

Title:

Waste Oil is NOT a waste!

Subtitle:

Chris Wiener, Solutions Architect at ArabIT and Consultant to Atlas Telecom's Transport and Logistics Solutions (TLS) and Renewable Energy and Green Solutions (REGS) business units, reminds us that Oil Recycling is more important than we think.

Body:

Did you know that one gallon of used oil improperly disposed can contaminate 1 million gallons of fresh water? One gallon of motor oil can create an oil slick 8 acres in size! 8 Acres are more than 344,000 square feet or 32,000 square meters. That is more than 4 English football pitches.

So one gallon of oil can cover more than 4 football pitches of water and killing everything in it, making the water beneath this thin coat of oil deadly.

1 million gallons of fresh water is more than a years' supply for 50 people!

In the United States, 40% of waterways—from rivers to brooks—are unsuitable for fishing, bathing or drinking. In developing countries, 90% of sewage is dumped—untreated—into bodies of water. Aside from the bio toxic contribution of sewage going into bodies of water, the oils which sewage carry significantly contribute to the environmental nightmare which water shortages are about to become.

Water pollution from sewage and waste oil threatens ecosystems and access to water for our generation and those to come. All over the world, water is becoming less suitable not only for human consumption but also for agricultural and industrial use. It can even cause death, disease and other health issues.

Making drinkable water is increasingly expensive; what's more, the costs are often not shared equally, thus exacerbating world poverty levels.

Some oily facts for consideration:

- Used oil is insoluble, persistent and can contain toxic chemicals and heavy metals, even bacteria.
- It's slow, and I mean reeeeeaaally slow, to degrade.
- It sticks to everything from beach sand (Dibba beach anyone?) to bird feathers (US Gulf Coast).
<INSERT PICTURE OF OIL COVERED BIRD>
- Recycled used oil can be re-refined into new oil, processed into fuel oils and used as raw materials for the petroleum industry.

- One gallon of used motor oil provides the same 2.5 quarts of lubricating oil as 42 gallons of crude oil at a quarter of the power bill. (WOW!!!)
- If all the oil from American do-it-yourself oil changers were recycled, it would be enough motor oil for more than 50 million cars a year.
- Used motor oil from cars, trucks, boats, motorcycles, farm equipment and lawnmowers can be recycled and re-refined.
- Used oil from private and commercial kitchens can be recycled. It can be used to produce soaps and even biodiesel.

What happens after the used oil is collected?

Depending on the final product, used oil can go through various recycling stages, including:

- filtering the oil to remove any solids present in the oil
- demineralization to remove inorganic material and certain additives
- propane de-asphalting to remove the heavier bituminous fractions
- distillation to physically separate the components of lubricating oil by boiling range
- solvent extraction to dissolve and remove undesirable compounds, and
- Hydro-finishing to improve physical properties of a re-refined base-oil

Used oil can be cleaned of contaminants and can be recycled again and again and again and again and again and again.

There are many uses for recycled oil, including:

- industrial burner oil
- mold oil to help release products from their molds (e.g. pressed metal products, concrete)
- bitumen based products
- an additive in manufactured products, and
- Re-refined base oil for use as a lubricant, hydraulic or transformer oil.

So what can you and I do with it?

Firstly we can recycle it because then it goes directly into industrial processing and ends up (hopefully) where it is needed most. According to the DM, Al Serkal group has deployed the first edible waste oil recycling facility in the UAE. As with other processing facilities in the world the waste oil can be converted to bio-diesel and returned to the waste producers to utilize in their logistics operations. Al Serkal could even be using the finished oil products to power and lubricate the vehicles used to collect the oil. Think about that next time you think you smell French Fries. 😊

Therefore secondly, we can burn it. Burning it is not designed to replace gasoline but to return the edible oils to the environment in a way that is more nature-friendly. When they are burned as car fuel, after they have released their energy, they will return to the atmosphere as water and CO₂.

If you fancy making your own bio-diesel; do it right, do it safely, do your research, and start at http://journeytoforever.org/biodiesel_make.html. This is a user friendly but scientifically educational introduction to the process.

Thirdly, we can clean with it. There are literally hundreds of recipes on the internet that will tell you how to make soap from oil. These recipes are for everything from common hand soap to Castile Pure soap and can be used for dishwashing soap, hand soap, or shampoo.

So, if you want to directly contribute to this process just Google “making castile soap at home”, go to Ehow.com and search for “How to Make Vegetable Oil Soap” or just go to <http://www.millersoap.com/> and start batching.

Fourthly, we can safely dispose of it although this is not recommended because it takes a valuable commodity out of the supply chain.

Whatever you do, PLEASE do not discharge frying oil or food particles in sinks or toilets as they cause blockages and make sewage treatment more difficult. If you don't want to recycle it because it is too much effort, at a minimum please follow the following steps:

1. Put the oil in a well-closed recipient (bottle)
2. Refrigerate it overnight to congeal the solids
3. Dispose of it as common organic garbage

Morally, we really should ultimately properly dispose of it through recycling, or for about \$5,000 you can go online and buy your own oil purifier machine to separate the water, oil and other materials and use them again.

Remember, if you can't eat it, recycle it - ☺, Chris