POLICY DILEMMAS AT THE SEATTLE SOLID WASTE UTILITY (A)

The “Garbage Mess"

Diana Gale, director of the Seattle Solid Waste Utility (SWU), frowned at the newspaper on her desk. The headline read “The Garbage Mess,” and the subtitle announced, “The city with the highest rates in the nation is pinning too many hopes on incineration.” The article went on to criticize the SWU recycling efforts and argue that environmental and health concerns about a proposed garbage incinerator were being downplayed by the utility and local politicians. It was August 1988, and Gale had been hired eighteen months earlier to lead the utility through a chaotic period marked by shifting policies and a turbulent political environment.

Gale was about to convene a staff meeting to discuss the proposed incinerator and decide which of three long-term disposal options the utility would recommend to the mayor. Should the city:

- Continue using the local King County landfill located a few miles outside Seattle?
- Build a garbage incinerator? or
- Haul the garbage to a landfill in eastern Oregon?

SWU had focused on the county landfill and incinerator options until a month earlier when it was discovered that a landfill in Oregon was looking for customers. From 1986 to 1988, SWU had favored the incinerator option, actively promoted by the mayor and city council. Recently though, environmentalists had claimed that the incinerator would release dangerous levels of nitrogen oxides, swaying public opinion against the incinerator, as evidenced by “The Garbage Mess” article and other negative media coverage.

Now SWU, especially Director Gale, was under pressure to propose a long-term disposal option that would be supported by both the public and the politicians who had stuck their necks...
out for the incinerator. Should the utility recommend the Oregon landfill and abandon the mayor and city council, or should it propose that the incinerator be built and hope that public opinion could be swayed in favor of that choice? As she considered the alternatives, Gale thought about the changing public perception of garbage over the last twenty years in Seattle.

**Garbage: "It Just Disappears"**

For decades, garbage collection and disposal in Seattle, like in most cities, was a "silent service." Citizens dumped out whatever they had on the back porch and, presto, it disappeared in the dark morning hours. And it was cheap too. Garbage services were funded by general tax revenues until 1961, when the Solid Waste Utility Division was created within the Seattle Engineering Department as an enterprise fund. For the first time, Seattle residents were billed directly for garbage collection and disposal.

At first, SWU used several small landfills around the city for garbage disposal, but most of those were closed in the late sixties. For the next twenty years, Seattle relied on two large landfills at Midway and Kent, small King County communities located ten miles south of the city limits. Garbage was simply out of sight and out of mind, barely given a second thought by residents.

Although landfill capacity wasn't a problem in SWU's early years, it was anticipated that someday the Midway and Kent landfills would fill up. During the 1970's, SWU considered measures to reduce the volume of waste and extend the life of the two landfills. In 1981, the utility implemented a variable garbage rate, linking the amount of garbage customers produced to the rate they were charged. SWU hoped that people would reduce their waste if given this financial incentive. But since rates remained low into the early 1980s, the financial incentive was diluted. The Kent and Midway landfills continued to receive the bulk of ever-growing amounts of residential waste from Seattle.

**Landfill Crisis**

Seattle's solid waste crisis began in 1983 when a *leachate* (1) was discovered in a ditch at the Midway landfill, posing a potentially serious environmental hazard. Midway was closed in 1983, but preliminary testing indicated that methane gas had already seeped from the landfill onto neighboring properties.

On Thanksgiving Day 1985, twelve families living near Midway were evacuated when near explosive levels of methane gas were found in their basements. SWU's landfill problem immediately took on new proportions, and the utility’s credibility suffered as media captured the haunting image of families fleeing their homes on Thanksgiving. Midway was nominated as a Superfund Clean-up Site, and the city and Washington State Department of Ecology battled daily in the press. The methane gas migration at Midway proved to be extensive and no one wanted to live near a landfill leaking potentially hazardous substances.
Residents living nearby the other landfill at Kent became agitated by the Midway situation. Worried about health hazards and declining property values, Kent residents confronted their mayor and city council. In 1986, Kent city officials responded by demanding that Seattle close its only operating landfill in Kent.

