

TUNE IN TO THE
SOUND OF DEMOCRACY

Justice Talking Radio Transcript

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With the nation's landfills reaching capacity, state and local governments are adopting new strategies to deal with solid and hazardous waste, from stepped-up recycling programs to exporting trash to foreign countries. On this edition of Justice Talking we take a fresh look at trash management and recycling programs and ask whether governments are cleaning up the problem or if their efforts are just one big waste.

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MARGOT ADLER: From NPR, this is Justice Talking. I'm Margot Adler. Everyday most of us touch it, make it and we don't even think about it. I'm talking about trash. And that's what our show is about today, what to do with all of the garbage we make each day.

UNIDENTIFIED MALE: I think we've forgotten about trash and garbage since 1984. We've been in amnesia. And now it's catching up with us.

MARGOT ADLER: There are differing opinions about whether we have a trash crisis and very different ideas about what to do about it. Recycling has become mainstream in many communities. But does it really work? Some cities are taking environmentalism to a new level. They call it "zero waste." Recycling and composting so that almost nothing is trash. After listening to today's show, you may never look at a Ziploc bag the same way. What happens to our trash, after the news.

MARGOT ADLER: This is Justice Talking. I'm Margot Adler. For most of us, our awareness of trash begins and ends when we take the garbage out and someone else takes it away. But

where does it go? On today's show, we'll find out what happens to all that garbage, what the law says about what can and can't be done with it. And we'll also talk about the pros and cons of recycling. We'll also find ourselves standing on an 80-foot pile of sand overlooking a landfill.

Elizabeth Royte was generally curious about what happens to trash. But it wasn't until she was canoeing in the Gowanus Canal in her neighborhood in Brooklyn, New York, that she really got excited about it. What did she see as she paddled along? All kinds of household trash, raw sewage and toxic waste. It made her wonder where her garbage ends up. She decided to follow her garbage and write a book about it. "Garbage Land: On the Secret Trail of Trash" was the result. Elizabeth Royte joined me to tell me about her trash journey. I asked her what surprised her most about her trash.

ELIZABETH ROYTE: What surprised me immediately was how heavy it was. I was trying to beat the national average. I had read that Americans throw out 4-and-a-half pounds of waste per person per day. And I thought, okay, I'm going to try and beat that. And so I had to know what was in there. I was weighing everything. And what was making it heavy and smelly and sticky and really gross was food waste. And I learned that 15 percent of New Yorkers' household garbage is actually food scraps. So I started to compost my food waste. And almost overnight, my trash was lighter and better smelling. And I was already beating the national average. But nationally, nine percent of kitchen waste is food scraps. And New Yorkers' number is higher because we--most of us don't have food waste disposers under the sink.

MARGOT ADLER: Now, you weighed your garbage. You did all the stuff. And then what happened after the garbage collectors hauled it away?

ELIZABETH ROYTE: My garbage goes down to the curb. And it's picked up by municipal workers, city workers. And they bring it to a transfer station on the edge of my neighborhood. And then it's moved from public hands into private, because the transfer station is privately owned by a company based in Texas. And when the garbage piles high enough in the transfer station, an eighteen wheeler pulls in and the garbage is loaded into this big tractor trailer truck. And my garbage heads across New York, across New Jersey and usually to the little town of Bethlehem, Pennsylvania where it's put into a landfill owned by that same Texas-based company.

MARGOT ADLER: Now, how much of our garbage ends up in a landfill?

ELIZABETH ROYTE: Nationally, about 56 percent of our municipal solid waste goes to landfills. Fourteen percent of it is incinerated. And about 30 percent is either recycled or composted.

MARGOT ADLER: Now, where are most of the landfills in the United States? And what's happening to the communities around where they are?

ELIZABETH ROYTE: There are much fewer landfills in the country now than there were in the '80s. In the 80s, there were about 8,000 landfills dotted across the country. In the 1990s, the

EPA tightened regulations and landfills that couldn't or wouldn't come up to code closed down. So that now we have fewer than 2,000 of them. And they're in rural areas. They're not near large population centers for the most part. But they're much, much bigger than these little town dumps. They're hundreds if not thousands of acres.

MARGOT ADLER: And the communities, do most of them want them? Not want them? I mean, you hear a lot of issues coming up about poor communities getting these landfills and so forth.

ELIZABETH ROYTE: Right. It's an interesting question. Most people don't want to live near a garbage dump. But communities accept them out of economic necessity. Because the waste companies that build these landfills pay host fees to the communities. They give them money for fire trucks. Or they build ball fields. Or in some small towns more than half of their entire budget is provided by landfill money.

MARGOT ADLER: Now, often people think that garbage, at least the problem with garbage, ends when our trash reaches the landfill. You say that's not true.

