

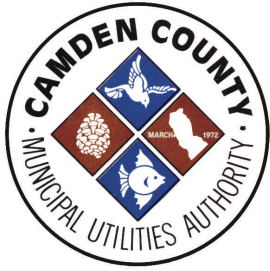
Camden County Municipal Utilities Authority

2012 Environmental Management

System Performance Report

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The National Biosolids Partnership (NBP) is an alliance of the National Association of Clean Water Agencies (NACWA) and WEF, with advisory support from the U.S. Environmental Protection Agency (EPA).

Results of Independent Third Party Audit: CCMUA is Generating Positive Outcomes

An Interim Audit was conducted September 6 and 7, 2012. A Follow-up Audit was conducted on December 7, 2012 to verify correction of major nonconformance during the initial audit.

The audits were conducted by an independent third party auditor, DEKRA, to verify that CCMUA's Biosolids Environmental Management System is meeting the requirements of the NBP' Biosolids Management Program.

The results of the audit determined that: (1) No major nonconformance and two minor nonconformances remained open at the conclusion of the audit. Approved corrective action plans are in place to address each nonconformance; (2), All nonconformance from prior third party audits have been effectively corrected; and (3), CCMUA's biosolids management system is generating positive results.

In September, an interim audit was conducted over two days where key persons were interviewed, including Synagro and NJDEP, and documents and records were reviewed to assess systematic performance of the process being audited and consistency of the written procedures. At the interim audit, DEKRA found nonconformance in the CCMUA management system that required correction. As a result, corrective actions were taken and DEKRA reviewed them in a December 7, 2012 Follow-up Audit.

The two nonconformances are: (1) NBP EMS Element 2 requires the contractors to establish and maintain emergency preparedness and response plans and procedures. Emergency plans being used by Synagro for their operation in the wastewater plant have not been coordinated with CCMUA Emergency Plans in the plant; and (2) NBP EMS Element 16 requires the organiza-

tion to establish an internal audit program to determine whether it is effectively meeting its biosolids management policy and that the internal audit program cover biosolids management activities performed by contractors. While a review of documentation has been completed, CCMUA has not conducted an onsite assessment of the use of their biosolids and consistency with their Biosolids Policy at the Lehigh Cement facility.

These two non conformances have now been corrected. The next scheduled Independent Third Party Audit is September 2013 and will again be performed by DEKRA.



CCMUA Conducts Internal Audit

On August 21 and 22, 2012, CCMUA conducted an Internal Audit as required by the National Biosolids Partnership EMS Element #16.

The purpose of the audit was to determine if CCMUA is complying with its Biosolids Management Policy and the NBP Code of Good Practice and begin corrective actions for any findings. The focus of the audit was the new Sludge Drying Facility, response to odor complaints and housekeeping and safety nonconfor-

mances from the 2011 interim audit.

Three Auditors were selected that were not part of the day-to-day operations of the plant. A worksheet was developed and interviews with plant personnel were conducted to assess the plant's compliance with the 10 principles of the NBP Code of Good Practice.

The audit identified four strengths including CCMUA's significant reduction in the volume of biosolids

generated at the wastewater treatment plant. The audit found that fundamentally CCMUA is meeting their Biosolids Management Policy and Code of Good Practice with some exceptions. There were four items needing correction and three opportunities for improvement. Corrective action plans have been developed for the four items needing correction. The opportunities for improvement will be considered during the annual Management Review meeting.

