1 🔅 Public Education And involvement

Developing integrated solutions for waste management problems requires public involvement. To economically and efficiently operate a waste management program requires significant cooperation from generators, regardless of the strategies chosen—buying products in bulk, separating recyclables from nonrecyclables, dropping off yard trimmings at a compost site, removing batteries from materials sent to a waste-to-energy facility, or using designated containers for collecting materials. To maintain long-term program support, the public needs to know clearly what behaviors are desired and why.

Involving people in the hows and whys of waste management requires a significant educational effort by the community. Ineffective or half-hearted education programs may confuse the public, reduce public confidence, or elicit hostility toward the program. Successful education programs must be consistent and ongoing.

Public education stimulates interest in how waste management decisions are made. And, when citizens become interested in their community's waste management programs, they frequently demand to be involved in the decision-making process. Communities should anticipate such interest and develop procedures for involving the public. When the public is involved in program design, it helps ensure that programs run smoothly.

This chapter provides suggestions for public education and involvement programs. Chapter 2 addresses public involvement in facility siting.

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Public education and A successful waste management program requires wide-spread public participation. involvement are Such participation can best be obtained through early and effective public education programs, which must continue even after the program is in full swing. crucial (p. 1-3) Communities comprise different mixes of home owners, apartment dwellers, busi-Planning and research form the basis for ness people, students (from college-level to preschool), age groups, income levels, and cultures. Planners must first know their own communities well enough to desuccessful education. sign programs that meet their specific needs. (p. 1-3) The six stages of a successful education program include the following: An effective education program leads people 1. Awareness: At this stage, people are learning about something new. The goal through several stages. is to let people know that a different way of handling waste may be preferable. (p. 1-4 — 1-9) Table 1-1 lists low-cost, medium-cost, and high-cost education methods. Interest: After people have been made aware of waste management issues, 2. they seek more information. Program planners must use a variety of methods to inform people. Voluntary programs require strong emphasis on promotion; mandatory programs should make clear what is required. Evaluation: At this stage, individuals decide whether to participate or not. For 3 even well-promoted programs, initial participation is about 50%. Making program requirements clear and easy to comply with increases participation. 4. Trial: Individuals try the program at this stage. If they encounter difficulty, they may opt not to continue participating. Well-publicized hot lines and clearinghouses provide additional instruction and information. Adoption: Participation should continue to grow. Ongoing education programs solicit 5. constructive feedback and provide new program information when necessary. 6. Maintenance: Ongoing incentives and education keep participation rates high. Following this eight-Effective waste management is a continuing process of public education, discussion, implementation and evaluation. All options should be continually investigated and stage plan facilitates actively debated, moving the community toward a consensus on the proper mix of public involvement. source reduction and waste management programs. (p. 1-10 — 1-13) 1. Concern: Waste management is put on the public agenda. Involvement: Representatives of various interest groups (regulatory officials, individuals 2. from neighboring communities, local waste management experts, representatives from environmental and business groups) are encouraged to participate. Issue Resolution: Interest groups make their points of agreement and 3. disagreement clear to each other and to program planners. Alternatives: Groups should make a list of available alternatives, including "no action." 4. Consequences: Economic and environmental consequences of each alternative 5. are discussed. Choice: Alternatives are decided upon. 6.

7. *Implementation:* The steps necessary to carry out the program are described and potential adverse impacts are mitigated, if possible.

8. *Evaluation:* The community should continually evaluate the program and solicit input.



PUBLIC EDUCATION AND INVOLVEMENT

A PUBLIC EDUCATION PLAN

In many ways, public education is similar to developing public support in an election. Motivating the public to support a particular solid waste management program is similar to the aggressive and highly interpersonal way in which a particular candidate pursues votes. The same methods that are used to gain political support can be used to educate the public about the need for a waste prevention and management program and to enlist public participation in such a program. The education plan must begin by introducing people to waste management needs and concepts, explaining clearly how to participate, and then effectively encouraging them to adopt the desired waste management behavior. Once people are participating in the program, incentives and reinforcements can be used to maintain and increase participation rates.

Developing an effective education program requires planning and research. Program developers must use different strategies for different groups, such as home owners, apartment dwellers, business people, and school children. They must carefully consider the diversity of the local culture. Focus groups can help identify the community's level of understanding, so that achievable goals can be set. For communities with limited budgets, they must target key participant groups and apply resources to reach them. Communities should be realistic about the costs of promotional efforts and the benefits they yield (see Table 1-1). Always deliver a positive message.