ELIZABETH ROYTE: No, it's not true at all. Putting garbage in a hole in the ground and then burying it is not the end of it. When we bury biodegradable resources, whether it's that food waste from your kitchen or your yard waste or it's paper or wood, it biodegrades in the absence of oxygen. It's anaerobic. And so it generates methane which is a potent greenhouse gas. And methane and other gases rise from landfills. The other form of pollution generated by landfills is leachate. And this is generated when it rains on a landfill, water trickles down and it picks up contaminants. And so leachate is what develops at the bottom of a landfill. It's this toxic soup.

MARGOT ADLER: So, how did writing this book change your own habits when it came to throwing things away?

ELIZABETH ROYTE: Researching the book made me think about what kind of garbage something would make before I bought it, because I was weighing everything. I was really aware of what was going to end up in there. Things that I ask myself include: Is this going to be recyclable? I ask myself if something's going to be toxic in a landfill. I wouldn't buy things that I knew were going to break and then I wouldn't be able to fix them. And I have a young daughter who is always clamoring for toys. So it was sort of difficult with her, because a lot of kids' toys are made out of plastic. And they're not really fixable by the average person. So she just had to get used to the idea that I wouldn't buy her these things.

MARGOT ADLER: More broadly, do you think that how we deal with our trash says something about who we are as a culture?

ELIZABETH ROYTE: Certainly. One of the most shocking things I learned was that what we put on the curb is just the tip of the materials, the iceberg. For every barrel of garbage you throw out, there were 71 barrels of waste generated upstream. So once I learned that, I really started

thinking about reducing what I put on the curb and what that would mean for what had been generated upstream and making it.

MARGOT ADLER: Elizabeth Royte is a freelance writer living in Brooklyn, New York. Her most recent book is “Garbage Land: On the Secret Trail of Trash.” Thanks for talking with me today.

ELIZABETH ROYTE: Thank you so much.

MARGOT ADLER: You can hear more of my conversation with Elizabeth Royte at justicetalking.org. And she’s going to tell us whether those garbage disposals we have in our sink are good or bad.

MARGOT ADLER: While our next guest hasn’t followed his trash, as far as I know, he knows a lot about the laws governing trash, what can be done with it and who is in charge of it. Nicholas Robinson joins me now. He’s a law professor at Pace Law School and the founder of the Environmental Law Program there. Nick, thanks for joining me. So when did we first start seeing laws about garbage?

NICHOLAS ROBINSON: The local governments began collecting garbage and disposing of it as soon as there were local governments. And they used landfills primarily. Right after the Second World War, the volume of garbage was growing so fast that Congress decided that it should give some grants to the states to try to encourage better management of refuse. And so we passed the Solid Waste Disposal Act of 1965. All that did was urge the states to work on this growing pile of garbage all around America. That did not effectively change the patterns that already existed. Most of the waste went into landfills. And some went into incineration.

MARGOT ADLER: Federal proposals in regards to waste management haven’t gotten very far. I know that some states have bottle return laws where you get a nickel or a dime for returning bottles or cans. The Clinton administration pushed for a national bottle law. It didn’t go anywhere. Why have attempts like this failed?

NICHOLAS ROBINSON: Well, the bottle laws are successful in removing roadside litter which was one of their objectives. But the biggest problem is that most people when they recycle a bottle don’t ever turn it in again. I mean, they pay the five cents or the ten cents. And vast sums of money are kept by the bottlers. Because they collect this nickel and then no one ever redeems it. And therefore, there’s an economic incentive in keeping ineffective bottle laws in operation. And similarly in the states that don’t have them yet. The only federal force which has been shaping the states is the United States Supreme Court which held many years ago that garbage was a commodity in interstate commerce. And no state could restrict its flow in a discriminatory way in and out of the state. So we buy and sell garbage these days.

MARGOT ADLER: Let's talk for a minute about electronic waste, computers, televisions, batteries. It's growing exponentially all over the world. A lot of it is hazardous. What kinds of measures have been taken to deal with this?

NICHOLAS ROBINSON: Well, where the waste has hazardous components, increasingly this has to be segregated out of the household waste stream. The State of Washington has recently enacted a law mandating that electronics and computer companies pay for the recycling of this equipment. And they want a statewide electronics recycling program in full operation by 2009. And in doing so, Washington is now joining California and Maine and Maryland in putting similar laws in effect to restrict the discard of electronic waste.

MARGOT ADLER: Now, you mentioned the Supreme Court and the issue of interstate commerce. I know that many states export garbage to other states. For example, New York ships a lot of its trash to Virginia, to Ohio, to Pennsylvania. And, of course, not everybody is very happy with this if they live in those states. What did the Supreme Court actually say about the relationship between out-of-state trash and commerce?