With no place to deposit garbage, Seattle turned to King County which also operated a landfill, for short-term waste disposal. King County had space available, but wanted exorbitant fees, in part because Seattle had pulled out of landfill contract negotiations with the county before, at a high price to the county. If the city used the county landfill, it would be charged a one-time fee of $3 million and a dumping fee that would increase from $11.00/ton to $31.50/ton. If Seattle elected to contract with the county landfill on a long-term basis, it would have to share the inevitable shut down costs once capacity was reached. The city wanted to avoid a long-term, open-ended financial commitment to King County, but the short-term options were nil. Seattle had garbage to dispose of. King County had the landfill.

The county also gave the city only two years to decide about a long-term contract or find an alternative disposal method, imposing a tight timeline on development of a long-term solution for solid waste disposal. SWU had 1987 and 1988 to investigate disposal methods and make its recommendation to the mayor.

In the meantime, in August 1986, SWU raised garbage rates by over 40 percent to cover the increased cost of using the county landfill and the anticipated closure costs for the Midway and Kent landfills. Residents were upset about their rising garbage rates, and they deluged SWU’s Customer Service Department with complaints. The landfill crisis and rate increase had changed everyone’s perception of garbage. No longer a basic service taken for granted, garbage pick up and disposal had become an expensive service that residents also connected with environmental and health risks.

**Problems at SWU**

By 1986 the utility was confronting serious problems:

- Closure of Seattle’s only two landfills at Midway and Kent;
- Environmental and health hazards at the closed landfills;
- High fees for using the county's landfill;
- Massive residential rate increases;
- The need to identify a long-term disposal option

These problems highlighted the changed mission of the utility. In addition to garbage pick-up and disposal, the utility was now responsible for developing and assessing waste management policies. The mix of staff would have to change. SWU needed personnel with research, policy analysis, and planning skills to provide Seattle’s elected officials with the information essential to making good policy decisions.
A different type of management expertise was also required to chart the new agency course. Weak leadership had plagued SWU for several years, damaging the division’s credibility and reputation, especially among city council members who openly criticized SWU and the quality of their data. On one occasion, SWU submitted a consultant’s report on recycling to the city council. This contained basic calculation errors. As a program developer at SWU explained:

"The city council was always looking over our shoulders. We felt that they saw us as a real problem, so council members asked their own people to do some of our work for us."

The council’s distrust didn’t help staff morale at SWU. The division had suffered from bad publicity and low public confidence since the Thanksgiving day evacuations, and staff confidence was shaken. The situation seemed hopeless.

**Leadership Changes at SWU**

In July 1986, Gary Zarker was hired as the new director of the Engineering Department, SWU’s parent department. The mayoral mandate was clear: Zarker had to find a person capable of managing the Solid Waste Division. Zarker recalled:

"When I started, Mayor Royer told me that the utility was the biggest political liability he had. He woke up each morning wondering what would happen that day. He had to avoid further crises, like that methane gas leaking from the city’s landfill, families evacuating their homes on Thanksgiving day, small children and turkeys in tow, and TV cameras rolling. People were really scared. Were they being poisoned to death? Was this another Love Canal?"

"Also, Royer had serious concerns about not having a place to take the city’s garbage. We were producing 300,000 tons a year, and were aware of the mountains of garbage that other cities had encountered when they had garbage strikes -- rats running all over the place. People in Seattle just would not have tolerated this type of thing . . . just absolute death for politicians. And Royer had no confidence that the Engineering Department, and SWU in particular, had the slightest clue about how to get a handle on it."

Zarker asked Diana Gale, then staff director of the Seattle City Council, to consider the SWU director position. Gale was interested, but had reservations, given SWU’s reputation with the city council. Zarker assured Gale that he would support any organizational changes she deemed necessary to accomplish the landfill closures, a city-wide recycling program, and a solution to the city’s long-term disposal problem. His record so far was promising. As Gale explained, Zarker made very strong statements about the need for more staff to the city council in June of 1986, when the council was considering his appointment as the director of the Engineering Department. He had elevated the position of the utility director within the department, had upgraded the utility from a section to a full fledged division in the department, and had added
some upper level management positions. I wanted to be sure his commitment to improving the utility would continue. Zarker assured me it would.”