Low Cost	Medium Cost	High Cost
News releases	Flyers	Commercials, T.V., radi
News advisories	Posters	Billboards
Public service announcements	Fact sheets	Media events
Community calendar announcements	Briefing papers	Calendars
Letters to the editor	Media events	Advertisements
News articles	Slide show	Public relations firm
Newsletter articles		
Speeches		
Guest spots on radio, T.V.		
Poster contests		
Church bulletin notices		

Planning and research are essential for developing effective education plans. Grounded on a sound information base, an effective education program moves people through the following stages: (1) awareness, (2) interest, (3) evaluation, (4) trial, (5) adoption, and (6) maintenance. Each of the stages is discussed below.

Awareness

At the awareness stage, people encounter a new idea or a new way of doing things. At this stage, they do not possess enough information to decide whether a change in behavior is a good idea or whether they should be con-



cerned. The goal of the awareness stage is to let people know that a different way of handling waste may be preferable to the historical way and that good reasons for considering a change in their waste management practices do exist.

A variety of methods can increase awareness (see Table 1-1). Low-cost methods include news articles and public service announcements or shows on radio and television. Highcost efforts include television commercials or billboards. Nationwide events such as Earth Day also help stimulate public awareness.

For example, the City of San Diego has developed a program informing its citizens about proper management of household hazardous materials (see Figure 1-1). The materials define household hazardous waste, provide recommendations on proper disposal and purchasing, and practices to limit generation. A phone number is listed for those seeking additional information.

Over the long term, education in schools is the best way of raising awareness. Many states now have curricula introducing school children from grades K through 12 to the concepts of source reduction, recycling, composting, and other waste management techniques. The Town of Islip, New York, uses a dinosaur symbol, always popular with children, to promote and explain its recycling program (see Figure 1-2). Besides educating the next generation of citizens, school programs indirectly help make parents aware of waste issues, because children frequently take home information they have learned and discuss it with their parents.



Programs aimed at children should be sensitive to cultural diversity. For example, in some cultures it is considered disrespectful for children to tell their parents how to conduct themselves. For these citizens, use alternative approaches.

Interest

In the second stage, individuals who are now aware of waste management issues seek additional information. Individuals may seek one-to-one exchanges with waste management professionals, political officials, or educators, or they Using a variety of methods to explain the program may be helpful.

Evaluation

Participation increases when program requirements are easy to follow.

Trial

The trial stage is decisive for participants.

may seek information about how they are involved in implementing a waste management initiative or an effective public policy. Making changes in required local waste management practices, such as mandatory recycling or yard trimmings disposal bans, will clearly stimulate interest, sometimes in the form of political opposition.

At this stage, program developers may need a variety of methods to explain the program. Voluntary programs need a strong emphasis on promotion. A mandatory program must clearly explain required behavior, as well as promote program benefits. Fact sheets prepared and distributed by state and federal regulatory agencies, local governments, university extension services, and waste-related business associations can provide clear and concise information for interested citizens. Making public speeches, offering tours of waste management facilities, creating exhibits for fairs, and preparing written material such as newsletters can help stimulate public interest in the program. Establishing and promoting a telephone hot line has been effective in a number of communities. In Onondaga County, New York, a promotion on two million milk cartons advertised a telephone hot line.

To promote newspaper recycling in San Francisco, residents received a paper grocery bag with newspapers delivered to homes. Printing on the bags gave instructions for recycling newspapers and a phone number for information. One survey concluded that information delivered to each residence, sometimes with utility bills, is a highly effective means of education.

At the evaluation stage, individuals decide whether to go along with the program. Even if the law requires specific behavior, achieving voluntary compliance is easier administratively and politically than strong enforcement. An easily understandable and convenient program will have the best chance of success.

Research has shown that for even well-promoted programs, initial participation is about 50 percent. Another third will participate as the program becomes established. Initial high participation rates should, therefore, not be expected.

