="#">Biosolids Fact Sheet</a> on page 9-2.</td>
</tr>
<tr>
<td>9/27/16</td>
<td>Element 3</td>
<td>Added Critical Control Point - High Strength Waste Receiving to Element 3, page 3-2. <a href="#">Element 3.3.2</a> Addition includes Operational Controls, Monitoring and Measurement, and Potential Environmental Impacts. SOPs are under development.</td>
</tr>
<tr>
<td>4/13/2016</td>
<td>Element 14</td>
<td>Added Procedure 4B – BMS Non-conformances Identified During Routine Monitoring &amp; Measurement – If Staff identify an operational or equipment deficiency or malfunction, and an on-call contractor is needed, it will be added to the Subregional Projects list on iNet.</td>
</tr>
<tr>
<td>10/5/2015</td>
<td>Element 14</td>
<td>Added Procedure 5 - BMS Opportunities for Improvement Identified During 3rd Party Audits - If the auditor identifies an opportunity for improvement, the Biosolids Coordinator will follow the steps listed under Procedure 2)b.(i-xiv) above.</td>
</tr>
<tr>
<td>3/24/2015</td>
<td>Throughout</td>
<td>Changed Utilities Department to Santa Rosa Water. Changed reuse to use.</td>
</tr>
<tr>
<td>8/18/2014</td>
<td>Element 16</td>
<td>Procedure 5 – added <a href="#">BMS Internal Audit Overview</a> as a resource for internal audits.</td>
</tr>
<tr>
<td>8/18/2014</td>
<td>Element 12</td>
<td>Procedure 2 – removed paragraph “a.” Replacing document control information with dates in header, rather than version numbers. Version will be tracked electronically in SharePoint.</td>
</tr>
<tr>
<td>8/18/2014</td>
<td>Element 5</td>
<td>Procedure 1 – added “These goals and objectives may be updated throughout the year as portions are complete, or new ideas come about.”</td>
</tr>
<tr>
<td>8/18/2014</td>
<td>Element 3 Table 3.1</td>
<td>Updated page 3-5 under Monitoring &amp; Measurements to add sampling weekly of moisture content of compost and monthly temperature calibration of bin temp sensors, and Misting System under Critical Control Points. Under Standard Operating Procedures on page 3-6, removed Clean Blend Tank Hopper at Belt Press due to the fact the Biosolids staff no longer uses a loader to do so. Vendor was hired by Treatment Team to have this service done.</td>
</tr>
<tr>
<td>8/18/2014</td>
<td>Element 17</td>
<td>Revised Procedure 1a to read “Biosolids Coordinator will announce any changes to, or get status reports from other sections, at the monthly scheduled Manager Meeting. The Biosolids Coordinator will then bring back the report for documentation.”</td>
</tr>
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BMS MANUAL TABLE OF CONTENTS

17 ELEMENTS OF THE BMS

Element 1: Santa Rosa Water - BMS Manual
Element 2: Biosolids Management Policy
Element 3: Critical Control Points
Element 4: Legal & Other Requirements
Element 5: Goals & Objectives
Element 6: Public Participation & Planning
Element 7: Roles & Responsibilities
Element 8: Training
Element 9: Communication
Element 10: Operational Controls
Element 11: Emergency Preparedness & Response
Element 12: Documentation, Document Control & Recordkeeping
Element 13: Monitoring & Measurement
Element 14: Non-conformances – Preventive & Corrective Action
Element 15: Biosolids Management Program Report
Element 16: Internal BMS Audit
Element 17: Management Review

ATTACHMENTS

1 Code of Good Practice
2 BPU Meeting Minutes
3 Letter of Understanding

Note: INET referenced links are only accessible if you are logged into the City of Santa Rosa’s internal network. If you would like a copy of the document referenced, please send an email request to SantaRosaBMS@srcity.org. Also note that clicking on a link to an external site will take you away from the BMS Manual.
**Introduction**

Santa Rosa Water's Subregional System provides wastewater treatment to the City of Santa Rosa, the City of Rohnert Park, the City of Sebastopol, the City of Cotati, Sonoma County South Park Sanitation District and unincorporated areas of Sonoma County. The City of Santa Rosa Laguna Treatment Plant (LTP) meets state tertiary treatment requirements and processes two valuable end products: highly treated effluent and biosolids. The effluent is either discharged to Laguna de Santa Rosa, sent to holding ponds for agricultural irrigation, or sent to the Geysers Recharge Project. The biosolids are either recycled to agricultural land as a soil amendment, sent to the compost facility to be composted for use as a soil conditioner, sent to the Alpha Farm storage facility for later land application, or sent to the landfill if no other solution is available.

The City of Santa Rosa produces both Class A compost and Class B biosolids, which allows the City to recycle approximately 3,900-4,200 dry metric tons of biosolids each year. In 1992, the City began recycling Class B biosolids to privately owned City farms and to local farmers. The Class B biosolids have improved soil tilth, reduced the potential for soil erosion, reduced reliance on commercial fertilizers and maintained or improved crop yields. The Class A compost program began in 1996. In order to produce Class A compost, Class B biosolids are sent to the Laguna Compost Facility.

Biosolids transportation, agricultural land application, and composting are accomplished using a combination of City owned/operated equipment and contract owner/operators (See Element 7 for contractor(s) roles and responsibilities). The City has been very careful to structure the biosolids and compost programs in such a way that it maintains total control over all aspects of program management: site selection, approval and scheduling, monitoring, recordkeeping, reporting, regulatory interactions, planning and communication.

The City is committed to continually improving all aspects of the biosolids management program. The City is committed to proactively addressing the challenges that will be encountered with respect to biosolids management in the future, especially changing regulations.

On December 29, 2003, The City of Santa Rosa's Director of Santa Rosa Water signed a Letter of Understanding with the National Biosolids Partnership (NBP) in which the City of Santa Rosa agreed to become an NBP Environmental Management System (EMS) agency with the intent to achieve national recognition for its excellent biosolids management program. The City has specifically committed to meet the national requirements for an excellent biosolids program, committed to implement an EMS and committed to the NBP’s National Code of Good Practice.

This Biosolids Management System (BMS) Manual describes the City of Santa Rosa's EMS for biosolids.

**Procedure**

1. The BMS manual is intended to be a “living” document. Revisions are expected as new information is obtained, changes to existing systems occur; input is received from interested parties, and as experience is gained in managing the biosolids program.
2. The Biosolids Coordinator and BMS Team will use the BMS Task List in order to track when revisions and changes to the manual are required.
3. The City of Santa Rosa Biosolids Coordinator will make revisions to the BMS manual on an “as needed” basis with assistance from the BMS Team.
4. The Deputy Director of Subregional Operations oversees the BMS program and has final approval of significant revisions/changes.
5. The Biosolids Coordinator will present revisions to the Deputy Director of Subregional Operations for input and final approval of significant revisions/changes to the biosolids program.

**References**

- BMS Manual: Element 7 - Roles and Responsibilities
- BMS Manual: Letter of Understanding
- BMS Manual: Code of Good Practice
- Biosolids Webpage (INET): BMS Task List
Element 2: Biosolids Management Policy

Introduction
The City of Santa Rosa’s Board of Public Utilities (BPU) formally adopted the following Biosolids Management Policy on November 2, 2006 (Attachment 1.2). The policy establishes guiding principles for the City of Santa Rosa Biosolids Management Program and the BMS.

Biosolids Management Policy Statement

Santa Rosa Water is committed to customer service and protection of the environment by providing high quality biosolids treatment. This is accomplished by our Biosolids Management System which ensures the safe and optimum beneficial use of this product.

The City of Santa Rosa will implement this policy by:

- Following the Code of Good Practice (Attachment 1.1) for biosolids developed by the National Biosolids Partnership.
- Periodically evaluating beneficial use 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.
- Participating as a voluntary member with the U.S. Composting Council and following the key elements of the U.S. Composting Council STA Program.