Gale expressed other concerns:
“. . . at that point, the SWU was in a true crisis. By the end of 1986, staff were burned out and weren’t answering a high percentage of their phone calls. SWU had a weak analytic process in place, staff had no experience closing landfills, and they couldn’t accurately predict closing costs. SWU was also producing a comprehensive waste management plan, which the city council staff thought was inadequate. It included a recycling plan with a goal of 40 percent, but that goal was not based on in-depth analysis. The mayor had also told SWU to get a curbside recycling program going. So, at the end of 1986 there was a financial crisis, a landfill closure crisis, and there was the demand for recycling, but there was no planning, no analysis, and an inadequate customer service section in the utility.”

With Zarker's commitment to reorganization, Gale accepted the newly created director's position at Solid Waste and began work in January 1987. Zarker had already begun reorganizing SWU based on their joint analysis of the management changes needed to improve the division's capability. These included:

- Allocating more money and staff to projects like long-term disposal;
- Establishing the landfill and long-term disposal projects as formal sections in the division;
- Upgrading a planning position to direct a new program planning unit; and
- Consolidating finance, rates, and customer service units into one section, and creating a directors position to manage it.

These organizational changes allowed Gale to hire new directors to strengthen the weakest areas of the department.

**Gale Jumps In**

During her first two weeks, Gale met with every program planner and senior level staff member. She then spent several more weeks talking to all of the customer service representitives in small groups as well as field staff like inspectors, laborers, truck drivers, and attendants. There were nearly one-hundred and fifty staff in the utility at that time. Gale recalled:

"I needed to know what staff did and how they worked with one another. The structure of the organization had been flat with up to ten program planners and two unit directors reporting to the director of engineering. I felt some mistrust coming in. I was viewed as a political person who knew little about solid waste and the environment, but things were also so bad that staff were willing to see what changes I could make. As it turned out, my talking to everyone was a positive first step. Staff told me that the previous director had rarely been out in the field."
Gale was challenged by what she learned from her conversations and meetings with utility staff. She was faced with a range of policy and organizational issues, most of which needed to be addressed immediately. To get the utility off to a new start, she needed to establish a "vision" or direction to pull people together and create a sense of purpose. One of the first things that jumped out at her was the poor communication, formal and informal, among SWU staff. For example, there were three people working on recycling who worked in two offices side by side but barely talked to each other.

"I brought the three of them together and had them talk about their projects so they would know what each other was doing. There had been no staff meetings for probably a year, so I realized there were simple and straightforward things that needed to be completed quickly. One was to start having meetings. I started weekly staff meetings right away.

"At the first meeting, I described my goals, and the direction I had received from the city council and the Engineering Department. No one had ever told them what the city council wanted, let alone the Engineering Department director. I also wrote a work program based on what I had learned from my conversations with everybody and passed it around to each section. Again, that was the first time they had ever seen what was expected of them in writing."

Gale also discovered that staff lacked basic discussion skills:
"There were a lot of bad feelings among people, and they didn’t know how to talk to each other. At staff meetings, they were critical of each other. In the middle of discussions, I would have to say, ‘now wait a minute, that's not the way you ask that question. You have just attacked that person. The point you're making is a good one but the way to state it is …’ I had to teach them how to have a meeting."

Once she had taken steps to improve basic communication at SWU, Gale turned to the problem of staff morale. She felt it was important for people to take pride in their jobs and in the division, and she wanted to develop a team approach to projects. She invited staff to participate on task forces to tackle problems at the utility. The Communication Committee, for example, focused on improving staff working relationships. Gale also improved the atmosphere in the division by forming a committee that planned parties, recognized achievement, and organized theme days, such as Hawaiian shirt day and hat day, when workers wore hats made from recycled materials.

Once these organizational changes had been accomplished, Gale began working on the pressing policy issues.

**Recycling**
As the long-term disposal problems became more costly and complex, it became apparent that overall waste reduction would need to be a key component of Seattle's long-term waste management policy. The mayor wanted to demonstrate his commitment to recycling as one way to achieve significant waste reduction. He had asked the previous SWU director to develop and implement a curbside plan throughout the city. The city needed a "win" in the solid waste field, and the mayor expected recycling to be popular. He wanted the recycling program to be cost-effective, customer driven, and convenient, so that people would use it.

Gale's predecessor had told Mayor Royer that the curbside recycling program would be up and running by May 1987. Gale felt this was unrealistic:

"Before I took the job I met with the mayor and tried to discourage him from moving forward on recycling that year. There was too much going on in the utility, the plan wasn't integrated, it wasn't worked out with the community, and the staff didn't know what they were doing.

