



Frequently Asked Questions About the Hydrologix® GRS

Sustainable and Affordable Green-Clean Technology for Wastewater Treatment

1. How is FOG/ brown grease waste from food establishments handled currently in the US?

By ‘pumping and dumping’. There are city and county ordinances in every state that mandate each food establishment to maintain grease traps or grease interceptors to collect the wastewater from kitchen drains (dishwashers, sinks, etc.). Periodic vacuum pumping removes (moves the problem) this waste liquid to either a wastewater treatment plant or a landfill, and is even sometimes illegally dumped.

- Costly to the business owner
- Risk of spill /overflow of grease interceptor
- Foul and potentially toxic gases
- Emulsified grease can still enter the sewer line
- Moving the problem, involving polluting vehicles
- Not aesthetic to customers at the business site
- What happens to the waste the haulers dump in the landfill? How much is going into landfills and does it biodegrade?

2. Why do we need to find a better way to manage the FOG/ brown grease waste?

1. To protect our environmental and public health, especially our beaches and other watersheds from sewage spills, many caused by grease blockages.
2. To offload our aging and outdated municipal wastewater treatment plants which have not kept up with urban development and must process the grease waste if it is not dumped in a landfill.
3. To protect our environment by offloading landfills where much of this grease waste is dumped and takes hundreds of years to biodegrade.
4. To assist restaurant/food establishment business owners who are responsible for the waste they create and need affordable disposal services.
5. To recycle the water the waste liquids contain so it can be re-used, saving costs and providing a source where water is scarce or rationed.
6. To responsibly care for our environment by using the most sustainable methods available to manage waste.



Below are sources and recent press articles given as examples that FOG/brown grease waste frequently overloads our municipal wastewater treatment plants which causes sewage spills, or overflows in the streets near the business and washes into the storm drains and reaches the ocean, polluting our beaches, harming humans and aquatic life.

[Sewage spill in Newport closes portion of the bay](#)

May 27th, 2008, OC Register

“The cause of the spill is still unknown, but it likely occurred from **oils and grease** built up from a restaurant, or tree roots that have taken over the sewage line, said Larry Honeybourne, program manager of the county’s water quality department.”

["\[Sanitary Sewer Overflows\] SSOs also occur due to the improper discharge of fats, oils and grease to the collection system..."](#)

EPA press release, June 19, 2008

["Nearly 70 percent of sewage overflows from human-waste sewage lines are due to breaches, obstructions such as tree roots or grease clogs, line breaks, and mechanical failures"](#)

NDRC, Sources of Beachwater Pollution, ch1, p15

["Fats, oils and grease get into the sewers mainly from commercial food preparation establishments..."](#)

<http://www.lacity.org/SAN/wpd/Siteorg/education/bmps/sewercomm.htm>

City of Los Angeles Bureau of Sanitation, BMP

["Sewage spills are a summer bummer for beachgoers"](#)

Los Angeles Times, July 29, 2008

“The beach closures -- three in less than two months -- are particularly bitter for Long Beach because the city has been trying to improve the water quality of its beaches by staging cleanups, commissioning environmental studies and sending cleaning crews to scour problem sewer pipes. While some of Long Beach's dirty water comes from pollution upstream, the latest closure was due to a local problem: **cooking grease** that has clogged city sewer lines from an upscale housing development along the shoreline”.

["Another Long Beach sewage spill forces beach closures"](#)

<http://www.latimes.com/news/science/environment/la-me-sewage14-2008aug14,0,5736270.story>

Los Angeles Times, Aug 14, 2008

["\\$2,475 to vacuum 3,200 gallons of 'grease water' at eateries"](#)

January 9, 2009, OC Register

“A city drain at West Coast Highway and Riverside Avenue backed up Aug. 29 and caused the **grease traps** at the Chart House, Rusty Pelican and Billy's at the Beach to overflow into their respective parking lots, according to a legal claim filed against the city on behalf of the eateries.”



