

Recently, and without much fanfare, the cities of Berkeley and Oakland adopted zero waste policy statements and have begun the long task of designing programs to implement that policy; Palo Alto, about to close its local dump, is a year ahead of them. As these local policies slipped through the decision-making process with little acrimony, it's appropriate to look at the roots of these actions.

When the great environmental laws were written in this country (now a generation ago), there was no thought or plan to reduce garbage or, as it's been called since the 1960s, "solid waste." The primary concern in 1976 was to bury garbage better so that there would be no open burning, no landfills leaking into ground water, no hazardous materials mixed in with the household garbage, etc. By the mid-1980s, recycling, a grassroots activity after Earth Day 1970 that slowly gained support in local governments, had become sufficiently wide-spread and successful and landfills and waste incinerators (the two other disposal options of our time) were having a tough time in the court of public opinion, so it became time for something new. Many of the various states each adopted so-called "rate and date" laws wherein a state would commit to reducing its garbage a certain amount (the rate) by a certain date (the date). In 1989 California was the ninth state to so enact and promised and planned 25% less garbage by 1995 and 50% less by the year 2000. Unfortunately, over the next several years, maneuvered by cry-baby cities that didn't really want to do anything, and led by public works officials who had no confidence that a waste-reduced society could ever be constructed, the California legislature carved up the law to grant enough loop-holes, exemptions, exceptions, etc. so that unachieving local governments became the objects of pity and training rather than enforcement and compliance. The recent declaration that we have reached 50% recycling in California is based on some many suppositions and extrapolations to have little credibility among informed opinion makers.

The result of the wobbly-kneed enforcement (blame the legislature, not the enforcers) has been that currently we have ten million more tons of garbage in the state than we did ten years ago (44 million tons now, not 34 as then). (A million tons of garbage, by the way, is a row of sea containers, end to end, stretching 310 miles; California's annual garbage now would cover a twenty lane highway from Oregon to Mexico.) The purported measurement tool the state developed looks at certain actual numbers and various hypotheticals and concludes significant recycling is taking place. The state actually abandoned measuring recycling in 1991 when local governments complained it was "too hard" to figure out. No one can explain how the hypotheticals yield 50% more trash when the population has only increased 15% but that's a side note because most of the elected and appointed officials are more concerned about looking good than doing good; unlike air and water pollution which really hurt all of us directly, too much garbage in the short term simply means more trucks, more landfills probably further away, etc.

In recent times the old true blue recyclers, now reduced in numbers by age and infirmity and the young people wandering off into other green goodness work (hemp clothing, bioaromatics, endangered species, tall trees, etc.) have realized that the numbers game was lost a few years back and have adopted the zero waste rallying cry. "Zero accidents, zero emissions, zero waste; makes sense to me" said a recent DuPont president. Individuals and some small groups have achieved zero waste or at least 99+% recycling in fact as well as theory but no one yet has applied this model to entire communities. What lurks in the details of zero waste is the question of who will be required to do how much when, and for what ends.

Our growing appreciation of the negative environmental consequences of 1) placing rotable materials in landfills where they make greenhouse gases that are poorly captured by so-called landfill gas [LFG] collection programs (current science says 20% is captured and burned, not the 75 to 80% that the landfill apologists tout), 2) the increasing awareness of the truly limited success of existing recycling programs (when you recycle 55% of the aluminum cans, it doesn't mean 55% of all cans are preserved forever, it means that 45% of the existing cans are lost every 90 days (typical cycle time from brewery dock to retail to frig to consumption to recycling to remanufacturing and back to the brewery dock). If you do the math, you realize that 98% of all the cans made 15 months ago are now in the dump (you get to keep 55% of 55% of 55% of 55%), and that 99.5% of all aluminum cans ever made (it's been 30 years now) are now at the dump.

3) Then, of course, there's the energy wasted by dumping materials rather than recycling them: making paper from wood chips vs. from old paper means more chemicals, more heat/energy, more water, etc. Recent USEPA calculations indicate that if all the recycling done in America today were to stop tonight, we would need 100 regular sized power plants tomorrow to make the electricity that would be required by starting from scratch rather than with post-consumer goods. Despite fifty years of writing reports, no one in Washington has calculated, much less proposed, what the resource savings (water, materials, energy, etc.) would be gained if all materials were forever recycled. The economic benefits of completing high school are well known, the economic benefit of keeping all materials out of the dump has no policy analysts, much less advocates.

And so, into this new consciousness of some big problems out there, our aging recyclers issue a clarion call for "zero waste." What they mean by the term varies:

1. MORE, BETTER RECYCLING: Some want to focus on the fact that 90% of what's in today's garbage is materials for which ready recycling markets exist. If

the simple answer to AIDS is abstinence, the simple answer to garbage gluts is make those garbage-makers recycle.

2. PRODUCT STEWARDSHIP/PRODUCER RESPONSIBILITY: Others want to look at materials for which markets don't yet exist (adhesives, foil-paper combinations, lots of plastics, alkaline batteries, etc.) and find a way to keep the cost of recycling on the backs of manufacturers and consumers and not on everybody (variously called "product stewardship" or "producer responsibility").

3. LIVE SIMPLY: Still others want to maximize reuse and voluntary simplicity programs so that we all buy less new stuff and reduce and reuse more. (One calculation says for every ton of material in currency in our economy there are 70 tons of mine tailings, tree trimmings, waste pits, etc. Not inconsiderable portions of the landscape have been denuded or overgrown with industrial residues, see Borax, California or Ajo, Arizona.)

4. COMPUTER-BASED MATERIALS AND PRODUCT TRADING: The recent success of the high-tech LA Shares computer-based program in Los Angeles that matches the non-profits' wish list of things to acquire with the current owners' needs to get rid of things (and incidentally, gain a tax deduction) may usher in a new, on-line version of thrift stores and flea markets, more like E-Bay and Craigslist than the Salvation Army. One recent story: a twelve story hotel on Sunset Boulevard decided to go out of business as a hotel and convert into condominiums. They followed the detailed instructions from LA Shares and prepared descriptor sheets on each available product and material. In 22 minutes of on-line match-ups, all of the discards from the building found a home with nine non-profits. The hotel owners gained a \$450,000 tax deduction and saved over \$100,000 in move out and disposal costs.

Palo Alto and now, just starting out, cities like Oakland and Berkeley, are designing programs to put these zero waste policies into place, but at this point there's little uniformity of opinion about how the planned or hoped-for future will be delivered into the present. But a sizeable number of our local governments are trying to make it work so the future will indeed be better than the past.

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