ABSTRACT

M. KAY HAWTHORNE. The Use of Compensation in Siting Hazardous Waste Facilities: Analysis of Current Practices and Recommendations for the Future. (Under the direction of DR. ALVIS G. TURNER.)

Siting hazardous waste facilities has become more and more difficult because of the legacy of pollution from old sites and the public's perception of inequitable costs imposed by new ones. Since new facilities may be needed soon, the use of compensation to offset residual costs along with expanded public participation can facilitate siting and help overcome local opposition. A survey of all 50 states determined the types of compensation and expanded public participation currently used by each state. These types are divided into required versus endorsed measures, and compensation is further categorized into preventive, mitigative, and compensatory measures. States use a combination of negotiation, legislation, and administration to implement these measures. Specific types and categories of compensation as well as their primary method of implementation are tabulated by state and summarized, and these results are illustrated geographically. According to this survey, some form of compensation or expanded public participation is either required or endorsed by 35 states. Case studies demonstrating the use of these measures are compiled, and recommendations for effective types of compensation and public participation are proposed.

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Acknowledgments

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facility.

PURPOSE

1) To obtain information from all 50 states on programs of compensation currently used in siting offsite commercial hazardous waste facilities. Data on low level and high level radioactive waste facilities is not included. Compensation is broadly defined as any measures beyond those required by federal waste management laws to prevent, mitigate, or compensate any adverse effects on the host community. Procedural requirements that strengthen the ability of the host community to obtain compensation are also considered. These include a whole range of "expanded" public participation measures in siting, beyond the Resource Conservation and Recovery Act requirements for public hearings. Since programs of compensation are often integral components of the siting process for hazardous waste management facilities, the siting processes for those states addressing issues of compensation or expanded public participation are described in alphabetical order in appendix A.

2) To collect illustrative examples of compensation on a case-by-case basis.

little concern over the use or transport of hazardous materials in their community, but object strongly to the management of "hazardous waste" in the same area. The scientific terminology of formal risk analysis is misleading to many laymen, who tend to place undue emphasis on possible consequences and not on the actual probability of occurrence. Additionally, the plethora of Superfund sites resulting from hazardous wastes that were mismanaged in the past has contributed to the public's fear and mistrust (9).

NECESSITY FOR FACILITIES

Hazardous waste is and will remain an unavoidable fact of industrialized society. Source reduction techniques such as process modifications, changes in raw material, and recycling are of paramount importance in the field of hazardous waste management. However, there will always be residuals, as long as society values the products whose manufacture generates hazardous waste: paint, paper, pesticides, medicines, jewelry, leather goods, fabric, and gasoline, to name but a few. Even the average household trash may contain hazardous waste in the form of drain cleaners, paint thinners, and automotive fluid (10).

Hazardous waste is loosely defined as byproducts "...that can pose an unacceptable risk to people and the environment if discarded carelessly" (11). Properly

regulated hazardous waste management facilities are necessary to avoid the careless disposal of these wastes. If such facilities cannot be sited, the hazardous waste being generated must still be disposed of - perhaps by midnight dumpers in the nearest stream ditch. The potential harm to public health and the environment from these illegal activities far outweigh the risks posed by federally regulated, carefully monitored facilities. According to a National Research Council report (11), "Disregarding cost, there exists some technology or combination of technologies capable of dealing with every hazardous waste so as to eliminate concern for future hazards." In addition, the federal Resource Conservation and Recovery Act of 1976 provides for the "cradle-to-grave" control of hazardous waste and sets forth stringent requirements for hazardous waste management facilities.

A debate exists over the current necessity for new hazardous waste management facilities; however, at some future date such facilities will surely be needed (12)(19). The siting dilemma - new facilities are needed but no one wants to live by one - must be overcome. This is not a simple problem, given the magnitude of hazardous waste generation in this country and the public's inveterate views on the risk of hazardous waste, as well as their fear of the unfamiliar and poorly understood. One element seems clearly

necessary; however: the provision of compensation to host communities to offset any inequitable costs.

CHAPTER 3

THE USE OF COMPENSATION AND PUBLIC PARTICIPATION

TYPES OF COMPENSATION

Compensation can be divided into three categories: preventive, mitigative, and compensatory (13). Preventive measures are designed to prevent an adverse effect. Examples of preventive compensation include monitoring of the facility and environment; monitoring of workers' health; health monitoring in the community; engineered safeguards built into the facility; safeguards in operating procedures; financial assistance to the community for technical review of the proposed facility; and funding for the training of inspectors and monitoring professionals (13,6). Mitigative compensation works to reduce the magnitude of an adverse effect. A new facility would cause traffic to increase in the community along routes to the plant; the owner might build a new road to reroute incoming trucks, or agree to pay for maintenance of existing roads. Neighbors of a facility might complain of its unattractiveness; the owner could install a buffer zone of trees and shrubs. A hazardous waste facility would place an additional demand on a community for water supply, energy,

and wastewater treatment services. The owner could mitigate these impacts by paying for the increased cost to the community of providing them. Perhaps the most obvious type of mitigative compensation is emergency response capability. Facility owners can provide firefighting equipment, fund additional members of response teams, or assist in training such teams (13,6). The third category of compensation is compensatory measures. For the purposes of this study, "incentives" are placed in this category and shall not be considered separately from the three types of compensation. Compensatory measures are actions taken to offset a negative effect. The negative effects most suitable for these measures are clearly those which cannot be either prevented or mitigated. Examples of compensatory measures to offset such "unavoidable" adverse impacts are liability insurance; payments to finance the post-closure care of the facility; property value guarantees for adjacent property owners; direct payments to community organizations, public schools, or local government; and provision of land for parks or other projects such as a new convention center, courthouse, etc. Compensatory measures may be perceived by citizens as a form of bribery unless they are convinced that possible adverse impacts - especially ones relating to health and the environment - have truly been minimized. The use of compensatory measures then allows the residual risks and costs to the community to be offset, by providing one type of

benefit in exchange for a different type of benefit foregone (13).

There are three methods of implementing compensation: via legislation, administration, or negotiation (14). In the first case, the specific types and amounts of compensation are set forth in state legislation; for example, that a host community shall receive $5 per ton of hazardous waste received at a facility. In the administrative method, a government agency (usually state government) decides compensation on a case-by-case basis. A state siting council might review a proposed facility application and solicit comments from the host community on expected impacts before establishing the actions the developer must take to offset these impacts sufficiently. Of course, only measures beyond any RCRA requirements are considered. The final and most flexible and comprehensive method of implementing compensation is through negotiation between the facility developer and the host community. This method allows specific concerns to be addressed directly and any questions regarding facility design or operation to be answered first-hand. The community is allowed to set its own priorities and is given the most leeway in assuring that they are addressed. The negotiated agreement is often incorporated into the permit.

SUMMARY AND ANALYSIS

The following section summarizes the use of compensation and expanded public participation by state. Data have been tabulated separately for compensation and for public participation measures. Each group is summarized into 1) those measures that are required or otherwise specifically provided for in legislation, and 2) those measures that are merely suggested or endorsed. The former category includes measures that may not be required in every siting, but are specifically listed as options, or are required to be addressed in approving a facility. For example, Alaska legislation states that the negotiated agreement between the developer and the local government must address compensation for decreases in property values (Appendix A). The second category consists of those measures that are formally endorsed in state legislation or by a state agency as well as those that are simply suggested or mentioned in legislation as appropriate. The use of compensation or expanded public participation by a state agency on an ad hoc basis is considered to constitute endorsement (see Nevada, Appendix A). The use of either technique by a private company in siting is not considered to constitute endorsement of the state for that technique (see Arizona, Appendix A).

COMPENSATION

There are 18 types of compensation currently required or endorsed by one or more states. A list of these measures as they appear in the tables and their definitions for the purposes of this study are provided below. "Facility developer" and "operator" are used interchangeably, as are "local government" and "host community". Note that contingency funds for spills or accidents are not considered a type of compensation.

1. Consistency with local ordinances.
   If required, a facility must comply with all applicable regulations regarding construction, operation, land use, etc. If this measure is endorsed, it means that a) a proposed facility's consistency with local ordinances will be considered in the site approval process, or b) local provisions should be integrated into the permit to the fullest extent practicable.

2. Developer funds local expenses.
   The developer, usually through an application fee, pays for certain expenses related to siting the facility: usually site review studies, also facility review studies, technical consultants, negotiation, and impact assessments. Instances where the developer provides the funding but the state agency administers the grant are included.

3. State grants for local expenses.
   The state provides funds for the local community's site review, etc. Money does not come from the developer, but from the state general fund or other government source.

4. Additional environmental monitoring.
   On site and off site sampling and testing to a greater degree than required by federal or state regulations.

5. Health monitoring.
   The periodic testing of facility employees' and/or community citizens' health.

6. Monitoring by community.
   The host community is authorized to monitor the facility and/or perform inspections.

7. Terms of construction and operation.
   Primarily an item of negotiation; the host community may request specific changes in the facility design or operation, such as limited times for receiving shipments of waste.

8. Road maintenance.
   The facility operator is responsible for the maintenance and repair of certain roads in the vicinity of the site; funds may be provided to the local government for this purpose.

9. Emergency training/equipment.
   The developer provides funds for the purchase of emergency response equipment (fire trucks, police cars, etc.) and/or the training of emergency response personnel.

10. General mitigation.
    The legislation provides that adverse effects in general from a proposed facility be mitigated. Specific effects are not delineated.

11. Direct payment.
    The facility developer pays an amount to the host community, either on a one-time or an annual basis, with no restrictions on the use of the funds.

12. Tipping fee.
    The operator pays the local government an amount per unit of hazardous waste received (e.g. $2/gal). No restrictions are usually placed on use of the funds.

13. Gross receipts tax.
    The operator pays the local government a set percentage of the facility's annual gross receipts (e.g. 2%). No restrictions are usually placed on use of the funds.

14. Privilege license tax.
The facility operator pays an annual tax to the local government in order to obtain a privilege license, which enables him to carry on his business.

15. Payment in lieu of property tax.
If the facility is or ever becomes exempt from ad valorem taxes, payments in place of the taxes will be made to the local government so it will not suffer a loss in revenue. Facilities that are owned by the state or that revert to the state for post-closure perpetual care are often exempt from property tax.

16. Property value guarantees.
The developer provides compensation to adjacent property owners for decreases in real estate values, or guarantees that such compensation will be provided in the future if necessary.

17. Funds for public improvements.
The developer provides funding for specific projects in the community, such as a new convention center, athletic equipment for local schools, or renovation of the county courthouse.

18. Site beautification.
The operator provides fences, buffer zones, landscaping, etc. in order to improve the visual effect of the facility.

Compensation measures specifically stated in state legislation are summarized in Table 1. The most common forms of compensation are consistency with local ordinances, gross receipts tax, developer funds local expenses, and state grants for local expenses. Consistency with local ordinances is by far the most popular. It is included in the study because these measures -- land use plans, zoning, building regulations, etc. -- are designed to minimize the impact of new construction and help insure its safety. The greater a

Table 1. Summary of compensation required to be addressed in state legislation.

	TYPE	# STATES
1.	Consistency with local ordinances	10
2.	Gross receipts tax	7
3.	Funds from the developer for local expenses in siting	7
4.	State grants for local expenses	6
5.	Tipping fee	5
6.	General mitigation of adverse effects	5
7.	Direct payment to community	4
8.	Community monitoring or inspection of facility	3
9.	Payments in lieu of property taxes	4
10.	Property value guarantees	3
11.	Privilege license tax	1
12.	Road maintenance	1
13.	Additional environmental monitoring	1
14.	Health monitoring	1
15.	Provision of emergency training/ equipment	2

hazardous waste facility's degree of compliance with local ordinances, the more involved the local government will be in facility approval, and the better the chance that adverse impacts of the siting will be addressed. Some states preempt local regulations completely, or specifically require that these cannot be a basis for disapproving a facility (e.g. Illinois).

All these most common forms of compensation are preventive measures with the exception of the gross receipts tax, which is compensatory (Table 5). The next most common forms -- general mitigation, tipping fee, direct payment, monitoring by community, payment in lieu of property tax, and property value guarantees -- are predominantly compensatory measures. The only exception is monitoring by the community, which is a preventive measure. The trend here is clearly toward preventive compensation, but with compensatory measures not far behind. Of the 15 total kinds of compensation required, 40% are preventive, 40% are compensatory, and only 20% are mitigative.

Table 2 shows the use of required compensation by state. 60% of all 50 states make some specific provision for compensation in their legislation. It is important to note that the types of compensation shown for each state may not be strictly required in every hazardous waste facility siting, but may be listed as an option or otherwise specifically provided for. These measures are to some degree

legally enforceable, unlike "endorsed" measures which are mere suggestions or endorsements. These definitions of "required" and "endorsed" will be used throughout the remainder of this discussion. Appendix A provides greater detail on the compensation used in each state.

One state whose position deserves clarification is Wyoming. Wyoming has no special process for siting hazardous waste facilities per se, but does have legislation governing the siting of all large industrial facilities. Extensive measures of compensation and public participation are addressed in this legislation. However, the act defines "large" industrial facilities as those valued at over $97 million dollars (15,16). A comprehensive hazardous waste treatment facility built recently in Arizona cost only about $15 million (17). Therefore, while a hazardous waste facility could fall under the scope of the Wyoming Act, whether one actually ever would or not is doubtful. The data from Wyoming's legislation has been included in the summaries because a) the legislation could be applied to hazardous waste facilities, and b) the compensation and public participation measures that are set forth in the act have been used in siting and would probably establish a precedent for siting hazardous facilities if one were ever proposed in the state.

The vast majority of states (25 of the 30 which require compensation) require only one or two types of compensation

	AL	AK	CA	CO	CT	FL	GA	ID	IN	KY	LA	ME	MD	MA	MI
Consistency w/ local ordinances	X		X	X											
Developer funds local expenses			X	X	X						X				
Gross receipts tax			X	X		X	X					X			
State grants for local expenses											X	X		X	
General mitigation		X							X						X
Tipping fee															
Direct payment				X											
Payment in lieu of property tax							X						X		
Property value guarantees		X						X		X					
Monitoring by community				X											
Privilege license tax															
Road maintenance															
Additional environmental monitoring		X													
Health monitoring		X													
Emergency training/equipment															

	MN	MS	NH	NJ	NC	OR	PA	RI	SC	TN	TX	UT	VA	WI	WY
Consistency w/ local ordinances					X	X		X		X			X	X	X
Developer funds local expenses				X				X			X				
Gross receipts tax				X	X										
State grants for local expenses				X	X								X		
General mitigation							X								X
Tipping fee		X	X						X	X		X			
Direct payment	X						X			X					
Payment in lieu of property tax				X	X										
Property value guarantees															
Monitoring by community				X						X					
Privilege license tax					X										
Road maintenance				X											
Additional environmental monitoring															
Health monitoring															
Emergency training/equipment				X	X										

Table 2. Forms of compensation required to be addressed in state legislation. See Appendix A for further details on each state.

