Book Review:

American Alchemy: The History of Solid Waste Management in the United States
Forester Press, Santa Barbara, 2003

By Neil Seldman, Institute for Local Self-Reliance, Washington, DC*

H. Lanier Hickman, Jr. is one of the nation's leading experts on solid waste handling. His textbooks are justifiably on the bookshelves of many solid waste management practitioners. And as a former Executive Director of SWANA (Solid Waste Association of North America) Hickman has been a key figure in formulating public policy in this area.

Hickman's newest offering, *American Alchemy: The History of Solid Waste Management in the United States* reveals his strengths and his weaknesses. His strength is in his discussion of solid waste technologies and in his explanation of historical developments in the field. His weakness is that his long-time advocacy of waste-to-energy plants and a top-down public policy strategy blinds him both to the effectiveness of alternatives and to the bottom-up public policy efforts that have led these to become a key element in solid waste planning.

Hickman's focuses exclusively on the federal role in solid waste management and ignores the grass roots recycling movement except to criticize it for its short-sighted and ill-informed opposition to garbage incinerators.

In a recent article in MSW magazine, Hickman poses the question, "Didja ever wonder why recycling took off in the 1980s?" His answer? "I don't have an answer for this question; I myself am still wondering."[1]

Yet in an earlier article in American City and County magazine Hickman declares, "In 1989, EPA launched the integrated solid waste management initiative that ignited the recycling movement that continues today…."[2]

The real answer is that the recycling initiative occurred from the bottom up. While the EPA was still maintaining as late as the mid 1980s that no community could recycle more than 25 percent of its waste stream, a number of communities had achieved 40 percent and higher recycling and composting levels.

Hickman argues that incinerators and recycling are compatible strategies. In some cases that may be true. But in many cases the inherent engineering economies of scale of incinerators has led them to be oversized. Many of the communities embraced recycling only after battling for many years against proposed incinerators designed to consume 75-100 percent of the local solid waste stream.

In his book, Hickman laments that "the integrated solid waste management strategy… has resulted in the loss of many resources in the municipal waste stream that could have been used as energy." Presumably he means paper and plastics, materials that can be more economically recycled or reused than burned. Opponents of incineration, he claims, use misinformation and lie. In fact, critics of incineration have proven to be prescient in their economic and environmental analyses.

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[1] www.forester.net/mw_0407_guest_editor.html
[2] www.americancityandcounty.com/mag/government_garbage Article entitled, Garbage: Bin There, Done That.

In the 1980s local coalitions of ad hoc citizen and business groups defeated some 300 planned incinerators. In l985, for the first time, more incinerator capacity was cancelled than proposed. Communities quickly followed up with mandatory recycling, pay-as-you-throw, minimum content and other innovative programs that have led to higher levels of recycling and source reduction.

Hickman claims that the rising costs of solid waste management in cities that have incinerators is a result of the cost of recycling programs. That is not true. Incinerators were too expensive to begin with. The only way they could justify the enormous capital expense was to sign very long term contracts and for communities to force waste collectors to dump their waste at the incinerators. When the Supreme Court declared such "flow control" ordinances unconstitutional, the incinerators had to lower their tip fee and local businesses and residents had to make up the difference. Residents of Montgomery County, MD must pay an annual household surcharge to cover the losses from the incinerator.

The recycling movement is unique in its spontaneous linking of groups usually divided by ethnicity, race, class and gender. The heirs of the mission driven drop off centers and curbside collection experiments of the l960's continue to provide the most cost effective and environmentally sound discard management services in the US, including, Eureka Recycling, St Paul, Solana Recyclers, Encinitas, CA, Garbage Reincarnation, Santa Rosa, Eco-Cycle, Boulder, Recycle North, Burlington, Urban Ore and Berkeley Ecology Center, Ann Arbor Recycles, Center for Ecological Technology, Pittsfield, MA. The infrastructure of state recycling organizations which emerged as the trade associations for recycling changed laws which favored recycling over disposal and hence changed the markets in favor of recycling. Today the recycling movement has adopted new structures and new strategies to go beyond the waste stream and address the root causes of waste in the economy: Zero Waste, Extended Producer Responsibility and the Precautionary Principle dominate the efforts in the US, and are buttressed by the new wave of European Directives coming from the European Union that impact US manufacturers.[3]