Progress Towards Goals and Objectives

Camden County MUA continues to optimize achievement of its four main long term goals to help continually improve performance of its Environmental Management System. These goals are to:

1. Optimize water quality performance,
2. Optimize air quality/odor control performance
3. Minimize cost to ratepayers and
4. Improve community relationship

In addition, the CCMUA has a number of objectives which contribute to, and fall under, the overarching umbrella of these main goals. 88% of these objec-

tives established for year 2012 were completed and completed on time. Accomplishments include:

- Maintain Effluent TSS <10 PPM
- Maintain Effluent cBOD <5 PPM
- “0” Air Permit violations per year
- Conduct at least one inspection of biosolids hauling destinations (i.e. landfill, land application sites) per year
- Achieve 97% completion of PM work orders .
- Conduct at least two Environ-

mental Justice Projects per year

- Reduce energy use from distribution grid by 10% by using solar power
- Update at all SOPs to reflect EMS requirements.
- Construct at least 10 new rain gardens/year.
- Maintain R&R requirements to \$3.5 million/year or less.

“ Be a good neighbor to the surrounding community with a view to not only doing no harm, with respect to odor impacts, but also to undertake initiatives to improve the quality of life for our neighbors.”

Each year CCMUA establishes objectives to help achieve its main goals and continually improve its Environmental Management System. Listed below are the current goals for 2013.

- Maintain Effluent TSS <10 PPM
- Maintain Effluent BOD <5 PPM
- “0” Air Permit violations and odor complaints per year
- Conduct at least one inspection of biosolids hauling destinations (i.e. landfill, land application sites) per year
- Update all SOPs to reflect EMS requirements
- Reduce energy use from

distribution grid by 10% by using solar power.

- Construct at least 10 new rain gardens/year
- Complete Sludge Drying Facility by 2013 to proc-

ess 100% of sludge produced

- Maintain R&R requirements to \$3.5 million/year or less.
- Use 100% green energy by 2017

2013 Objectives

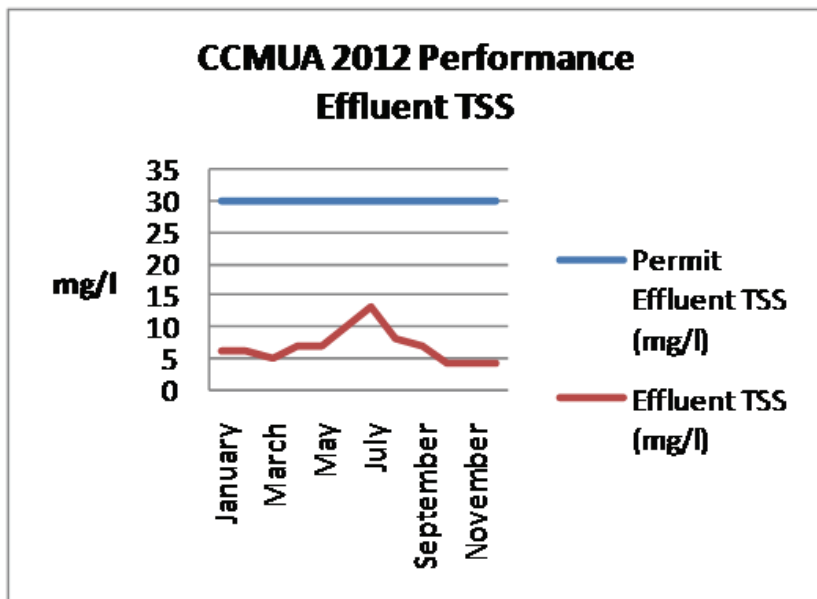
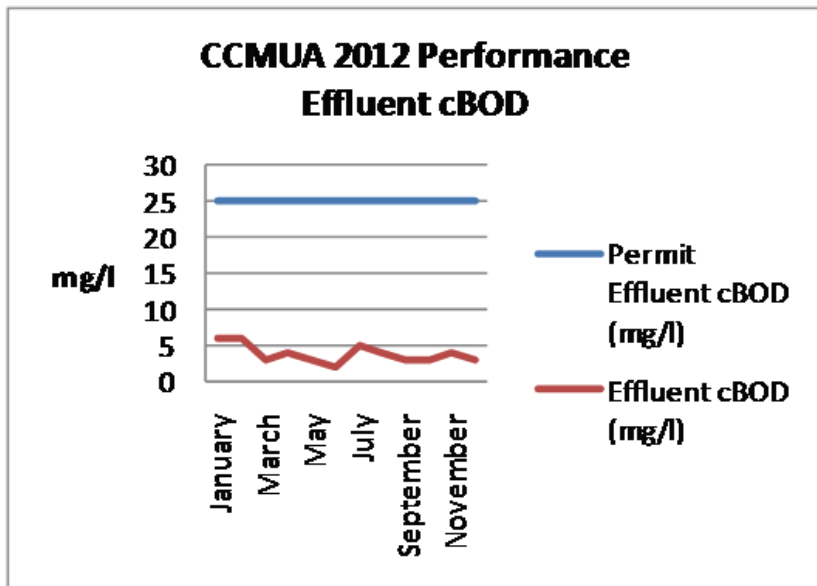