NICHOLAS ROBINSON: Well, in a case called *City of Philadelphia vs. New Jersey*, 1978, the Supreme Court effectively prevented New Jersey from restricting the flow of garbage from Philadelphia because it wanted to save and conserve for its own citizens the landfill space in New Jersey. And the court held that discriminates against those who want to export waste as a commodity, as a sale item, from Pennsylvania. The only time the Supreme Court will allow a restriction like that if it's for health or sanitary quarantine reasons. It's a very narrow exception. And consistently, the Supreme Court has said it would be a discriminatory act to impede the flow of garbage across borders. We have a tremendous flow of waste, imports and exports, every year. In total, there's something like 46 million tons of waste imported by states each year from other states.

MARGOT ADLER: Do you believe, bottom line, that we have a trash crisis?

NICHOLAS ROBINSON: I think we've forgotten about trash and garbage since 1984. We've been in amnesia. And now it's catching up with us again. I do think we have a growing crisis of trash, because we only have so much space for landfills. The Clean Air Act, rightly so, has stopped most of the incineration process, because we've not been able to create clean incinerators. So we're left with having to come up with recycling use and package redesign reduction as our solution.

MARGOT ADLER: That was Nick Robinson, a law professor at Pace Law School. Later in the show, he tells us why Congress effectively banned landfills in the 1970s, coming up.

UNIDENTIFIED MALE: More people recycle everyday than vote for president of the United States.

MARGOT ADLER: Recycling has become mainstream over the past twenty years partly because of PSAs like this one.

UNIDENTIFIED MALE: Hey, Tom. Boy, you've got a lot of trash here. Ever thought about recycling?

TOM: Yeah, we tried it for awhile. But it just didn't seem like it was doing anything.

UNIDENTIFIED MALE: I don't know. The latest reports show that recycling has generated over a million jobs, saves energy and continues to add billions of dollars to the U.S. economy.

TOM: Wow.

MARGOT ADLER: Recycling has its staunch defenders. But is it all it's cracked up to be? We'll debate the pros and cons of recycling. Don't go away.

MARGOT ADLER: This is Justice Talking. I'm Margot Adler. When I grew up, no one talked about recycling. Now it's a household word that almost every school child knows. Everything from paper and plastic to metal and construction materials is now being recycled. But just as there are passionate advocates for recycling, there are also ardent detractors who question its environmental impact and economic viability.

Neil Seldman and Adrian Moore are here to talk about these issues. Neil Seldman is founder and president of the Institute for Local Self-Reliance, an organization promoting sustainable communities. And Adrian Moore is vice president of research at the Reason Foundation, a think tank that advances libertarian principles, including individual liberty, free markets and the rule of law. Twenty years ago, only one curbside recycling program existed in the United States. Now there are between eight and nine thousand communities across the country with curbside recycling. States like Florida, Oregon, New Jersey and California all have mandatory recycling laws.

Adrian, let's start with you. What's the problem with mandating that people recycle?

ADRIAN MOORE: Well, the basic problem with mandating recycling is that it's a crude instrument. They set some arbitrary number at the state legislative level usually and say every community has to recycle this percentage of the flow of solid waste or divert this amount of the flow of solid waste using recycling. Rather than a system that recycles the amount that can actually be used, when you use a blunt instrument like mandates, you wind up with a lot of materials being separated that aren't ultimately going to be used that wind up in the landfill anyway after a lot more expensive handling or that aren't really used by the market.

MARGOT ADLER: And Neil, how would you respond to that?

NEIL SELDMAN: Well, I think it's picking up the problem from the wrong end of the stick. But from Moore's point of view, it seems as if mandating is a horrible, undemocratic thing. When in fact in this country, its citizens have required that governments pass mandatory programs. So mandatory recycling is a rather democratic grassroots movement.

MARGOT ADLER: And how many communities require that people recycle?

NEIL SELDMAN: Oh, if you're on the East Coast or the Midwest, and the West Coast, it's probably required. Some communities combine making it mandatory with economic incentives usually called "pay-as-you-throw," which means if your neighbor puts out five bags of garbage and you put out one, they must pay more money for their garbage collection.

MARGOT ADLER: Neil, can you point to a specific state or community where the recycling program functions really well?

NEIL SELDMAN: Oh, yes. San Francisco, Portland, Oregon, Seattle, Washington.

MARGOT ADLER: Why have those programs been more successful than others?

NEIL SELDMAN: The rule of thumb is that cities and counties that listen to their citizens have the best programs and most efficient in terms of cost effectiveness. And in those cities, the citizens about 10 or 15 years ago took control of the process through democratic methods at the local level. 99.9 percent of all money spent and all decisions made around garbage are made at the local level where citizens have the most direct access to their elected officials. And citizens use their power to force elected officials to pass infrastructure programs and incentive programs and education programs to get the country recycling. More people recycle everyday than vote for president in the United States.

MARGOT ADLER: Adrian, give us an example where recycling has been a failure.