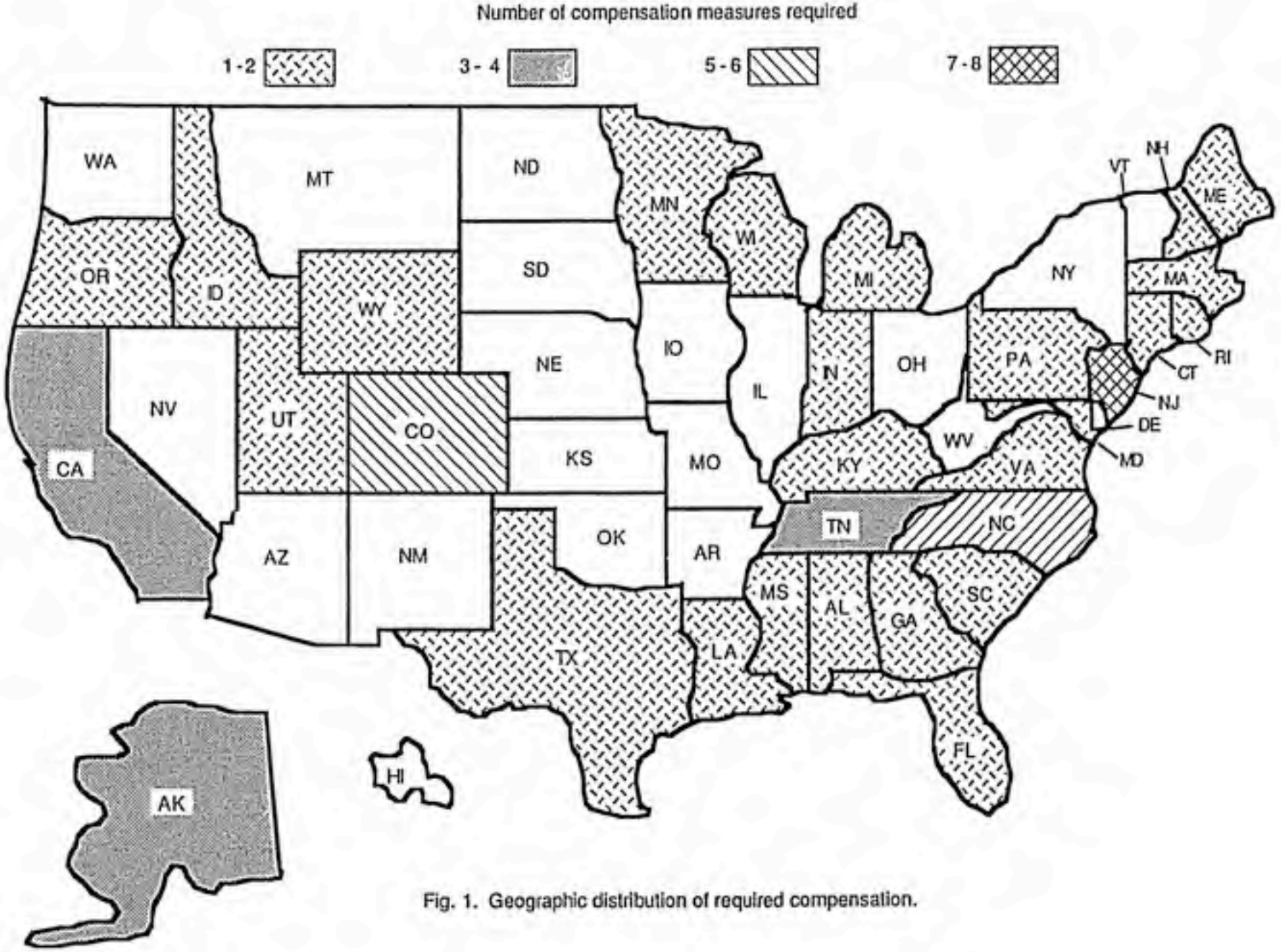

Fig. 1. Geographic distribution of required compensation.

(Fig. 1). New Jersey is the most specific in its legislation; it requires seven different compensation measures. The use of required compensation seems to cluster in the Gulf and Eastern seaboard states and up into New England. Roughly half the western states require some compensation with California and Colorado having rather extensive programs. There is a noticeable paucity of any compensation in the midwestern states.

Table 3 summarizes the compensation measures that are endorsed by states. There are 13 measures in all; ten of these were also required in some states. The three additional measures are terms of construction/operation, funds for public improvements, and site beautification. Of the 13 types of endorsed compensation, 46% are preventive measures, 30% are compensatory, and 24% are mitigative. This pattern is similar to the pattern for required compensation: preventive measures have the most variety followed by compensatory, then mitigative. Mitigative measures have clearly not been well developed, in either required or endorsed forms. The most common forms of endorsed compensation are consistency with local ordinances, general mitigation, and terms of construction/operation. Consistency with local ordinances is the measure both required and endorsed by the most states. Although 60% of the 50 states required some form of compensation, only 36% have endorsed measures of compensation (Table 4). Of these states,

Table 3. Summary of compensation endorsed by states.

	TYPE	# STATES
1.	Consistency with local ordinances	8
2.	General mitigation	7
3.	Terms of construction and operation	6
4.	Direct payment	5
5.	Emergency training or equipment	5
6.	Property value guarantees	3
7.	Funds for public improvements	3
8.	Road maintenance	3
9.	Health monitoring	2
10.	Payment in lieu of property tax	1
11.	Developer funds local expenses	1
12.	Additional environmental monitoring	1
13.	Site beautification	1

	CT	FL	ID	IN	KS	KY	LA	ME	MD	MA	MI	MN	NV	OR	RI	VA	WI	WY
Consistency w/ local ordinances		X	X	X	X	X		X	X		X							
General mitigation	X		X		X	X	X								X	X		
Terms of construction/ operation										X	X	X			X	X	X	
Direct payment	X					X										X	X	X
Emergency training/ equipment	X			X									X	X				X
Road maintenance	X													X				X
Property value guarantees	X											X		X				
Funds for public improvements	X											X						X
Health monitoring														X	X			
Payment in lieu of property tax												X						
Developer funds local expenses																	X	
Additional environmental monitoring															X			
Site beautification																	X	

Table 4. Compensation endorsed or suggested by state legislation. Ohio gives the state siting board power to dispense compensation at its discretion, but endorses no specific measures.

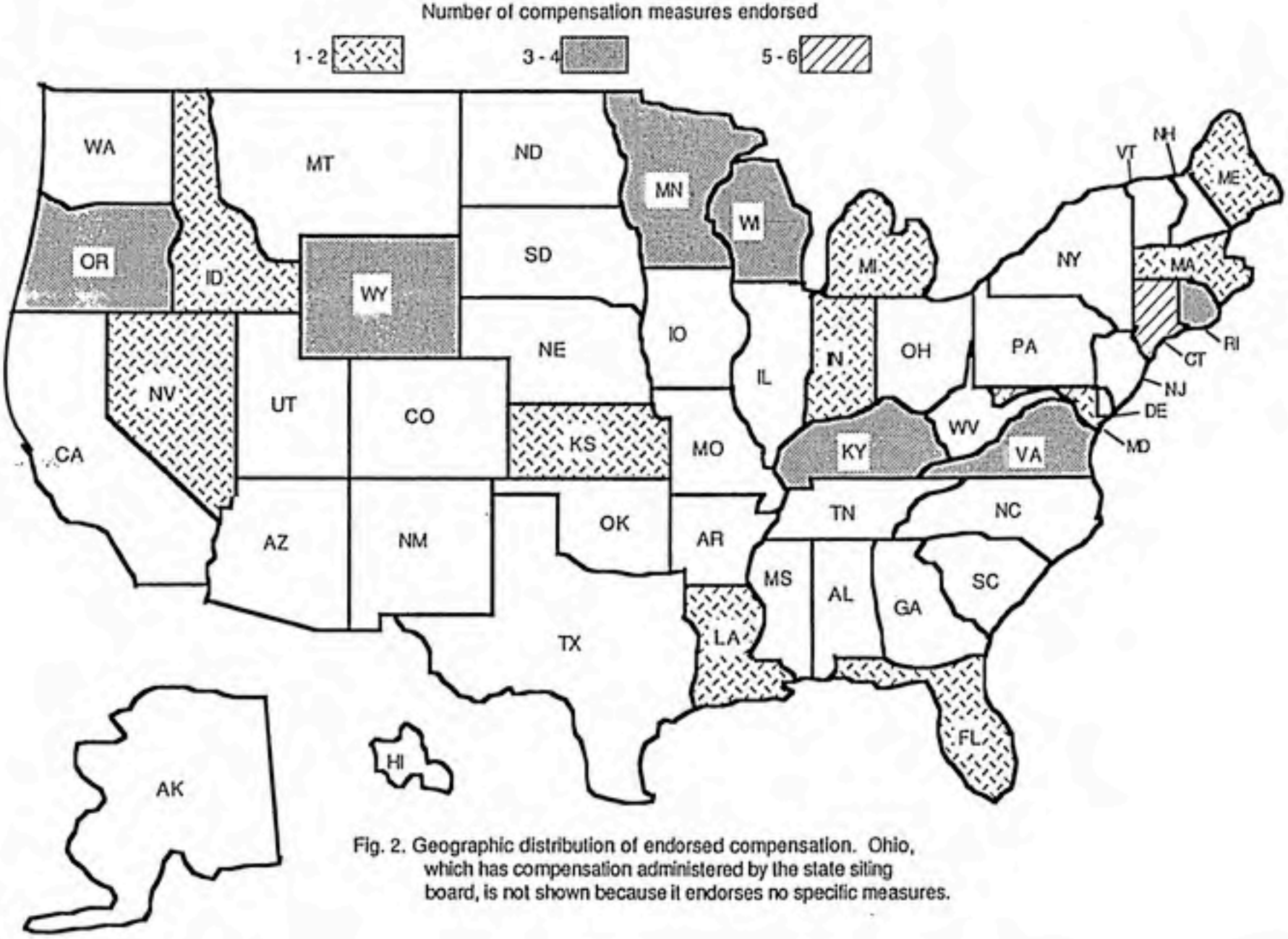

Fig. 2. Geographic distribution of endorsed compensation. Ohio, which has compensation administered by the state siting board, is not shown because it endorses no specific measures.

Connecticut has the greatest number of endorsements. No clear pattern in the geographic distribution of endorsed compensation emerged (Fig. 2).

The use of compensation by type is listed in Table 5. Of the 30 states requiring compensation, 60% chose compensatory measures, 53% chose preventive measures, and 20% chose mitigative measures. The use of the three types usually overlaps; for example, a state may require preventive as well as mitigative measures. Of the 18 states endorsing compensation, 78% endorse preventive measures, 67% endorse mitigative measures, and only 39% endorse compensatory measures. Although mitigative compensation is not as well developed as the other types, it is so popular here because of the number of states that endorse mitigation of adverse effects in general (Table 4). The trend in the use of the three types of compensation appears to be that states tend to require compensatory measures, but only suggest preventive and mitigative measures. Perhaps the rationale is that developers will be more likely to comply voluntarily with the latter measures, since doing so is generally in their best interests anyway. Compensatory measures, on the other hand, represent money out of the developer's pocket with little direct benefit for him, except a better relationship with the host community.

In figures 3,4, and 5 required and endorsed measures have been combined to show the geographical distribution of

Table 5. Summary of the use of compensation by type.

TYPE OF COMPENSATION	# STATES REQUIRING	# STATES ENDORSING
Preventive	16	14
Mitigative	7	12
Compensatory	18	7

Compensation measures were classified into the following categories for the purposes of this study.

Preventive

Consistency with local ordinances
Developer funds local expenses
State grants for local expenses
Additional environmental monitoring
Health monitoring
Monitoring by community
Terms of construction/operation

Mitigative

Road maintenance
Emergency training/equipment
General mitigation
Site beautification

Compensatory

Direct payment
Tipping fee
Gross receipts tax
Privilege license tax
Payment in lieu of property tax
Property value guarantees
Funds for public improvements

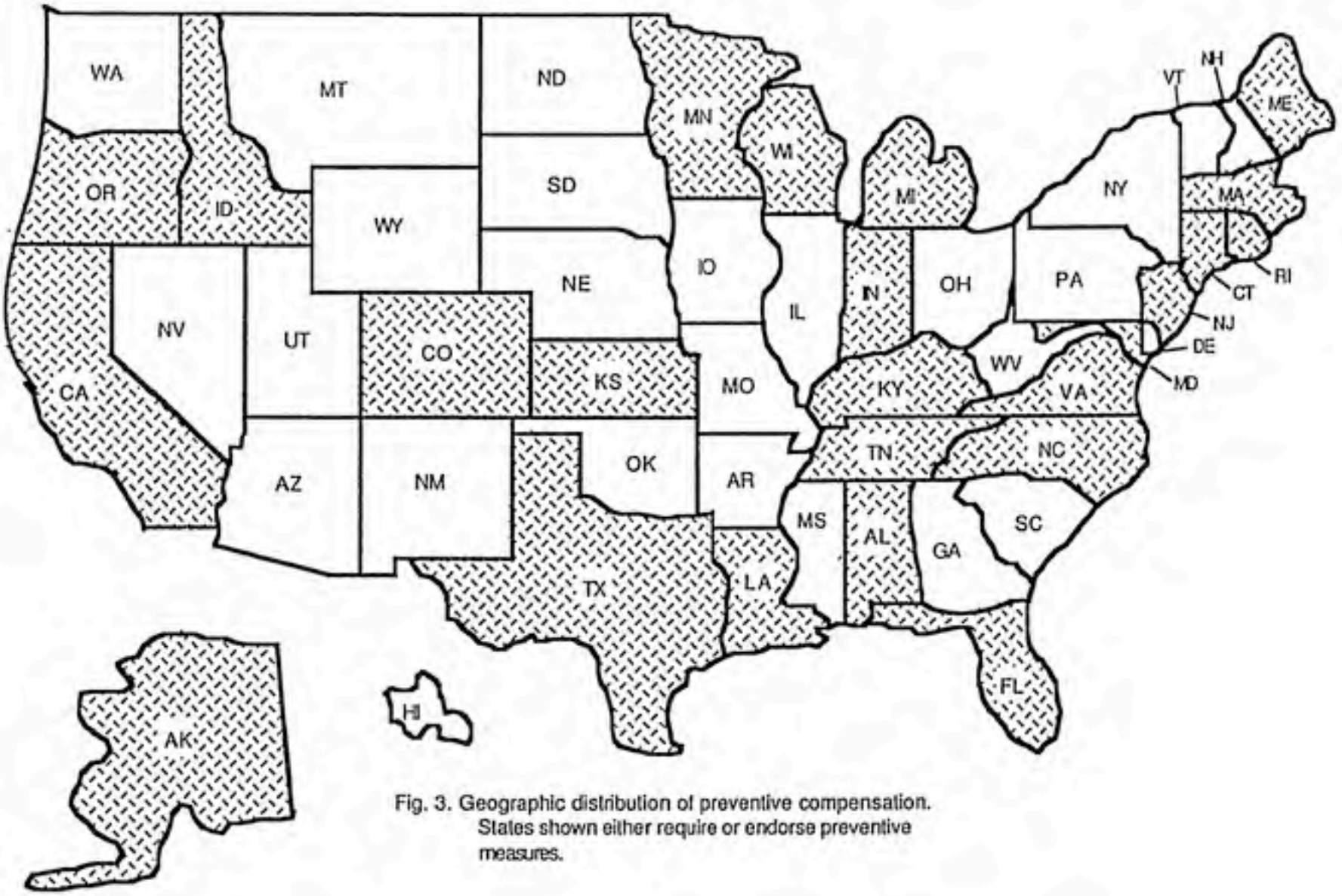

Fig. 3. Geographic distribution of preventive compensation. States shown either require or endorse preventive measures.