Procedure
1. The Biosolids Coordinator is responsible for ensuring that the biosolids management policy is implemented and communicated to appropriate City staff, contractors, and other interested parties, using one or more of the communication tools listed under the Communication procedure (Element 9).
2. Methods used to accomplish Procedure 1 include, but are not limited to the following:
   a. meeting with staff to discuss how the policy affects City operations
   b. meeting with the contractors to discuss how the policy affects their activities
   c. revising the contracts, upon agreement with the contractors or at the next renewal cycle, to reflect the provisions of biosolids management policy
   d. meeting with farmers to discuss how the policy guides actions of the City and the Contractor
   e. communications with interested parties as addressed in Element 9.
3. If revisions are needed because of changing conditions, audits, or management reviews the Biosolids Coordinator will adjust the current policy statement.
4. The Biosolids Coordinator will bring recommendations to the Deputy Director of Subregional Operations for input and review. Revisions to the policy will be in coordination with the Deputy Director of Subregional and may also be included in the annual BMS Management Review (Element 17).
5. Revisions to the policy will be approved by the Deputy Director of Subregional Operations and the Biosolids Coordinator will communicate the revised policy as per Procedure 1 above and place the revised policy in the BMS Manual.

References
- BMS Manual: Attachment 1.2 - BPU Meeting minutes
- BMS Manual: Attachment 1.1 - Code of Good Practice
- U.S. Composting Council STA Program
- BMS Manual: Element 9 - Communication
Introduction

Critical Control Points (or key processes) are those biosolids management activities that are under the direct control or influence of the City of Santa Rosa that have the potential, if not managed effectively, to create significant changes to the quality of its biosolids and/or create negative environmental impacts. Critical Control Points include activities that can affect the quality of biosolids, how biosolids are managed, or how the City’s biosolids program is viewed by the general public and regulators.

Table 3.1 identifies the City's Critical Control Points that need to be managed in order to avoid problems with biosolids quality and potential environmental impacts. The Critical Control Points were selected by the City's BMS Team after reviewing information contained in the Manual of Good Practice for Biosolids.

The City of Santa Rosa manages its biosolids to:
- meet the regulatory requirements for metal concentrations
- meet the regulatory requirements for pathogen reduction
- meet the regulatory requirements for vector reduction
- maintain minimal content for plastics and debris in the biosolids
- produce a product that does not 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. The City’s BMS Team will review information in Table 3.1 on an annual basis, when there are regulatory changes, or whenever major operational changes occur.
2. Revisions to Table 3.1 will be documented in writing, in the management review and annual biosolids program report, by the City's Biosolids Coordinator.
3. If revisions to the Critical Control Points are made by the Biosolids Coordinator, information related to roles/responsibilities, operational controls, monitoring/measurement and any other relevant areas of the BMS 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 Biosolids Coordinator will inform the NBP and the third-party verification auditor of the changes.

References

- BMS Manual: Table 3.1 - Critical Control Points

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, IRRELEVANT TO THE PROCESSES USED AT THIS FACILITY
<table>
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<tr>
<th>Biosolids Value Chain (Operational Area)</th>
<th>Critical Control Points (Key Processes)</th>
<th>Operational Controls (Control Points)</th>
<th>Standard Operating Procedures (SOP’s)</th>
<th>Monitoring &amp; Measurements</th>
<th>Potential Environmental Impacts</th>
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</thead>
<tbody>
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<td>Collections System</td>
<td>Industrial, Commercial, and Residential Sampling Areas</td>
<td>Quality Assurance Manual</td>
<td>Conventional Pollutants Priority Pollutants Metals Organics and Inorganics</td>
<td>Contamination of soil or groundwater</td>
</tr>
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<td>Septage Receiving Station</td>
<td>Wastehauler Receiving</td>
<td>pH and Volume</td>
<td>Attraction of vectors (e.g. flies) could affect human health</td>
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<td>High Strength Waste Receiving</td>
<td>HSW Receiving Station</td>
<td>High Strength Waste Receiving Facility</td>
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<td>Wastewater Treatment and Solids Generation</td>
<td>Preliminary Treatment:</td>
<td>Screen Operation</td>
<td>Pretreatment - Headworks</td>
<td>Volume of Screenings removed</td>
<td>Plastics in biosolids contaminate the soil with a material that does not readily biodegrade.</td>
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<tr>
<td></td>
<td>Headworks and Preaeration:</td>
<td>Grit Pumping Control</td>
<td>Preaeration and Grit Removal</td>
<td>Volume of Grit removed</td>
<td>Attraction of vectors (e.g. flies) could affect human health</td>
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<tr>
<td></td>
<td>• Screenings Removal</td>
<td>Grit Washer Operation</td>
<td></td>
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<td>Odors</td>
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<td>• Grit Removal</td>
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<td>Primary treatment:</td>
<td>Scum Thickness</td>
<td>Primary Treatment</td>
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<td>• Primary Clarification Tanks</td>
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<tr>
<td></td>
<td>• Scum Removal System</td>
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<tr>
<td></td>
<td>• Sludge Removal System</td>
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<td></td>
<td>• Aeration Basins</td>
<td>Dissolved Oxygen Level</td>
<td></td>
<td>Meter RAS and WAS flow continually.</td>
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</tr>
<tr>
<td></td>
<td>• Aeration System</td>
<td>Solids Blanket Thickness</td>
<td></td>
<td>Determine appropriate RAS flow, and Activated Sludge wasting rate daily to maintain established target SRT</td>
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<td>• Secondary Clarifiers</td>
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<tr>
<td></td>
<td>• RAS Pumping</td>
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<td></td>
<td>• WAS Pumping</td>
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<tr>
<td>Biosolids Value Chain (Operational Area)</td>
<td>Critical Control Points (Key Processes)</td>
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<td>Standard Operating Procedures (SOP's)</td>
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</tbody>
</table>
| Solids Stabilization, Conditioning and Handling | Anaerobic Digestion:  
- Digester Feed Valves  
- Digester Heating System  
- Digester Mixing System  
- Digester Dewatering Valves | Total and Volatile Solids Loading  
Feed Rate  
Temperature  
Digester mixing  
Digester operating levels |  
Anaerobic Digestion  
Troubleshooting  
Anaerobic Digestion  
Digester Gas System | Temperature measured daily  
Volatile Solids loading calculated daily  
Detention time calculated daily  
Grab samples taken daily for Total and Volatile Solids analysis.  
pH, VA/Alkalinity, and gas composition measured weekly  
Ammonia level analyzed monthly  
Determine compliance with Class B Biosolids requirements bi-weekly (volatile solids reduction and detention time) | Pathogens affect human health  
Attraction of vectors (e.g. flies) could affect human health  
Odors |
|  | Thickening:  
- Belt Thickeners  
- Polymer System  
- Thickened Waste Pumping | Thickener Performance |  
Solids Thickening  
Ferrous Chloride Feed System  
GBTPolymer Feed and Storage System | Grab samples of thickened waste taken each shift, daily composite analyzed by laboratory for Total and Volatile Solids | |
|  | Dewatering:  
- Belt Filter Presses  
- Feed Pumping  
- Polymer System  
- Cake Pumping  
- Cake Hopper | Dewatering Press Performance |  
Biosolids Dewatering  
Cake Hopper Controls | Dewatered Biosolids cake samples grabbed each shift and analyzed using microwave; sample composite analyzed daily by laboratory for Total Solids  
Mass of solids removed calculated from truck trip tickets. | |
### Solids Stabilization, Conditioning and Handling (cont.)

