

2011 Periodic Biosolids Program Performance Report

Issued: March 2012

"It is the goal of the City to manage biosolids processing, handling, and final disposal in a manner which meets public acceptance and to produce a product that complies with all state and federal regulatory requirements."

Introduction

The Grand Rapids Wastewater Treatment Plant (GRWWTP), located in Grand Rapids, MI, provides wastewater collection and treatment for the City of Grand Rapids and 9 surrounding communities totaling approximately 270,000 customers within a 200 square mile geographical area. The Wastewater plant treats 16,060 million gallons annually with a design capacity of 61.1 million gallons a day (MGD) and currently has an average daily flow of 44.05 MGD. The facility was constructed in the 1920's and treatment consisted of primary clarification, anaerobic digestion, and drying beds. The Biosolids from the drying beds were bagged and sold to businesses and homeowners for fertilizer for many years. In the mid 1950's the plant was expanded to include secondary treatment capability utilizing activated sludge as the biological treatment process along with increased primary treatment capacity and disinfection. In the 1970's the facility was again expanded to increase flow capacity and solids handling processes. Solids handling converted from anaerobic digestion to thermal heat treatment using low pressure oxidation.



The GRWWTP was part of a third round of agencies participating in the National Biosolids Partnership (NBP) Environmental Management System (EMS) for Biosolids. Terminology for the program evolved in 2011 with Biosolids Management Program (BMP) replacing EMS. Development of our BMP started in early 2005 with the creation of an internal BMP team. Team members attended four (4) NBP sponsored workshops which helped guide the development of our BMP. The GRWWTP BMP was formally certified by the NBP in December 2006 and successfully completed our first annual interim audit in November 2007. During 2008 an internal audit was performed. In October of 2009 we successfully completed our second interim audit. We completed an

internal audit during the first quarter of 2010 and in the first quarter of 2011 we conducted another internal audit. We successfully completed our recertification audit in October of 2011.

During July of 2009, the Joint Biosolids Management Project Agreement was approved by the City of Grand Rapids and City of Wyoming which finalized the creation of the Grand Valley Regional Biosolids Authority (GVRBA). On July 1, 2009 the GVRBA became responsible for processing 100% of the biosolids from the City of Grand Rapids Wastewater Plant and the City of Wyoming Clean Water Plant.

In 2011, several modifications and improvements were completed and/or undertaken at the WWTP and the collection system support facilities including:

- Eastside combined sewer overflow – Contract 17, Contract 20 (Wealthy Heights) Highland, Union and Cass
- Oak Hollow and Orchard Vista lift station emergency generators
- Michigan Street Lift Station renovation
- Bird Lift Station replacement
- North clarifier improvements and Bio P
- WWTP air compressor and air dryer system replacement
- Market Avenue Pump Station (MAPS) emergency generator replacement
- MAPS ventilation improvements
- MAPS flood gates repair and/or removal
- Market Avenue Retention Basin (MARB) bar screen improvements
- WWTP - Electric Motor upgrades
- Television Truck replacement
- Leonard Heights Lift Station replacement
- WWTP - South Blower Building ventilation improvements
- North Blower Building waste heat project
- Improvements to several buildings and roads within the plant grounds
- New groundwater dewatering wells in the south and north secondary area
- Upgrades and replacement of electrical apparatus MAPS
- Demolition of the Zimpro® sludge processing facilities (including the 2 associated sludge storage tanks and related structures)
- Implementation of the Footing Drain Disconnection Program in East Leonard Heights and Maryland Estates
- Hach portable equipment addition
- Headworks area new blowers and ventilation improvements
- Collection system flow meters and software
- Grit system rehabilitation
- WWTP final effluent distribution loop modifications

Outcomes Matter

The NBP has identified key outcomes which serve as good indicators of successful and well managed Biosolids Management practices. Efforts undertaken by GRWWTP during the past year in support of these outcomes are detailed below.