But the mayor held firm:
"No way, you will get a recycling program up and running this year."
I said 'OK' and after another careful look, it became clear that even though we would not have it going by '87, we could at least get the RFP process completed and finish designing the program."

In the spring of 1987, the utility issued an RFP to potential recycling contractors, and by fall, the utility had selected the vendors and contracts were signed. SWU offered recycling services to Seattle residents in February 1988.

The city council was pleased that SWU had gotten the recycling program off the ground so quickly. The next step was to see how recycling fit into the city's long-term waste management plan. In 1988 the council requested that SWU determine a maximum feasible recycling level. The utility spent six months preparing a Recycling Potential Assessment, and recommended to the council that the city establish a long-term recycling goal of 60% by 1998. Interim goals would be 40% by 1991 and 50% by 1993.

The mayor supported these levels and thought they were a good first step toward reducing the total volume of garbage, an important objective of the city's long-term disposal policy. Recycling would be the most cost-effective way to reduce the city's waste stream and lower future disposal costs.

**Landfill Closures**

After the Midway and Kent landfills were shut down in 1983 and 1986 respectively, environmental problems continued to surface at both sites, including methane gas emissions and leachates in the ground water. The city conducted extensive investigations of the sites and signed consent orders with the Washington State Department of Ecology to begin implementing remedial measures, including gas collection systems and drainage controls.
Both landfills were nominated as Superfund Clean-up Sites and closing them was a high priority for the mayor and Engineering Director Zarker due to the environmental and health risks. The former SWU director, Rich Owings, now the new Landfill Section Director, had approached the city council, asking for $45 million to close Midway and Kent. The council approved the expenditure, but in late January 1987, Owings reported to Gale that the preliminary estimates of the total capital cost for landfill closure would be closer to $77 million, with closure scheduled for 1993. Ongoing operation of environmental protection systems was expected to continue for several decades. Gale was not pleased with this report:

"That was a huge red flag. The utility had just gone to the city council the previous August and swore up and down that it was not going to cost more than $45 million. Now staff were coming to me in my first month on the job, saying it would really cost $77 million."

Gale hired an engineering firm to calculate capital estimates so that SWU had reliable data to give the city council. The firm provided cost estimates and suggested a closing process for the landfills. SWU compared those cost estimates to other landfill closure costs around the country to provide some context and rationale for the $77 million estimate. With the landfill closure process under way, Gale turned her attention to the next major policy issue — long-term disposal. The division’s new capabilities and confidence would be tested in its handling of the long-term disposal issue.

**Long-term Disposal Options**

The city council had signed a contract with King County in December 1986, agreeing that SWU would tell the county within two years if Seattle intended to continue using the county landfill on a long-term basis. Under Gale's leadership in 1987, SWU began the Disposal Options Project to analyze long-term disposal methods. The project had to be completed by 1988 when SWU would recommend a long-term disposal option to the mayor. The mayor in turn would make his recommendation to the city council, where the final decision would be reached. Gale quickly pulled together a team of people to begin research and analysis of the options:

"I started the disposal project with fifteen staff people and a team of consultants that met once a week. I didn't have a project manager so I was running this project in addition to overseeing other work in the utility. It became clear that we needed a project manager. I talked to the city council and they gave SWU a new project position, director of Disposal Development. I filled the new position with one of the council’s own staff members, Tom Tierney, who was a tremendous addition to our staff."

Tierney was a good choice because he was well respected by council members and could make strong arguments that SWU was improving its capacity to produce credible data that the council could use to make good policy decisions.
One disposal option was to go ahead and sign a long-term contract with the county for continued use of its landfill, but the city would have to pay 7% of the total closing cost of shutting it down in the future. SWU had already learned first-hand that landfill closures could be expensive because of environmental hazards. There was no way for SWU to accurately predict how much it would cost to shut down the county’s landfill, so the utility was very hesitant to back the county landfill option.

SWU turned its attention to other alternatives. Garbage incinerators had become a popular disposal choice around the country, as communities grappled with the additional costs and hazards of operating landfills. Sometimes called "resource recovery" or "waste-to-energy" plants, incinerators burn trash to boil water which creates steam to generate electricity. When SWU began its analysis, there were about 100 incinerators in the U.S., most of them hooked up to produce electricity. Initially, there seemed to be local support for an incinerator.