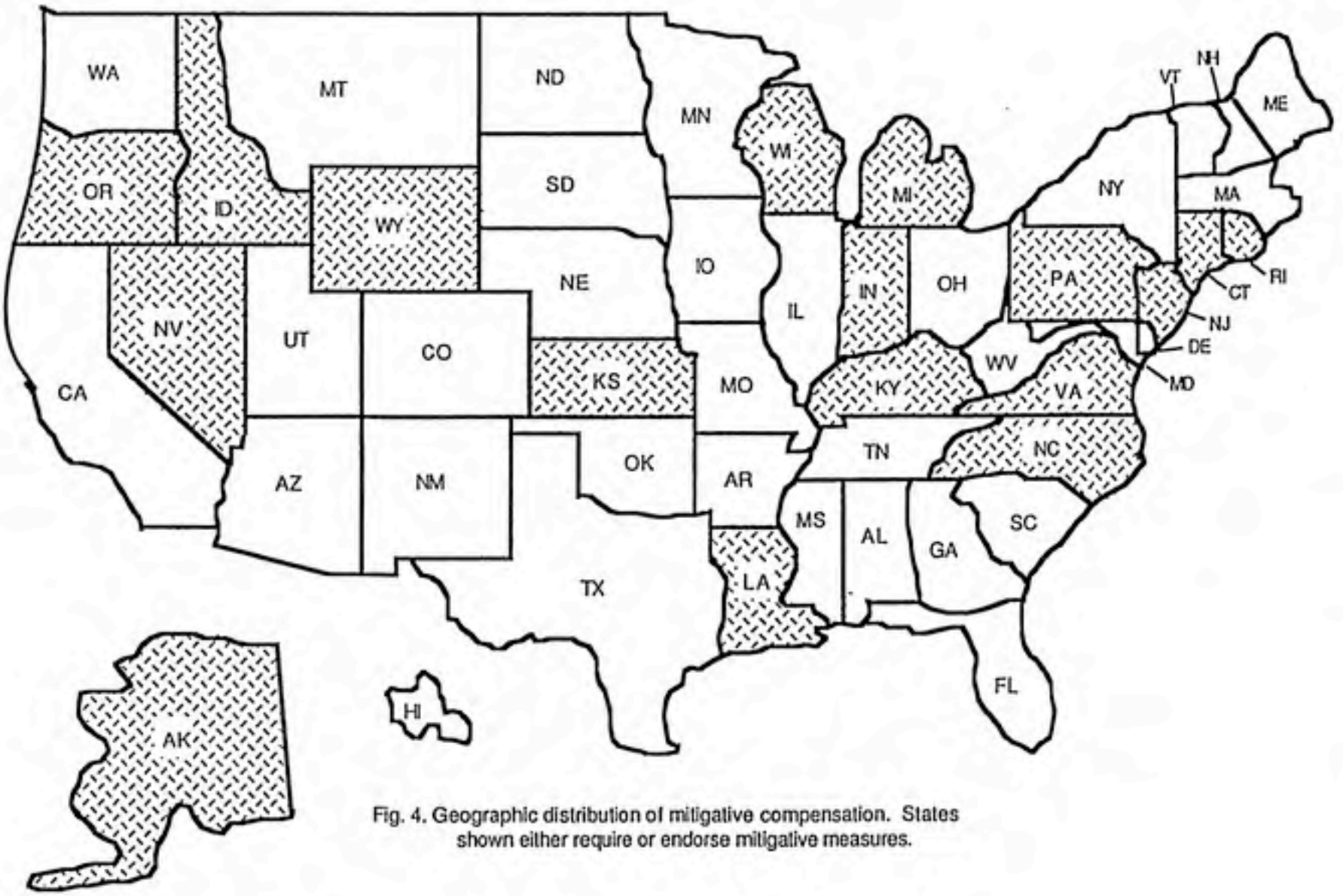

Fig. 4. Geographic distribution of mitigative compensation. States shown either require or endorse mitigative measures.

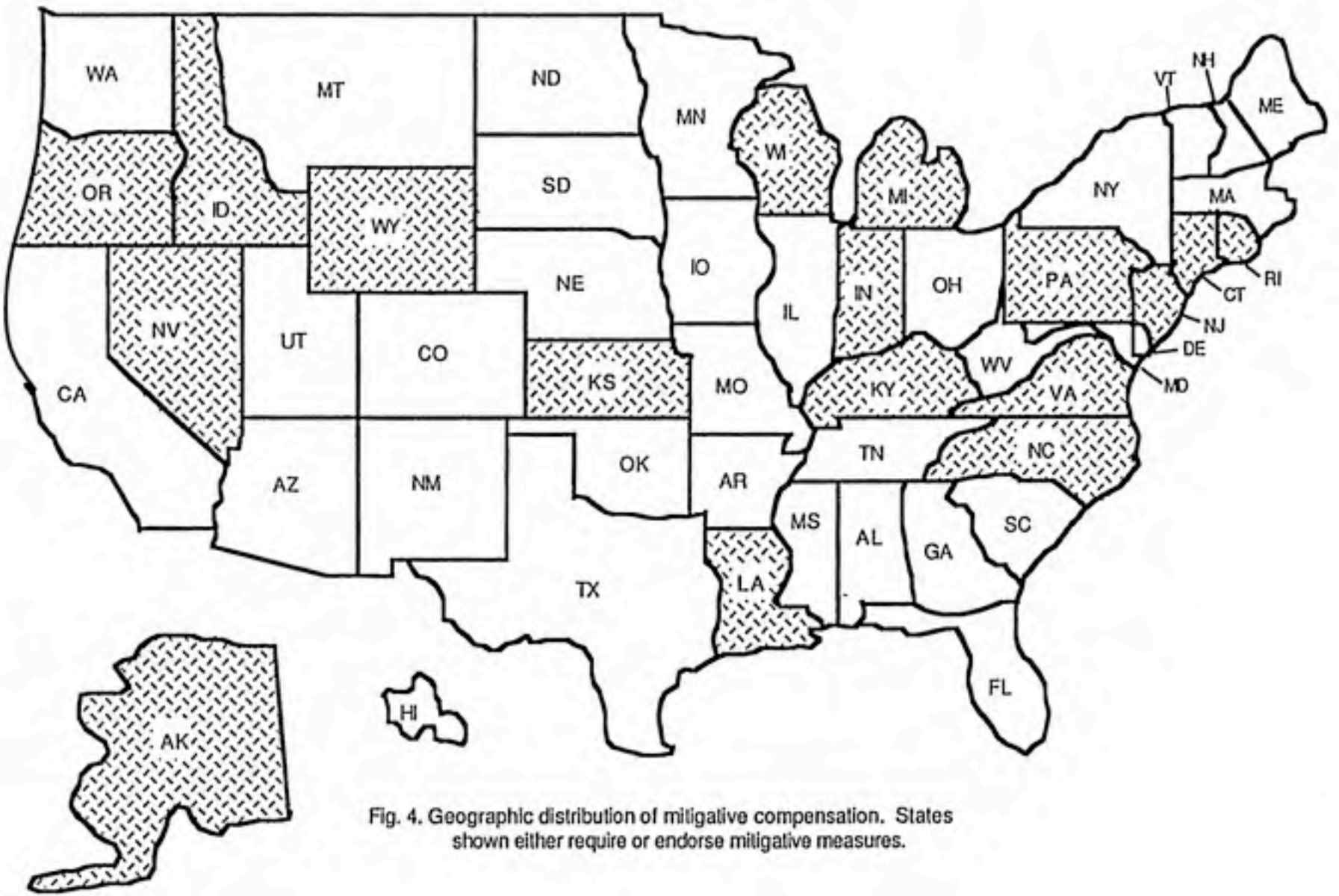

Fig. 4. Geographic distribution of mitigative compensation. States shown either require or endorse mitigative measures.

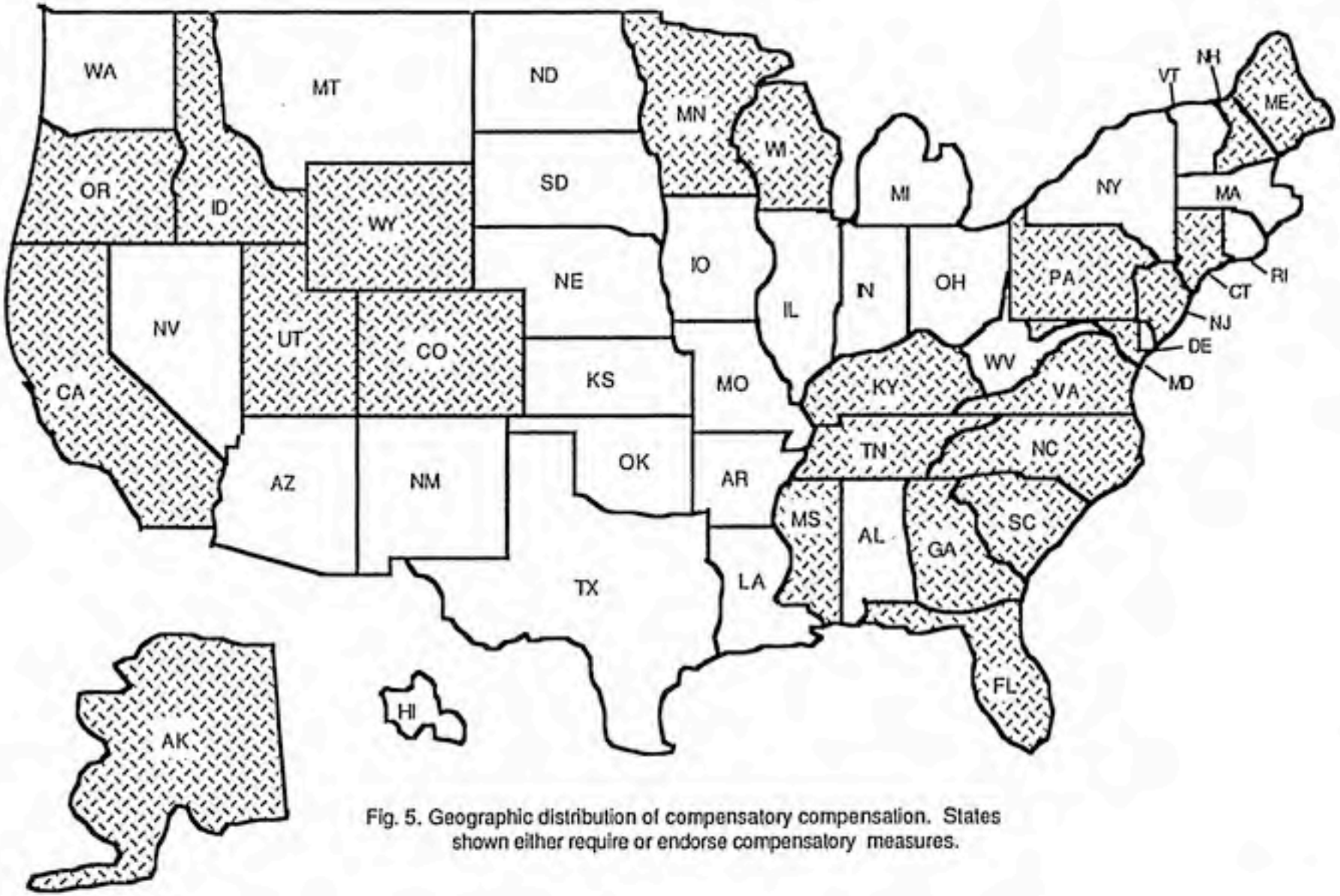

Fig. 5. Geographic distribution of compensatory compensation. States shown either require or endorse compensatory measures.

each of the 3 types of compensation. Preventive compensation and compensatory compensation are roughly equal: 24 states require or endorse preventive measures while 23 states require or endorse compensatory measures. However, there is a noticeable lack of compensatory measures in the Midwest and Southwest. Mitigative compensation is clustered in two areas: the Northwest and the Northeast. In all three cases, the use of each type tends to cluster; seldom does a single state stand by itself. This phenomenon is probably due to interaction between policy makers in neighboring states as well as to regional similarities in facility markets and public opinion.