Quality Management Practices

- Clean all sanitary sewers 24" and smaller in diameter once every 5 years in order to maintain the integrity of the biosolids, protect the environment and avoid system upsets that can result in sanitary sewage back-ups in residences and business facilities; comply with applicable local, state and federal regulations as well as public health and safety concerns (our previous goal had been sanitary sewers 15" and smaller).
- Reorganized department to have the Utility Maintenance Mechanics, Maintenance Painter, Utility Crew Leader and the Plant Assistants report to the Wastewater Operations and Maintenance Supervisors.
- Upgrade the Computerized Maintenance Management System (CMMS) program to Maximo 7.1 in order to maintain sanitary sewer system and treatment facilities and equipment in a more cost effective and pro-active manner.
- Perform quarterly analysis on the WWTP biosolids and compare results to the tables found in Federal Regulations 503.
- Improve performance of assets by exposing high maintenance systems and/or equipment through better utilization of our CMMS's reporting function to track man-hour utilization and maintenance classifications (predictive and corrective).
- Replace grit blowers and air control valves as a follow-up to 2010 goal results which determined that unit upgrades would provide cost savings and performance improvements.
- Improve biochemical oxygen demand (BOD) removal, nitrification/denitrification and phosphorus removal in the north plant by tracking monthly averages for carbonaceous biochemical oxygen demand (C-BOD), total suspended solids (TSS), ammonia and total phosphorus (TP) attributed in the north plant.
- Implementation of the Footing Drain Disconnection Program (FDDP) to better maintain biosolids throughout the collection system and those subsequently being processed at the WWTP.
- Provide commendable customer service by maintaining a 75% or greater satisfaction rating among those citizens we have serviced by surveying customers that have reported possible issues with the collection system.
- "Lean Process" review and implementation of continuous improvement recommendations for the Grand Valley Regional Biosolids Association biosolids handling facilities.

Relations with Interested Parties

In 2011, we focused on the many educational opportunities that were afforded to us in the Grand Rapids metropolitan area and within the Environmental Services Department (ESD). In most cases, the associated costs were limited to staff time and printing costs for educational materials that we passed out to interested parties.

- For the second time, several staff members volunteered at an informational booth at the March “Home and Garden Show”. This event is the largest of this type of event in West Michigan with attendance in excess of 30,000. This was the Home and Garden Show’s 32nd season and was held at the De Vos Center in downtown Grand Rapids. Staff from a variety of workgroups volunteered for this event.
- In celebration of Earth Day, staff manned an informational booth at the “Party for the Planet” which was held at John Ball Zoo in Grand Rapids. Approximately 6,000 people attended the party.
- Over 1000 students toured the Wastewater Treatment Facility in 2011. The popularity of these tours continues to grow.
- Based on enthusiastic input from staff, display materials were acquired and utilized to present more information in the limited amount of space that is usually allotted for “not-for-profit” entities at expositions.
- Created and distributed 2 additional “Environmental Tips” to all sewer customers. A 3rd “Environmental Tip” was created and has not been distributed yet.
- Started developing a “311” application for the department to enhance and improve customer service.
- Created videos that reflected the relationship between each of the work groups and biosolids critical control points. These videos were used for internal training purposes.
- Created a video that exemplified the City’s need for additional field testing equipment. This video was submitted to competitive public judging in the “Hach Big Picture Contest” and as a result the Environmental Services Department was awarded “The People’s Choice Award” and \$40,000 worth of field testing equipment.
- Citizens can explore various areas of the wastewater treatment process including pretreatment, bar screens, grit removal, primary treatment, aeration tank, final tank, ultraviolet disinfection, waste thickening, biosolids storage, biosolids dewatering, biosolids trucking, biosolids disposal and wastewater plant final discharge on the Environmental Services Department website.