According to Gary Zarker, Engineering Department director, "Everybody in the country at the time and every politician around here was convinced that burning garbage was the way to go, that it was the most environmentally sound approach to garbage disposal. In fact, Mayor Royer wanted us to begin the process of selecting a site to build an incinerator that could handle all of the city's waste."

Although the incinerator was the utility's likely choice because the cost of using the county landfill was high and there was no way to site a new landfill in the county, several citizen and environmental groups in Seattle opposed that option. They argued that an incinerator would release unacceptable levels of nitrogen oxides, which had been linked to respiratory illness. Although some ecology engineers refuted those claims, the press picked up on the fears voiced by environmentalists. Public support for an incinerator began to erode.

Citizens also wanted to know what would be done with the incinerator’s ash, which would contain hazardous metals and organic compounds. There are two types of ash: Fly ash, constituting less than 1 percent of the incoming waste stream by weight, and bottom ash, sometimes weighing one-fourth as much as the original garbage, and considered less hazardous. The State Department of Ecology tested fly ash from three incinerators in other states, and all three were rated "extremely hazardous" because of toxicity to fish, presence of heavy metals, or presence of cancer-causing chemicals. These results confirmed the fears of the critics. SWU was also concerned and uncertain about the best method for ash disposal.

Opponents also argued that an incinerator would cost too much. An incinerator in Marion County Oregon, one-third the size that Seattle anticipated building, cost $47.5 million. Although incinerators produced electricity that could be sold to help offset costs, electricity sales wouldn't come close to covering the total construction and maintenance costs. Environmentalists also feared that serious recycling efforts would be abandoned if an incinerator was built.
In August 1988, the city council completed its site-specific environmental impact statement for the incinerator and other disposal options, finding the incinerator environmentally acceptable. Many local politicians continued to support the incinerator option, and had been flown to Tampa and Oregon to see their state-of-the-art incinerators. A lot of effort had been expended on selling the idea of an incinerator, and the mayor was set on that option.

However, the site selection process aroused and solidified intense public opposition, led by environmentalists. Zarker, Director of Engineering, recalled:

"There were tremendous siting problems and citizen concerns. We didn’t anticipate such strong citizen opposition to the incinerator in Seattle, but when we got out and talked to people, they told us that wasn't what they wanted to do with their garbage. Incineration was a smoke stack industry, not the right option for Seattle where people are very environmentally conscious. The hard part was that everyone in the utility had been working towards getting an incinerator built because other options, such as siting a new landfill in King County, didn't seem feasible."

While public opposition intensified, SWU learned that Waste Management Corporation was seeking customers for its landfill in eastern Oregon. When SWU looked into this, it found that the rates offered by Waste Management were more competitive than those offered by King County. For the first time, SWU began to realize that the incinerator might not be the best alternative for long-term disposal.

A Rock and a Hard Place

Several interest groups continued to exert pressure on the utility as Gale and her staff prepared to make a final recommendation to the mayor on the disposal options. Although some council members now seemed to be wavering, Mayor Royer still preferred the incinerator option. As Zarker explained:

"Mayor Royer was leery of hauling the garbage to an Oregon landfill, because he thought politicians in Oregon would be opposed to Seattle transporting its garbage across state lines. He said he could just see every politician in Oregon taking a 'political free kick' at him if we did this."

Public support for the incinerator was continuing to weaken, and SWU didn't know if citizen concerns about nitrogen oxide levels and health concerns could ever be allayed. SWU also remained concerned about ash disposal if the incinerator was built. Clearly, the days when Seattle's garbage "just disappeared" were long gone.
As Gale prepared to meet with her staff, she reflected on the utility's difficult position. It would be hard to tell the mayor that the utility had changed its mind, after he'd publicly supported and promoted the incinerator. On the other hand, she couldn't ignore public concern about environmental and health risks. She picked up her notes, the final environmental impact statement, the "Garbage Mess" article, and went to meet her staff. It was time for the Seattle Solid Waste Utility to make a decision.

(1) Leachates are potentially poisonous substances that form when rain percolates down through a landfill, absorbing metals and chemicals from the garbage.