Encina Wastewater Authority

6200 Avenida Encinas
Carlsbad, CA 92009

Phone: 760-438-3941
Fax: 760-438-3861
Email: BiosolidsEMS@encinajpa.com

"There is a strong commitment throughout the organization to the principles of the Code of Good Practice."

-EMS 3rd Party Auditor (KEMA)

Contact Information

If you have comments on this report or any other biosolids related items, please call our EMS Coordinator at:

(760) 438-3941

or email us at:

biosolidsEMS@encinajpa.com.

If you would like to be involved in the Biosolids EMS process, you may request to be placed on the interested party list by calling us or submitting your request via email.

For more information about EWA's biosolids program, you can access the Biosolids EMS website at:

http://www.encinajpa.com/EMS-Live/BiosolidsEMS/emshome.html.

Audit Results

The first internal audit of EWA's EMS was performed by Millenium Environmental in February 2005. The audit resulted in no major nonconformances, 22 minor nonconformances, and 4 noteworthy efforts of achievement. All nonconformances were addressed through EWA's corrective action program prior to the third party audit.

The first third party audit of EWA's EMS was conducted by KEMA and included documentation review, process audits and examination of outcomes. EWA successfully passed the third party audit with no major nonconformances and only 9 minor nonconformances. The auditors noted that "There is a strong commitment throughout the organization to the principles of the Code of Good Practice."

EMS Audit Team – Tish Berge (EWA's EMS Coordinator), Bruce Dale (EWA), Jon Shaver (KEMA), Jim Donley (Ag Tech), Salvador Ruiz (Ag Tech), Fred Arsaga (Ag Tech), and Ralph Eschborn (KEMA)

Future Plans

EWA will continue to improve its Biosolids EMS. In accordance with EWA's Biosolids Policy, EWA will strive to continue its 100 percent biosolids beneficial reuse program that is cost-effective and publicly accepted. EWA is committed to producing Exceptional Quality Class B biosolids at the present, and plans to begin producing Class A biosolids in 2007.

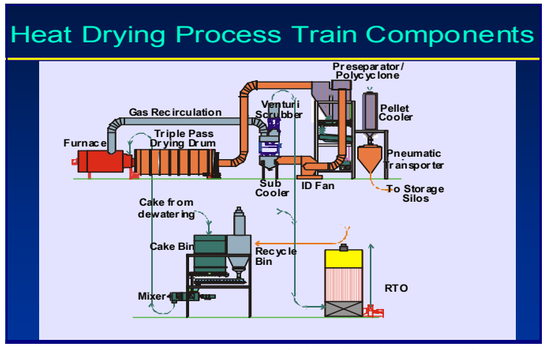
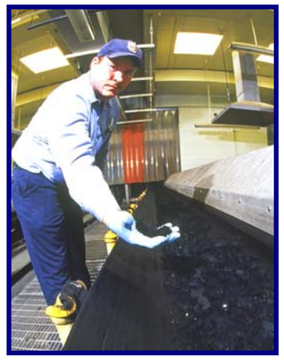


Diagram of the heat drying process, which will produce Class A biosolids.

Encina Wastewater Authority

Annual Biosolids Program Performance Report 2005

EWA's Biosolids Management Program



EWA Operator, Octavio Navarrete displays a sample of biosolids.

Biosolids are the nutrient-rich, organic, soil-like product resulting from wastewater treatment. In 2004, the Encina Wastewater Authority (EWA) produced approximately 34,295 dry tons of Class B Exceptional Quality biosolids at the Encina Water Pollution Control Facility (EWPCF).

The EWA is committed to maintaining 100% beneficial reuse of biosolids; as a result, all biosolids produced at the EWPCF have been land applied as soil amendment on a farm in Yuma, Arizona, since 2001.

Collaborative efforts of the operations, maintenance, and environmental compliance departments have enabled EWA to maintain this beneficial biosolids reuse program. In addition, EWA investigates and implements feasible, innovative, and cost-effective resource recovery options.

EWA Obtains Biosolids EMS Certification

In the spring of 2000, the EWA committed to participate in the National Environmental Management System (EMS) Demonstration Program sponsored by the National Biosolids Partnership (NBP). As part of this program, EWA developed a Biosolids EMS as a management tool to improve the effectiveness of plant operations, meet regulatory requirements, and address environmental issues associated with biosolids production, handling, transportation and reuse/ disposal. EWA's EMS was implemented in December 2002 and was certified by the NBP in August 2005.

EWA is proud to be the ninth agency in the nation to receive this certification.

EMS Outcomes & Benefits

Like the other certified agencies, EWA has seen several benefits as a result of implementing a Biosolids EMS. Many of these benefits stem from an increase in communication and processes streamlining.

EMS implementation provided the framework for consolidating specific practices and procedures into an integrated program with assigned responsibilities and oversight. This integrated program is supported by the recognition of biosolids management as a priority core business area. By managing performance in the four outcome areas, EWA also established a method to benchmark biosolids operations performance.

Through this new management structure and focus, implementation of the EMS created an organizational culture where each individual has responsibility and commitment to protecting the environment through continuous improvement. This new culture has fostered improved communication between departments and with our land application contractor. Commitment to continuous improvement and environmental performance is supported by EWA's Mission and Vision. The 3rd party verification audit reinforces EWA's commitment to the

(Continued on Page 2...)

EMS Outcomes & Benefits *(continued)*

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EMS program. This process provided the team with the opportunity to demonstrate the 17 elements and their integration into biosolids value chain management. The auditors provided valuable outside views which helped EWA identify areas for improvement. Additionally, the 3rd party verification further emphasized the priority of biosolids as a core business area.