Regulatory Compliance

- Started modifications to the north plant to improve our treatment.
- There were not any sanitary sewer overflows (SSO’s) that were caused by root infestation or grease.
- Achieved 100% compliance with regulatory requirements as related to biosolids.
- Waiting approval of application for our new National Pollution Discharge Elimination System (NPDES) permit as submitted in 2010.

Environmental Performance

- Maintaining effective CMMS programs (Maximo® and Cityworks®) in the Environmental Services Department helps maintain infrastructure, ensure reliable equipment and operations resulting in the compliance with permit requirements, prevention of accidental spills, combined sewer overflows and sanitary sewer overflows.
- A motivated staff striving to achieve 100% compliance with all regulatory requirements is focused on protecting the environment. The Environmental Services Department's Grand Rapids staff operates in a highly effective and professional manner and consistently achieves regulatory compliance in excess of 99%.
- In 2005, the City (including the Wastewater Plant) formed a "Renewable Energy Team" that began meeting with various community partners, companies, and energy experts in search of the best way to fulfill the 20% renewable energy goal set by Mayor George Heartwell. The City Commission approved a purchase that met the 20% goal in November, 2007. This purchase continues to significantly reduce Grand Rapids' carbon footprint by offsetting the greenhouse gasses (carbon dioxide, sulfur dioxide and nitrogen oxide) produced using non-renewable sources and qualifies the City for this recognition by the Environmental Protection Agency (EPA).
- In 2011, as part of our continuous improvement process, the City formed an Energy Management Strategy Team that is composed of representatives from all areas of the City including the Environmental Services Department. Some of the focus areas of this team are pumps and process equipment, electricity, natural gas, steam, fuel, and renewable energy.
- Over the last 19 years the City of Grand Rapids has worked aggressively to reduce Combined Sewer Overflow volumes by 99.9% and is continuing work to remove the remaining 0.1%.
- In 2011 we replaced our oversized compressed air system with a "right-sized" system. Development of this project (which has a 2 year pay-off) was done completely "in house" in lieu of utilizing a consulting engineer. Projected cost savings are \$30,000 annually in electric costs alone.
- The ESD is in discussion stages of entering into a cooperative pilot program which will introduce biosolids into compost materials to expedite the decomposition process and also enrich the end product.
- The Central Sanitary Landfill located in Pierson, Michigan is very interested in receiving the GVRBA biosolids for its facility which has environmentally proactive uses for the methane that is generated from it's landfill. This facility will propose rates that are quite cost effective for GVRBA and utilization of this facility will be reviewed by GVRBA board of directors in the near future.

Biosolids Value Chain - Monitoring and Measurement Report and Progress

Monitoring and measurement provides critical input to the organization relative to the effectiveness of its operational controls. This information helps to identify any weaknesses or other areas in which the program can be improved. The department continues to develop and utilize more accurate and easily maintained monitoring equipment.

Wastewater Collection and Pretreatment

Significant Industrial Users (SIU) – In 2011, the Industrial Pretreatment Program (IPP) staff worked with industrial users and State regulators to maintain compliance with local, state, and federal discharge laws. In June, the Department of Environmental Quality (DEQ) conducted an Industrial Pretreatment Program Reconnaissance Inspection of the GRWWTP. No concerns were identified by the DEQ as a result of the inspection. The departments many achievements were denoted and the IPP passed with flying colors. Annually, IPP provides an industrial user meeting to keep industries current on regulations, understanding the IPP program, and compliance issues. A Linko® compliance database is utilized to track compliance while email and phone reminder notifications are sent to industrial users for sampling and reporting events. During 2011, nine additional Significant Industrial Users (SIU) were identified.

Commercial User Discharges – IPP staff continues to review the cyclic non-domestic user surveys. Users who might fit the criteria of a SIU are notified and further information is collected by phone and/or a site visit to determine if the user requires an industrial user permit.

Discharge Authorizations – Discharge requests that are one time or short term discharges to the Publicly Owned Treatment Works (POTW) are handled using this process. A discharge request containing Material Safety Data Sheets (MSDS), waste characterization, flow volumes, discharge rates and location is submitted by potential dischargers. The proposed discharge is reviewed by IPP staff to determine potential impacts to the POTW. The user receives an approval or denial letter for the discharge.

