

A Regional Solid Waste Task Force: Making It Work

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North Carolina faces a growing shortage of landfill space. To address this problem, Orange and Durham Counties have recently joined together to create a regional solid waste task force. This article describes the genesis, structure, and function of this multi-jurisdictional body.

Introduction

As the present group of sanitary landfills reaches capacity, solid waste management has become both more expensive and technically and politically more complex. Over half of North Carolina's landfills will be full within the next five years. New state regulations require that existing landfills, now simple holes in the ground, be replaced with lined landfills costing \$150,000 per acre, incinerators costing over \$100,000 per ton of daily capacity, and recycling programs costing over \$50 per ton. Other potential waste management methods are also expensive. In addition, the lead time needed to construct any type of waste management facility is increasing, and the regulations remain in a constant state of flux.

In recognition of these challenges, the mayors of Durham and Chapel Hill in 1986 founded the Regional Solid Waste Task Force (RSWTF) as a mechanism for local governments in the Triangle area to examine the potential for regional solutions to solid waste management. Although other Triangle governments and Alamance County attended initial meetings, by November 1986, the RSWTF consisted of only the local governments in Durham and Orange Counties, both of whose landfills are scheduled to reach capacity by early 1997. These five local governments--the towns of Carrboro and Chapel Hill, the city of Durham, Durham County and Orange County--initiated a process to systematically determine the potential for regional solutions to the problems.

The possibility for regional cooperation hinged on the timing of projected landfill closures and a desire by the involved governments to reduce the costs of the next generation of solid waste management facilities. In 1986, when this process was formalized, a planning horizon of four years was chosen to study the options available, select an approach, and design a plan to implement it. This would

leave five years for implementation, so that the required organization and the technologies for recycling, volume reduction, and safe disposal of the residues would be in place by 1997, when the landfills are due to close.

Why a Regional Approach?

Generally, solid waste disposal is conducted by one government within a county for the other governments. There is often an adversarial relationship between the waste generators (e.g., municipalities which collect solid waste), and the disposer (e.g., a county which operates a landfill). Typically, as the landfill grows, tipping fees increase, as do restrictions on what can be landfilled. The regional approach represented by the RSWTF is potentially different, not only because it involves both the generators and the disposers of waste in a single county, but also because it is one of the first attempts in North Carolina to forge a multi-county cooperative structure to handle solid waste.

Many other states have achieved various types of regional cooperation. One New Hampshire integrated waste management facility serves thirty-nine towns, and only one facility serves the entire state of Rhode Island. Often, however, these states have higher tipping fees, smaller geographic areas, and different local government structures. In contrast, the RSWTF is neither dictated by the state as in Rhode Island, nor born of economic necessity as in New Hampshire, but is an independent attempt to achieve cost-effective environmentally sound regional planning.

Structure of the Regional Solid Waste Task Force

The final composition of the RSWTF included both official and citizen representatives from the towns and

counties involved, as well as a representative from the physical plant of the University of North Carolina at Chapel Hill. UNC contributes over twenty percent of Orange County's waste stream and is considered an essential participant in any solid-waste planning effort. Therefore, one representative from the university physical plant was invited to participate. Each county sent two citizen representatives, and one elected official and one staff member represented each governmental jurisdiction--Durham County, Orange County, the towns of Carrboro and Chapel Hill, and the city of Durham.

Purpose of the Task Force

The task force stated its purpose as follows:

... to identify the problems of waste disposal and explore alternative solutions to those problems. The positive and negative aspects of each should be evaluated while keeping in mind cost-effectiveness, environmental sensitivity, and the political realities they affect. With such information at hand, the task force will draw conclusions to present to those governing bodies they represent.

The RSWTF appointed a technical subgroup to act as its staff. This group included the Public Works Directors of Chapel Hill, Carrboro, and Orange County, the solid waste planners for Orange County, Carrboro and Chapel Hill, the Durham Sanitation Department Assistant Director, the Durham County General Services Director, the Carrboro Town Manager, and the Assistant Physical Plant Director from UNC. These are all RSWTF members.

The Study Process

The RSWTF met monthly from June 1986 onward. After a request-for-qualifications process, they selected HDR Engineering as the engineering consultant to define the feasible options for solid waste management.

The RSWTF developed an initial charge which was refined through discussions with the consultant. The consultant then completed the required studies and wrote a solid waste report. Hearings were conducted in January 1988 in Durham and Chapel Hill to obtain public input to the study. A clear consensus emerged in favor of maximizing recycling efforts. In Durham, the speakers also focussed on opposition to a potential waste incinerator. In the Orange County hearing, more opposition to landfills was expressed.

