



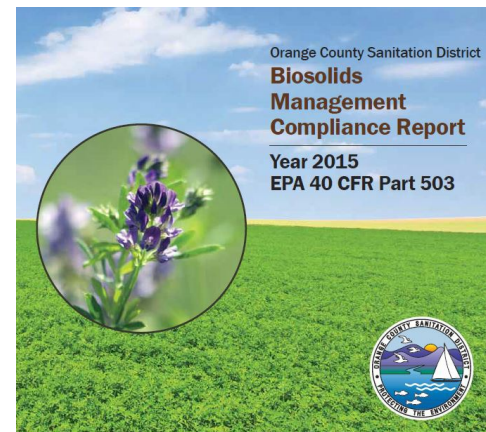
biosolids newsletter

2015 Annual Compliance Report Available

In 2015, OCSD produced 278,500 wet tons of biosolids, which equates to an average of 763 tons per day of biosolids or 30 truckloads hauled from OCSD's Fountain Valley and Huntington Beach plants.

Our annual compliance report details how we met regulatory requirements onsite and how our biosolids were recycled offsite.

Biosolids compliance reports are submitted to regulators by February 19th each year. OCSD's submitted report is available on our website: ocsd.com/503.



OCSD moving to internal standard for its biosolids management system

[Read about OCSD's recent decision](#) based on our program's maturation, and what impact we expect the changes to have on the quality of our program.



Are you registered to receive OCSD bid/RFP opportunities?

Your company will be notified once an opportunity becomes available in your area of interest. Using OCSD's Bid and RFP's website (ocsd.com/businesses/bids-and-rfps), you will be linked to PlanetBids portal for registration. Note that registration is also required in order to view any bid/RFP packets.

Orange County Sanitation District VENDOR PORTAL

New Vendor Registration
Create a new vendor record.
If you wish to view or edit an existing vendor, simply Log In with your User Name and Password.

Bid Opportunities
Search for bid opportunities with this agency, download documents, become a prospective bidder, and electronically bid on projects.



OCSD Biosolids Master Planning contract awarded

In December 2015, OCSD's Board of Directors awarded the Biosolids Master planning contract to the proposal team of Black & Veatch with Brown & Caldwell. This planning effort will identify, evaluate, and integrate onsite solids treatment technologies with offsite biosolids management options for a holistic plan. The final biosolids plan is expected to be completed in spring of 2017. The last comprehensive biosolids planning effort was completed in December 2003.

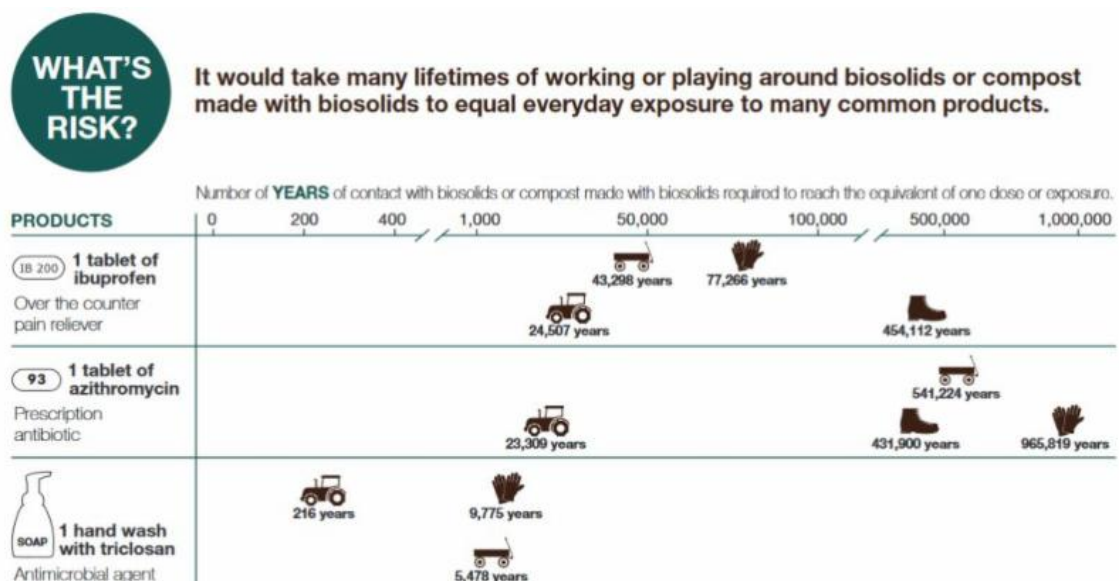
Could this be the next generation of solids to energy?

