

California Air and Water Pollution Set to Jump January 2010

Imagine for a minute that I could arrange to have 10,000 special ATM's that give out FREE money installed all over California. The ATM's would come in several flavors, depending on their year of manufacture. Although each would provide the same amount of money, depending upon their year of manufacture they would charge you a different amount.

Let's say the ATMs would all give back \$500. With an ATM built in 1995, it would cost you \$1 to get \$500 back (you net \$499). As shown in the chart below, the newer machines give the same \$500 payout; however, because of their increased efficiency, there is less cost to use them.

<u>Year</u>	<u># of ATM's</u>	<u>Cost \$</u>	<u>Payout \$</u>
2010+	none	\$0.20	\$500
2007-2009	1,000	\$0.40	\$500
2004-2006	2,000	\$0.60	\$500
1999-2003	4,000	\$0.80	\$500
1990-1998	3,000	\$1.00	\$500

Now, if you can find 2007 or newer machines in your neighborhood, that would be awesome since it only costs 20-40 cents to get your \$500. However, let's suppose that the only machines in your area were built in 2006 and before. Further, let's say that a government agency decided to ban any of the machines that were built in 1999 and prior, because it was decided that the amount they charged to get the \$500 return was just too much.

Most of us would say: "WAIT! The cost of \$1 is not as good as 20 cents, but I will gladly pay \$1 to get \$500 all day long and twice on Sundays."

Of course in reality we're not talking about ATM's, but about bonafide Pollution Reduction Machines. These are real machines, not fictional. In fact, you have probably seen them, but just did not know what they were or how they have been specially built to remove pollutants from our air, land, rivers and ocean.

To adapt what occurs with Pollution Reduction Machines, instead of dollars in the above chart substitute pounds of pollution. So a 1990 Pollution Reduction Machine puts out 1 lb of pollution (from its engine) for every 500 lbs it picks up.

It's actually better than that, so stay with me. For every 500 lbs of pollution these Pollution Reduction Machines remove from the environment, at least 5 lbs of the pollutants are what is called "PM10 and below." In other words, *Particulate Matter smaller than 10 microns*. (Human hair is 72 microns wide.)

PM is term used by the EPA to describe small particles such as "fugitive dust" (normally referenced as PM10) and even smaller PM2.5 particles such as diesel particulate.

In a sense, for the benefit of all of us, the benefit provided by these Pollution Reduction Machines is comparable to getting free money at ATMs. Instead of spending a dollar and getting \$500 back, we output a pound or less of pollutants and collect 500 pounds. This includes at least five times the amount of pollutants that are the same relative size as the ones emitted. Like the ATMs, we should all be saying: "Give me more! Since we can use the machines twice per day, put Pollution



Reduction Machines into every neighborhood. With the payback that even older ones provide, who cares what year they are? I love them all!"

Unfortunately, on December 31, 2009 all the 1999 and older such machines must be turned off, scrapped or sold out of state. 1999 to 2006 machines must be modified to the 2007 standard, at significant cost, or they also must be turned off, scrapped or sold out of state.

Since that affects more than half of all Pollution Reduction Machines, we are looking at some major increases in pollution.

To keep it simple, let's look at just the 1999 models since they can't be modified.

<u>Year</u>	<u># in Use</u>	<u>Cost lbs</u>	<u>PM10 & under</u>	<u>Over PM10</u>	<u>Removed</u>	<u>Removed</u>
1999 & older	3,000	1 lb.	5 lbs		500 lbs	

Each machine removes 1,000 lbs per day (of which 10 lbs is PM10 and under), while putting out 2 lbs of PM10 as particulates per day. (We're just doubling the numbers from the chart, to account for twice-per-day usage.)

The good news:

By removing all 3,000 machines from California, we save 3,190,000 pounds of pollution. (2 times-per-day, X 365 days, X 3,000 machines)

The bad news:

By removing all 3,000 machines we leave 547,500,000 pounds of pollution in our environment, of which 10,950,000 lbs is PM10 and smaller.

The numbers are more dramatic in table form:

3,190,000 lbs removed
547,500,000 lbs left in environment

Since air pollution is driving the impending regulation, let's just illustrate what happens with the PM10 portion:

3,190,000 lbs removed
10,950,000 lbs left in place

If we leave it, where does it go? It goes into the air, on our roads, into streams, rivers, homes, and into our lungs. Try to visualize what 547 million pounds of extra pollution left in our environment per year would look like.