Pollutant Minimization – Toxic metals, including mercury, are the main focus for pollutant minimization for IPP staff. Toxic metals are tracked by collecting and analyzing six trunkline locations daily, while mercury is analyzed monthly from each of the six locations. POTW influent mercury is sampled and analyzed monthly, with low level influent and final effluent sampling performed quarterly.

Wastewater Treatment and Solids Generation

Solids Screening and Grit Collection – Bar screens in the Wastewater plant headworks continue to significantly reduce screening type debris in the biosolids. We have been exploring alternatives that would further enhance our ability to screen debris.

Scum – This product consists of greases and oils which enter the wastewater plant through the collection system. A proactive program to capture and remove grease and oil at lift stations by cleaning the wet wells on a routine basis continues to help reduce grease and oils contained in the biosolids. Schedules for cleaning wet wells are continually adjusted according to condition of the well at last cleaning, condition history, etc. The captured grease and oil is collected and transported to local landfills for disposal. We have ramped up our public “grease” education program. In 2011, we partnered with City High and Middle School in a program in which over 500 students and their families focused on reducing the amount of grease that they discharge into the system and then finding creative reuses for those grease products.

Primary Treatment – We have been very proactive in maintaining our primary tank mechanisms and associated equipment during “fair weather” months so that repairs

during the winter months are minimized and/or not necessary. The new compressed air system has operated without any system or sizing issues.

Plant Lighting – Staff continues to replace plant lighting with more energy efficient units as time and funding allows (based on cost effectiveness of the replacement). The WWTP is participating in a citywide program geared at reducing electrical consumption.

Raw Solids Storage – Biosolids are held in new storage tanks prior to dewatering. Alternative blending methods have been discussed.

Secondary Treatment – BioP facilities in the south aeration plant continue to be exceptionally effective. We began the “build” portion of a project to convert the north plant to BioP. Upon completion of this project, the liquid processes of the WWTP will be “chemical free”.

Changes in Flows – Billed volume remains low due to the economic climate. Elimination of a majority of the combined sewers has had a dramatic effect on stabilization of plant flows during rain events and winter thaws. Disconnection of footing drains that are discharging to the sanitary should further minimize influent flow peaks.

Solids Stabilization, Conditioning, and Handling

Centrifuge Dewatering – Centrifuge operation went smoothly during 2011. The Program Manager continues to monitor the performance of the units under various load rates in order to determine which feed rate is most cost effective based on electric use, solids capture, polymer usage and recycle treatment costs. Through monitoring centrifuge operations closely, an SOP for centrifuge operation has been developed resulting in a more consistent product and diminished operating costs.

Centrifuge Thickening (WAS) – The centrifuge thickeners are scheduled to be replaced. Possible replacements and/or alternatives are being studied.

Odor Control – The odor control system worked great all year. The wastewater plant did not experience any odor complaints related to the plant. The odor control media for all 3 odor control units at the sludge processing facilities were changed in 2011. Modifications were implemented to minimize maintenance hours and material costs.

Hydrogen Sulfide Containment – Modifications were made to the silo augers seal systems. Graphite packing was used in lieu of the designed grease seal. This proved effective in eliminating the release of hydrogen sulfide from the seal area and will be an extremely cost effective solution to the problem.

Solids Storage and Transportation

Truck Loading – The contractor maintains log-sheets and inspects each truck before departure from the site to ensure that there are no leakage or tracking issues. We have made significant headway in regards to diminishing the excessively high levels of hydrogen sulfide that was being released during loading.

Truck Cover – All trucks are covered during transport to the landfill site in accordance with state law.

Truck Transport to Landfill – The contractor maintains records of dates, driver(s) and landfill destination site(s) for each load leaving the site. There were no spills in 2011.