OCSD's Senior Engineer Jeff Brown was featured in a [recent article for WERF's LIFT Notes](#). Jeff discusses OCSD's interest in demonstrating super critical water oxidation as a new, efficient method of turning solids to energy.



New reader-friendly biosolids risk brochure available

[From NBMA Biosolids eBulletin](#): This brochure is one of three resources being offered as part of the Biosolids Risk Analysis study coordinated by NW Biosolids with professionals Kennedy/Jenks and University of Washington taking the lead on this extensive literature review and biosolids risk analysis. A primary goal was to create simple, easy to understand metrics to effectively communicate risk associated with common biosolids land application pathways. A full technical report and research note will also be released soon. [Download your copy here.](#)



Updated Fact Sheets

- OCSD recently [updated our biosolids fact sheet](#) with a new look and minor text changes.
- California Association of Sanitation Agencies published a [Spanish version of their biosolids fact sheet](#). Both of which are available on CASA's biosolids website.

ORANGE COUNTY SANITATION DISTRICT
ANSWERS TO QUESTIONS ABOUT...

Biosolids

WHAT ARE BIOSOLIDS?
Biosolids are nutrient-rich, treated organic matter recovered through the treatment of wastewater.

WHAT IS THE BIOSOLIDS PROGRAM?
OCSD's biosolids program consists of processes to ensure solids are treated onsite and used offsite (recycled or disposed) in accordance with all regulations and best management practices.

HOW ARE THEY TREATED?
Solids in wastewater (sewage sludge) are settled through the treatment process and treated (digested) to minimize pathogens (germs that cause disease) and odors. These digested solids are called biosolids.

The digestion process also yields methane gas that is converted to electricity to fuel most of our treatment operations. Some of the methane is converted to hydrogen to fuel motorist's vehicles.

WHAT IS BIOSOLIDS PROGRAM SUSTAINABILITY?
OCSD needs to safeguard that our biosolids have a home for a long time to come. We use strategies like a diversity of management options and ensuring contractors follow best management practices to achieve program reliability.

WHAT IS LAND APPLICATION?
Land application uses biosolids as a soil amendment to fertilize farmland, typically for non-food crops. The biosolids are usually broadcast using a manure spreader then tilled into soil using a disc. Because biosolids are nutrient rich, contain beneficial microbes, and bring

needed organic matter to marginal desert soils, biosolids are a low-cost, environmentally-friendly alternative to popular petroleum-based fertilizers.

HOW DO OUR BIOSOLIDS ENHANCE THE ENVIRONMENT?

- Some of our biosolids are recycled and used like fertilizer on farm fields to create and maintain healthy soils and improve crop yields.
- Some of OCSD's biosolids are further processed through composting to create a consumer-grade soil amendment that is distributed to agricultural, commercial and residential users.

WHERE ARE OCSD'S BIOSOLIDS RECYCLED?
OCSD currently recycles our biosolids at the locations on the map (www.ocsewers.com/map).

FARMING WITH ORANGE COUNTY'S BIOSOLIDS IS A WIN FOR THE ENVIRONMENT, FARMERS, AND RATEPAYERS
Decades of nationwide use, research, and regulatory review and oversight have demonstrated the benefits and safety of biosolids. Orange County's biosolids have been safely applied to farmland in California and Arizona since the 1960's.

Orange County's biosolids (treated sewage sludge) are a beneficial soil amendment for farmland and an environmentally-friendly alternative to petroleum-based and chemical fertilizers. Not only do biosolids help conserve water in the soil, the California State Water Resources Control Board designated biosolids farmland application to be the environmentally-superior option in their Environmental Impact Report for the state-wide biosolids permitting process.