The methods of implementing compensation are shown in Table 6 and Table 7. States establish their compensation and public participation measures in three ways: by legislation, negotiation, or administration. (Negotiation is also discussed as a type of public participation). Legislation is the most popular method, closely followed by negotiation. Of all 50 states, 42% use legislation and 34% use negotiation; only 28% use administrative methods. Table 7 denotes the particular methods used by each of 35 states. Ohio gives the state siting board the power to dispense compensation if it deems necessary, but does not require or endorse any specific measures. For this reason, Ohio does not appear in any previous tables or maps. Of these 35 states, 60% utilize legislation, 49% utilize negotiation, and 40% utilize

Table 6. Summary of methods of implementing compensation and public participation. Negotiation includes endorsed as well as required negotiation; the legislative and administrative methods reflect only required measures (except Nevada, see Table 7). Note that the states' use of these methods may overlap (Table 7).

METHOD	# STATES
Negotiation	17
Legislation	21
Administration	14

	NEGOTIATION	LEGISLATION	ADMINISTRATION
Alabama		X	
Alaska	X	compensation that must be addressed	
California	X	gross receipts tax	state establishes grant
Colorado	endorsed	gross receipts tax	
Connecticut	X	tipping fee gross receipts tax	Siting Council approves negotiations
Florida		X	
Georgia		X	
Idaho			X
Illinois		X	
Indiana			X
Kansas			X
Kentucky			X
Louisiana		X	state establishes grant
Maine	endorsed	X	
Maryland	endorsed	payment in lieu of property tax	
Massachusetts	X		state establishes grant
Michigan	endorsed		X
Minnesota	X	payment to counties	
Mississippi		X	
Nevada			endorsed
New Hampshire		X	
New Jersey	endorsed	X	
North Carolina		X	
Ohio			X
Oregon	endorsed	X	
Pennsylvania			X
Rhode Island	X		
South Carolina		X	
Tennessee		X	
Texas	endorsed	grant amount set	
Utah		X	
Virginia	X		state establishes grant
Washington	endorsed		
Wisconsin	X		
Wyoming	endorsed		X

Table 7. Methods of implementing compensation and public participation by state. An "X" indicates the primary method of implementation. In the case of negotiation, this means that negotiation is required. Secondary methods are briefly described where necessary. See Appendix A for further details.

administration to establish compensation. Quite a bit of overlap exists; 15 of the 35 states (43%) use two or more methods. Negotiation/legislation is by far the most popular combination, used by 53% of the 15 states. 27% use negotiation/administration; only Louisiana uses legislation/administration. California and Connecticut are the only states utilizing all three methods. Overall, the most popular methods are a) the legislative method by itself, used by ten states; b) legislation/negotiation, used by eight states; and c) administration by itself, used by seven states.

Figure 6 illustrates geographically each state's primary method of implementation. For states using a combination of methods, the primary method is considered to be the one by which the most compensation measures are likely to be established. Of the 35 states shown, legislation is the primary method for 40%; negotiation is the primary method for 34%; and administration is the primary method for 26%. It is interesting to note that from Texas westward, negotiation is the most prevalent method. In the eastern United States, the use of negotiation is concentrated in states along the northern Atlantic seaboard, with the notable exception of New Jersey, which does not require but does endorse negotiation. The most densely populated areas in the country -- California, the East Coast, and certain areas around the Great Lakes -- predominantly use negotiation. Legislated

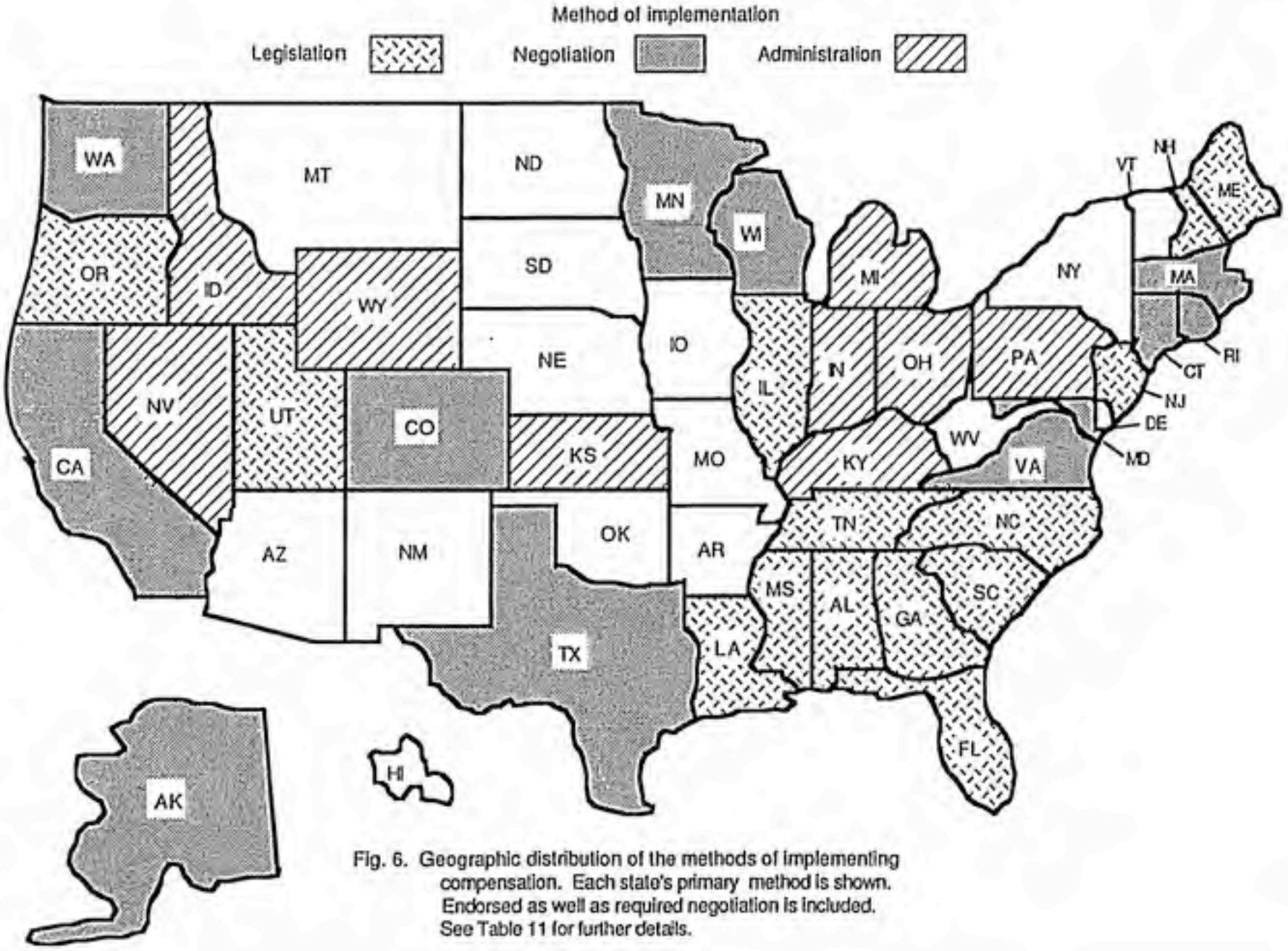

Fig. 6. Geographic distribution of the methods of implementing compensation. Each state's primary method is shown. Endorsed as well as required negotiation is included. See Table 11 for further details.

compensation is concentrated in the southeastern states, from North Carolina to Louisiana. The administrative method is used primarily in a group of northeastern states around Ohio, along with several states in the west.

PUBLIC PARTICIPATION

The following section summarizes the use of public participation in siting hazardous waste facilities. Only those measures beyond required public hearings have been included. The data for public participation are tabulated with regard to "required" versus "endorsed" measures; these terms have the same definition discussed earlier. Six forms of public participation are currently used in siting:

1. Local review of application.
   The state siting process specifically provides for the host community's review of an application for a proposed facility, and the community's comments are integral to facility approval. Instances where the application is simply published in a newspaper or otherwise made available subsequent to a public hearing are not included.

2. Negotiation.
   The facility developer and host community representatives meet to discuss impacts of the proposed facility and possible compensation. A contractual agreement establishing any compensation is usually formulated; it may or may not be incorporated into the permit. Some states also have provisions for mediation or arbitration (e.g. Wisconsin, Texas, Rhode Island). Negotiation is also analyzed as a method of implementing compensation (Table 10 and Table 11).

3. Local members on state siting board.
   A certain number of representatives from the host community are appointed (usually by the CEO of the local government) to the state board or council which oversees the siting of new facilities. Local members are usually allowed to vote only on those issues regarding the proposed facility in their community.

4. Adjacent owners notified.
   People who own property adjacent to the facility site are individually notified about the proposed facility.

5. Local review committee.
   A group of citizens established by local government that represents the host community in its relationship with the developer and the state. The LRC may be responsible for the application review, site evaluation studies, or impact assessments. If negotiation is used, the LRC will usually represent the host community. LRCs are also known as Local Project Review Committees, Local Assessment Committees, Citizen Involvement Committees, Citizen Advisory Committees, etc., depending on the state.

6. Adjacent communities involved.
   Representatives from neighboring communities are allowed on the Local Review Committee. Not included are instances where adjacent communities were notified of the proposed facility, but no further involvement was mentioned.

Public participation measures required by state legislation are summarized in Table 8. The most common form of public participation by far is local review of the application. Of all 50 states, 34% require this measure; of those states requiring some form of public participation, 81% require this measure (Table 9). Negotiation and local review committees are the next most common forms of public participation. However, only 16% of all 50 states require negotiation and only 14% require local review committees. Of

Table 8. Summary of public participation required by states.

TYPES	# STATES
Local review of application	17
Negotiation	8
Local review committee	7
Local members on state siting board	6
Adjacent owners notified	6
Adjacent communities involved	4

	AK	CA	CO	CT	ID	IL	IN	KY	LA	ME	MD	MA	MI	MN	NH	NJ	NC	OR	RI	VA	WI
Local review of application	X	X	X	X		X			X	X	X	X		X	X	X	X	X	X	X	X
Negotiation	X	X		X								X		X					X	X	X
Local members on state siting board				X	X		X	X		X			X								
Local review committee		X		X								X						X	X	X	X
Adjacent owners notified		X		X		X					X							X		X	
Adjacent communities involved		X		X								X									X

Table 9. Public participation measures required to be addressed by state legislation.

the 21 states requiring expanded public participation, 38% and 33%, respectively, use these measures. Involving adjacent communities is the least-used type of public participation.

The use of required public participation occurs predominantly in the north central to northeastern states and on the west coast (Fig. 7). This corresponds closely to the nation's most densely populated area (18). California and Connecticut require the most public participation, followed by Wisconsin, Oregon, Virginia, Massachusetts, and Rhode Island. The Southeast and Southwest, along with the central states, generally do not require any expanded public participation measures.

Only two types of public participation are endorsed by states: negotiation and local review committees (Table 10 and Table 11). Thirteen states in all endorse one or both of these measures; 69% of these 13 endorse negotiation and 46% endorse the use of a local review committee. Of all 50 states, 18% endorse negotiation and 12% endorse local review committees. The geographic distribution of endorsed public participation reveals no regional trends (Fig. 9). However, states endorsing these measures do tend to occur in groups of at least two, presumably reflecting interstate communication on policies.

Figure 8 describes the distribution of required compensation together with required public participation. In

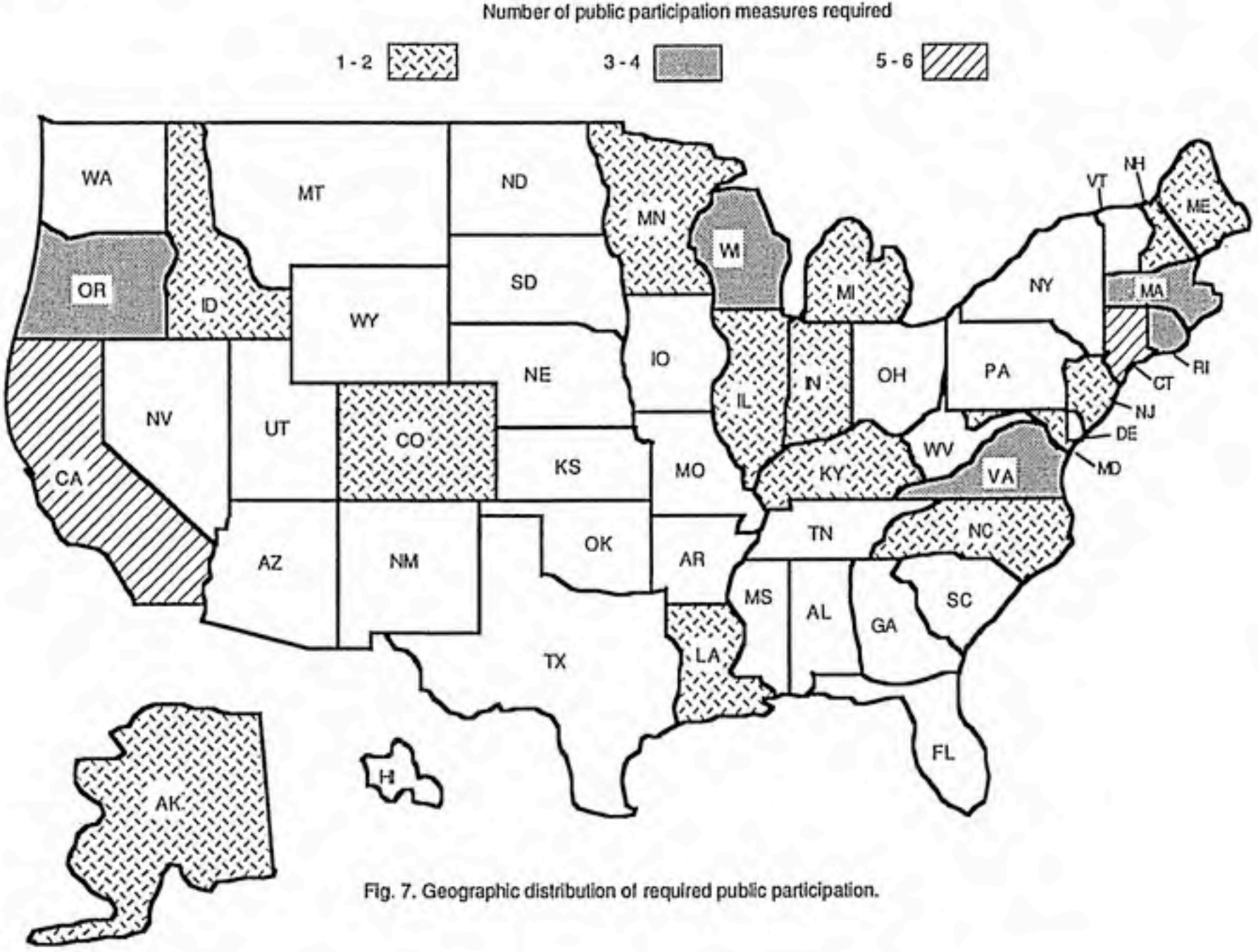

Fig. 7. Geographic distribution of required public participation.