The EMS has resulted in many other positive outcomes since it was implemented in 2000:

Quality Biosolids Practices: Sub-surface liquid injection practices used by Ag Tech for land applying biosolids are highly regarded by regulators and have successfully eliminated all odor complaints, creating a reliable land application alternative. Enhanced operational performance to ensure reliability of the cogeneration plant has enabled EWA to continue generating approximately 80% of its own electric needs saving $1MM per year in reduced utility costs. Implementation of the Biosolids Strategic Plan resulted in design of a heat dryer system that will cost-effectively produce Class A biosolids.

Environmental Performance: Surface water drains at the treatment plant have been connected to the plant headworks to eliminate dry weather storm water runoff, which reduces pollutant loadings on local waterways. Optimization of the chemically enhanced primary treatment system resulted in assured plant capacity, increasing methane gas production and reducing energy costs by 45% for a net savings of $330K per year.

Regulatory Compliance: NPDES permit violations have been eliminated in the past two years, providing for cost reductions and improved public perception. Since Arizona was granted primacy in 2004, regulators have expressed confidence in Ag Tech and EWA's land application practices, allowing for beneficial reuse of 100% of biosolids generated.

Relations with Interested Parties: A public outreach and education program has reduced instances of pollutant slugs entering the plant, enabling more stable operations. Methods described above in other outcome areas have also helped in reducing odor complaints received by EWA generating increased public acceptance.

EMS Achievements 2004 - 2005

To continually improve the environmental performance of its biosolids management program, the EWA establishes and periodically reviews measurable biosolids program goals and objectives for its biosolids activities. EWA has developed goals and objectives in four EMS outcome areas: Regulatory Compliance, Environmental Performance, Interested Party Relations, and Biosolids Quality. EWA's overarching goal is future production of Class A biosolids.

Through the dedication of the EMS Team, EWA continues to meet each goal and objective. EWA remains in compliance with applicable federal, state, and local regulations. In accordance with its Biosolids Strategic Plan, EWA is in final design of a facility that will produce Class A biosolids.

Objective	Achievements
• 100% Production of Class A Biosolids	Conducted Heat Dryer Workshop and are in the final design phase of a Class A Biosolids facility.
• Maintain 100% Beneficial Reuse of Biosolids	Continued efforts to develop a Biosolids Disposition and Marketing Plan for Class A and B Biosolids. Successfully negotiated an amendment to land application contract to commit to EWA's EMS; thereby securing land application as a beneficial reuse option.
• Increase Biosolids EMS Outreach	Publicizing NBP certification and preparing public Biosolids EMS workshops. Presented EWA's EMS to community groups and professional associations. Upgrading web page with appropriate emphasis on biosolids.
• Implement and Certify Biosolids EMS	Completed internal and third party audits and obtained NBP certification.

Public Participation

A goal of the EMS is to select and implement a proactive public participation approach involving interested parties in the EWA's Biosolids Management Program and EMS planning process. The approach selected for public participation provides interested parties with meaningful opportunities to express their views and perspectives relative to the EWA's biosolids management activities, including concerns about environmental impacts, biosolids program performance, and potential areas for improvement. EWA considers input from interested parties in updating goals and objectives as part of the periodic review of biosolids management program performance.

EWA conducts wastewater treatment plant tours on a regular basis throughout the year. In 2004, 25 tours were conducted for approximately 600 people. Plant tours include a discussion of the treatment process and pretreatment program, storm water pollution prevention, household hazardous waste disposal practices, product substitution, and EWA's Biosolids EMS.

EWA also participates in community outreach activities and recently developed an interactive treatment model to use during these events. In 2004, EWA staff: spoke to the Industrial Environmental Association about EWA's Pretreatment Program; hosted booths at Oceanside's Pepper Tree Day Fair and the City of Carlsbad's Public Works Fair; and made a presentation at a Metal Finishing Pollution Prevention Workshop sponsored by the County of San Diego. In addition, copies of the brochure developed in 2003 entitled "10 Simple Things You Can Do to Protect the Ocean" were distributed to EWA's member agencies, the San Dieguito Lagoon Foundation and the Stephen Birch Aquarium for distribution.

EWA staff remain involved in industry associations. In 2004, staff presented their biosolids heat drying design and Biosolids EMS to the California Water Environment Association.

EWA's Compliance Record

EWA is in compliance with all applicable federal, state, and local regulations regarding biosolids, including meeting the more stringent Exceptional Quality requirements of 40 CFR Part 503 regulations.

In recognition of complete and consistent compliance with its National Pollutant Discharge Elimination System (NPDES) permit during the 2004 calendar year, the National Association of Clean Water Agencies (NACWA) presented a Gold Award to EWA.

EWA's laboratory, which is certified by ELAP (Environmental Laboratory Accreditation Program), monitors and measures the biosolids produced at the EWPCF. Samples of the biosolids are taken from the process areas and analyzed for metals, dioxins, PCBs, pathogens and vector attraction.

EWA currently meets 40 CFR Part 503 pathogen reduction and vector attraction reduction requirements through anaerobic digestion.

EWA Associate Chemist, Justin Law, analyzes samples for pollutants.

"EWA is a leader and a model to other wastewater agencies nationwide who want to strive for continuous environmental improvement."

-NBP Chair, Robert Hite

Land Application

EWA currently has one contractor that is responsible for transporting and beneficially reusing the biosolids produced at the EWPCF. Ag Tech LLC transports and land applies the biosolids, which are liquefied and injected as soil amendment to produce crops for non-human consumption.

Ag Tech LLC has developed a positive working relationship with the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (EPA) through the permitted land application of biosolids for approximately 25 years. Ag Tech LLC is in compliance with all local, state, and federal requirements and is monitoring and tracking the amount of biosolids applied and the crops planted and harvested.