Even for mandatory programs, convenience is a major factor in determining participation (see Figure 1-2). For example, the convenience of curbside pickup normally makes participation in waste management programs higher than for drop-off programs. As a result, some communities only provide drop-off service for yard trimmings, so that it becomes more convenient to not collect grass clippings or to home compost. A combined curbside and drop-off program may be the most convenient. At this stage (see Figure 1-3) education should stress what each citizen's role in the program is, their contribution to its success, and the most convenient level of participation.

By the fourth stage, individuals have decided to participate in the new activity. This is a crucial step for every program. If individuals try back yard composting or a volume-based system and encounter difficulty, they may choose not to adopt the desired conduct, and the program could lose political and public support.

By this stage in the educational program, everyone should have the information describing exactly what they are expected to do (see Figure 1-4). The community program must then provide the promised service in a highly reliable fashion. An adequately staffed and properly trained clearinghouse or hot line is a useful tool to answer questions and provide additional information. If appropriate, the hot line should be multilingual.



At the trial stage of a volunteer program, a pilot project can also help stimulate participation. Program organizers should assure citizens that the pilot project's goal is to evaluate various strategies, respond to public feedback, and make any changes required to improve program efficiency and reliability. Citizens may be more willing to try a project if they know that the project is short term and that any concerns they may have will be taken into account in developing a long-term effort. During the trial stage, public hearings may be helpful by giving citizens an opportunity to voice their opinions about the project. A focus group effort prior to initiation of the trial will help pinpoint important participant concerns and issues.

Adoption

Education should focus on reinforcing program participation at this stage.

If the education program has been well-planned and implemented, public support and participation should grow. Educational efforts at the fifth stage focus on providing citizens with positive feedback concerning program effectiveness (see Figure 1-5). A newsletter or other regular informational mailing can help inform citizens about the program's progress and any program changes. Community meetings can serve to reward and reinforce good behavior and answer questions. Local officials should be informed of program participation rates to generate political support for program budgets and personnel needs. At this stage, it can be helpful to target additional educational efforts at program nonparticipants.

Figure 1-4 Sample Education Program





HERE ARE THE WAYS YOU CAN REDUCE WASTE

Variable Can Rate:

Variable Can Rate: South residents use for the whome of gar-bage thin brous-hold throws away if you select cur's alles collection service, you have your choice of four curtaners save provided by the collection contranter. Sour garbage is picked up weekly at the curt hor allex Your container needs to be set to 700 a.m. toget picked up form your mackyard, you will gas a higher rate and you must provide sourcewing attack can call \$84,5600 for once information.

Trash Tags:

Table riggs. Occusionable tes dentis have mere garbage-than will think their regular cars or cars. If you take additional garbage and do not want to make strip b (h) large/or Satistic or recrease year in mbb garbage and explosing uncloses a Table hat. Profil or your exits bandle – or profil bills, stars of 1 out want strip adhedeen to or can be strip additional strip or adhedeen to or the strip of the other strip adhedeen to or the strip of the other the strip see examined in the to up the South of Elevent Soleway and Associated for the strip adhedeen to or can nally tes cents have more garbage interf (coder stores and community store on the where statisty talks are paid

Yard Waster

Yard Waste: All of the high prenery in the Flacific Northwest means that if you have a yard or gav dem you will have yard waste (for ordinance requires all yard waste be separated from grahage. The good news is that Senite has three ways for you to dispose of your yard waste - You can compost at home. For those informa-tion, call the Compost Holime at 833 00224 - You can sign up for the Uilty's cerb sile yard waste pick up program for just \$2 per month - Or you can sign up for the North or South transfer station for just \$1 a car could.

Transfer Stations:

The City of Seattle has two Transfer The City of Seattle has two Transfer Stations. Nou can self-havi garbage, yard wasle, reevicables, appliances, notir oil, and batteries. A the South Fransfer Station you can bring in horsehold hazardous wastes. Please call 683 7600 for the binars of operation and fee schedules.

Curb/alley Recycling:

Curti2 alley H6CyCling: Seattle residents can sign up for curb allev recording by calling 684 7600. You can rerected glass that allowing 1684 7600. You can rerected glass that allowing 1684 7600. You can rerected paper 1% or magazines adversing mail: card-beard, etc.) Your recycling codection contractors will deliver contractors to you allowing with a brichter about how to prepare store materials and your recycling pick ap with disking contractors and you allowing the pick of the additional charge.