Type of public participation	# states
Negotiation	9
Local review committee	6

Table 10. Summary of public participation measures endorsed or suggested by state legislation.

	AK	CO	ME	MD	MI	MO	NH	NJ	NC	OR	TX	WA	WY
Negotiation		X	X	X	X			X		X	X	X	X
Local review committee	X				X	X	X		X		X		

Table 11. Public participation measures endorsed or suggested by state legislation.

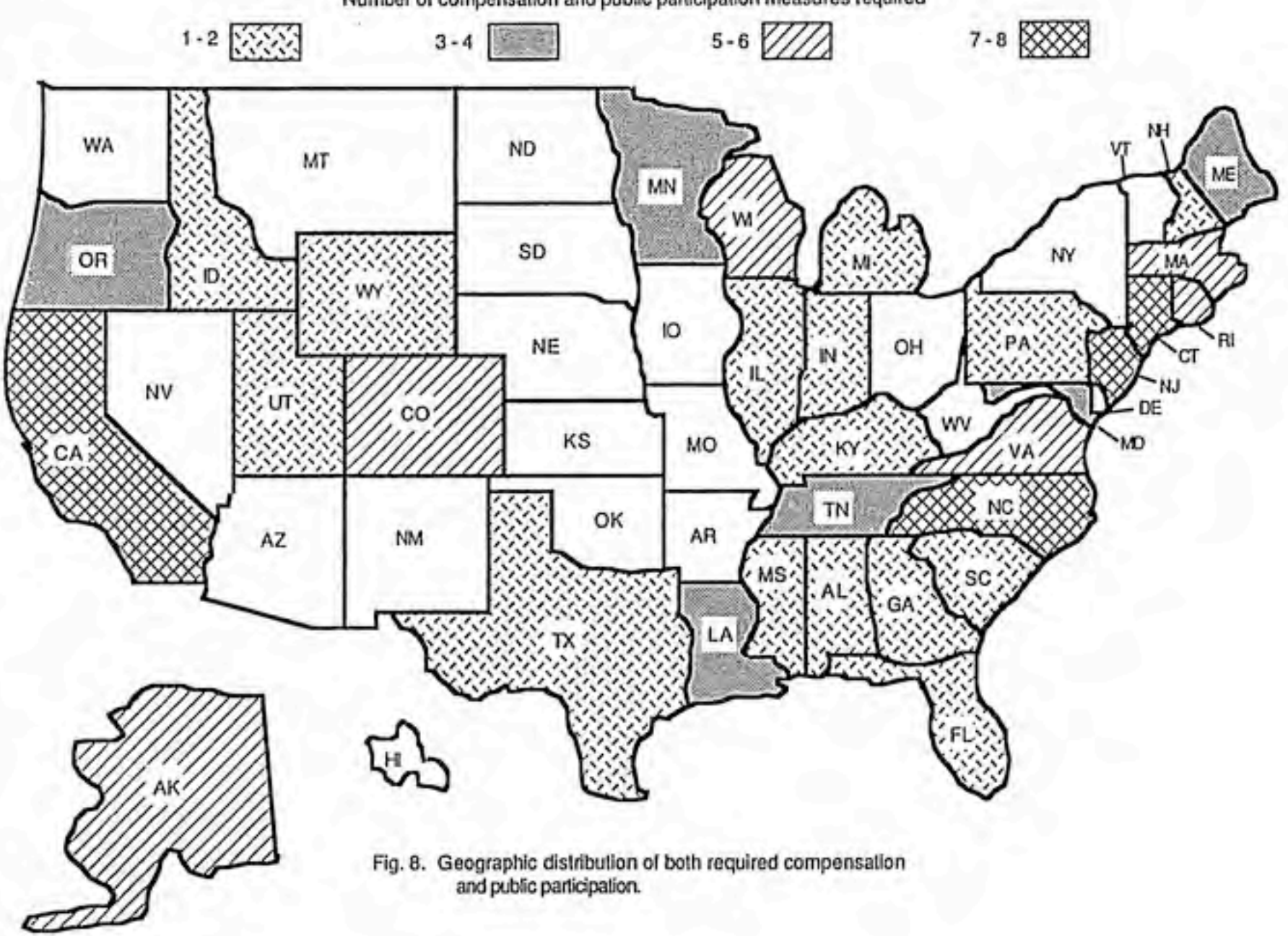

Fig. 8. Geographic distribution of both required compensation and public participation.

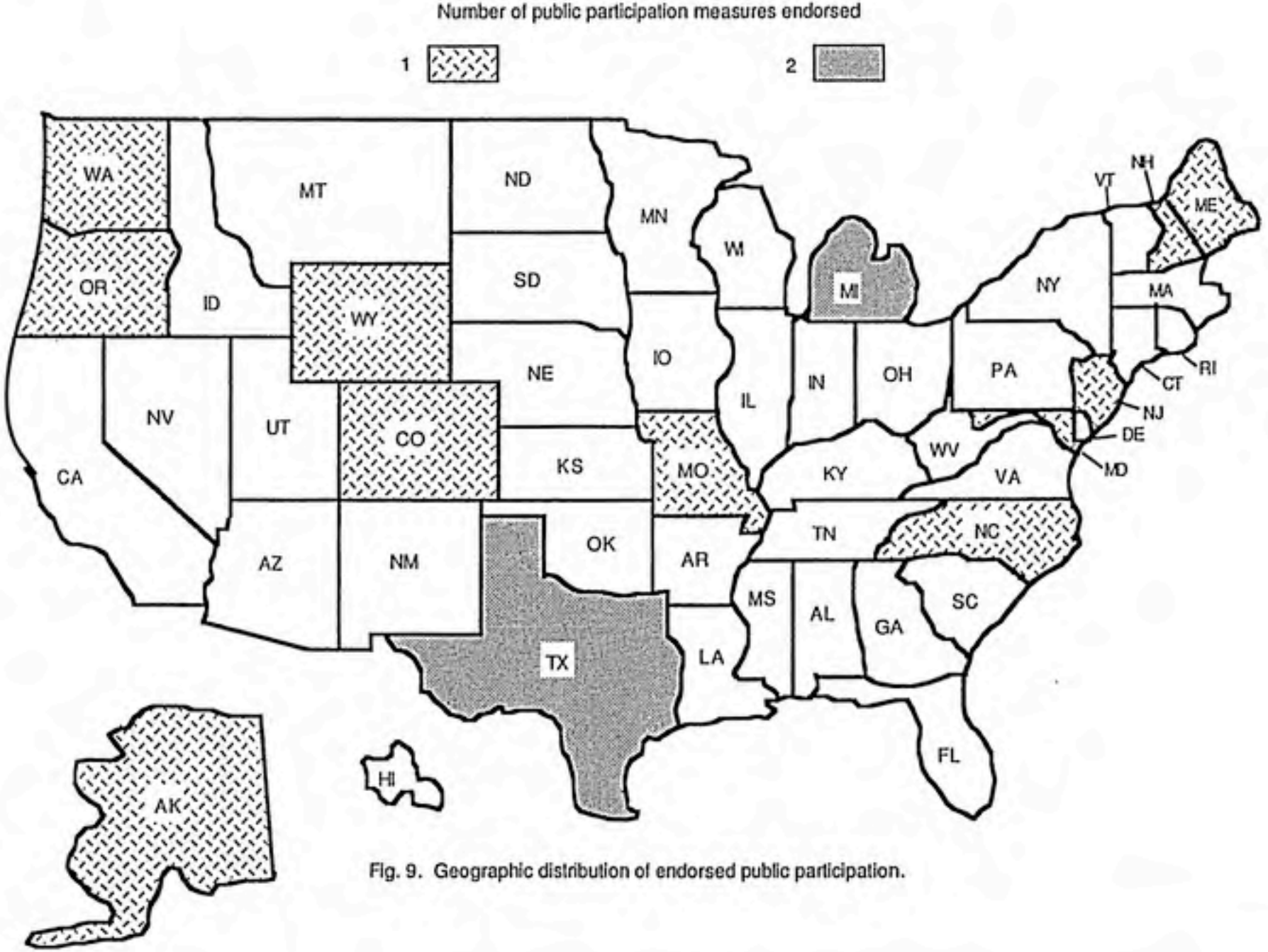

Fig. 9. Geographic distribution of endorsed public participation.

general, all measures are more prevalent in the eastern portion of the country; the Central Plains and the Southwest are noticeably lacking in either measure. A group of Atlantic Seaboard states - New Jersey, Connecticut, Maryland, and Rhode Island - is a significant cluster requiring many types of compensation and public participation; California also uses a large number of measures. The eastern cluster and California comprise the most densely populated areas of the United States; it is unsurprising that the techniques of compensation should be more developed in these areas. Figure 10 shows the geographic distribution of required and endorsed compensation and public participation. The same trends are basically true for this map as for Fig. 8. The only anomalies are Alaska, Colorado, and Wyoming, all of which use seven to nine measures of compensation and public participation. Recall that Wyoming deals with hazardous waste facilities only indirectly; its measures apply to industrial facilities valued at over $97 million dollars. Alaska and Wyoming are both major oil producing states. All three states contain some of the most important scenic resources in the country; perhaps their presence stimulated a greater awareness of the need to mitigate adverse environmental impacts, and compensation for adverse socioeconomic impacts followed.

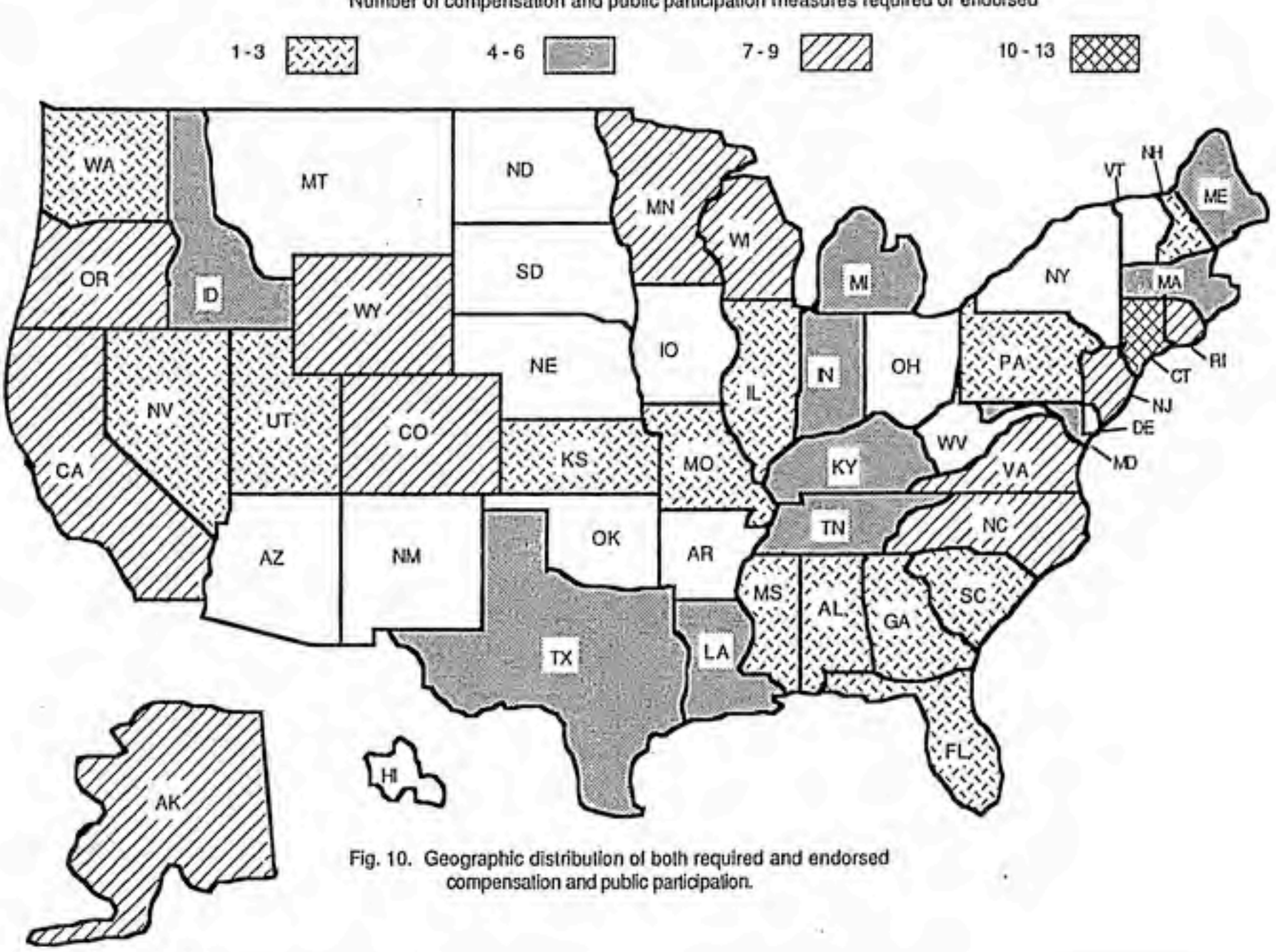

Fig. 10. Geographic distribution of both required and endorsed compensation and public participation.

SUMMARY

The use of compensation and public participation across the nation can be briefly summarized as follows:

1. 30 states (60%) require some form of compensation to be addressed in siting hazardous waste facilities.

2. 18 states (36%) endorse some form of compensation in siting.

3. The most commonly used forms of compensation are a) consistency with local ordinances b) developer funds local expenses c) state grants for local expenses and d) gross receipts tax. The first three are preventive measures; the last is compensatory.

4. Preventive and compensatory measures are used with roughly the same frequency; mitigative compensation is only used about half as much.

5. The legislative method is the most popular; 10 states (20%) use this method alone to implement compensation. The legislative method in conjunction with negotiation is the next most popular; 8 states (16%) use this combination.

6. 21 states (42%) require expanded public participation measures in siting.

7. 13 states (26%) endorse expanded public participation measures in siting.

8. 31 states (62%) require compensation and/or expanded public participation.