3. Why not turn the brown (FOG) waste into biofuel, isn't that the most sustainable disposal method available today?

Compared to the Hydrologix GRS solution we do not think this is the most sustainable method. Firstly, there are two types of restaurant grease waste. "Brown grease" is grease waste from kitchen drains that enters sewer systems or is removed from a grease trap or grease interceptor. This is much harder to turn into fuel. "Yellow grease" refers to cooking grease or fryer oil that is recycled and is not disposed of in the sewer system. This is fairly easy to recycle into fuel as it is "pure" oil. Processing biodiesel from brown grease is not commercially viable yet and may not be affordable for some years to come. Plus, this process uses up a lot of energy, requires pumping trucks, as well as still leaving the restaurant owners with the problems of odor and risk of overflows.

4. What are the advantages of using the Hydrologix GRS service?

The Hydrologix GRS is a service that entirely prevents grease entering the overburdened sewer system and landfills, bioremediating it at the source.

- Affordable to the business owner
- Economically feasible as it replaces the pumping service already budgeted for
- No pumping (or at most, very infrequent) and no hauling to landfills or biodiesel plants
- Sustainable because the problem is dealt with at the source, where the problem is created and the output is CO₂ and water. Polluting and energy consuming vehicles transporting the waste away become obsolete. It is no longer dumped in landfills.
- Very little energy (electricity) is used in the Hydrologix bioremediation process. Power for pumps and an internet connection is all that is required.
- Gray water output is potentially re-usable for landscape watering.
- Emulsified fats are bioremediated whereas they are not with the conventional pumping solution which allows this mix to enter the sewer line.
- Hydrologix is the first to achieve commercial success with this type of waste management.

5. How can the water produced be re-used?

The output of grey water from the Hydrologix GRS process, is easily recycled into irrigation water, a huge advantage in water scarce regions and/or where public water is expensive. Think of the many hotels and resorts maintaining golf courses in Southern California alone. Water is arguably our most precious resource and possibly deserves a higher focus from us than biofuels. For example, see the following recent news, predicting more drought in California in 2009:

"CA water agencies told to prepare for dry '09 - 10/31/2008 2:45:29 PM

SACRAMENTO, CA — *More than 25 million Californians will be under stricter water rationing, following an October 30 California Department of Water Resources' (DWR) announcement <http://www.water.ca.gov/news/newsreleases/2008/103008allocation.doc>



that it will deliver just 15 percent of the amount of water that local agencies have requested for 2009.”

01/29/2009 GAAS:042:09 FOR IMMEDIATE RELEASE

“Gov. Schwarzenegger Issues Statement on Department of Water Resources’ Second Snow Survey of the Season
<http://gov.ca.gov/press-release/11445/>

Governor Arnold Schwarzenegger today issued the following statement after the Department of Water Resources (DWR) conducted its second snow survey of the 2008-2009 season, which showed statewide Sierra snowpack water content at only 61 percent of normal: “California is entering a third straight year of drought, and today’s snow survey is just one more piece of evidence that we urgently need comprehensive water reform to protect our economy, our jobs, our communities and our quality of life. **California is headed toward one of the worst water crises in its history**, underscoring the need to upgrade our water infrastructure by increasing water storage, improving conveyance, protecting the Delta’s ecosystem and promoting greater water conservation.” ”

5. Why is Hydrologix the only one to successfully do this, after all using bacteria for bioremediation is nothing new?

The Hydrologix technology puts living creatures to work in one of the harshest, foulest environments.

Keeping the microorganisms thriving and ready to digest the restaurant’s waste liquids (organic and chemical) instantly and on the spot “in situ” in the grease interceptor, is the challenge.

This foul wastewater from food establishment kitchens’ drains is:

- Corrosive: dissolves Stainless Steel pipes in a matter of weeks
- Extremely hot: high temperatures up to 140 degrees F
- Potentially deadly: anaerobic decomposition releases Hydrogen Sulfide gases
- Explosive: anaerobic decomposition produces Methane gases
- Fast moving: influx force is such that retention time* can be as short as 30 minutes

How does the Hydrologix blend of living organisms thrive and digest FOG in restaurant grease interceptor wastewater, when time is so short and the conditions are so harsh?

The answer is our patented technology...