Regulatory Compliance

CCMUA's Environmental Management System complies with all applicable federal, state, and local requirements.

CCMUA's plant effluent concentrations of TSS and cBOD are averaging below 15 mg/l and 10 mg/l, respectively, which is significantly lower than the discharge permit requirements of 30 mg/l and 25 mg/l, respectively.

Biosolids produced at CCMUA met all standards required by U.S. EPA for metal concentrations.



Environmental and Contractor Performance

One of the main priorities for CCMUA is to minimize adverse impact from odors emanating from the wastewater treatment and sludge disposal process---this is being done both through implementation of a "zero tolerance" policy for odors, and through capital improvements. The CCMUA has also been pursuing this goal through implementation of successful odor

control strategies, such as assigning additional supervisors, operators and maintenance staff on weekends, produce sludge cake with solids concentration of at least 27% to reduce the amount of sludge to be hauled out from plant, and minimization of off-site sludge hauling during off hours. In 2012 CCMUA had "0" air permit violations.

In 2012 CCMUA representatives also per-

formed random inspections of the truck hauling process during biosolids loading and inspected a minor reclamation site which applies CCMUA biosolids. The inspections are conducted in order to insure that hauling contractors are following correct procedures and complying with CCMUA's established standards.

CCMUA Expands Sustainability Outreach

The CCMUA has been working to not only expand its own internal sustainability program but to also assist other Camden County Agencies and Municipalities with their sustainability program as well. The CCMUA is taking the lead in directing the Camden County sustainability plan with the goal of implementing water conservation and energy conservation programs, promoting recycling and environmental education countywide. The CCMUA'S Sustainability coordinator is working directly with several Camden County Municipalities to develop their municipal sustainability plan as well.



Continual Improvements - Green Energy

In a continuing effort to reduce energy costs and make the CCMUA greener, the Authority has installed a new 1.8 million-watt solar panel array that is now in service and providing power to our wastewater treatment plant. The 1.8 million watts of electricity represents approximately 10% of the plant's energy needs. The projected savings are approximately \$300,000 in energy costs during the first year of the project and about \$7 million over the life of the 15 year power purchase agreement.

Go to www.ccmua.org to access more information. The amounts of energy generated today, this week and since installation are all shown. Photos, weather information, and a Real Time Power System Schematic are all provided. The amounts of Carbon Dioxide, Nitrogen Oxide and Sulfur Dioxide avoided by the energy generated by the solar panels are listed. The solar panel

monitor is available both on our web site and administration building lobby. This solar panel project is the first phase of the CCMUA's overall green energy initiative. Ultimately, the CCMUA's goal is to use 100% green energy within the next five years.

CCMUA is in the process of investigating other alternative and renewable sources of energy, such as digester and combined heat and power, geothermal, and additional solar installations.



Camden SMART Accomplishments

During 2012, the Authority met its goals for Environmental Justice and Rain Garden Installations through the Camden Smart Initiative.

Camden SMART is a collaboration between the City of Camden, Camden County Municipal Utilities Authority, Cooper's Ferry Partnership, Rutgers Cooperative Extension Water Resources Program, New Jersey Tree Foundation, NJ Department of Environmental Protection. The purpose of Camden SMART is to develop and implement a comprehensive network of green infrastructure programs and storm water management in the City of Camden.