9. 35 states (70%) either require or endorse compensation and/or expanded public participation.

10. The use of compensation and public participation in general is concentrated in the most densely populated area of the country.

EXPERIENCE WITH COMPENSATION

In spite of the number of states requiring or endorsing compensation and public participation, very few have actually had experience with any of these measures. Sources in each state requiring/endorsing these measures were consulted regarding recent sitings involving compensation. According to this survey, ten new facilities in seven states have been sited utilizing state legislated or endorsed compensation or public participation measures. In addition, at least 30 to 40 facilities are currently going through the siting process in these states. These figures are probably underestimated, since other sources indicate that there are at least 68 siting proposals in progress across the country (19). Compensation and public participation programs have also been used in other sitings on an ad hoc basis by the private sector; several of these instances are discussed in chapter four.

The states that have had experience with compensation/public participation are Colorado, Illinois, Maine, Maryland, Nevada, Rhode Island, and Wisconsin. Landfills were sited in Colorado and Maryland; storage facilities were sited in Maine, Wisconsin and Nevada; a treatment facility was established in Rhode Island. Each of these cases will be discussed in further detail in the following chapter. In Illinois, three facilities (one treatment and one storage facility and an incinerator) have

received local approval and are fully permitted, but no compensation was negotiated (20).

CHAPTER 4

CASE STUDIES

In order to illustrate the use of compensation twelve case studies of facilities that have actually been sited will be discussed. These are not a comprehensive list, but are meant to demonstrate how compensation measures are applied in siting. Five of these facilities involved state required/endorsed compensation measures while seven included the use of compensation on an ad hoc basis by the private sector. Ten of these sitings used negotiation as the primary method of implementation; the remaining two used administrative methods.

Of the seven facilities characterized by the ad hoc use of compensation, six negotiated compensation and one established compensation administratively through the developer. The latter is a comprehensive hazardous waste management facility near Mobile, Arizona developed by ENSCO, Inc (21, 22). The facility will specialize in PCB high temperature incineration, but also includes chemical treatment, land disposal, reclamation, and detoxification. Total cost is estimated at $15 million; it should be fully operational by August 1988. ENSCO will be responsible for

post-closure perpetual care of the facility. Compensation established by the company included:

a) area fire departments, many of which are volunteer, received equipment and additional training for hazardous response
b) ENSCO's fire equipment will be available for community use
c) local roads near the site were improved.

As the facility will employ over 100 people, it will also contribute to the area's economy.

Six facilities negotiated compensation on an ad hoc basis:

1. Bruneau, Idaho (14, 23). Wes-Con Corporation transformed abandoned Titan missile silos into hazardous waste disposal sites. These sites were located in rural Idaho in a farming community. The company made an effort to identify the community's concerns, and negotiated the following measures:

    a) free waste disposal for local residents (mostly pesticides)
    b) free use of equipment (cranes, bulldozers, etc.) on weekends
    c) free use of fire trucks in emergencies
    d) free training for local hospital personnel
    e) free first aid classes to residents neighboring the facility
    f) the company guaranteed bills incurred by their workers in local businesses. (The community had encountered problems in the past with migrant construction workers.)

2. Niagara, New York (24). Several companies owned a 385 acre site on which they operated a hazardous waste landfill and treatment facility, a metal recycling plant, a sludge management facility, and a solid waste landfill. The town of Niagara had not approved of some of these facilities; a negotiated agreement was used to settle differences and discontinue pending litigation. Compensation agreed upon included:

    a) a site beautification plan
    b) payments in lieu of property tax (at least $200,000 per year, based on $23.33 per ton of waste landfilled). The company can subtract the taxes paid on waste received from the payment in lieu of property tax.
    c) free landfilling of household or commercial solid waste up to 106 tons per week. This figure increases by 1% per year to allow for growth.
    d) a citizen advisory board was established as a liaison between the town and the companies. It has no authority to interfere either with company operations or with the town board.

3. Peekskill, New York (23). The county developed a resource recovery plant and negotiated the following compensation:

    a) lower electric rates for the city.
    b) $1.5 million per year in lieu of property tax after ten years the amount rises to $3 million per year.
    c) the county promised to help plan and develop an industrial park around the plant.

4. Missouri (25). Bob's Home Service sited a hazardous waste landfill, and agreed to the following compensation in an out-of-court settlement:

    a) to post a $75,000 bond to assure a neighboring development of vacation homes that no waste would leach from the site.
    b) to monitor a creek that flowed near the site.

    Since completion, the facility also provides free waste disposal to nearby residents and maintains the county road leading to the site.

5. Livingston, Alabama (26). The developer of a hazardous waste facility donated an ambulance to the community.

6. Norwood, Ohio (27). Ohio Waste Management Company sited a hazardous waste landfill: the company and the city entered into a contract of their own volition. Compensation established included:

    a) new firefighting equipment
    b) a tipping fee.

    Other details were unavailable.

Five hazardous waste facilities have been sited under state processes requiring or endorsing compensation: four of these used negotiation, and one used administration.

1. Menomonee, Wisconsin (28). Milwaukee Solvents and Chemical Corporation built a hazardous waste storage facility; the local committee negotiated these terms:

    a) the company agreed to compensate the village for costs incurred in negotiation
    b) the company agreed not to stack barrels of waste more than three high.

2. Port Washington, Wisconsin (29). Aqua-Tech, Inc. had been operating a hazardous waste storage facility in the area for some time when they applied for a RCRA Part B permit. The only negotiated term of the agreement stated that the company would not load or unload waste during nonbusiness hours except in an emergency.

3. Adams County, Colorado (30, 31). The Last Chance Hazardous Waste Disposal Site was established. The facility is a landfill only; operations have not yet commenced. Compensation was established partly via state legislation and partly via negotiation:

    a) county receives a 2% gross receipts tax
    b) county received a $5000 application fee from the developer
    c) the facility operator pays $100,000 per year to the county. $50,000 to $60,000 pays for a full-time chemist employed by the facility for monitoring; the remainder funds the county's monitoring and emergency response programs.

4. Warwick, Rhode Island (32). ETICAM Corporation sited a hazardous waste treatment and storage facility adjacent to a residential neighborhood. The negotiated agreement established with the city of Warwick is the most detailed one in the nation. Specific compensation measures include:

a) grounds around the facility will be attractively maintained
b) deliveries are prohibited from 3:00 to 7:00 P.M. Monday through Friday, and from 5:00 to 9:00 A.M. all week
c) no more than three trucks may make deliveries between 10:00 P.M. and 5:00 A.M.
d) specific routes are established for delivery trucks
e) specific operating procedures are set forth
f) inspection procedures and frequency are established; the city may approve inspectors chosen by ETICAM
g) employees must be suitably trained
h) employees' health will be regularly monitored
i) city officials can inspect the facility at any time, unannounced; residents can tour the facility by appointment
j) free testing of hazardous materials submitted by the city
k) in accepting waste, ETICAM will give preference first to local generators, next to generators within Rhode Island
l) free treatment of 2500 gallons of hazardous waste generated by the city, its hospitals and schools
m) community benefit fund established. ETICAM pays $0.01 per gallon of hazardous waste treated (at least $20,000 per year but no more than $60,000 per year); the money is used to pay for consultants to inspect the facility, to train safety personnel, buy emergency response materials, etc.
n) ETICAM pays for training of eight emergency response personnel at the National Fire Academy. The company also bought two

encapsulated suits with self-contained breathing apparatus.
o) amounts of liability insurance are established
p) arbitration shall be used to settle any disputes between the city and ETICAM.

The ETICAM-Warwick agreement is considered a milestone in the siting of hazardous waste facilities and a model for the nation (33).

5. Yerington, Nevada (34). A PCB storage facility was sited near this town. Compensation was established by the Administrator of the state Division of Environmental Protection, based upon comments received in public hearings:

a) the DEP conducts quarterly areal sampling to check for PCB spillage
b) the facility operator obtained additional levels of liability insurance
c) the operator provided for the training of local emergency response personnel, and donated foam-generating fire equipment.

In the 12 case studies discussed above, the most common forms of compensation used are provision of emergency equipment and emergency training; these measures are used in almost half of the sitings. The next most common measures are (a) free waste disposal (b) additional environmental monitoring (c) specified operating procedures and (d) additional liability insurance or money posted to cover accidents. None of these are among the most common measures required or endorsed by the states (Table 2, Table 4). However, their popularity here suggests that these measures

may be more important to residents of host communities than most states realize. Another noteworthy feature of these case studies is the predominance of negotiation versus administration and legislation as methods of implementing compensation. As stated previously, these examples do not comprise a comprehensive list of facilities that have been sited with compensation; however, the relative paucity of case studies available to this author using administrative/legislative methods suggests that negotiation may be the more effective technique. Further research in this area might be useful.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Recommendations for the most effective types of compensation and public participation can be proposed based on the information accumulated in this study. The purpose of these measures is twofold: 1) to restore equity by bringing the benefits of hazardous waste facilities more in line with the costs and risks imposed, and 2) to facilitate the siting of new facilities by reducing public opposition. Compensation for adverse impacts leads to greater efficiency in facility planning and is both morally fair and strategic: it reveals the full costs of siting, helps to correct imbalances in benefits and costs, and helps reduce delays and legal expenses resulting from public opposition (14).

The choice of compensation measures depends a great deal upon the public's perception of the risks associated with hazardous waste facilities, as well as their estimate of the operator's ability to predict, prevent, detect and mitigate possible adverse effects. Obviously, prevention is of paramount importance in waste management; however, the risk from a facility can never be reduced completely to zero. Therefore, techniques to reduce or reverse adverse impacts

are of equal, perhaps greater, importance. This is particularly true when the public lacks confidence in the operator's ability to predict and adequately prevent adverse impacts (35). Finally, after all preventive and mitigative programs are complete, compensatory measures can be used to offset the residual risks and costs. The public must be convinced that risks have been minimized and possible effects can be mitigated, or compensatory measures may be perceived as bribes or payoffs (23). Table 12 lists the author's recommendations of the most appropriate types of preventive, mitigative, and compensatory compensation. Each measure and its recommended method of implementation are described below.

1. Consistency with local ordinances.
   A proposed facility should comply with existing local regulations, land use plans, zoning, etc. to the greatest extent practicable. Total compliance is probably not feasible because communities might simply act to prohibit facilities, either directly or indirectly. However, the greater the degree of compliance a facility achieves, the more likely it is to fit in with overall development plans of the community. In addition, the local government gains a measure of control over the facility, which may help to facilitate siting.

2. State grants for local expenses.
   State grants, established in legislation, are recommended for the local community's costs of site review studies, facility review studies, negotiations, etc. Most local governments have neither the requisite technical expertise nor the money to hire consultants to evaluate the proposed facility. Without additional funds, their review of a facility application may be severely limited. Grants could be supplemented by funds from the developer's application fee, if the state imposes one.

Table 12. Recommendations for compensation and public participation.

TYPE OF COMPENSATION	METHOD OF IMPLEMENTATION
Consistency with local ordinances	Negotiation (endorsed by legislation)
State grants for local expenses	Legislation
Terms of construction/operation	Negotiation (endorsed by legislation)
Monitoring by community	Legislation
Emergency training/equipment	Negotiation (required to be addressed in legislation)
Payment in lieu of property tax	Legislation
Gross receipts tax	Legislation
Funds for public improvement	Negotiation (endorsed by legislation)

TYPE OF PUBLIC PARTICIPATION	METHOD OF IMPLEMENTATION
Local review committee	All forms of public participation should be required by legislation
Adjacent communities involved	
Local review of application	
Negotiation	

However, the funding of local expenses exclusively by the developer is not supported; some authors believe the cost of proper waste management could rise so high as to encourage illegal methods of disposal (36, 37).

3. Terms of construction/operation.
   The host community should be able to negotiate specific details of facility construction and operation with the developer; for example, hours and routes of deliveries, additional engineered safeguards, necessary training for employees, etc. This measure is recommended a) because of its prevalence in the case studies discussed in chapter four, and b) because involving the host community in the design and operation is likely both to reduce their suspicions about the integrity of the facility as well as to mitigate specific objections they may have. This measure should be endorsed by legislation so that potential host communities will realize it is an option in their negotiations with the developer.

4. Monitoring by community.
   The power of the local government (or an established board) to monitor, inspect, and generally oversee the facility's operations should be established in legislation. Allowing the community to participate in the management of the facility can be a very effective way to allay their concerns (38, 9). It also affords them some control over the prompt detection and mitigation of potential problems.

5. Emergency training/equipment.
   The provision of emergency equipment and training for emergency personnel by the developer should be required to be addressed in the negotiated agreement. This measure was very popular in the case studies previously discussed. Proper emergency response capability eases one of the primary fears of local residents.

6. Payment in lieu of property tax.
   In order to avoid any loss in revenue for the local government, legislation should provide for payment in lieu of property taxes if the facility will ever be tax-

exempt. Many local governments operate on a strict budget, and the revenue lost from a large site could be substantial.

7. Gross receipts tax.
   The purpose of this measure is to provide money as compensation for the residual risks and costs of the facility that cannot be prevented or mitigated. Legislation should establish the percentage of gross receipts that the host community shall receive. Payment schedules could be negotiated. A gross receipts tax is recommended over a tipping fee only because it is currently used by more states (Table 2). No restrictions should be placed on the community's use of the funds.

8. Funds for public improvement.
   The developer provides funds either for specific projects in the community or for improvements in general; details and amounts can be negotiated. These funds are needed to compensate for the intangible effects of the facility, such as a negative community image. In addition, this measure and the gross receipts tax could be perceived as incentives by some communities and thus facilitate acceptance of the facility.

The recommended methods of implementing the above compensation measures include negotiation, legislation, and negotiation/legislation combined (Table 12). Negotiation seems to be the most effective technique by far (9, 14). The case studies discussed earlier support this opinion. Negotiation allows the developer and the host community the most flexibility in addressing the concerns unique to each siting. However, legislation is a more appropriate method for those compensation measures that need to be provided in every siting. In addition, legislation adds legitimacy to negotiated types of compensation by endorsing them: the

community is less likely to perceive proffered compensation as bribery if the measures are mandated in state law (23). Compensation suggested in legislation can also serve as a starting point for developer/community negotiations.

The recommended types of public participation are listed in Table 12. All of these measures should be established in legislation. The developer and the host community alike should be required to participate in negotiation; as in Wisconsin's process, any subject except the need for the facility may be discussed. Some provision for arbitration or mediation should also be made.