Truck Washing Procedures – The contractor maintains procedures to wash and inspect trucks to minimize odors and biosolids tracking issues.

Biosolids End Use or Disposal

Landfill – The contractor works with the landfill to properly incorporate the biosolids into the municipal trash. This augments the decomposition process and maximizes the potential for methane gas which is recovered and beneficially used.

Annual Operational Controls Review and Internal Audit

An internal audit of the City's BMP was conducted during the first quarter of 2011. There were 2 non-conformances were identified during the audit.

Third Party Recertification Audit

In the fall of 2011, the City underwent its recertification audit. The Environmental Services Department appreciates the opportunities that having our entire biosolids value chain, as well as those management practices and activities that directly support biosolids-related operations, processes and activities, objectively reviewed through the 3rd party audit process provides us. The feedback gleaned through this process is of great assistance in our commitment for continual improvement. We found the auditor, Dr. Hancuff to be very comprehensive and insightful. We will continue to expand our horizons and encourage the public, educators, representatives of local and state agencies, as well as staff members to become more knowledgeable and involved in our BMP. The department received one positive observation.

- The Environmental Services Department's Wastewater Treatment Plant personnel involved in biosolids management should be recognized for their outstanding achievements, and the exceptional features of their Biosolids Management Program.

In addition to the positive observation the department received commendations as follows:

- The Department established an excellent training program to encourage all employees to understand critical control points (CCP). The active participation of different work groups in creating CCP training videos aided those who made the videos as well as captured the attention of fellow employees. The viewing of the 6 videos during the annual BMP refresher training set a new attendance record.
- The Department has prepared several exemplary environmental protection "tips" publications. These "tips" are short quarter page color handouts that explain what individual citizens can do to help control pollution associated with wastewater generation. The TIPS developed to date include "Proper Grease Disposal", "Proper Medicine Disposal", "Disposable Not Flushable" (for convenience wipes), and "Rain Water is not Wastewater."
- The sewer maintenance crew is almost a full year ahead of its schedule to routinely clean all sewer lines 24-inch and smaller.
- The hard work and dedication of the BMP management team must be acknowledged. While maintaining the BMP verification goal is obviously a team effort, the effectiveness of guidance provided by the Manager assured maintenance of this common goal.

There were also opportunities for improvement.

- Overall – Consider encouraging the use of the terms “solids” and “biosolids” in place of the term “sludge,” and consider referring to the Biosolids Environmental Management System (EMS) as the Biosolids Management Program (BMP).
- Requirement 5.1 – Review the status of the objective associated with preparation of the TIP leaflet scheduled to be produced in 2011.
- Requirement 5.5 – The Grand Rapids biosolids value chain related goals, objectives and programs established in the wastewater treatment “lean” process have not been incorporated into the goals, objectives and programs of the biosolids management program. Additionally, the BMP takes no credit for the detail cost tracking and savings attributable to improved operations resulting from the accomplishment of biosolids goals and objectives. And finally, the Department has established a mercury pollution minimization program to comply with NPDES permit requirements, but has not included it as a goal/objective with regulatory compliance outcomes.
- Requirement 6 – The list of interested parties contact information identified in Table 6.2 of the Grand Rapids Biosolids Management Program Element 6 procedure does not identify the NBP or the lead auditor as interested parties to receive formal communications.
- Requirement 9 – Review Element 9 (and 6) procedure(s) to update contents and specifically define how the program will increase public involvement in determining biosolids goals and objectives.
- Requirement 10.5 – The hauling contractor, Cordes Trucking Inc’s Vehicle Inspection Plan – 2009-1 does not reference or attach the Truck Inspection Log sheet as a figure or table in the procedure (plan). Additionally, 2 of the truck drivers did not have the vehicle inspection plan with them in their trucks.
- Requirement 12 – Element 12 procedure related to document control does not clearly indicate that the EMS Document Revision History as it appears in each document is no longer used to record document changes. The new method of tracking revision history through SharePoint is not described. Consider including in the last revision history entry to all element documents entered on 3/28/2008 that this is the last entry in this format and all future document revision histories will be documented in SharePoint. Additionally some of the descriptions of changes recorded in the SharePoint revision history are not described in sufficient detail including those revisions resulting from audit findings.
- Requirement 15 – The periodic biosolids program performance report for 2010 did not present the specific details of the non-conformances identified in the third party interim audit.
- Requirement 15 – Consider including costs and savings associated with biosolids operations and the BMP in the periodic biosolids program performance report.