<table>
<thead>
<tr>
<th>Biosolids Value Chain (Operational Area)</th>
<th>Critical Control Points (Key Processes)</th>
<th>Operational Controls (Control Points)</th>
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</thead>
<tbody>
<tr>
<td>Composting</td>
<td>Delivery contract</td>
<td>Loader Procedures</td>
<td>Detention time &amp; Temperature recorded electronically in RIMS</td>
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<td></td>
<td>Amendment availability</td>
<td>Loading Bins</td>
<td>Samples taken using STA method</td>
<td></td>
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<td>Agitators</td>
<td>Mixing Procedures</td>
<td>pH level</td>
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<td>Temps/ record keeping</td>
<td>To Run Agitator</td>
<td>Coliform MPN/g dry weight basis</td>
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<td>Walking floor</td>
<td>Running the Agitators</td>
<td>Metals mg/kg</td>
<td></td>
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<tr>
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<td>Conveyor</td>
<td>To Traverse</td>
<td>Watch amps on blower fans to make sure they don’t drop below 90; could indicate plugged pipes or plugged ducting on fans</td>
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<tr>
<td></td>
<td>Screening</td>
<td>Temps in Compost</td>
<td>Weekly samples for moisture content</td>
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<td>Sampling</td>
<td>Walking Floor Op</td>
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<td>Biofilter</td>
<td>Loader Screener</td>
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<td>Misting system</td>
<td>Compost Sampling</td>
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<td>Biofilter media</td>
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<td>Reset Exhaust Fans</td>
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<td>Odor Impact Mgmt Plan</td>
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<td>RBPM Procedure</td>
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</tbody>
</table>

Detention time & Temperature recorded electronically in RIMS

Samples taken using STA method

pH level

Coliform MPN/g dry weight basis

Metals mg/kg

Watch amps on blower fans to make sure they don’t drop below 90; could indicate plugged pipes or plugged ducting on fans

Weekly samples for moisture content
<table>
<thead>
<tr>
<th>Biosolids Value Chain (Operational Area)</th>
<th>Critical Control Points (Key Processes)</th>
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<tbody>
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<td>Transportation</td>
<td>Loading</td>
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<td>Biosolids measured in wet tons</td>
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<td>Loading site</td>
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<td>Soil pH determines if lime addition is needed</td>
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<td>Perimeter of application site</td>
<td>Rye Grass Plant Tissue Sampling</td>
<td>Nitrogen requirements: South County = NTE 140lbs/acre North County (aka City Farms) NTE 143 lbs/acre</td>
<td></td>
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<td></td>
<td></td>
<td>Set back distance</td>
<td>Soil Sampling</td>
<td>General Order &amp; 503 regulations define setback distance in feet</td>
<td></td>
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<tr>
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<td>Compost</td>
<td>Bulk sales/retail Delivery</td>
<td>Transportation</td>
<td>Sales by cubic yard; delivery area determined by miles from Compost facility</td>
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<td>Traffic Plan City Farms</td>
<td>Restricted delivery to landfill of 22 wet tons per day</td>
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<td>Traffic Plan So. County</td>
<td>Lab results based upon WM Schedule 1 criteria done at 6 month interval</td>
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<td>Sterling Truck/Transfer</td>
<td>Storage capacity measured in wet tons</td>
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<td>Storage</td>
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<td>Percent solids</td>
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</table>

3/10/2017
Introduction
Identifying existing legal and other requirements that impact the various aspects of the City of Santa Rosa (the City) biosolids program is extremely important. Most of the existing requirements are defined by State and Federal regulations and most are reflected in the City of Santa Rosa’s National Pollution Discharge Elimination System permit NPDES Permit No. CA0022764, General Order No. 2004-0012-DWQ, and the Federal Title 40 CFR Part 503. However, when new or revised regulations are proposed, the City identifies, tracks, and assesses the potential effects on the biosolids program.

Procedure
The procedure used by the City to identify, track and assess the potential effects of new or revised regulations that may affect the City’s biosolids program is described below.

1. The following sources provide updates, as needed to identify and track potential changes to regulations:
   - Sonoma County Health Services
   - Regional Water Quality Control Board
   - California Association of Sanitation Agencies (CASA)
   - State Water Resources Control Board
   - California Water Environment Association
   - Water Environment Association
   - California Air Resources Board
   - Bay Area Air Quality Management District

2. The Deputy Director of Environmental Services is responsible for ensuring that the City is aware of potential changes to regulations. The Deputy Director of Environmental Services will:
   a. Identify potential changes to regulations through review of information provided by sources identified in Procedure 1 above.
   b. Work with the Biosolids Coordinator to evaluate potential effects on the City’s biosolids program.
   c. Determine the appropriate actions and schedule, including the need to involve other City staff.

3. The following procedure is used to ensure that new legal and other requirements are appropriately communicated and implemented:
   a. The Deputy Director of Environmental Services will follow Procedure 2 above.
   b. The Biosolids Coordinator will be responsible for communicating new requirements to the contractor(s) and farmers on whose land biosolids are applied.
   c. The Biosolids Coordinator will make any necessary changes to the BMS manual and related documents. Revisions to the BMS manual will be approved by the Deputy Director of Subregional Operations. Table 4.1 identifies legal and other requirements specific to the City’s biosolids program. The City’s NPDES permit contains very specific regulatory and legal requirements. Detailed information can be found through a direct review of NPDES Permit No.CA0022764 (See references)

References
   - BMS Manual: Table 4.1 - Legal Requirements
   - Biosolids Webpage (INET): BMS Permits & Regulatory Documents
### Federal Regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 CFR 403:</td>
<td>403.5; 403.6; 403.8-403.12: Requires industrial dischargers to use treatment techniques and management practices to reduce or eliminate the discharge of harmful pollutants to sanitary sewers.</td>
</tr>
<tr>
<td>40 CFR 503:</td>
<td>Subpart a and subpart b: Regulates agricultural land application, distribution, marketing, monofills, surface disposal, and incineration</td>
</tr>
</tbody>
</table>

### State & Local Regulations

<table>
<thead>
<tr>
<th>Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title 22 California Administrative Code</td>
<td>Division 4.5, Chapter 11: Identification and Listing of Hazardous Material Waste – Classification of hazardous and extremely hazardous wastes</td>
</tr>
<tr>
<td>Title 23 California Administrative Code</td>
<td>Division 3, Chapter 15: Municipal Sewage Sludge Discharges to Land</td>
</tr>
<tr>
<td>California Regional Water Quality Control Board</td>
<td>General Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the discharge of biosolids to land for use as a soil amendment in agricultural, silvicultural, horticultural, and land reclamation activities in the North Coast Region (North County). The San Francisco Bay Region (South County) follows the federal regulations set by 40 CFR 503, NPDES Permit No.CA0022764 for the North Coast Region’s waste discharge requirements.</td>
</tr>
<tr>
<td>California Integrated Waste Management Board</td>
<td>All landfilled biosolids are disposed of at Redwood Landfill, Novato, CA, a Class III landfill operating under Waste Discharge Requirement (WDR) Number 95-110, and are approved as alternative daily cover.</td>
</tr>
<tr>
<td>Bay Area Air Quality Management District</td>
<td>Gas/odorous emission limits for the districts wastewater treatment plant and landfill partners BAAQMD Permit to Operate and BAAQMD Permit</td>
</tr>
<tr>
<td>Sonoma County Division of Health Services</td>
<td>North County &amp; South County Agricultural Land Application and Compost Facility Notification, This is not required by regulation; however it will provide the enforcement agency with the information required by 14 CCR 18103.1. Land Use Permit #UP 94-518, determines specific land parcels that allow City to apply biosolids as a soil conditioner. Refuse Vehicle Annual Permit, The vehicle referenced is authorized for removal, hauling or transporting of refuse to be disposed of at the Sonoma Transfer Station. The authorization is pursuant to the California Administrative Code, Title 14, Section 17332 and/or Sonoma County Code Section 22-8.</td>
</tr>
</tbody>
</table>
Introduction
The City of Santa Rosa’s Biosolids Management Policy states that “Santa Rosa Water is committed to customer service and protection of the environment by providing high quality biosolids treatment. This is accomplished by our Biosolids Management System which ensures the safe and optimum beneficial use of this product” by:

- Following the Code of Good Practice for biosolids developed by the National Biosolids Partnership.
- Periodically evaluating beneficial use 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 City of Santa Rosa will set and/or revise goals to support its policy on an annual basis using the following procedures.