ADRIAN MOORE: Well, a good example is in California there is a set of laws that are pieces of requirements to recycle trash bags and other forms of plastic bags. And the requirements are so draconian that so much of the plastic bags that we use in California have to be recycled that the companies making plastic bags are required to use a lot of recycled materials. Well, that recycled material is low quality. It makes the bags weak. So they have to add a lot more virgin plastic to supplement the recycled plastic to make the bag strong enough to actually be useful. And we've wound up using a lot more plastic in our bags than we would if we'd just left the doggone thing alone. And we're left with countless cases where newsprint has been needed to be recycled. And there's nobody to buy the newsprint. And so it goes into a warehouse. And after months in the warehouse and lots of transportation and resources being used, it winds up in the landfill anyway. So with these mandated systems, we wind up using lots more materials and lots more resources in many cases instead of a market-driven recycling system where demand for recycling materials drives how much material gets recycled.

MARGOT ADLER: I'd like you to both do exactly the opposite of what I just asked you to do which is Adrian give me an example where recycling has worked. And Neil, give me an example where recycling has not worked. Who wants to go first? Let's start with you, Adrian.

ADRIAN MOORE: Neil mentioned pay-as-you-throw programs. And I think the greatest successes come in communities that have embraced the concept behind this. Which is basically rather than mandating certain recycling of certain materials or certain methods of recycling, what they do is they charge people for how much trash they throw away. You throw away more trash, you pay a little bit more. You throw away less, you pay a little bit less. And this puts the incentive on people to think, hmm, what can I do to not make as much trash? Which is really even better than recycling. Not creating the waste in the first place is really the primo. Second best is can we reuse some of this stuff so that it doesn't wind up going in the trash, gets used instead. And then if we can't do that, can we recycle it so that it doesn't wind up in the landfill? And with that incentive from a pay-as-you-throw system, you see in over 6,000 cities around the country a real difference in the amount of recycling that's done. You see a real difference in the total amount of waste that gets disposed of.

MARGOT ADLER: Neil, is this the solution?

NEIL SELDMAN: First of all, your direct question, cities like Chicago and New York City have notoriously poor systems because originally recycling was an add-on to the solid waste system as opposed to making it an integral part. But the point about newspapers being in warehouses and going to landfills is just not the case. Perhaps it was ten years ago. The markets for newsprint worldwide are soaring. And anyone who has a warehouse full of newsprint and doesn't put it on the market is just wasting their money. The other point that has to be made is that markets are not written into the Bible. Markets are made by laws and loopholes and all kinds of concessions and tax breaks. So I could make a market that it's so expensive to throw something out that everybody would recycle and you could reverse that.

MARGOT ADLER: Adrian was mentioning pay-as-you-throw. And my first reaction was, well, what about poor people? I mean, what about people who cannot afford to pay and who might think, well, my taxes are what's paying for this?

NEIL SELDMAN: That's a good point. And pay as you throw is just one tool. The best results cities and counties have made is when they combine pay-as-you-throw and mandatory. It's very important to have recycling required. Because 99.9 percent of all people obey the laws, stop at stop signs and red lights, et cetera. And once it's known that it's the law and once the kids learn it, it becomes second nature.

MARGOT ADLER: Let me ask Adrian this question about pay-as-you-throw. And what about poor people? And what about people who say, well, garbage is part of my taxes?

ADRIAN MOORE: First of all, the thousands of communities that have put these systems in place are keenly aware of that. And the systems are designed to avoid being hard on poor people. Your general taxes usually don't pay for trashes. Most cities have some sort of trash fee on the property owner. So that may be on the landlord; that gets included in your rent or in your

property tax bill if you own the home or what have you. There are fee systems in place even where they don't have it based on weight. And poor people, as we all know, don't consume as much as richer people. And so they don't tend to dispose of as much as richer families do.

MARGOT ADLER: I would like to ask both of you to weigh in on the question of whether you think we do have a garbage crisis. I know that in the past, some of the materials I've read from the Reason Foundation, your foundation, have said we don't have a crisis. I'd like both of you to weigh in on this.

NEIL SELDMAN: The reason why we don't have a garbage crisis is because we have a lot of land. But we do have other types of crises. We have crises of energy, in employment, in living-wage jobs. And the fact that in the last twenty years, recycling has created over 1.1 million living-wage jobs is quite significant. The fact that cities like Seattle and San Francisco are now composting their organic waste and giving it to farmers to put on their farms to rebuild their soils shows there's a soil crisis in the United States. So garbage, if you will, is the bottom line. It reflects everything we do in society. And there is not a garbage crisis, but there are a series of crises which garbage impacts very directly. And it's one of the few things where citizens can direct everyday because they touch garbage everyday and can make a decision whether they want a green planet or a polluted planet.

MARGOT ADLER: That was Neil Seldman, president of the Institute for Local Self-Reliance, an organization promoting local self-sufficiency and sustainable communities. Also with me is Adrian Moore, vice president of research at the Reason Foundation, a libertarian think tank. Adrian, do we have a garbage crisis?