Seven (7) minor non-conformances were identified in the audit and can be found in the summary of non-conformances section near the end of the report.

Interested Parties Input/Participation

- During the last quarter of each year the City develops a list of goals and objectives for the next year. As part of this process we seek input from our interested parties regarding concerns and issues they may have. We did receive

positive feedback from 2 interested parties regarding our commitment to improvement in 2011.

- Held an annual meeting with industrial users to discuss new compliance inspection procedures. Industries impact on Biosolids quality was discussed as well as the City's Biosolids BMP.
- The City will continue to keep interested parties apprised of our efforts to seek input as part of our continuous improvement process.

2012 - Current Year Goals & Objectives

An important component of our Biosolids BMP is continual improvement. Annually, goals are identified based on key outcomes, Biosolids value chain, or BMP improvements. During the past year staff determined the following new goals would help us achieve these objectives:

Environmental Tip

- Educate customers by providing a minimum of one "Environmental Tip" that is associated with a "Critical Control Point" of the Biosolids Management Program.

Reduce Significant Industrial User Non-compliance

- To avoid NPDES permit violations and obtain a more consistent quality of biosolids we want to reduce the number of Significant Industrial Users (SIU) that do not comply to the regulations imposed on them.

Create a Tri-fold Brochure

- Create an informative brochure that will educate homeowners in properly addressing any issues they might have with their sanitary sewer lateral. This brochure will also educate the homeowners on many of the root causes of sanitary lateral issues which should in turn result in a more consistent biosolids product and assist our staff in maintaining the integrity of the sanitary sewer system.

Maintenance of Sanitary Sewers

- Track and monitor cleaning of all sanitary sewers 24" and smaller in order to ascertain if we can not only clean 15 inch and smaller sanitary sewers once every 5 years (as we have to date) but clean those up to 24" once every 5 years also. It is critical to maintain our sanitary sewers in order to maintain the integrity of the biosolids, protect the environment and avoid system upsets that can result in sanitary sewer back-ups in residences and business facilities, violation of applicable local, state and federal regulations as well as pose public health and safety concerns.

Chloride

- To eliminate one hazardous waste stream which originates in house, change to an alternate approved method of analyzing wastewater samples for chloride that does not generate any hazardous waste as does the current method.

Improve Use of Computerized Maintenance Management System

- Better utilize the "Computerized Maintenance Management System" (Maximo 7.1) by increasing the accuracy and completeness of data entered before closing a work order so that we may better maintain our assets by having complete information in the system.

Work Orders Less Than 3 Months Old

- The Technical Services group will be striving to make sure that their workgroup does not have any work orders that are more than three (3) months old because if we do not perform work in a timely manner assets will not be maintained properly which could result in an inferior biosolids product or violation of our NPDES permit.

Amalgam Separators

- Track the number of amalgam separators that are being installed in dentist offices connected to our collection system to ensure quality biosolids.

Commendable Service

- Maintain a 75% satisfaction rating among those citizens we have serviced by surveying the customers involved in the Footing Drain Disconnection Program.

Biosolids Quality

- Perform quarterly analysis on WWTP biosolids and compare results with those found in tables associated with Federal Regulations 503 to help assess the impact of changes made in the North Plant Improvement Project which should result in the reduction/elimination of the ferrous addition for phosphorus removal.