Procedure
1. The City will set and/or revise goals and objectives for its biosolids program on an annual basis as defined in the BMS Task List. These goals and objectives may be updated throughout the year as portions are complete, or new ideas come about.
2. The Biosolids Coordinator will draft a set of goals and objectives considering:
   a. The City of Santa Rosa Biosolids Management Policy
   b. Input received throughout the year from the general public, regulators, elected officials, and other interested parties (Input will be maintained as per Element 6 Procedure 5)
   c. Input from the BMS Team, City staff, and the Deputy Director of Subregional Operations
3. Each goal will include a short statement identifying its benefit to overall biosolids management activities.
4. Goals will be established using SMART criteria (Specific, Measurable, Achievable, Relevant and Time-bound).
5. Goals and Objectives will be set considering each of the following- Environmental Performance, Regulatory Compliance, Quality Management Practices and Relations with Interested Parties.
6. The Biosolids Coordinator will review goals and objectives and present them to the Deputy Director of Subregional Operations for approval.
7. Final goals and objectives will be posted on the Biosolids Webpage on INET (Intranet) and the BMS Webpage (Internet).
8. The Biosolids Coordinator will prepare an action plan to support each goal, consistent with the BMS Goals and Objectives, using the G&O Tracking Sheet located on the Biosolids Webpage on INET that contains schedules, milestones, and necessary resources.
9. The Biosolids Coordinator is responsible for assigning appropriate BMS staff to track progress toward each goal and/or objective.

References
- BMS Manual: Attachment 1.1 - Code of Good Practice
- Biosolids Webpage (INET): BMS Task List
- BMS Manual: Element 6 - Public Participation in Planning (Procedure 5)
- Biosolids Webpage (INET): G&O Tracking Sheet
- BMS Website (srcity.org/bms): http://www.srcity.org/bms
Introduction
The City of Santa Rosa has a well-managed biosolids program which has been in operation for over 20 years. During facilities planning efforts in the 1980’s, public interest in developing a long term strategy for managing biosolids was present, and significant efforts were undertaken to involve the public. As the biosolids program has matured and become a model at the local, state, and national levels, the public gained confidence in the program, and interest in participating in planning has remained consistent.

Public confidence continues to remain high and public interest in participating in the planning processes is relatively moderate. The City’s 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. The City 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. Formal participation opportunities are described below.
3. Opportunities are available for the public to provide input through informal avenues; examples of informal participation opportunities are described below.
4. Information on the third party verification process will be shared with interested parties using any of the formal or informal participation opportunities identified below.
5. BMS staff will record and respond to significant input received from interested parties. An inquiry/complaint/comment form will be used to record, when possible, the names, addresses, phone numbers and e-mail addresses of interested parties and will be maintained on the Biosolids Webpage on INET.

References
- Biosolids Webpage (INET): Inquiry/Complaint Forms
- BMS Website (srcity.org/bms): Questions/Comments: email to SantaRosaBMS@srcity.org
- BMS Website (srcity.org/bms): Biosolids Fact Sheet
Formal participation opportunities

1. **Board of Public Utilities (BPU) Meetings** - The BPU generally meets twice a month and the meetings are open to the public. Public notice of each meeting is published on the City internet site and includes a copy of the agenda.

2. **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. City sponsorship of informational meetings is generally determined on a project specific basis based on recommendations from BPU and/or determinations made by the City Council, with input being solicited from City staff. City staff also participates in informational meetings held by other parties when requested.

3. **Formation of citizen's advisory committees** - The City forms citizen's advisory committees for selected projects which, in the City’s judgment, may be precedent setting, address issues outside of areas traditionally considered City “core” business, or address issues that are viewed as potentially generating a great deal of public interest. City of Santa Rosa BPU may request that advisory committees be formed for particular projects.

4. **Notice of Intent (NOI)** - The City files a Notice of Intent with the North Coast Regional Water Quality Control Board for the continuation of the biosolids program. As per State requirements, all adjacent property owners with parcels abutting the subject agricultural land application sites and site tenants, as well as pertinent State and local agencies, receive written notification about the biosolids program.

Additional participation opportunities

1. **Informational letters** - Performance reports are sent to elected officials annually. The report is also made available online and new reports are posted in the spring of each year, providing information on such topics as nutrient management, land availability, biosolids quality and the City's BMS Program.

2. **Website (www.srcity.org/bms)** - The City maintains a website that contains information on a variety of City-related activities, including the City's biosolids management program and the BMS program. The website also includes a comments/questions box for public input and requests for additional information. The public can request to be added to the BMS email list to receive updates on the BMS program.

3. **Biosolids fact sheets** - Fact sheets are prepared by BMS staff to provide information to the public about biosolids. They are available on the City's website (srcity.org/bms) or upon request.

4. **BMS Performance Reports** - These reports contain annual information on the BMS program's goals and objectives and are available to the public on the City's website (srcity.org/bms) or upon request.

5. **Information packets** - These packets contain general information and fact sheets on the City's biosolids program and are available to the public at outreach events, presentations, the City's website (srcity.org/bms), and upon request.

6. **Social media and website** - City staff work cooperatively with the media and have in many cases been proactive in encouraging stories, articles, etc.

7. **Plant tours and presentations to school/community groups** - The City provides general plant tours to a wide variety of school/community groups and other interested parties.

8. **Tabling at Local Events** - Santa Rosa Water provides information and opportunities for communication to the community throughout the year by tabling at local events and providing information about the City's biosolids program.
Element 7: Roles & Responsibilities

Introduction
Clearly identifying roles and responsibilities is important to the success of both the biosolids management program and the BMS. Without a clear definition of roles and responsibilities, the likelihood of failing to comply with operational and regulatory requirements significantly increases. Funding for the operation and management of the BMS program is appropriated by the City Council and Board of Public Utilities (See references for the Biosolids Budget Report).

Procedure
1. Roles and responsibilities for various individuals (including contractors) that are specific to the BMS are assigned by the Biosolids Coordinator. They are reviewed and updated as necessary.
2. The Biosolids Coordinator will also review existing roles/responsibilities whenever significant operation changes are made to ensure that roles/responsibilities are appropriately defined.
3. General descriptions of the roles/responsibilities for various positions and an organizational chart are provided below. Additional information on roles and responsibilities is available on the HR Job Description Webpage.

The BMS Management consists of the Director of Santa Rosa Water, the Deputy Director of Subregional Operations and the Deputy Director of Environmental Services.

Director of Santa Rosa Water
The Director of Santa Rosa Water is responsible for the overall operation of the City of Santa Rosa municipal services, which includes the BMS.

Deputy Director of Subregional Operations
The Deputy Director of Subregional Operations reports to the Director of Santa Rosa Water and has overall management responsibility for the wastewater treatment plant and the biosolids use program, which includes the BMS. The Deputy Director 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 Deputy Director is also responsible for ensuring that the contractor performs hauling and agricultural land application tasks in accordance with the terms of the contract and any other operation agreements.

Deputy Director of Environmental Services
The Deputy Director of Environmental Services reports to the Director of Santa Rosa Water and is responsible for the management, planning, direction and review of activities relating to environmental compliance, industrial waste inspections, water quality, and laboratory analysis for the department. The Deputy Director is responsible for ensuring compliance with all regulatory requirements and updating BMS Staff on changes to regulations.

Wastewater Treatment Superintendent, Senior Wastewater Operators and Operations Staff
The Wastewater Treatment Superintendent reports directly to the Deputy Director of Subregional Operations and supervises the Senior Wastewater Operators. The Wastewater Treatment Superintendent and the Senior Wastewater Operators are responsible for the day to day management of the liquid and solids treatment system and for ensuring compliance with all regulatory reporting requirements, as defined in the BMS. The Operations staff is responsible for performing the daily operations necessary to ensure that the plant performs in a satisfactory manner.