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More Recycling:

If you are interested in buy back centers drop site locations, or charitable organizationwhich accept recyclable materials, please contact 1-800-RECYCLE for a location near you

Waste Reduction:

Waste Reduction: The way South will mark in service the reads to be reducing wave reacting draws, as hurs but well the the thread wave. Regin rough the Sold Waste Utility is working in some requests set waves reduction programs. This includes being and in site base with the wave, they a being rough is also means tayling projects that are made of projected marken also may rail the sold and the sole base with their wave, they are made of projected marken also may rail the recycler. Which means would take their the marken they are the sole base with them are the instrumed archief products, we product that can we satisfy and economical segment. Wo marke the solar bettered or forms worketing that way with the access soleme. Do you by predict do

only use ever scotten. Devou buy used of the ing? Or do you donate used clothing to a charm ble organization? Picase call 684-7600 for copies of "Carting Down On Garbage" brochures.

Source: Seattle Solid Waste Utility

Maintenance

At the sixth stage, the program is up and running. Using a variety of intrinsic and extrinsic incentives will maintain and increase participation. Intrinsic incentives are largely informational. They are designed to induce citizens to perform the desired conduct for its own sake and because they provide a personal sense of well being and satisfaction. Extrinsic incentives are tangible rewards for performing desired conduct, such as reduced fees or monetary payments. A maintenance program may employ both types of incentives. Basic education must also continue.

INTRINSIC INCENTIVES

It is important for individuals to view participating as "the right thing to do." Intrinsic incentives seek to support the desired behavior as the right thing to do. Some studies, for example, have shown that the ideals of frugality, resource conservation, and environmental protection over the long run were strong intrinsic motivators for those participating in recycling and reuse programs.

Issuing routine press releases and reports describing the progress of the program, providing awards for exemplary services, publishing newsletters for participating citizens and residences, and creating special events, such as "recycling week" or "master composter programs," all provide positive support for community waste management activities. An aggressive school education program will provide intrinsic incentives over the long term.

Figure 1-5

Example of Material Encouraging Feedback on a Recycling Program



Source: WRAP (We Recycle America...and Proudly) Islip, New York

EXTRINSIC INCENTIVES

Extrinsic incentives provide direct rewards for desired activities. Volumebased fees are a form of extrinsic incentive: the smaller the waste volume generated, the less the generator must pay for waste management. Another wellknown example of extrinsic incentives is the Rockford, Illinois, "cash for trash" campaign. This program involved weekly, random checks of a household's refuse with \$1,000 rewards given to households that properly separated their recyclables from nonrecyclables.

Careful analysis of extrinsic incentives is important. For example, a volume-based fee system encourages both source reduction and recycling. But a volume-based collection system could actually reduce participation in recycling if minimum volumes are large. It is important that the public does not connect the desired activity only with a reward. If that happens, if the incentive program is terminated or changed, some people may stop or reduce participation in the program. The public must see the program as a way to promote proper conduct, not merely as a way to make money.

Nonmonetary social incentives can also be effective. Many communities use block captains or community leaders to help boost neighborhood participation. These local leaders remind neighbors that the problem is, in part, local and that local people can help solve it. Linking social and monetary incentives may also be possible. For example, the proceeds from a neighborhood-run collection center could help support a neighborhood project or local recreational programs.

Organizers should carefully consider extrinsic incentives. Payback in terms of increased participation in the program and improved awareness and understanding of issues should offset the cost of the incentive. The extrinsic incentive should always be seen as an adjunct to the program, not the sole reason for participating. Extrinsic incentives can help get people interested in participating while intrinsic values are being developed through education.

THE PUBLIC INVOLVEMENT PLAN

Public involvement is too frequently confined to the facility siting process (see Chapter 2). Participation of local residents should begin earlier, when program developers are deciding which overall waste management strategy will best meet the community's economic and environmental needs. The strategy should consider source reduction and other options in addition to the facility being proposed. Allowing public involvement only at the facility-siting stage, and not before, may engender public opposition; residents may view the siting process as a *fait accompli*, because other decisions (which waste management option to use) were made without their participation.

Public involvement should start early, before the siting process begins. Choosing a site without input from residents and then weathering intense opposition has been called the "decide-announce-defend" strategy. Although this strategy has been used extensively in the past, the increasing sophistication of groups opposed to certain waste management alternatives makes this approach more difficult. The public is demanding meaningful participation in making waste management decisions. But the public must also accept responsibility for its role in implementing sound and cost effective waste management solutions.

