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Silent Oil Spills
The World's Largest Oil Spill Happens One Quart of Motor Oil at a Time

According to the National Research Council, approximately 500 million gallons of used, petroleum based lubricating oil reaches the world's oceans each year through; routine ship maintenance (137 million) and used engine oils being dumped down the drain (363 million) - equivalent to almost **four** *oil tanker-sized* spills **every month**.

Many people, when they think of an oil spill, picture a tanker run aground with oil lapping up on the shore. These accidents are tragic yet relatively infrequent. Because the vast majority of the consumption of petroleum occurs on land, rivers and waste- and storm-water streams represent the most significant source of petroleum to the marine environment. (National Academy of Sciences)

"Oil is one of the most common water pollutants in the world, primarily because of how much is used on a daily basis. Spills, leaks and improper disposal lead to oil seeping into our water supply and contaminating it." Not only is it the most common pollutant, the effects of used oil can be extremely damaging. "It takes only one gallon of used oil to contaminate one million gallons of drinking water." (USEPA, 2000)

With this premise let's take a closer look at the life and fate of petroleum based lubricants in the United States.

Each year, approximately 2.5 billion gallons of petroleum based lubricating oil is sold. Of this amount, over **1 billion gallons are "lost in use,"** meaning it is spilled, leaked, combusted or otherwise released from the machinery it is lubricating. Have you ever taken your car in and been told you were a quart low? It was lost in use and may have ended up on the roadway or on your driveway. These 1 billion gallons are uncollectable.

The EPA reports that of the 1.5 billion gallons that are collectable, about **200 million gallons** are illegally dumped or otherwise improperly disposed of every year from do-it-yourself oil changes. If that happened all at once, it would rank as one of the largest spills ever, and would receive considerable attention. Yet, these intentional spills happen year after year with little, if any media outrage.

That leaves 1.3 billion gallons that are collected, of which the vast majority is burned as a fuel with the remainder being re-refined back to petroleum based lubricants. "Air pollution, mainly from cars and industry, places hundreds of tons of

hydrocarbons into the oceans each year. Particles settle, and rain washes hydrocarbons from the air into the oceans." (U.S. Coast Guard)

For further perspective, the top 10 oil spills in the history of the world have totaled between 1.2 and 1.4 billion gallons. Catastrophic environmental repercussions have ensued. Yet as detailed above, every year in the United States alone, there are nearly 1.2 billion gallons of used petroleum based lubricant lost in use or improperly disposed of resulting in environmental tragedy. These are **silent oil spills** and they need a voice of concern.

Much of this environmental and economic damage could be mitigated through the use of non-toxic, biodegradable synthetic oils made from sustainable sources such as vegetable oils. Unfortunately, virtually all motor oils in the market today are made from refined petroleum.

However, thanks to ground breaking work done by scientists at the USDA's Agricultural Research Labs, environmentally friendly motor oils will soon be available. USDA researchers have invented and patented a whole new class of molecule that has the same performance characteristic found in the highest grade synthetic oils currently used in motor oils. However, these renewable oils are synthesized from fatty acids found in plant oils, making them renewable, nontoxic, biodegradable and recyclable. With this advancement, billions of gallons of petroleum lubricating oil can now be replaced by safer, cleaner plant-based oil grown by U.S. farmers. Public health and the environment will be protected and significant economic benefits will result.

The USDA is now working exclusively with Biosynthetic Technologies (BT), a cleantech company located in Southern California, to bring these oils to market. BT is building a pilot manufacturing plant in Baton Rouge, LA with completion expected by mid-2013. Further, BT is working closely with several global manufacturers of motor oils and industrial lubricants that intend to use these environmentally friendly oils to launch their first ever biosynthetic motor oils and lubricants. You can expect to see these products on the shelf in 2013 under the brand names you already know. For further information you can visit the company's website at www.biosynthetic.com or email info@biosynthetic.com