Biosolids Coordinator
The Biosolids Coordinator plans, coordinates, supervises, directs, and reviews the activities involved in the operation and maintenance of biosolids recovery facilities and the use or disposal of residuals generated by these facilities; and to provide professional and technical assistance in adherence to local, state and federal requirements for processing, transporting, marketing, and disposing of these products. This single position class is a full, first-line supervisory management classification in the Santa Rosa Water department. Under general direction, the Biosolids Coordinator oversees the operation and maintenance of biosolids facilities and the disposal of products from these facilities. General direction is provided by the Deputy Director of Subregional Operations. In the current structure of the City of Santa Rosa's hierarchy, the Biosolids Coordinator has been officially designated as the Biosolids Management System Manager by the Director of Santa Rosa Water. As the BMS Manager, job responsibilities include ensuring the biosolids management program and BMS manual are implemented and maintained.
Utilities Technician – Compost
The Utilities Technician-Compost works under direct supervision of the Biosolids Coordinator. Duties include reporting, scheduling and helping maintain all operation and maintenance activities of the Compost Facility; adhering to all local, state and federal requirements; reviewing, updating and helping to maintain the BMS and coordinating contact both internal and external to the City in regards to meetings or updates involving the BMS.

BMS Team
The BMS Team is segmented into two levels; the Core BMS Team and the Full BMS team.
The Core Team consists of the Biosolids Coordinator, the Wastewater Treatment Superintendent and the Utilities Technician-Compost.
The Core Team will meet monthly according to the Task List to review BMS elements and the BMS manual and to manage all BMS activities.
The Full BMS Team is comprised of the Core Team in addition to representative BMS staff throughout the Biosolids Value Chain (BVC) from the following sections; Wastewater Treatment, Mechanical Technologists, Skilled Maintenance, Instrumentation Technologists. This team meets on an “as needed basis” throughout the year to update the BMS manual and to verify that BMS goals and objectives, action plans, and commitments are up to date.

BMS Staff
BMS staff is made up of those Santa Rosa Water employees that have responsibilities within the Biosolids Value Chain (BVC). These employees are responsible for understanding their role in the BVC and how it affects their work. In addition, the BMS staff members are required to receive BMS training on an annual basis (See Element 8 for training requirements). A list of all the BMS staff is available in the Hansen database.

Contractors
The City uses contractors to supplement hauling and agricultural land application capabilities. The hauling contractor supplies owner/operated semi trucks and tractors to transport trailers. The spreading contractor supplies all equipment, transportation of equipment and labor necessary to perform the agricultural land application of City-provided biosolids and agricultural lime. Contractors are responsible for following instructions necessary to ensure that operations are conducted in a safe and environmentally sound manner. In addition, hauling contract operators are responsible for trip tickets and waste hauler tags which are used for load tracking and regulatory reporting and to provide information for the City’s record keeping and reporting responsibilities. Additional responsibilities are identified in the contract document. It is important to note that the City structures contracts such that it ultimately maintains all responsibility for sighting, monitoring/sampling and regulatory reporting. Contractors are provided copies of and responsible for understanding and following the permits and the Emergency Response Plan described in the BMS.

References
- Biosolids Webpage (INET): Contracts
- BMS Manual: Figure 7.1 - BMS Staff Organizational Chart (abbreviated)
- Biosolids Webpage (INET): Biosolids Budget Report
- Santa Rosa Water Webpage (INET): Subregional Organizational Chart (full)
- Biosolids Webpage (INET): BMS Manager appointment letter
Figure 7.1 BMS Staff Organizational Chart

*For full organizational chart see Element 7 References – Subregional Organizational Chart*
Element 8: Training

Introduction
Training is important to ensure good job performance. The City of Santa Rosa demonstrates the importance it places on training by having a full time Training and Safety Coordinator on staff.

Training occurs through a variety of mechanisms, including (but not limited to):

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

Procedure
1. Training is based on performance needs as determined by the Biosolids Coordinator and BMS supervisors.
2. Formal training hours are documented in the Hansen Database.
   a. The following process will be used to ensure that the BMS Staff have a general awareness of the biosolids value chain and the BMS, and how they relate to their areas of responsibility. The Biosolids Coordinator is responsible for implementing these steps. Once a year, as defined in the BMS Task List, the Biosolids Coordinator will update the BMS Staff Training Materials located on the Biosolids Webpage on INET to reflect program changes and updates.
   b. The Biosolids Coordinator will provide training and materials to BMS supervisors.
   c. Each BMS supervisor will be responsible for training their staff on an annual basis as defined in the BMS Task List or “as needed” for new or reassigned employees.
   d. The Biosolids Coordinator and Supervisors will be responsible for tracking training in the Hansen database.
3. The following process will be used to ensure that the contractor has a general awareness of the Biosolids Value Chain and the BMS, and how they relate to their areas of responsibility. The Biosolids Coordinator is responsible for implementing these steps:
   a. At least one meeting annually, as defined in the BMS Task List, addressing the BMS will be held with the contractors.
   b. Contractors participation in training activities is required per contract language (contracts are located on the Biosolids Webpage on INET).
4. The Biosolids Coordinator will identify relevant training opportunities for the contractors providing biosolids services to the City of Santa Rosa. This will include general BMS awareness training, such as the Emergency Spill Plan.

References
- Biosolids Webpage (INET): BMS Task List
- Biosolids Webpage (INET): BMS Staff Training Materials
- Biosolids Webpage (INET): Contracts
- BMS Webpage (INET): Emergency Spill Plan
Introduction
The City of Santa Rosa is committed to proactively communicating information on the City's biosolids operations. Information is communicated to City Staff and contractors through regularly scheduled and “as needed” training or meetings (See Element 8 Procedure). Communication to interested external individuals and agencies may be provided in a variety of formats by the Biosolids Coordinator.

Public confidence in Santa Rosa’s biosolids program is high due in part to the City's communication efforts, which are designed to provide ongoing information regarding the biosolids program and related activities. The City of Santa Rosa’s communication efforts are consistent with legal requirements, the degree of current public interest, historical levels of public involvement and related local circumstances.

Procedure

Identification of interested individuals/organizations
1. A list of individuals interested in Santa Rosa’s biosolids program and/or BMS related activities has been developed and is maintained by the Biosolids Coordinator. Current “interested individuals” include:
   - Farmers who own land where biosolids are agriculturally land applied
   - Residents next to agricultural land application fields
   - Neighbors of the treatment plant
   - State Biosolids Regulator
   - Board of Public Utilities (BPU)
   - City Council
   - Sonoma County Health Services
   - North Coast Regional Water Quality Control Board (NCRWQCB)
   - State Rural Water Association
   - SF Bay Regional Water Quality Control Board (SFBRWQCB)
   - Other interested individuals

2. Contact information for interested individuals is currently maintained and updated by the Biosolids Coordinator. Individuals can request to be added to the list by contacting the Biosolids Coordinator, or by sending a request online using the BMS Website comment box.

Communication approach
1. The Biosolids Coordinator will have primary responsibility for ensuring effective communications on the part of the City as it relates to the biosolids program and the BMS.

2. Information to be made available on the Biosolids Webpage or upon request to interested parties will include:
   a. The City of Santa Rosa Biosolids Management Policy (Element 2).
   b. Information about legal and other requirements.
   c. The City of Santa Rosa biosolids program goals and objectives.
   d. Biosolids Management Performance Reports.
   e. Information related to independent, third party BMS verification audit reports

3. Specific approaches used to facilitate communication, and the frequency of their use, are left to the discretion of the Biosolids Coordinator. Examples of communication include meetings, emails, letters, reports, tours, presentations, newspaper articles and radio programs (See Element 6 – Public Participation and Planning).

4. The City of Santa Rosa 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.
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 City Staff 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 on the Biosolids Webpage on INET. These may include detailed requests for information by interested parties, including homeowners, regulators and elected officials. For documentation see Element 6, Procedure 5).