The rapid impact of these new tactics can be seen in electronic recycling. Within two years of national and international organizing, manufacturers who swore they would never be forced to take responsibility for their product are now rushing to implement take-back programs to meet the public demand for action. Environmental concerns merge with economic concerns. If 10,000 tons of computers are processed for reuse, almost 300 jobs are created. If that same amount is disposed, then 1 job is created.

The magic of recycling is its popularity, common sense and cost effectiveness. More people recycle every day in the US than vote for president once every four years.

Hickman's meager reference to the National Recycling Coalition is misleading, as is his lack of economic analysis of the waste incineration industry. Although initiated in 1980 by 400 recycling organizations meeting in Fresno, CA, the organization quickly fell under the control of the beverage and incineration industry. Bottle bills and waste-to- energy issues were banned from discussion. By l985 recycling pioneers like Dan Knapp, Urban Ore, would resign in protest. The NRC today remains the loyal Tonto to corporate generators of waste in the economy. Numerous grass roots organizations have risen at the local, region, national and international levels to provide an alternative vision for materials management that reduces pollution and creates viable economic activity.

[3] See, Neil Seldman, "The New US Recycling Movement", Biocycle

Despite the flaw in focus and lack of reality, American Alchemy makes excellent contributions to our knowledge base. The Key Moments section stands out as an editorial accomplishment. The section on the l968 Memphis garbage collection workers that led to the assassination of Martin Luther King, Jr. is the most extensive reporting I have seen.

Sections that trace the development of collection vehicles, 'waste to energy' technology, municipal composting and landfill technology are comprehensive and will save future researchers time and effort as a result of their comprehensiveness. (The editorial decision to have the author's side comments interspersed with the text detracts from these sections. The ideas should have been integrated into the text.) Hickman goes overboard in naming hundreds of federal government researchers and program managers, even to the extent of listing their secretaries. This eulogy for a generation of solid waste decision-makers is misplaced given that their efforts failed. The book does not address the shortcomings of current landfill policies. These allow for owners to escape liability after 30 years, just when control systems are breaking down; thus, putting the costs and liabilities on local tax payers. EPA's permissiveness with regard to radioactive waste in municipal landfills and investment in 'bio-reactors', an unproven technology, are not mentioned.

The source reduction sections, including corporate and federal efforts is a very useful addition as most contemporary students of the field forget that EPA was once a leader in common sense solid waste management in the early l970's. The economic and environmental data is overwhelmingly in favor of diversion up front, not disposal and pollution management. The analysis of why EPA did not champion these programs and why EPA switched to hail waste incineration as the future solution is inadequate.

The US has not found the alchemists answer to the solid waste dilemma, as the author would have us believe even as our post-l945 economy cries out for relief from the double burdens of pollution and high costs. A critical factor, the rise of an oligopoly of corporations that control local and regional hauling and landfill markets is not addressed.

The American Alchemy is looking in the wrong place to find the answers. The answers are at the local level, with new rules that force change. Federal policy continues to subsidize disposal in cheap landfills, which continue to undermine progress at the local and regional levels.

The positive aspects of American Alchemy cannot overcome the wrongful focus on federal activity, the uncritical analysis of incineration and the head in the sand approach to the US and international recycling movement.

* Neil Seldman founded the Waste to Wealth program at the Institute for Local Self-Reliance. He co-founded the National Recycling Coalition and the Grass Roots Recycling Network. He has written extensively on solid waste and recycling issues for over 30 years.