Recommendations by the Consultant

HDR presented the preliminary report chapter-by-chapter to the task force. The technical group of the task force

reviewed the consultant's work, and brought its recommendations back to the full RSWTF. Working together, the task force and the consultant developed a final report. This process spanned a two-year period from its beginning in November 1986 through acceptance of the consultant's final report by the task force in November 1988.

HDR's report recommended the following. Some estimated costs are noted. Both counties will likely finance most study costs from tipping fees.

1. Develop a plan to reduce wastes and increase recycling in all jurisdictions to reach a minimum goal of twenty-five percent recycling in Orange County and twenty percent in Durham County by 1998.
2. Initiate a search for a new landfill site in Orange County with at least a ten year capacity. Study should include full public participation. (\$155,000)
3. Study and evaluate in more detail the potential of the following technologies for reducing solid waste volume:
 - a. Regional refuse-derived fuel production (RDF) facility. (\$10,000)
 - b. Regional waste-to-energy (WTE) mass burn facility. (\$85,000)
 - c. Compost/landfill facilities either regional or for each county. (\$50,000) Compost should include both municipal solid waste and sludge.
 - d. Waste Characterization Study for both counties. (\$50,000)
4. Evaluate participation in a larger waste-to-energy project involving Wake County.
5. Evaluate mechanisms (creation of an agency, for example) to establish a regional solid-waste management program.
6. Evaluate waste-flow control mechanisms to direct all refuse haulers in the jurisdictions to deliver waste to a specified solid waste disposal facility or facilities.
7. Develop a comprehensive waste-management plan which will include recycling, waste reduction, and reduction in the volume of waste remaining after recycling.

A second public hearing was held in December 1988 to publicize these recommendations. A public information piece was released in conjunction with it. Many of those who attended and spoke at the hearing voiced support for increased recycling efforts. There were several speakers who opposed construction of an incinerator to reduce waste volume. Interestingly, locally based Environmental Protection Agency researchers on solid waste incineration voiced their personal opinions that solid waste combustion was both safe and effective.

The RSWTF then presented its own report and recommendations to the governing bodies in these two counties. This report to the elected officials and the public became in large part the work plan of the RSWTF.

Conclusions on the Durham-Orange Regional Solid Waste Planning Efforts

1. Regional solid waste planning works best when interests, economics of solid waste management, and timing of the need for new solid waste management facilities are mutual among jurisdictions. This is the case for Durham and Orange Counties. Both the Durham and Orange landfills are in a rapid growth area with competing land interests, and their tipping fees and operating costs are similar. In addition, both counties' landfills are scheduled to reach capacity around 1997.
2. The process is twice as long and twice as expensive as had been originally anticipated. The task force first convened in July 1986 and now expects to continue meeting for at least another year--longer if a solid waste management agency is not formed. Continuity in the process has been, and will continue to be, extremely important through the three phases of the study: feasibility assessment (now complete), identification of site-specific, technology-specific options (planned for 1990) and final site selection, risk assessment, design, and engineering.
3. The means of moving from a planning process involving two counties and three municipalities to a working agency handling regional solid waste problems is still unresolved at this time. There is no direct precedent in North Carolina for a multi-county solid waste management agency. (Note that it is not called an *authority*.)
4. Development of the formula used to pay for all this work is part of the politics of regional planning.
5. The waste volume reduction option(s) identified by the engineering consultants will not necessarily entail a regional facility, a two-county regional approach, or the same approach for each county.
6. There are other approaches to the problem of solid waste management. Some are engineering oriented, some are political, some are expedient. All are costly. Alternatives to sanitary landfilling as the primary method

of disposal are driven primarily by the increasing regulation of landfills, the "Not-In-My-Back-Yard" syndrome, and the availability of sufficient suitable land.

Conclusion

The process of moving towards regional solid waste management solutions is long, arduous, and uncertain. The mechanisms to achieve true regional solutions do not yet exist in North Carolina. They will be invented and will evolve as needed. The solutions which are developed by the Durham-Orange RSWTF will include not only the technical aspects of waste reduction, recycling, composting, incineration, and RDF production, but also financing and institutional arrangements which will be innovative and ground breaking for our state.

Update: October 15, 1989

At present, the RSWTF has requested and received proposals to conduct a solid-waste characterization study in each of the two counties. The studies will begin in January 1990. A request for qualifications is now being developed to select a lead consultant for detailed technical study of RDF markets, municipal solid waste composting, and incineration. The Orange Regional Landfill Owners' Group is concomitantly developing a process to select a potential site or sites for the next landfill in Orange County.

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