6. The Biosolids Coordinator will prepare and submit a written report each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken or will be taken to address any non-conformances. The audit report may be a standalone document or may be included as part of other prepared reports (e.g. the Biosolids Management Performance Report). The audit report will be made available on the BMS Website or upon request.

References
- BMS Manual: Element 8 - Training Procedure
- BMS Manual: Element 6 - Public Participation in Planning
- BMS Website: www.srcity.org/bms
- Biosolids Webpage (INET): Inquiry Form
- Biosolids Webpage (INET): Noise Complaint Form
- Biosolids Webpage (INET): Odor Complaint Form
- Biosolids Webpage (INET): Interested Parties List
- BMS Website (srcity.org/bms): Questions/Comments: email to SantaRosaBMS@srcity.org
- BMS Website (srcity.org/bms): Biosolids Fact Sheet
Introduction
Operational controls include Standard Operating Procedures (SOP’s), 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 the City of Santa Rosa Biosolids Coordinator, 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 the personal experiences of the City Staff. Operational controls and related procedures include preventative maintenance procedures (located in the Hansen Database), work management systems and any relevant contracted procedures. Current operational controls are found in Table 3.1 of the BMS Manual.

2. Operational controls will be reviewed by The City on an annual basis or whenever significant changes in plant processes and/or operations occur. Revisions to Table 3.1 and associated SOP’s and monitoring/measurements will be made by the Biosolids Coordinator following these reviews.

3. Changes will be documented in writing and noted in the annual biosolids program report.

References
- BMS Manual: Table 3.1 - Critical Control Points
- BMS Manual: Element 3 – Critical Control Points

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
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. The City of Santa Rosa has a Biosolids Emergency Response procedure “Unauthorized Bypass and Spill Response” on INET in the Treatment site’s Operations & Procedures Library.

2. The Emergency Response Manual (ERM) establishes clear protocol for how a wide variety of situations should be handled. The ERM is available in the Treatment Operations and Procedures Library, located electronically on INET. Important emergency contact information is kept in all vehicles used in the City of Santa Rosa biosolids program, including contractor vehicles. Emergency procedures for all situations are reviewed annually and updated on an as needed basis.

3. Testing and training with respect to safety and emergency response procedures is conducted on an annual basis as determined by the Biosolids Coordinator and Wastewater Treatment Superintendent and is tracked in the Hansen Database.

4. The need to require contractors performing work related to the City biosolids activities to develop Emergency Response and Preparedness Plans will be determined on a case-by-case basis. Generally, contracted activities are limited to biosolids transportation, spreading, amendment, and land filling. Therefore, contractors are required to follow the Emergency Spill Plan for applicable contracted activities. The contractor must follow their own Emergency Response and Preparedness Plans in addition to the City’s Emergency Spill Plan.

5. The biosolids transportation, spreading, amendment, and land filling are performed by contractors to the City. Relevant portions of ERM are applicable to these contracted activities and the contractor must follow their own Emergency Response and Preparedness Plans in addition to the City’s ERM. The contractor is required to follow relevant sections of the City of Santa Rosa Emergency Response Manual (See Element 7 for Contractor Roles and Responsibilities).

References
- Biosolids Webpage (INET): Emergency Spill Plan
- BMS Manual: Element 7 - Roles and Responsibilities
**Element 12: Documentation, Document Control & Recordkeeping**

**Introduction**

The City of Santa Rosa has established and maintains documentation for the biosolids management program, including the 17 elements of its BMS. Procedures have been established to ensure that biosolids management program documentation is reasonably available, has been created following established document creation protocol, is kept up to date through periodic reviews and revision, and is properly documented with version information, effective dates and references to replaced or superseded versions. Record retention periods are also established. The initial BMS documents were created by the BMS Team and approved by the Biosolids Coordinator. The SOP’s were created by operational personnel and approved by their BMS supervisors (See Element 7 for Roles and Responsibilities).

**Procedure**

1. The following documents related to The City’s BMS program or relevant biosolids management activities are considered “controlled” documents:
   a. Policy statements
   b. The BMS Manual
   c. Standard Operating Procedures (SOPs)

2. Standard operating procedures (SOP’s) and associated BMS documents will contain the following document control information tracked electronically by Sharepoint:
   - Version # (including history)
   - Effective Date
   - Approval Status (authorized personnel defined by workflow)

3. Creation of a document will begin with the document control information described in procedure 2 and will include in body of document all appropriate links and cross-references. This could also include any tables, SOPs or other references in the BMS manual and/or any hyperlinked BMS documents.

4. All BMS documents, including policy statements, process control SOPs, equipment maintenance SOP’s and all other relevant SOP’s and the BMS Manual will be controlled in the Santa Rosa Water Subregional webpage, either under Treatment or Biosolids/Compost on INET.

5. Version and revision history will be maintained for all controlled documents electronically by Sharepoint.

6. The record retention period for these documents will be 5 years unless defined differently in regulatory requirements (See Retention for Regulatory Documents). When documents have reached the retention date, the document will be reviewed by the Biosolids Coordinator to determine whether the retention period needs to be extended.

7. Data resulting from monitoring and measurement activities are retained in the Biosolids Webpage on INET. This information has been retained continuously since operation commenced. See Element 7 for contractor roles and responsibilities.

8. The Biosolids Coordinator has sole responsibility for updating/revising the BMS 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 control, and biosolids program goals and objectives

e. Input from Management Review

f. Annual Biosolids Management Program Performance Report

9. All new BMS documents created by BMS Staff will be controlled documents following procedure 3 above. Once a document has been created it will be submitted to the authorized personnel, which include Biosolids Coordinator, Wastewater Treatment Superintendent or BMS Management (as defined in the structure of Sharepoint workflow) for review and approval.

References

- BMS Website (srcity.org/bms) – www.srcity.org/bms
- BMS Manual: Element 7 - Roles and Responsibilities
- EDMS Project Webpage(INET): UT Retention Schedule
### Introduction

Monitoring and measurement activities conducted by the City of Santa Rosa 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.

The City's National Pollution Discharge Elimination System (NPDES) permit identifies monitoring, measurement and reporting requirements for solids and biosolids by the California State Water Resources Board, North Coast Regional Water Quality Control Board and/or EPA, and addressed here as essential to the overall quality of treatment plant operations. The City also conducts additional monitoring to measure performance at critical control points. Table 3.1 in Element 3 contains a comprehensive listing of monitoring and measurements.

### Procedure

1. Monitoring and measurement activities will be reviewed by the Biosolids Coordinator on an annual basis or whenever significant changes in plant processes and/or operations occur.

2. Analytical or instrumentation data is stored in the Biosolids Webpage on INET.

3. Progress towards meeting goals and objectives will be tracked at intervals deemed appropriate by the Biosolids Coordinator. Progress will be noted in the BMS Goals, Objectives, and Tracking Action Plan on INET as described in Element 5.

4. The Biosolids Coordinator 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). See Element 7 for contractor roles and responsibilities.

### References

- BMS Manual: Table 3.1 - Critical Control Points
- BMS Manual: Element 3 - Critical Control Points
- BMS Manual: Element 5 - Goals and Objectives
- BMS Manual: Element 7 - Roles and Responsibilities
- Biosolids Webpage (INET): BMS Goals, Objectives, and Tracking
Introduction
The purpose of this element is to establish, document and maintain procedures for investigating noncompliance with BMS protocols, legal/regulatory and other requirements, including conformance issues that may arise from monitoring/measurement activities, or non-conformances noted as a result of internal or external BMS audits.

Procedure
1) Legal and Regulatory Non-conformances
   Legal/Regulatory Requirements are specifically identified in Element 4. The City’s NPDES Discharge permit, Biosolids permit, and others contain procedures for investigating non-conformances of legal/regulatory requirements. See Element 4 Table 4.1 for legal and regulatory requirements.
   a. If a legal/regulatory non-conformance occurs, BMS Staff will follow the non-conformance procedures as defined in the associated permit. The Deputy Director of Environmental Services is responsible for overseeing the completion of non-conformance procedures.