ADRIAN MOORE: No, we don't. And there's a lot of reasons for that. Not only have our recycling technology and processes in general gotten better over time, but so have our landfilling and incinerating processes, so that we can put more trash in less land. And so we don't need to expand landfills the way we thought we were going to need to in the 70s and 80s. What we have to debate is how to recycle. How do we get the most out of recycling? And I think we all know intuitively that if we mandate 100 percent of recycling of all things, there's just not a use for all things that are trash. And so we can pick that up and we can haul it somewhere. And it can be sorted. But nobody's going to use it. And it's going to wind up having to go into a landfill anyway. So somewhere between zero and 100 percent for any given material is the right number. And that changes. And I argue that markets are very good at figuring out where materials can be used and how to use them most effectively. That's what markets are. That's what they've always been. Governments are not very good at that. And democracy is not very good at that. Masses of people going to public hearings is not a great way to decide where technical uses of materials should occur.

MARGOT ADLER: Well, let me ask you ...

NEIL SELDMAN: Excuse me, but that's incredibly discouraging for organized citizens who for over thirty years have forced cities to change the rules so that they know that their systems work better. To say that that is a foolish activity is to say that this country doesn't mean anything.

ADRIAN MOORE: No, I'm saying it's a foolish activity for a group of citizens to try to run the technical details of recycling over a long period. What's wise is to create a recycling program through the democratic process that utilizes the best means possible of recycling. That's mobilizing the citizens and educating them to recycle and reuse and divert. That is collecting the materials in the most cost-effective fashion. And that is utilizing the maximum amount of those recycled materials in ways that doesn't lead to increase use of virgin materials, but actual decrease in use of raw materials and landfilling and incineration. That's a good recycling program.

NEIL SELDMAN: What you described is exactly what's happening in the country and why cities like Los Angeles have reached 50 percent and now are going for 70 percent. Because they know what they're doing. They set up commissions so that citizens could meet with industry and government and plan how to produce products and how to produce packaging to reduce materials and to increase recycling. The process that you want to happen is happening.

ADRIAN MOORE: That is absolutely not true.

ADRIAN MOORE: It is true. It is true. And in fact in Europe--

MARGOT ADLER: I want to jump in here. This past summer, the European Union adopted strict limits on electronic waste, television, computers, et cetera. Many people say that this is the fastest-growing and most hazardous form of waste. What should we be doing about it? You know, isn't the idea that if we use less toxic materials in these products, they would become easier to dispose of and recycle? Should we have stricter regulations on this? Adrian, we'll start with you.

ADRIAN MOORE: Yeah, the e-waste is definitely the kind of emerging hot solid waste issue. And I think we're going to spend a number of years more trying to figure out the right solution. And recycling is probably even more the answer with these materials than it is with the sort of more mundane trash. Because like you say, there's a lot of very expensive material that goes into electronics. And there's a lot of toxic material that go into electronics. And so, you know, the options are much more constrained. But again, the way we're going to get the most materials recycled and reused is by encouraging the reuse of those materials. We can mandate that they be recycled. But most likely that will just wind up driving up the cost. And that means fewer people can have cell phones. Fewer people can have computers and what have you. If we use the most efficient means of recycling those materials, we will reduce those cost effects.

MARGOT ADLER: Neil, what do you think should be done about electronic waste?

NEIL SELDMAN: The first thing that should be done is the federal government should do nothing. Because the federal government is slowing the process down. Electronic scrap recycling in the United States is a direct result of citizens organizing, putting pressure on the companies. Three years ago, the companies refused to talk about taking responsibility. Now they're falling all over themselves to set up centralized systems, so that they can control the system. Whereas small companies all across the country are making a tremendous amount of profit by refurbishing and recycling computers in an environmentally sound way, creating jobs,

very high skilled jobs and very high paid jobs. So the answer is development of small businesses at the local level. And let the federal government stay out of it.

MARGOT ADLER: Bottom line, what do you think people should believe about recycling? Start with Adrian.

ADRIAN MOORE: I think people should believe that recycling, like a lot of other things they do, should be a rational process. That you should be recycling things for which there is a good use that is going to yield a net benefit to folks. And you should not recycle materials for which there isn't any use and it's just going to take more resources to process that material than it would otherwise. You know, it's an unwieldy system to do that through the law at the state level and at the municipal and county level. And it's a very nimble process to do that through the market.

MARGOT ADLER: Neil, bottom line, what do you think that people should believe about recycling?

NEIL SELDMAN: Recycling is an answer to the sustainability questions that people have concerning their water, concerning their building materials, that are currently putting things in their body that shouldn't be there. Recycling is no longer really concerned with bottles and cans. The recycling movement is talking to big corporations about their mining operations, their transportation operations and the different raw materials they're using. So the recycling industry and the social movement around it is a very sophisticated hard -hitting movement which has international connections. So what's going on in Europe is starting to impact the United States. What's going on in India and China is now impacting the United States. The world right now is a perfect forum for recycling.