As a founding member of Camden SMART, the Authority's work helped Camden City become certified under the Sustainable Jersey program. Our Authority had programs for renewable energy, green jobs, water conservation education, green infrastructure and storm water management, completed a

community asset map project and participated in a green fair, which all contributed to the program.

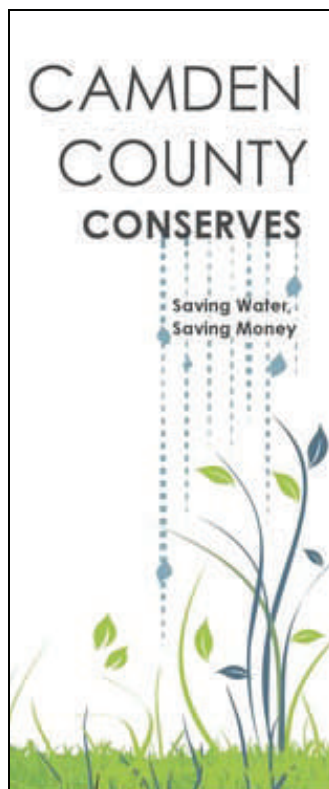
Two Rainwater harvesting cisterns and eight rain gardens were installed during 2012. The Camden SMART water conservation programs included distributing educational pamphlets, community workshops and water conservation kits. 236 Trees were planted during 2012 through the Urban Air Shed Reforestation Program.

During April the ground breaking ceremony was held for Phoenix Park. This five acre site is being converted

from an abandoned industrial complex into a waterfront park.. The finished park will improve storm water management and give the residents of the city needed access to the river. The design of the land portion of the park has been completed.

The Rain Garden Sponsorship Program was begun to provide funding for the rain gardens. The SMART team drafted a water conservation ordinance which was adopted by Camden City.

Camden SMART was recognized by the media, the Camden County Freeholders, Sustainable Jersey and the Governor of New Jersey during 2012.



See www.camdensmart.com for more information

During 2012, the Authority included several educational flyers in with the bills sent to the customers:

Camden County Conserves

Promotes saving water and preventing flooding.

Green Challenge

Helping Camden become a certified green city.

CCMUA Continues to Reduce Odors, Lower Fuel and Disposal Costs

Sludge Drying Facility

The CCMUA's new Sludge Drying Facility is operating at 57% capacity in 2012. Originally the Dryer was anticipated to be at 100% capacity at this time; however, several problems arose during the commissioning period. At full capacity the dryer will process an average of 160 tons of sludge per day. The Dryer will reduce the quantity of sludge to 40 tons per day and thereby significantly reduce disposal costs by 50 percent.

In addition to sludge disposal costs, odors will be reduced as a result of the reduction in truck traffic by at least 80%. This reduction will also help to improve the quality of life for the surrounding neighborhood.

Other benefits of the sludge drying facility include a reduction in carbon emissions. The sludge from the dryer will be converted to a renewable fuel to create energy and power manufacturing operations. During the first year of operation, CCMUA's sludge will be burned instead of over 6,000 tons of coal. This substitution of dried sludge for coal will reduce carbon emissions by 17,000 tons annually.

During 2012 the Authority explored the addition of a Sludge Digester in order to lower fuel and disposal costs. Management will continue to evaluate this during 2013.



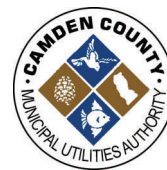
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- Steve Lee, Chief Operator
- Jeff Wilson, Sludge Distribution Coordinator
- Chris Waldron, EMS Co-Coordinator
- Douglas Burns, EMS Co-Coordinator



MISSION STATEMENT

Total commitment to our customers, public health and quality wastewater management through teamwork and individual effort by participating in ongoing training, education and research, maintaining regulatory compliance, and striving for continuous improvement of systems and services.