2) BMS Non-conformances Identified During Internal Audits
   a. Internal audits will be conducted in accordance with procedures developed under Element 16.
   b. A Corrective Action 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. Non-conformances (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 the Biosolids Coordinator for review. This may be done by completing the appropriate sections directly on the worksheet or addressing them through a separate written report.
   e. The Biosolids Coordinator is responsible for tracking progress using methods he/she deems appropriate. For all non-conformances, progress will be tracked every 4 weeks, unless there is an extenuating circumstance. Tracking will be documented by completing the tracking sheet which is included as part of the audit worksheet located on the Biosolids Webpage on INET.
   f. The Biosolids Coordinator will prepare and submit a written report each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken, or will be taken, to address any non-conformances. The audit report may be a standalone document or may be included as part of other prepared reports (e.g. the Biosolids Management Performance Report). The audit report will be made available upon request.
3) **BMS Non-conformances Identified During 3rd Party Audits**

   a. If the auditor identifies non-conformances, the Biosolids Coordinator will follow the steps listed under Procedure 2)b.(i-xiv) above.
   b. Minor non-conformances will be corrected within a 90-day period and major non-conformances will be corrected within a 30-day period, unless the auditor and The City agree that these timeframes need to be extended.

4) **BMS Non-conformances Identified During Routine Monitoring and Measurement**

   a. If BMS Staff identify non-conformances during routine monitoring/measurement, per SOP, a work order will be opened in Hansen under identified asset to correct.
   b. If BMS Staff identify an operational or equipment deficiency or malfunction, and an on-call contractor is needed, it will be added to the Subregional Projects list on iNet.

5) **BMS Opportunities for Improvement Identified During 3rd Party Audits**

   If the auditor identifies an opportunity for improvement, the Biosolids Coordinator will follow the steps listed under Procedure 2)b.(i-xiv) above.

**References**

- BMS Manual: Element 4 – [Legal and Other Requirements](#)
- BMS Manual: Element 4 - Table 4.1 - Legal and Other Requirements
- BMS Manual: Element 16 - Internal BMS Audit
- Biosolids Webpage (INET): [Corrective Action Worksheet](#)
Introduction
The City of Santa Rosa will annually prepare a performance report that provides summary information on activities associated with the biosolids management program(s) and the BMS.

Procedure

1) The Biosolids Coordinator will prepare an annual report on biosolids that summarizes the performance of the biosolids management program. The performance report will be completed each year and 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 the City’s 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 that states any deficiencies or non-conformances.
   f. A summary of independent third party audits.

The performance report will be available on the BMS Website (Internet), Biosolids Webpage (Intranet) and upon request.

References
- BMS Website – BMS Program Performance Reports
- BMS Website - www.srcity.org/bms
Introduction
The City of Santa Rosa will conduct annual internal audits of the BMS program in order to determine the effectiveness of the biosolids program.

Procedure
1) The City will conduct internal audits of the BMS program on an annual basis, and will address program activities completed during the previous operating period.
2) The audit will be conducted by the City’s BMS Internal Audit Team under the direction of the Biosolids Coordinator.
3) The audit will evaluate the effectiveness of the biosolids program, including progress toward goals and objectives, response to non-conformances, management review, public participation, contractor activities, and communications.
4) All documents and records related to internal audits will be maintained in the Biosolids Webpage on INET.
5) The NBP Agency BMS Guidance Manual, BMS Internal Audit Checklist, BMS Internal Audit Overview and other appropriate documents will be made available as a resource to the audit team on the Biosolids Webpage on INET. The objective methods listed in Guidance are as follows:
   i. Document and records review
   ii. Interviews
   iii. Direct observation
6) Non-conformances will be addressed using the procedure identified in Element 14.
7) The Biosolids Coordinator will prepare and submit a written report to the Deputy Director of Subregional Operations each year, summarizing the internal audit results and corrective actions (if necessary) that have already been taken or will be taken to address any non-conformances. The audit report may be a standalone document or may be included as part of other prepared reports (e.g. the Biosolids Management Performance Report). The audit report will be available upon request.
8) Biosolids Coordinator will provide at least 4 hours of formal training to the internal auditors, will appoint a lead auditor and will provide additional guidance as needed.
9) The Biosolids Coordinator will be responsible for coordinating any subsequent activities related to training or guidance.

References
- Biosolids Webpage (INET): BMS Internal Audit Checklist
- BMS Manual - Element 14 – Non-conformances - Preventative and Corrective Action
- Biosolids Webpage (INET): Internal Auditor Training Materials
Element 17: Management Review

Introduction
The City of Santa Rosa will conduct a management review of its biosolids and BMS program on an annual basis. The purpose of this review will be to address the possible need for changes to policy (Element 2), the goals and objectives (Element 5), the biosolids management program and other BMS elements based on internal BMS audit results, third party verification audit results, changing circumstances, and the City’s commitment to continual improvement.

Procedures

1) Biosolids Coordinator will review BMS and related biosolids management activities on an annual basis.
   a. Biosolids Coordinator will announce any changes to, or get status reports from other sections, at the monthly scheduled Manager Meeting. The Biosolids Coordinator will then bring back the report for documentation.

2) The review will be conducted each year and will cover activities of the previous year.

3) The scope will include:
   a. Review monitoring data and other measurements that demonstrate the performance of the City's biosolids program relative to established goals, objectives and legal requirements.
   b. Review progress towards achieving biosolids goals and objectives.
   c. Review internal audit results.
   d. Review 3rd party audit results.
   e. Review the need for changes in existing policy or the adoption of new policy to support the BMS and biosolids related activities.

4) To facilitate the review, the Biosolids Coordinator 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 Deputy Director of Subregional Operations.

5) The management review will be carried out in close coordination with the Biosolids Management Program Performance Report and the internal BMS audit. The timing of the internal audit and the management review will be included in the BMS Task List, which defines, by month, when specific elements are reviewed. To the extent practicable, an effort will be made to develop a single report on an annual basis.

6) The Biosolids Coordinator will schedule a meeting with the Deputy Director of Subregional Operations and may include the Director of Santa Rosa Water and the Deputy Director of Environmental Services to discuss the report.

7) Any changes to policies, goals/objectives, plans, procedures, work practices and other BMS elements deemed necessary as part of the management review will be documented in writing by the Biosolids Coordinator.

8) The Biosolids Coordinator will develop a schedule and action plan to address recommendations from the management review.

References
- BMS Manual - Element 2 - Biosolids Management Policy
- BMS Manual - Element 5 – Goals and Objectives
- Biosolids Webpage (INET): BMS Task List
ATTACHMENTS

1 Code of Good Practice
2 BPU Minutes
3 Letter of Understanding
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 – in short, a biosolids management system (BMS). Those who embrace the Code and participate in the BMS commit to “do the right thing.” Code subscribers and BMS participants pledge to uphold the following principles of conduct:

COMPLIANCE: To commit to compliance with all applicable federal, state, and local requirements regarding production at the wastewater treatment facility, and management, transportation, storage, and use or disposal of biosolids away from the facility.

PRODUCT: To provide biosolids that meet the applicable standards for their intended use or disposal.

BIOSOLIDS MANAGEMENT SYSTEM: To develop a biosolids management system method of independent third-party verification to ensure effective ongoing biosolids operations is included.

QUALITY MONITORING: To enhance the monitoring of biosolids production and management practices.

QUALITY PRACTICES: To require good housekeeping practices for biosolids production, processing, transport, and storage, and during final use or disposal operations.

CONTINGENCY AND EMERGENCY RESPONSE PLANS: To develop response plans for unanticipated events such as inclement weather, spills, and equipment malfunctions.