The siting process is the context in which the above measures are implemented. Types of compensation and public participation have been recommended; what characterizes the most suitable framework for applying these measures? Essential elements of the siting process are suggested below.

1. Balance state preemptive authority with local authority. Because of the amount of public opposition to proposed facilities, state preemption alone probably is not a viable alternative (9,14). The facility should comply with local ordinances, and the local government should be given as much input as possible in the facility planning stage of the process. It is unwise to present a community with a facility as a fait accompli. Early community involvement in all aspects--site selection, facility design, proposed technology, methods of operation--is imperative.
2. A Local Review Committee should be established as a liason between the host community, the developer, and the state. Members should be appointed by the local government, and adjacent communities should be represented. The membership should reflect concerned groups in the area: industry, environmentalists, landowners, local businesses, etc. The committee serves as a forum for concerned citizens.

3. The state should furnish grants to the LRC for the costs of site review, facility review, consultants, negotiations, etc. The developer must be willing to provide complete information on the facility and possible impacts.
4. The developer and the LRC should negotiate a siting agreement, including terms of construction and operation, provision of emergency training and equipment, funds for public improvements, and any other issues that concern the public.
5. A community board should be established to oversee the facility once it is in operation. They should have the authority to close the plant in case of an emergency. Local officials should be allowed to inspect the facility at any time during operation.

These elements of the siting process, together with the recommended compensation measures, provide an effective strategy to cope with the nation's siting dilemma.

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APPENDIX A

INTRODUCTION

Compensation and especially public participation are often an integral part of the siting process for commercial hazardous waste facilities. For each state using some form of compensation or expanded public participation, the siting process (if one exists) has been extracted from the state legislation with a focus on these measures; exhaustive detail has been avoided. A few states use some type of compensation but have only a permitting, not a siting, process. The process described is the one used to site new facilities, not necessarily the one used to permit facilities. Usually the siting and permitting processes are intertwined; the permit may be applied for before, during, or after the siting process is complete, depending on the state. In addition, some states have mechanisms for appeal by local government or the developer, but these are not included.

ALABAMA

The state of Alabama has no formal siting process, only a permitting process. No offsite commercial hazardous waste facilities have been sited recently; public opposition has even been brought to bear against proposed onsite facilities (1). State regulations require that "local approvals" in addition to state and federal ones be met before construction of a facility can commence, but no other forms of public participation or compensation are addressed (2).

ALASKA

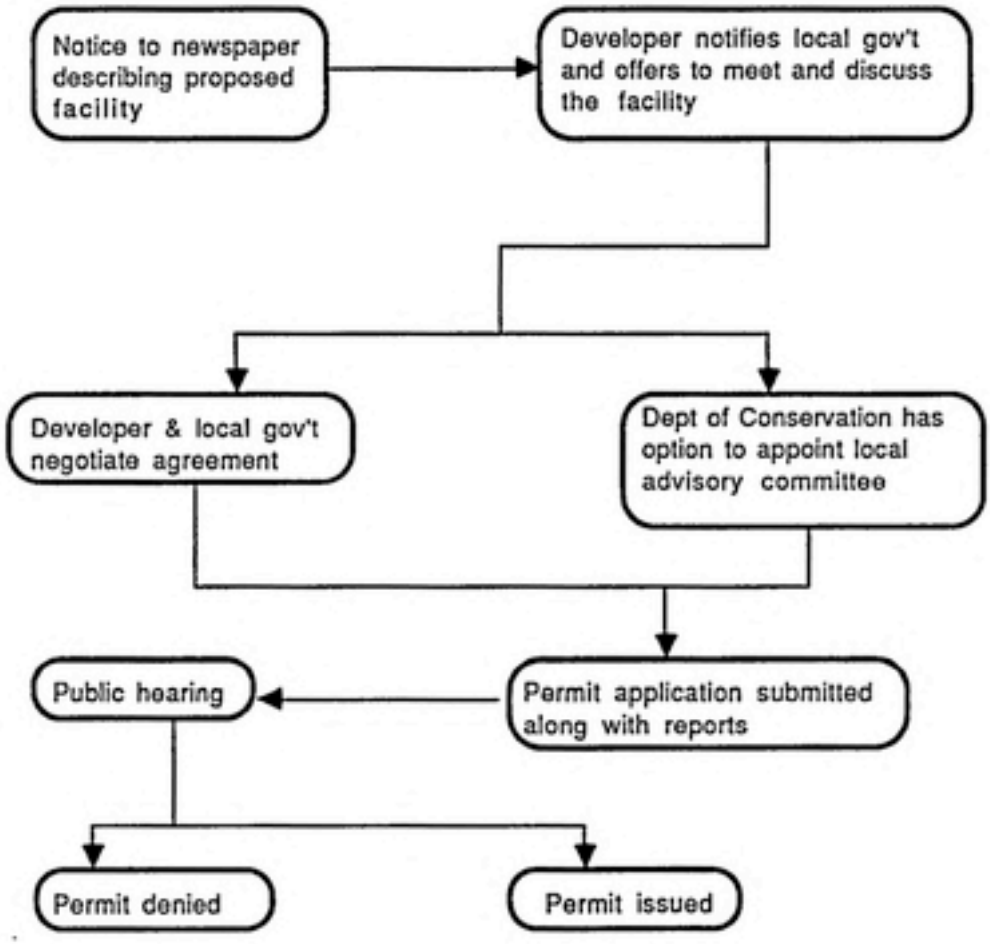
Hazardous Waste Facility Siting Process

1. The operator publishes a notice in two editions of a newspaper in the site area at least 90 days before applying for a permit. The notice must describe the proposed hazardous waste facility, transport routes, and sources, and types and amounts of waste to be handled. A copy of the permit application is offered at no charge to interested parties.

2. The local government is notified by the operator who offers to meet with them publicly to discuss the facility.

3. The operator must negotiate an agreement with local government which addresses:
   - --on-site and off-site monitoring to prevent adverse health effects to citizens and facility employees.
   - --operator response to spills, accidents, etc.
   - --safety in the transport of hazardous waste to the site.
   - --compensation for decreases in property values.
   - --mitigation of adverse effects to agriculture and natural resources.

Alaska


Notice to newspaper describing proposed facility
Developer notifies local gov't and offers to meet and discuss the facility
Developer & local gov't negotiate agreement
Dept of Conservation has option to appoint local advisory committee
Public hearing
Permit application submitted along with reports
Permit denied
Permit issued

4. The Dept. of Conservation has the option of appointing a Local Advisory Committee, composed of (1) residents who live near the proposed facility or along transportation routes, (2) people nominated by the local government and (3) people with technical, social, cultural, etc. expertise. The purpose of the LAC is to facilitate communication between the applicant and the local community, and to serve as a forum for local citizen's concerns. The Committee prepares a final report summarizing these concerns and how the applicant is addressing them. The Department will accept this report in lieu of the negotiated agreement mentioned above.

5. The permit application is submitted by the applicant, along with (1) his report of concerns raised and measures to alleviate them and (2) confirmation that all public participation requirements were met, including copies of all pertinent documents.

Source: Alaska Admin. Code ch. 63: Draft Regulations for the Siting of Hazardous Waste Management Facilities. July 1986.

The state of Alaska has a siting process for hazardous waste facilities which offers the opportunity for local government participation and allows flexibility in the manner

in which local concerns are addressed. Alaska's process is somewhat unique in that it does not rigidly dictate the methods of host community/developer interaction. The legislation implies that a developer must negotiate with the local government if the local government wishes. However, no mention is made of the form the negotiations must take, the eligible parties, time constraints, or other pertinent details. In fact, the word "negotiate" is not used in the legislation, but according to Mr. Carl Reller, Siting Program Manager such details along with local concerns are to be "negotiated" between the developer and the local government, with the Dept. of Conservation as technical advisor (4). The Dept. of Conservation has the option of appointing a Local Advisory Committee. It is not explicitly stated what role this committee would play in community/developer negotiations. If the local government chose to negotiate and an LAC were appointed, it seems likely that the committee would be the logical choice to negotiate.

The only mechanism for compensation is via negotiation; no other administrative or legislated forms are mentioned. The act delineates several types of compensation which must be addressed, but does not preclude other types from being negotiated. The on-site and off-site monitoring referred to may be either environmental or health monitoring, depending on what the local government wants (4).

To this author's knowledge, no hazardous waste facilities have been sited to date.

ARIZONA

The state of Arizona has no formal process, other than permitting requirements, for siting hazardous waste management facilities in general. An ad hoc procedure was used to site the state's first such facility recently near Mobile, Arizona. The facility will serve a regional market and will specialize in PCB high temperature incineration. It is a comprehensive hazardous waste management facility, utilizing chemical treatment, reclamation, detoxification, and land disposal, as well as incineration. The facility's total cost estimate is $15 million; it should be fully operational by August 1988. The developer is ENSCO, Inc., which is responsible for perpetual care (5). The state and federal permitting process included provisions for public notification and public hearings, and ENSCO representatives also planned to meet on an informal basis with community citizens and elected officials in an attempt to address their concerns (6).

In siting the ENSCO facility, Beverly Westgaard (Arizona Dept. of Health Services) notes that "...no direct community incentives were provided;..." in part because the site area was purchased from the federal Bureau of Land Management (7). However, several measures were taken which could be perceived as compensation by the local community. Fire departments in the area, many of which are volunteer, will receive equipment

and additional training for hazardous response. ENSCO's fire equipment will also be available for community use. Local roads in the site area were improved. Finally, local residents could conceivably feel incentives

> "...in the potential of long term economic improvement, a lowered localized unemployment rate and the potential of employee skill development as the facility intends to employ over 100 individuals at full operation." (7)

ARKANSAS

The state of Arkansas has no legislation addressing the use of compensation or incentives in hazardous waste facility siting. John D. Ward, Chief of the Hazardous Waste Division of the Department of Pollution Control and Ecology, knows of no examples in which compensation was used in siting a facility in the state, whether through voluntary negotiation or administered by a state agency (8).

CALIFORNIA

Hazardous Waste Facility Siting Process

1. An applicant files a notice of intent with the Office of Permit Assistance to apply for a land use decision from the local government.

2. The local government publishes notice in local newspapers and notifies adjacent property owners to the site.

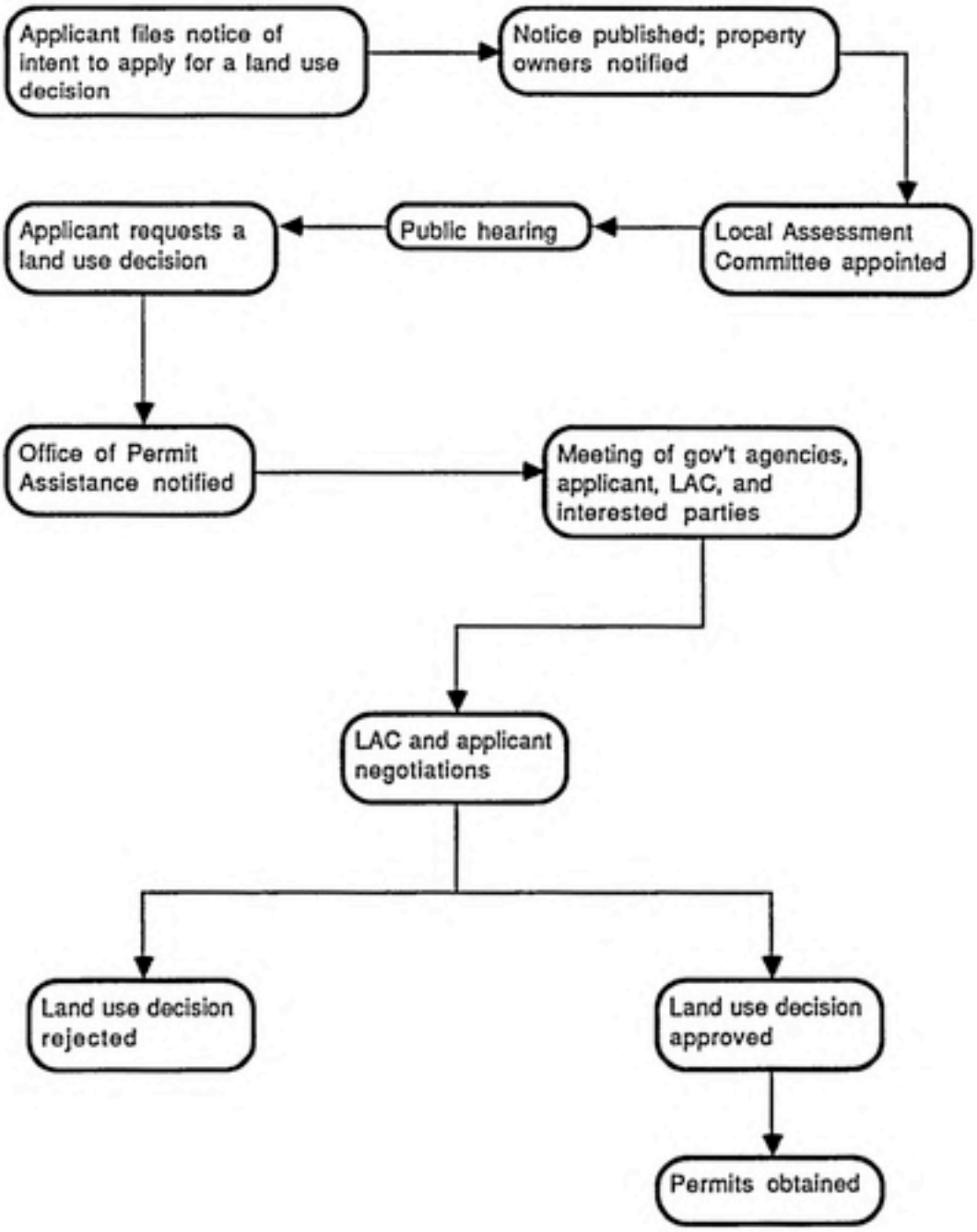
3. Within 90 days after a notice of intent is filed, the local government appoints a seven-member Local Assessment Committee and the Office of Permit Assistance holds a public hearing in the site area.

4. Not less than 90 days after filing the notice of intent the applicant may request a land use decision from the local government.