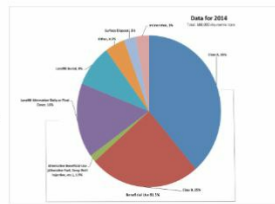
California Association of Sanitation Agencies
**HOJA INFORMATIVA:
¡LOS BIOSOLIDOS SON UN
RECURSO, NO UN RESIDUO!**
Ensuring Clean Water for California



¿Qué son los Biosólidos?

- Biosólidos son el subproducto natural, rico en nutrientes del tratamiento de aguas residuales. Son altamente procesados y analizados para garantizar su seguridad. Biosólidos generalmente se utilizan en una de cuatro formas: como nutrientes ricos, sólido húmedo, gránulos secos, líquido o abono. Biosólidos son generalmente reciclados como acondicionador del suelo, pero también pueden utilizarse como alternativa final en las rellenas sanitarias. También se están utilizando cada vez más como una fuente de energía alternativa.
- Biosólidos de Clase A contienen patógenos (organismos que causan enfermedad) que no se detectan en niveles muy bajos antes de aplicarse a la tierra o distribución pública. Las leyes de protección aseguran que los biosólidos de Clase B son seguros y también se pueden utilizar a pesar de que puedan tener niveles mínimos de agentes patógenos. El secado, la luz solar y otros procesos naturales hacen que los patógenos mueran cuando se aplican a los suelos. Las rigurosas prácticas de tratamiento y supervisión reguladas de biosólidos de Clase A y Clase B minimizan la posibilidad de amasar cualquier portador de agentes patógenos.
- Biosólidos aplicados a la tierra deben cumplir con las normas federales y estatales para los 9 contaminantes regulados (desde el arsénico hasta el zinc). Prácticamente todos los biosólidos de California están muy por debajo de los límites de riesgo basados en "Alta calidad" para todos los contaminantes. Esto es en gran parte debido a la estricta implementación de requisitos estrictos para el procesamiento prerrogado en la década de 1980, que regulan las industrias que descargan residuos industriales a las plantas de tratamiento de aguas residuales.
- Los californianos generaron aproximadamente 688,000 toneladas métricas secas de biosólidos en 2014, la mayoría de los cuales fueron aplicados a la tierra.

¿Cómo se Manejan Los Biosólidos Producidos en California?



Beneficios Ambientales

- El reciclaje de biosólidos mejora la calidad y salud del suelo, y aumenta el rendimiento de los cultivos.
- Biosólidos tienen alta capacidad para absorber y retener la humedad, lo que mejora la habilidad del suelo de absorber y mantener la humedad, reduciendo la necesidad de riego y proporcionando una resistencia natural contra la sequía.
- Biosólidos retienen el carbono en el suelo y reducen la emisión de gases de efecto invernadero y el consumo de energía en comparación con la producción de fertilizantes sintéticos.
- Biosólidos disminuyen el uso y gasto en fertilizantes.
- Biosólidos pueden ayudar a recuperar la tierra devastada por incendios, las minas abiertas, pastos de pastoreo excesivo, y áreas deforestadas.
- Biosólidos pueden ser tratados para usar como fuente adicional de combustible para crear energía.
- Biosólidos pueden utilizarse como en los rellenos sanitarios, reduciendo el uso de suelo limpio y otros valores materiales.

¿Cómo se Manejan los Biosólidos?

- Regulaciones federales y estatales regulan el reciclaje de biosólidos y garantizan la seguridad pública.
- Personal capacitado realiza pruebas de calidad en plantas de tratamiento de aguas residuales para asegurar que los biosólidos cumplen estrictas normas regulatorias antes de su uso.
- Biosólidos son transportados en camiones con contenedores cerrados.
- Biosólidos son el material aplicado a la tierra altamente regulado. Sitos de Clase B incluyen zonas de amortiguamiento, acceso limitado al público y restricciones de cosecha. Los biosólidos de Clase A son regulados un poco más, y se comparan a los fertilizantes comerciales.

Thank you for your interest in Orange County Sanitation District's Biosolids Program. Please contact me if you have questions or suggestions on any aspect of our biosolids program, including what you would like to see in these periodic updates.

Thank you,
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