SUSTAINABLE MANAGEMENT PRACTICES AND OPERATIONS: To enhance the environment by committing to sustainable, environmentally acceptable biosolids management practices and operations through a biosolids management system.

PREVENTIVE MAINTENANCE: To prepare and implement a plan for preventive maintenance for equipment used to manage biosolids and wastewater solids.

CONTINUAL IMPROVEMENT: To seek continual improvement in all aspects of biosolids management.

COMMUNICATION: To provide methods of effective communication with gatekeepers, stakeholders, and interested citizens regarding the key elements of each biosolids management system, including information relative to system performance.
SANTA ROSA BOARD OF PUBLIC UTILITIES MEETING MINUTES  
THURSDAY, NOVEMBER 2, 2006  
CITY HALL COUNCIL CHAMBER, 100 SANTA ROSA AVENUE  
REGULAR MEETING

1:36 p.m. City Council Chamber

ROLL CALL

Present (5) Chairman Dowd, Vice Chairman Lowe, Board Members Dean, Galvin and Lindsay

Absent (2) Bolton and Downey

STATEMENTS OF ABSTENTION BY BOARD MEMBERS

Chairman Dowd stated that he had an ex parte communication with Charlie Traboulssi with Horn Land LLC.

PUBLIC APPEARANCES - None

MINUTES APPROVAL

Vice Chairman Lowe moved approval of the minutes of October 19, 2006. The motion was seconded by Board Member Galvin and carried unanimously. AYES (4) ABSENT (2) Bolton and Downey ABSTAIN (1) Lindsay

CONSENT ITEMS - None

SCHEDULED ITEMS

6.1 NATIONAL BIOSOLIDS PARTNERSHIP – ADOPTION OF CODE OF GOOD PRACTICE AND PREPARATION OF ENVIRONMENTAL MANAGEMENT SYSTEM FOR BIOSOLIDS RECYCLING AT THE SANTA ROSA SUBREGIONAL SYSTEM

Miles Ferris, Director of Utilities gave the staff presentation. He indicated that this system would assist the Subregional System to meet high standards for composting and handling of Biosolids. It would provide for testing of the facility to see if the management structure, operational procedures and equipment meet standards. He reported that this program would assist the City's land applications program and further reduce the amount of Biosolids that is disposed of in the landfill.

MOTION:

Vice Chairman Lowe moved a motion to adopt the “Code of Good Practice” and direct staff to implement it and to develop an “Environmental Management System” in accordance with the National Biosolids Partnership guidelines for future review and consideration by the Board. The motion was seconded by Board Member Dean and carried unanimously. AYES (5) ABSENT (2) Bolton and Downey ABSTAIN (0)

6.2 INCREMENTAL RECYCLED WATER PROGRAM – REQUEST FROM CITY OF ROHNERT PARK TO EVALUATE THE FEASIBILITY OF EXPANDING URBAN REUSE IN ROHNERT PARK

Dr. Dave Smith, Merritt Smith Consulting briefly reviewed the letter submitted to the Board requesting that the City of Santa Rosa, as owner of the Subregional System, study the feasibility of expanding the Subregional System’s water reuse infrastructure located in Rohnert Park. The Subregional Contractors’ Agreement indicates that Rohnert Park’s capacity right for treatment capacity (and therefore also to reuse recycled water) is 16% but an amendment to the agreement has been requested to increase this amount to 20%. He then reviewed the relationship of existing Rohnert Park facilities to the proposed Santa Rosa Urban Reuse Project and indicated that their request was consistent with the Subregional Agreement, the IRWP Master Plan, the timing of the proposed evaluation would be beneficial and there could be cost savings for the Santa Rosa Urban Reuse Project.

Darrin Jenkins, City Engineer for City of Rohnert Park explained that the infrastructure is already in place and may have customers ready to use. They are also requiring all new businesses to install purple pipe. He suggested that the study should be a joint project because of the Subregional contract and stated that funding is available.

MOTION:

Vice Chairman Lowe moved a motion to direct staff to conduct a feasibility study, contact other contractors within the Subregional System to inquire about their interest in participation in the study and evaluate how to most equitably allocate costs of recycled
DRAFT FOR DISCUSSION PURPOSES ONLY
December 29, 2003

LETTER OF UNDERSTANDING
BETWEEN

The City of Santa Rosa, California and the National Biosolids Partnership for Establishing an Environmental Management System Covering Wastewater Solids and Biosolids Management

Demonstration Project
This agreement is between the City of Santa Rosa, California (The City) and the National Biosolids Partnership (NBP) located in Alexandria, Virginia.

The City and the NBP agree to work together on a Demonstration Project to test the Environmental Management System (EMS) blueprint for biosolids management that is being prepared by the NBP. The Demonstration Program, which includes approximately one hundred Demonstration Projects, is taking place from January 2000 to December 2005. The City will be recognized as one of the EMS Demonstration Projects.

Objectives of the Demonstration Program:

The objectives of the Demonstration Program are:
1) To assist organizations to establish EMS’s based on the “blueprint” developed by the NBP
2) To evaluate the components of the blueprint; and
3) To gather information about EMS implementation by the Demonstration Organizations that will allow the NBP to expand the EMS program to full-scale implementation in 2004.

Definition

Wastewater Solids and Biosolids Management: This includes wastewater pretreatment, treatment, and beneficial/disposal of biosolids.

EMS Blueprint: The blueprint has five components:
1.) The Code of Good Practice;
2.) The National Manual of Good Practices;
3.) The Elements of an Environmental Management System
4.) The EMS Guidance Manual
5.) The Independent Third-Party Verification Program

The Blueprint documents are found on www.biosolids.org
Commitment of the National Biosolids Partnership

Commitments

To assist the City in completing each of the steps toward development of a biosolids EMS, the National Biosolids Partnership makes the following commitments:

- The NBP will assist the City in establishing an EMS by providing the EMS Blueprint documents, an EMS Implementation Plan and technical assistance to prepare the EMS consistent with the NBP Blueprint. Technical assistance will include two on site visits by the NBP’s consultants, one visit will include the preparation of a draft EMS Implementation Plan for The City’s biosolids program and the second will include a review of The City’s draft EMS; the NBP will also provide up to three national training workshops on preparing the EMS to meet the NBP’s requirements. NBP consultants will also be available to provide advice via telephone during the preparation of The City’s EMS. Because of grant money uncertainty, the NBP will commit technical resources for 12 months. Upon satisfactory progress in the development of The City’s EMS and availability of 2004 grant money, the NBP will continue to provide technical assistance for the remaining 6 months of the program.

- The NBP will take appropriate steps to recognize The City’s effort to develop an EMS at national biosolids conferences and through other suitable venues or means.

- The NBP will provide a certificate to The City documenting its membership in the NBP Code of Good Practice Club.

- The NBP will publish a report on the experiences of the organizations that participate in the Demonstration Program. The report will also contain recommendations for ways to strengthen the NBP’s EMS Program based on these experiences.

Commitments from the City of Santa Rosa, California

- The City commits to implementing the National Biosolids Partnership’s “Code of Good Practice” (Attached)

- Following the results of the Implementation Plan Site Visit – The City will develop an EMS that is consistent with the NBP’s EMS blueprint and will start operating within 18 months and will start operating by June 2005 at the latest.

- The City will participate in up to three two-day training and information exchange workshops with the other Demonstration Organizations during the 18 months.
- The City will share its EMS experiences with other organizations and share related information at local, regional, or national conferences and meetings.

- The City will provide feedback to the NBP on the EMS blueprint and document costs, benefits and other relevant information through short quarterly progress reports and a final report.
Points of Contact

National Biosolids Partnership

City of Santa Rosa, California

Mr. Robert Hite
Chair
National Biosolids Partnership
651 Wythe Street
Alexandria, VA 22314

The person who can assign resources such as the Mayor/Department Head

Miles Ferris, P.E.
Director of Utilities
City Engineer

City of Santa Rosa

9549-9506