MARGOT ADLER: Neil Seldman is founder and president of the Institute for Local Self-Reliance, an organization promoting sustainable communities. Adrian Moore is vice president of research at the Reason Foundation, a think tank that advances libertarian principles. Thank you both for joining me.

NEIL SELDMAN: My pleasure.

ADRIAN MOORE: Thank you.

MARGOT ADLER: Coming up on Justice Talking, we'll hear about a town that has decided to dig up its landfill. And we'll talk to a guy in Boulder, Colorado about the town's plan to recycle and compost everything. And I do mean everything.

UNIDENTIFIED MALE: When you build a composting program on a community scale rather than your backyard, it will take a piece of meat as big as a cow. As a matter of fact, out in Colorado, we compost whole cows out here.

MARGOT ADLER: Don't go away.

MARGOT ADLER: This is Justice Talking. I'm Margot Adler. There are only a few human-made objects that can be seen from outer space. Fresh Kills landfill in New York City is one of them. It is 2,200 acres and was open for trash dumping for more than fifty years. The United States produces more garbage than any other country in the world. But what do we do with all of that trash? In the past, the solution was largely to burn it or put it in landfills, a practice that raised many environmental concerns. Earlier in the show, we heard from Nick Robinson, a law professor at Pace Law School. Here he is again to talk about how the federal government changed the landscape of landfills by forcing states to think differently about how they dispose of garbage.

NICHOLAS ROBINSON: Congress effectively banned landfills. You may remember Love Canal and the fact that we found waste dumped into the ground, leached into the groundwater, and poisoned people. So beginning with the Resource Conservation and Recovery Act in 1976, and then amendments to that in 1984, Congress said: Enough already, we're going to ban landfills. You have so many months to get out of the landfill business.

MARGOT ADLER: Well, wait a minute. There are landfills all over the place. I mean, Fresh Kills closed finally. But it was certainly a successful landfill for years and years. And there are current landfills today.

NICHOLAS ROBINSON: Well, Fresh Kills wasn't very successful actually. It was designed over a wetland. So that as you dumped all your waste in Fresh Kills, the rainwater would leach out the poison from the garbage and put it into the harbor. And when we passed the Clean Water Act, we began to ban the discharge of waste from direct or indirect sources into harbors. And so it really wasn't a very effective landfill. I was involved as the general counsel of the State Department of Environmental Conservation in ordering New York to close all of its landfills on behalf of the State. They were making mountains of waste. Fresh Kills became the highest point of land between Mt. Desert Island in Maine and the Florida Keys right along the coast. But it was not an effective way to get rid of waste, because it simply transferred some of the poison from one form into another form.

MARGOT ADLER: But there are landfills still operating today, correct?

NICHOLAS ROBINSON: We have a huge number of landfills still operating today. And they operate under a set of conditions the US EPA has promulgated. And every state has had to adopt its own state law to regulate those landfills.

MARGOT ADLER: Now, are there any states that have come up with particularly innovative or successful ways of dealing with their trash?

NICHOLAS ROBINSON: Right now some of the biggest innovations are with places like Washington State, which wants to go to zero waste discharge. And they are in the process of

trying to come up with a way to essentially eliminate waste. The cities of San Francisco and Boulder, Colorado and Palo Alto have passed local ordinances which want to move towards maximum recycling in excess of 50 percent, for instance, by 2010 or 2020. And basically, these localities are using recycling as the main alternative to landfills.

MARGOT ADLER: Now, many environmentalists hope for a federal mandate restricting packaging. Do you think there's any likelihood of that?

NICHOLAS ROBINSON: I don't think there's much of a likelihood of Congress entering the solid waste field for a while. They're going to let the states work on trying to come up with the solutions. And since 1976 when the Resource Conservation Recovery Act was adopted in Congress, we haven't really done anything more to innovate. I would say some of the industries are doing more voluntarily to come up with product redesign and product life-cycle analysis to reduce the problems they face when they have to access packaging than the governments are doing.

MARGOT ADLER: Nicholas Robinson is a law professor at Pace Law School and the founder of the Environmental Law Program there. Nick, thanks for talking with me.

NICHOLAS ROBINSON: Well, thank you, very much.

MARGOT ADLER: A moment ago, Nick mentioned that Washington State is hoping to go to a zero waste model. A little later in the show, a zero waste activist in Boulder, Colorado tells us how his town is planning to kick the trash habit by 2020.

MARGOT ADLER: Since 1993, more than 6,000 landfills in the U.S. were forced to shutdown because of tighter environmental regulations. But to close a landfill the operators have to make sure that no contaminants from decomposing garbage can leak into the groundwater. This can be an expensive project requiring covers and drainage systems. So the town of Riverhead, New York wanted to try another solution: digging up the town dump and selling what's underneath. It's an unusual process called reclamation that turns trash into cash. Charles Lee has this report.