Just the 1999 and older machines, remove from the environment three times the PM10's than all the newer ones put out.

Put another way, if you could magically make all 10,000 machines zero pollutant emitters during operation, just the older ones would still pick up more PM than would be saved by the magic.

If you have not guessed already, these magic pollution machines are street sweepers. The numbers and examples are real. A whopping 99% of these sweepers are owned by small business or cities, meaning you own some via your tax dollars.



The small businesses that own sweepers are just like every other small business trying to meet expenses, pay employees and play by the rules. Unfortunately, these new rules don't allow for "grandfathering." The sweepers that were purchased in good faith, and which payments may still be occurring on, must be sold out of state and for pennies on the dollar.

New sweepers cost over \$200,000 each, some as much as \$260,000. How can a small company with 5-10 sweepers or even a slightly larger one with 10-20 sweepers afford these kinds of replacement costs? The answer is, they can't.

Who benefits by the new rules? You might say the companies that sell new sweepers. However, since there is no trade-in value, even they sell fewer sweepers than they otherwise would.

Who loses? All of us:

- Taxpayers, because the cities that own sweepers must turn over their fleets early.
- When cities don't get any trade-in value, more tax money must be spent.
- People in homeowners associations that contract their sweeping will pay more.
- Construction projects that must sweep to meet storm water and fugitive dust rules will pay more, raising the cost of housing.
- The beaches and rivers will collect hundreds of tons of additional trash.
- All of us will be affected by the tons of PM10 left for re-entrainment into the air.
(PM left on the street is blown back up by passing vehicles; other washes off into waterways.)
- Other industries that must make up the difference to meet EPA pollution goals.
- The small business owners that lose their investments
- Drivers/employees losing their jobs.

Sweepers are not the only machines hit by these rules. Prices will be going up for all equipment and services that use diesel fuel. Some states, like New Jersey, have suspended all new diesel retrofit rules because "it was decided that given the state's fiscal crises, the timing was not right to initiate such a costly program."

Is it too late? Our state government is taking a firm stance and passing many regulations before the technology is available for all industries. The regulators also admit newer engines will eventually filter down; they just want things to happen faster. In fact, in about 15 years, pollution will be about the same, with or without this law.

Street sweeping is a small, hidden industry, and the pollution reduction benefit provided to air and water quality – as compared to their relative pollutant output – was simply not considered. The unfortunate fact is that small industries without large corporate lobbying dollars have a very difficult time getting the word out. In this case, we can't afford to let street sweeping be reduced. The issue is simply too important.

Large companies like Wal-Mart, FedEx and UPS, simply assign new truck purchases to California and let the older trucks continue their lives in other states.

The end users of street sweepers are small family businesses and municipalities. They are not equipped to do the safety engineering to properly repower the sweepers to meet the new requirements. The sweeper manufacturers themselves are struggling to make their new sweepers



comply; remember, the new, proposed regulations are only for sweepers sold in California. So far, no street sweeper manufacturers have plans to upgrade old models.

Unlike most trucks, sweepers don't have the normal spaces for retrofit filters and new modified engines. Sweepers are also 2-4 times the cost of similar-sized trucks. The sheer numbers of sweepers is, unfortunately, too small for a major engine manufacturer or retrofit company to do the testing necessary to certify the road safety of the upgrades.

Similar challenges were encountered with off-road construction equipment having to get very creative applying retrofits. There are continuing safety issues that industry is dealing with. Luckily, that equipment is not sharing the road with you and me, like sweepers will be.

Our hope is with enough public input we can get street sweepers exempted. Is this special treatment? Yes. However, since each sweeper removes many times the pollution it puts out, who is getting the special treatment? We all are.

Sweepers do put out pollution, just like every other petroleum-fueled vehicle. However, since they pick-up more than they put out, every hour a sweeper is working, it is a *net benefit* for the environment. A *net benefit* in the reduction of air pollution and water pollution.

Our hope is CARB will realize this and exempt sweepers from the Airborne Toxic Control Measure (ATCM), and the proposed Statewide Diesel Truck and Bus Regulation.

If the Agency doesn't, thousands of street sweepers will be forced out of service, and California's air and water pollution level will increase markedly starting in 2010.

California Chapter
North American Power Sweeping Association
www.napsaonline.com

Information reviewed and certified as an accurate portrayal by the Editorial Board of WorldSweeper.com, 'Earth's Largest Power Sweeping Resource.'