THE ISSUE EVOLUTION-EDUCATIONAL INTERVENTION (IEEI) MODEL

Although some communities still use the "decide-announce-defend" strategy, many now realize that, while there will probably always be opposition to proposed waste management strategies, investigating alternatives and building a consensus are likely to result in more efficient decision making.

Participation can be encouraged through rewards and public recognition. Developing a written plan for seeking public involvement is important. Written procedures help insure the inclusion of all important interests and legal requirements. The plan will show involved citizens and groups at which points in the process they can express opinions and how to be most effective in communicating their views. A written, publicly available plan lends credibility to the program.

The "Issue Evolution-Educational Intervention" (IEEI) model provides public involvement throughout the decision-making process. It comprises an eight-stage process for developing and implementing public policy:

Stage 1—Concern	Stage 5—Consequences
Stage 2—Involvement	Stage 6—Choice
Stage 3—Issue Resolution	Stage 7—Implementation
Stage 4—Alternatives	Stage 8—Evaluation

The IEEI process ensures that the public will have a meaningful voice in deciding how best to manage solid waste. The process is not simple and requires a commitment from the community of time and resources. Each of the stages is briefly discussed below (also see Figure 1-6).

1. **Concern:** In the first IEEI stage, an event puts waste management on the public agenda. Perhaps the local landfill is nearing capacity and is about to close. Perhaps the legislature has just enacted a mandatory recycling bill. The public begins to ask questions.

At this stage, a procedure for providing accurate, reliable information to the public is important. Eliminating misconceptions and establishing a firm educational base for public discussion is the key. County and university extension offices, governmental associations, and regulatory agencies can provide information. Education programs should target local officials, as well as the public. Showing concern and a willingness to take proper action is most important. A focus group can help define important public issues. Community service organizations can provide a forum for discussion.

- 2. Involvement: As discussion of the issue begins, regulatory officials, persons from neighboring communities, local waste management experts, environmental and business groups, and others should be encouraged to participate. Bringing representatives of interest groups together and providing a forum for communication is a valuable activity. Cultural diversity is another consideration when seeking input from the broadest possible spectrum of the community.
- **3. Issue Resolution:** Interest groups should make clear their points of agreement and disagreement. The various groups should then attempt to understand and resolve points of conflict. Determining what people can agree on is also important. All parties need to understand the motivation and circumstances of the other community interests in the process.
- **4. Alternatives:** The participants should develop a list of available alternatives; the list should include taking no action. Each alternative should have a list of potential sites for facilities.

At this stage participants should use the same criteria to analyze comparative economics, environmental impacts, and other aspects of each alternative. Each interest group should scrutinize carefully the analyses prepared by all others. Results of analyses of various alternatives should be communicated to local officials and input sought from the public and others.

5. **Consequences:** Involved parties should then determine and compare the economic and environmental effects of each alternative. They should

Following the IEEI Model helps elicit public participation. also evaluate consequences in light of community resources and goals. The public must understand the results of choosing one alternative over another. All involved interest groups should acknowledge the benefits and costs associated with each alternative.

6. Choice: At this stage, the decision-making body must decide which alternative or group of alternatives to implement. In addition to publicizing the chosen alternative or alternatives, the decision makers should clearly communicate the reasons behind each choice by explaining the necessary tradeoffs, the efforts made to consider the interests of each affected group, and the anticipated impact of the chosen alternative or alternatives on the community.

Not all interest groups will support the chosen alternative or alternatives. Some may oppose the option(s) chosen and seek to force reconsideration of other alternatives through legal and political challenges. The process outlined here does not guarantee success, but it will help develop a broad community consensus, enabling the community to better withstand legal and political challenges.

- 7. **Implementation:** At this stage, the decision makers should describe the steps necessary to implement the chosen strategy. They should also try to mitigate potential adverse impacts which the chosen alternative or alternatives may have on relevant interest groups. Chapter 2 discusses this issue in more detail.
- 8. Evaluation: The community should continually evaluate the model and solicit input from affected groups. The impact of decisions should be communicated routinely to the public and to local officials. Ongoing evaluation helps provide an information base for making future waste management decisions. Existing programs will continually improve if they respond to changing conditions and public input.



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