



# Biosolids Program Annual Report 2016

## Biosolids Management Plan Update

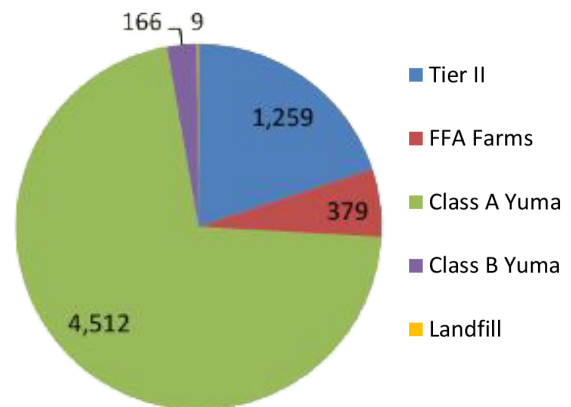
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The Encina Wastewater Authority (EWA) continues to implement Phase II of its Biosolids Management Plan (BMP), by developing “Tier II” markets for its PureGreen fertilizer (e.g. fertilizer distributors and blenders, golf courses, sod farms, local communities, specialty agriculture and research). Tier I options (land application and landfill) provide EWA with reliable and flexible outlets for its biosolids as needed. Tier II options require more development and are more seasonal. They have limited capacity for product use, but offer increased public outreach benefits and generate more income.

### BMP Accomplishments Include:

- Since 2010, PureGreen fertilizer has generated over \$418,000 in operational revenue.
- During FY2016, 1,259 tons of PureGreen fertilizer was distributed to Tier II markets.
- During FY2016, PureGreen generated an additional \$83,957 in revenue through sale of the product.
- Continued development of partnerships to assist in PureGreen product distribution.

FY 2016 Biosolids Distribution (Dry Tons)



### Benefits of Biosolids as a Fertilizer & Soil Amendment:

- Source of organic matter, nitrogen, phosphorus, and micronutrients.
- Increases crop production by making marginal soils productive.
- Enhances soil structure.
- Increases water retention capacity reducing the need to irrigate crops.
- Promotes soil aggregation and reduces bulk density.



## Environmental Management System Accomplishments

### Regulatory Compliance

- Testing results showed that 100% of EWA's biosolids met regulatory standards for their intended use.
- EWA received a Platinum Award from the National Association of Clean Water Agencies for 100% compliance with its ocean discharge permit for six consecutive years.



### Environmental Performance

- EWA received the California Water Environment Association Plant of the Year Award for large plants (>20 MGD).
- EWA produced 75% of the energy needed to operate the treatment plant through the use of digester gas in its cogeneration facility and continues to be recognized by the EPA as a Top 30 Green Power Partner.

- Installation of new aeration basin air supply piping and diffusers has reduced energy demand and will assist EWA in achieving its goal of energy independence.

### Quality Biosolids Practices

- 99% of EWA's biosolids were recycled as a fertilizer or soil amendment by fertilizer blenders/wholesalers, local nurseries and Future Farmers of America (FFA) groups.
- Identified critical spares inventory for biosolids heat dryer.

### Relations with Stakeholders

- Forty-one facility tours and five community outreach events provided information about how EWA protects the Pacific Ocean, produces renewable resources, and regulates discharges from local industries.
- EWA continues to use social media (i.e. Facebook) to expand outreach to interested parties.





## Monitoring & Measurement Results

### Monitoring of Biosolids Product

EWA conducts required and routine testing of its biosolids to ensure that reuse of this product will not endanger public health or the environment. All tests conducted during FY2016 demonstrated that EWA's PureGreen fertilizer and biosolids met or exceeded state and federal standards including:

- California Department of Food and Agriculture fertilizer requirements.
- EPA's Class A pathogen requirements.
- EPA's Exceptional Quality requirements.

### Contractor Compliance

In FY 2016, EWA contracted with Denali Water for biosolids hauling and handling services. Class A fertilizer not used by Tier II clients is hauled to Yuma, Arizona for land application along with any Class B material produced. During the year, Denali Water hauled 4,512 dry tons (dt) PureGreen and 166 dt Class B biosolids to Yuma. An additional nine dt was hauled to the Otay Landfill while the heat dryer was offline. Agronomic rates and annual report information show Denali is meeting industry standards for land application.

During FY 2016 a total of 1,259 dt of PureGreen fertilizer was used by nurseries, golf courses and third party distributors. These customers are visited and/or communicated with on a regular basis regarding proper usage and how to avoid product reheating.

### 2015 Recertification Audit

Last year EWA successfully completed a third party audit to maintain Platinum Certification of its Biosolids Environmental Management System (EMS) from the National Biosolids Partnership (NBP). The audit was conducted October 19-22, 2015 by DEKRA Certification Inc. This was the third verification audit of EWA's EMS program, which is required every five years. The audit results were reported to EWA management, the NBP and DEKRA Certification Inc.

DEKRA reviewed the dynamics of EWA's biosolids program and audited the program for conformance with expectations and requirements of the NBP EMS Elements. The audit identified two major nonconformances, which require EWA to: create more measurable goals for the EMS program; and establish an action plan that describes improvement activities it is pursuing to achieve its biosolids program goals and objectives. Six minor nonconformances were addressed through EWA's corrective action process. In addition, DEKRA noted the following strength in EWA's Biosolids Management Program:

- Effective initiatives are in place to make biosolids a value-added product for customers to increase revenue.

Based on the results of the audit, DEKRA issued the following verification statement: "DEKRA Certification, Inc. has independently verified that the biosolids management program being used by Encina Wastewater Authority supports continual improvement in environmental performance, meeting regulatory compliance obligations, utilizing good management practices, and creating meaningful opportunities for public participation and is in conformance with requirements of the National Biosolids Partnership Biosolids Management Program."





## FY 2016 Goals and Objectives Completed

In Fiscal Year 2016, five of eight goals were completed, with three being carried over to Fiscal Year 2017. Completed goals include:

- Beneficially used >95% of EWA's biosolids.
- Provided >1000 tons PureGreen fertilizer to blenders or wholesalers of premium fertilizer product.
- Maintained heat dryer operational status >90% excluding planned maintenance.
- Discussed EMS program with biosolids contractors at least once during the year.
- Provided 41 tours to schools, industry groups, or other interested parties.

## FY 2017 Goals and Objectives

### Preserve Public Health and Environmental Protection

- Eliminate use of chemical treatment for Odor Reduction Facility III and conduct an odor evaluation to verify effectiveness of stand-alone carbon treatment for removal of secondary process odors.
- Beneficially use >95% of EWA's biosolids.

### Continued Regulatory and Program Compliance

- Achieve DOE Better Plants Program 5% overall energy demand reduction for EWPCF.
- Reduce natural gas use in the heat dryer 20% from FY 2016 (GHG).

### Continued Quality Biosolids Management Practices

- Provide 1500 tons of PureGreen to blenders or wholesalers of premium fertilizer product.
- Maintain heat dryer operational status >90% excluding planned maintenance.
- Improve centrifuge output efficiency from 22% to 24% total solids.

### Continued Communication with Stakeholders

- Discuss EMS program with biosolids contractors at least once per year and perform site visit.
- Provide 30 or more tours to schools, industry groups, or other interested parties.
- Publish two issues of RenEWable News updating stakeholders on resource recovery efforts.

If you have comments on this report or any other biosolids related items, please call our EMS Coordinator at: (760) 438-3941 or e-mail us at: [biosolidsEMS@encinajpa.com](mailto: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 website at: [www.encinajpa.com](http://www.encinajpa.com).

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