CHARLES LEE: At a closed landfill in Riverhead, New York on eastern Long Island, town engineer Ken Testa gives a tour. For 35 years, this is where Riverhead dumped its garbage. Now, it's a muddy valley scattered with giant heaps of trash and sand.

KEN TESTA: You know what? I'm going to go all the way out. It's a good vista up here. What you're looking at, for your listeners, is about 35 acres of a hole in the ground.

CHARLES LEE: Testa climbs an 80-foot-high mountain of sand that was mined from the stadium-sized hole below. To the south is the actual landfill where the sand was used as daily cover to keep out rats, seagulls and other vermin. For landfills around the country, sand is a huge expense. Riverhead's landfill has \$200,000 worth of sand mixed in with the trash. The town decided to recoup some of that expense by digging up the garbage and sorting it. They also

found other ways to make money. Testa picks through a pile of debris the size of a three bedroom house.

KEN TESTA: See that metal that we've got there? This stuff is like--I think it's like 10, 15 cents a pound right now. It's scrap metal. That's an old exhaust manifold from a car engine. This probably weighs ten pounds. So at 10 cents a pound, we've got a dollar here.

CHARLES LEE: By sorting and selling the waste, the town hoped to offset the cost of closing its landfill. Besides the metal in the sand, there are chunks of concrete that can be ground up and used in roads, glass that can be recycled and wood that can be mixed with the sand to make topsoil. However, it is an expensive and tedious process that requires hiring a reclamation company to sort through the trash. Testa explains how it works.

KEN TESTA: An excavator would dig the garbage in the sand up from the landfill, put it in a huge off-road dump truck that would come to this location and he would dump everything. And then it went into a series of conveyor belts and ultimately to a picking station which was elevated. And it was six employees there, and they would actually pluck the concrete and the metal and the wood out and throw them in various containers.

CHARLES LEE: Even with the sale of the sand and other recyclables, Riverhead spent almost a million and a half dollars to sort through the landfill and it's not over yet. Currently, the project is on hold because the town underestimated the amount and density of the garbage. So the cost of the project is expected to go even higher. According to Ed Rippa, a landfill expert for the National Solid Waste Management Association, reclamation is an unusual last step for a closed landfill.

ED RIPPA: It's not very common. It's not very common at all. I mean, the value of those pieces of material, you know, the aluminum cans and the tin cans just doesn't pay to dig it up.

CHARLES LEE: However, making a landfill comply with environmental regulations can be prohibitively expensive. To do this, the landfill must be lined--a costly process, but one that prevents rotting garbage from polluting the groundwater.

ED RIPPA: It was almost like a bathtub. You put something that's impermeable on the bottom. And then when you're done, you turn another bathtub over top of it.

CHARLES LEE: These bathtub-like liners which are made of plaster or clay are expensive and have been known to leak over time. So Riverhead was faced with the choice of spending lots of money on a potentially faulty liner or sorting through the trash and selling it. Riverhead chose to unearth the garbage and sell about three-quarters of the landfill's content. James Taylor runs Taylor Recycling in Montgomery, New York, 70 miles north of New York City. His business takes garbage destined for landfills like Riverhead's and turns it into usable products for the wholesale market.

JAMES TAYLOR: You get paid for stuff coming in the front door. And you get paid for everything going out the back door. And in the middle, you've got a big manufacturing plant, a demanufacturing plant.

CHARLES LEE: Taylor Recycling charges \$80 to \$125 per ton to accept trash from contractors in municipalities. The waste then gets sorted, everything from telephone polls to mattresses.

JAMES TAYLOR: And this is all material that when it goes through our facility doesn't wind up in a landfill.

CHARLES LEE: Standing alongside a modified assembly line, fifteen men pluck heavy pieces of wood, plastic and other debris from a moving conveyor belt and sort it into piles. The wood becomes gardening mulch and plastic sheeting is sold to China and turned back into packaging. Taylor's system has huge magnets that can suck screws out of a two-by-four and can pull the battery from a plastic toy. Batteries are one of Taylor's pet peeves.

JAMES TAYLOR: So this is in some kind of an electronic gizmo that's on the nightstand and this is the stuff that's polluting our groundwater. This is the stuff that's going in landfills today.

CHARLES LEE: Right now there aren't many facilities like Taylor's in the U.S. And unless there's a reclamation facility nearby, towns are left with few options for dealing with landfills that have been closed. So for most of the 6,000 closed landfills in the country, the waste will stay underground for years to come. For NPR's Justice Talking, I'm Charles Lee.

MARGOT ADLER: I'm Margot Adler and you're listening to Justice Talking. When we began doing research for this show, we came across what to me was a new concept called zero waste. Eric Lombardi is here to explain what that is and how it might be achieved. He's the executive director of Eco-Cycle, a community-based recycling organization. He's often invited to speak about the social and technical aspects of creating a "zero waste or darn near" society. Eric, what is zero waste?