BOD

- Track C-BOD, TSS, ammonia and TP attributed to the North Plant Modification Project.

Summary of Non-Conformances

2011-1

- The "Goal & Objectives Annual Review" forms 5.1 and 5.3 were not completed during the last quarter of 2010.

2011-2

- SOP 1110 that when "*Note: The EMS Coordinator must be advised of any changes in current SOP's or of any new SOP's that are associated with a Critical Control Point.*" was added to address Non-conformance 2010-10, history was not updated at the bottom of the SOP – Fixed immediately.

2011-3

- The City of Grand Rapids Element 1 – Documentation of Biosolids EMS does not include a description of the biosolids processes and transportation responsibilities of the Grand Valley Regional Biosolids Authority (GVRBA) or the relationship of this entity with the City of Grand Rapids and the City of

Wyoming. There is no description of which organization has authority for managing various critical control points in the biosolids value chain.

2011-4

- The NBP standard requires the organization to establish and maintain a training program for employees responsible for specific biosolids management activities and to ensure that these individuals are competent for the implementation of various BMP functions. The City of Grand Rapids BMP Element 8 – Training procedure # 10 indicates training schedules by job classification have been developed, which cover recommended and mandatory training of employees. The NBP standard also requires that records of training maintained. Other than for the BMP awareness training there is no organized or centralized comprehensive training schedule by job classification containing recommended and mandatory training of employees relative to their responsibilities for specific biosolids management activities (wastewater treatment, critical control point processes, operational controls, monitoring and measurement, etc.) As a separate aside, consider using the specific name of the training session subject on the sign-in sheets for biosolids training records.

2011-5

- There is no SOP for routine operation of the new centrifuges addressing optimum operating parameters and conditions such as polymer dosage, centrate clarity and/or foaming, centrate recycling or capture, centrifuge speed, concentrated solids pumping, etc.

2011-6

- The Department has established an excellent emergency preparedness and response plan for liquids and solids releases throughout the city collection system and lift station failures. However, except for the contractor's spill control plan, there is no emergency preparedness plan for addressing liquids, solids or biosolids releases at various locations throughout the wastewater treatment plant. Also, there has been no evaluation of the effectiveness of such a plan (e.g. spill drill), and there is no inventory of emergency response equipment on site or readily available (e.g. booms, pumps, kitty litter, brooms, shovels, spill kits, etc.)

2011-7

- The City of Grand Rapids BMP manual Element 14 – Non-conformances, preventive and corrective actions procedure # 3 indicates that whenever a nonconformance occurs an investigation report will be prepared using Table 14.2 form and a corrective action plan will be developed using Figure 14.1. The first form is used to analyze the problem and the second form is used to identify the corrective action and the actual completion date of that action. Nonconformance number 2011-1 had an erroneous completion date in Figure 14.1.

2011-8

- The City of Grand Rapids BMP Manual Element 16 Internal Audit Procedure #5 does not represent the current members and responsibilities of the audit team.

2011-9

- The management review has not maintained a schedule and scope for the review and documentation of changes, policies, plans, procedures, practices and other BMP elements that occur as a result of the management review findings, evaluation or follow-up actions.

Summary

Maintaining a Biosolids Management Program can be challenging - especially when contending with unprecedented staff cuts and turnovers due to the difficult financial times all government entities have been experiencing the last few years. Success has only been achieved through the hard work and dedication of staff, input from interested parties as well as the leadership and guidance of our department administration and the National Biosolids Partnership (NBP).

Continual improvement has long been a departmental philosophy and our Biosolids Management Program enhances this process. The guidelines set forth by the NBP for Biosolids Management Programs has helped immensely with our growth as an organization and encourages teamwork amongst those helping to administer the program.

Non-conformances which are identified assist in strengthening our management practices and improve the overall effectiveness of the Biosolids Management Program. We believe that the new goals we have identified for 2012 will further improve our Biosolids quality and management practices.

Kathie Kuzawa
BMP Coordinator