ERIC LOMBARDI: What is zero waste? Well, intuitively it is 100 percent recycling. That's the easy part. Half of the story that most people don't understand is that we'll never get to that until we invite industry to participate in redesigning the products of our lives. So they're designed to be recovered rather than thrown away.

MARGOT ADLER: You know, you just got to my second question. Because the first thing I thought of when I thought of zero waste was it doesn't seem possible. I mean, even if it was possible for me and my family to go to zero waste, I kept on thinking: How can a community like Boulder, Colorado, you know, a rich, very consumer-oriented community, which is trying or planning to go to zero waste by 2020, how could it do it?

ERIC LOMBARDI: Well, first, let me share with the listeners the fact that about 90 percent of what you see in your trash can is actually marketable. It has market value. And so if we can just

get it out of that trash can and separate it, I can sell all of the paper and plastic and metals. Because these are all resources, okay? And the organic part, all the food scraps, that becomes soil. The farmers want to buy that back in the form of compost. So most people don't realize we could technically get very close to 100 percent recycling today. But that's why we say zero waste or darn near. Because if we got to 90 percent, I think we would have changed the world as we know it. So how does the zero waste community go forward? Well, there are four things that a community has to do. The first principle is you need to invest in the infrastructure that will get you there.

MARGOT ADLER: That means what? Companies?

ERIC LOMBARDI: No, that means things other than landfills and incinerators. Because in the 20th century, that's where most of the millions of dollars went, building massive holes in the ground or building massive burn chambers where everything got burned. What I'm saying is now what we're going to build is three facilities. I run some of them myself out here in Colorado. One is a modern recycling facility. Two is a modern composting facility which will take all of your food scraps and your yard waste.

MARGOT ADLER: Even meat?

ERIC LOMBARDI: Even meat. Because when you build a composting program on a community scale rather than in your backyard, it will take a piece of meat as big as a cow. As a matter of fact, out in Colorado, we compost whole cows out here. So it is a biological process. It's a natural process that turns things back into a useful product that farmers want for their soil. And about half the trash in America is compostable. People don't realize that.

MARGOT ADLER: So you said recycling, composting, and what was the third?

ERIC LOMBARDI: And the third is a new facility Eco-Cycle pioneered called the Center for Hard-to-Recycle Materials. And the acronym for that is CHARM. And what it is is this is where we are recycling electronic scrap like computers, television, plastic bags, tennis shoes, block Styrofoam, old textiles, cell phones.

MARGOT ADLER: So let's take two things, cell phones and Ziploc bags. What can you do with them?

ERIC LOMBARDI: Well, for example, right now cell phone reuse around the world is a big business. I'm collecting old cell phones in Boulder. As you can imagine, we have lots of them. And they're being refurbished and then sold overseas. Because a lot of people don't realize that some of the less-developed areas of the world, they're not even stringing phone lines anymore. They are leapfrogging that whole technological step that we took. And they're just going right to wireless. So there's a market for used cell phones. And then plastic bags, well, right now those are called plastic film, any plastic like that. And in fact, plastic films are in high demand. Because they are a key ingredient in things like plastic lumber. If you mix together, let's say, a grocery shopping bag with a milk jug with some sawdust, there's a company in the world called Treks that will make a two-by-four out of that stuff. My backyard deck is made out of it. I don't

have to put stain on it. And that deck is going to last my lifetime and look good for the rest of my life. So there are creative uses for all of this stuff. And that's the key thing why zero waste is the philosophy for the 21st century.

MARGOT ADLER: Now, give us some concrete examples about how the theory of zero waste would go into action in business and schools and the home.

ERIC LOMBARDI: Sure. For example, I hoped to design the recycling system for a large shopping mall here. And when we were almost done with the project, they wouldn't give me any space for the recycling containers, even though they had a huge asphalt parking lot, plenty of room. They wouldn't give me a parking space to put any dumpsters in. So rather than get mad, I got even. I went to the city council. And we worked out an ordinance that said any new construction in the city, the developers have got to design equal space for trash dumpsters as recycling and composting dumpsters.

MARGOT ADLER: Ah-ha. So you changed basically government policy.

ERIC LOMBARDI: Yeah, exactly.

MARGOT ADLER: Eric Lombardi is a zero waste advocate and the executive director of Eco-Cycle. Thanks for talking with me.

ERIC LOMBARDI: It's been a great pleasure.

MARGOT ADLER: Eric and almost 100,000 other Boulderites are looking forward to reaching darn near zero waste by 2020. You can hear more of my conversation with Eric Lombardi on our website, justicetalking.org. While there, you can find out more about all of our guests and get more information on trash and recycling.

Thanks for joining me. I hope you'll tune in next week. I'm Margot Adler.