5. The local government notifies the Office of Permit Assistance within 10 days of accepting a complete application.

6. The Office of Permit Assistance convenes a meeting within 60 days of all government agencies, the applicant, the

CALIFORNIA


Applicant files notice of intent to apply for a land use decision
Notice published; property owners notified
Local Assessment Committee appointed
Public hearing
Applicant requests a land use decision
Office of Permit Assistance notified
Meeting of gov't agencies, applicant, LAC, and interested parties
LAC and applicant negotiations
Land use decision rejected
Land use decision approved
Permits obtained

Local Assessment Committee, and all interested parties for determining the issues that concern everyone.

7. After this meeting, the applicant and the Local Assessment Committee meet to determine the conditions under which the project will be acceptable.

8. If differences cannot be resolved, the Office of Permit Assistance may recommend the use of mediation, paid for equally by the applicant and the state general fund.

9. The local government approves or rejects the land use decision.

10. If the land use decision is approved, the applicant is free to obtain the permits necessary for the construction and operation of the facility. If the land use decision is denied, the applicant may appeal to the governor within 30 days after the decision is rendered.

Source: California Assembly Bill #2948.

California's siting process for hazardous waste facilities allows almost total local control over the siting of new facilities by requiring developers to obtain local approval before applying for the necessary state/federal

permits. The local government's land use decision must be based on (1) the application's consistency with local planning and zoning ordinances in effect when the application was received, and (2) the county hazardous waste management plan, if it is in effect yet. The LAC is authorized to negotiate with the applicant the provisions of and conditions for project approval, including any special benefits. The Local Assessment Committee represents adjacent communities as well as local residents, and consists of three members from the community at large; two members representing environmental groups; and two representing affected industries.

Monetary compensation for the host community is also established in the legislation. The local government may impose a fee on the applicant to cover the costs of notification in no.2 above. The applicant must pay an amount established by the Office of Permit Assistance to the Local Agency Technical Assistance Account. Grants are made from this account to local governments for the purpose of hiring independent consultants to review the project and assist in negotiations. Host communities can also levy a tax or a user fee of 10% annual gross receipts.

Although no facilities have yet completed this siting process, there are "a surprising number of facilities in the works", according to Gloria McGregor of the California Hazardous Waste Management Section. The California process seems to be working quite well. Ms. McGregor attributes its

success to two primary factors: the amount of local control inherent in the process, and the public's increasing knowledge about hazardous waste management. The latter is partially the result of the hazardous waste management plans being developed by California counties. (10)

COLORADO

Hazardous Waste Facility Siting Process

1. A developer applies for a Certificate of Designation from the board of county commissioners or governing body of the host municipality. An application fee must be submitted along with the application.

2. The county clerk promptly notifies the governing bodies of counties and municipalities within 20 miles of the proposed site.

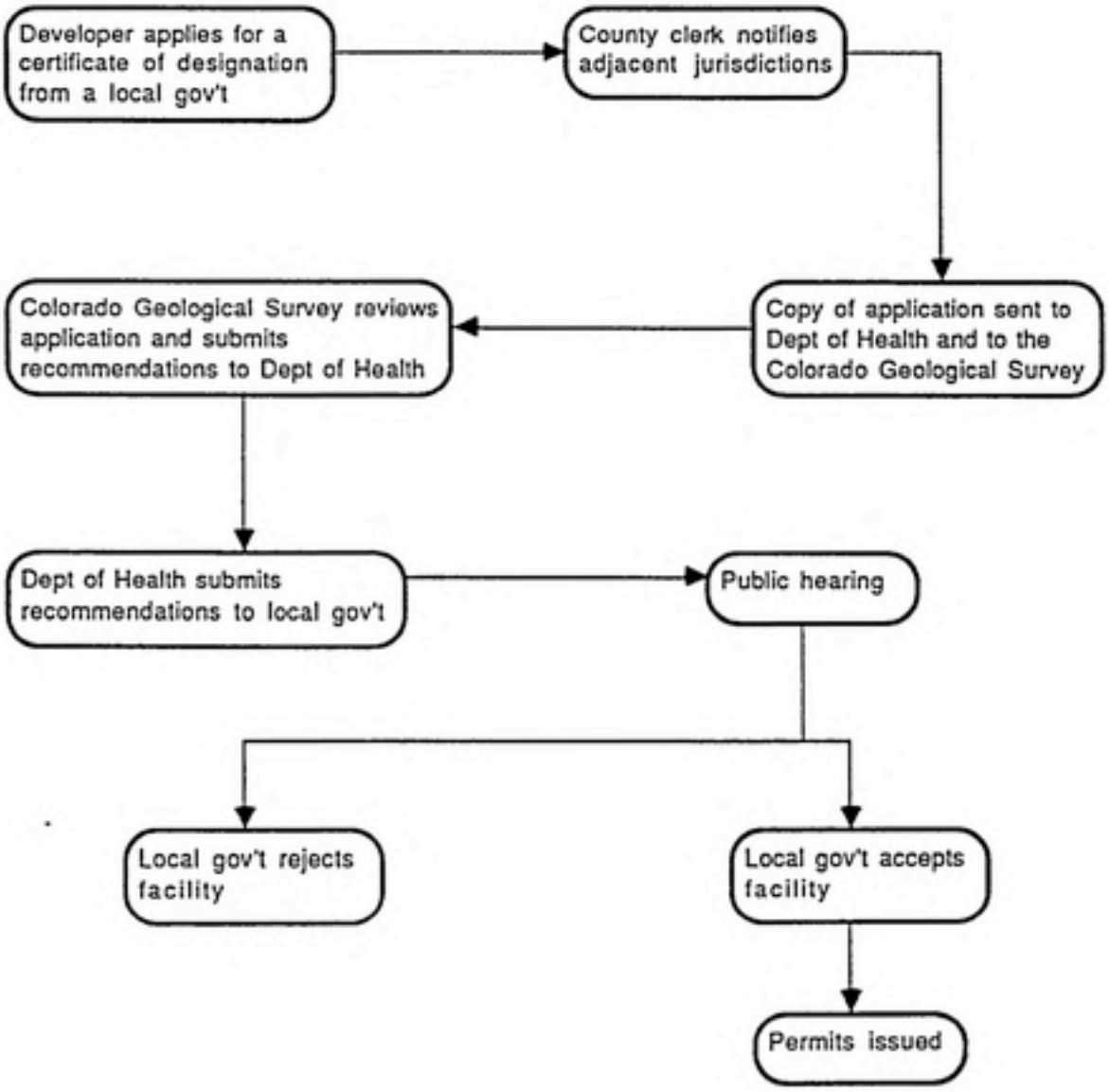
3. Within 10 working days, the clerk sends a copy of the application to the state Dept. of Health and the Colorado Geological Survey.

4. The Colorado Geological Survey reviews the application and returns it to the Dept. of Health within 60 days.

5. Within 90 days of receiving the application, the Dept. of Health makes its recommendations to the county commissioners.

6. The commissioners then schedule a public hearing.

COLORADO


Developer applies for a certificate of designation from a local gov't
County clerk notifies adjacent jurisdictions
Copy of application sent to Dept of Health and to the Colorado Geological Survey
Colorado Geological Survey reviews application and submits recommendations to Dept of Health
Dept of Health submits recommendations to local gov't
Public hearing
Local gov't rejects facility
Local gov't accepts facility
Permits issued

7. The county commissioners vote to approve or disapprove the proposed facility.

Source: Colorado Title 25 Article 15, July 1983.

Colorado's siting process is unusual in that the host community's local government is the central figure, while state agencies function only as advisors. Participation by the general public is also limited; a single public hearing, no formally recognized Local Review Committee. All power to negotiate the terms and conditions of siting, as well as any compensation, lies with the local government itself.

Certain requirements in must be met in approving a proposed hazardous waste facility. According to the legislation, a facility can be approved only if:

1) the Dept. of Health has recommended approval
2) the applicant has demonstrated a need for the facility
3) the site would not pose a significant threat to the public safety
4) the applicant has demonstrated his financial and technical reliability
5) the site conforms to all official land use plans and policies

The above conditions must be met before a local government can approve a facility.

In addition to any negotiated compensation, specific compensation measures are addressed in the legislation. The host county or municipality establishes an application fee of up to $50,000. 50% of this fee is given to the Dept. of Health to cover its application review costs. The remainder belongs to the local government, and no restrictions are mentioned on its use of the funds. The statute provides that all or part of the host and community's portion of the application fee may be refunded to the applicant.

The Act establishes a 2% annual gross receipts tax paid by the facility operator to compensate the host community for providing additional public services such as road maintenance, law enforcement, fire protection, monitoring by health officials, and emergency response. The county can suspend the facility's Certificate of Designation until the tax is paid.

The local government may assume responsibility from the state for inspection and monitoring of the facility. In that event, the state allocates the local government a portion of the fees collected from the facility operator for these purposes.

According to Mary J. Gearhart (Section Chief (Permits), Hazardous Materials and Waste Management Division, Colorado Dept. of Health), Colorado's siting process has met with success: the Last Chance Hazardous Waste Disposal Site was issued a Certificate of Designation by Adams County. The most controversial issue in that siting was the fact that

adjacent communities received no compensation and had no say in the conditions imposed on the facility by the host community (12). For further discussion of the compensation established for this site see Chapter 4.

CONNECTICUT

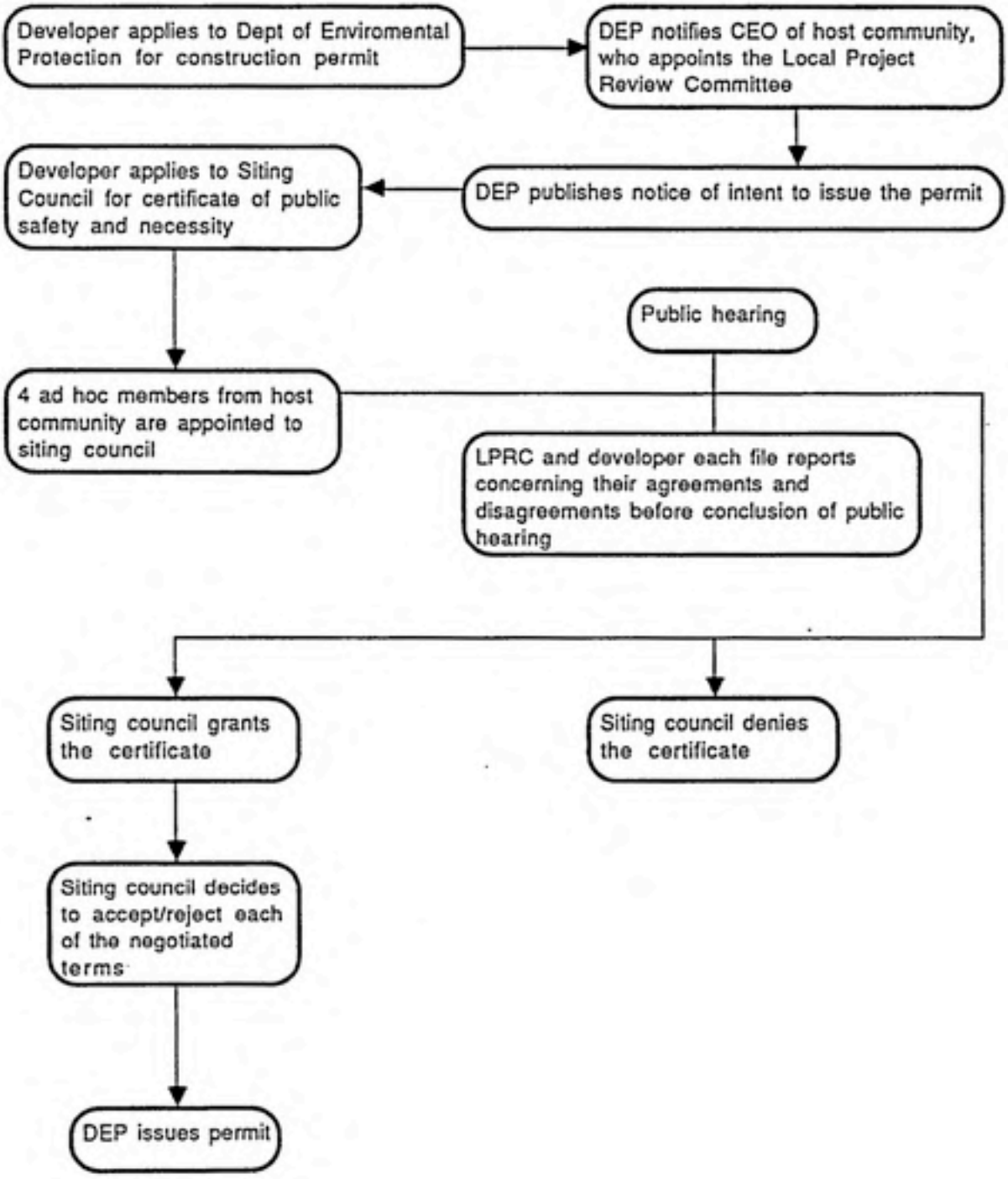
Hazardous Waste Facility Siting Process

1. The developer applies to the Department of Environmental Protection for a construction permit.

2. The Department notifies the Chief Elected Official (CEO) of the host community, who appoints the Local Project Review Committee. The LPRC consists of 4 to 9 members; all are electors of the host community except one, who is an elector of the neighboring community most likely to be affected by the proposed facility.

3. After the Department publishes their notice of intent to issue the permit, the developer applies to the Siting Council for a Certificate of Public Safety and Necessity. Copies of the application are sent to various host community officials (CEO, director of health, fire marshal, chairpersons of the conservation commission, planning commission, and zoning commission) as well as to each owner of land adjacent to the proposed site. The application must include a description of incentives and benefits for the host community.

CONNECTICUT



4. The CEO appoints 4 ad hoc members from the host community to the Siting Council, which has 9 permanent members.

5. A public hearing is held within 180 days of receipt of the application for the Certificate of Public Safety and Necessity. Before the conclusion of the public hearing, the developer and the LPRC each file reports concerning their agreements and disagreements. The Siting Council is the arbitrator of any disputes, and considers the reports and negotiations as part of the application. The Council has the authority to accept or reject any of the negotiated terms.

6. The Council decides to grant or deny the certificate. If the certificate is issued, the Department can then issue the construction permit.

Source: Connecticut General Statutes ch. 445.

The Council is mandated to determine a need for a proposed facility before issuing a Certificate. However, the legislation does not prohibit the discussion of need in community/developer negotiations. Connecticut's siting process provides for extensive participation by the local community, with strong oversight by the Siting Council. This

degree of oversight is one of the notable features of the process. Although the host community has many options in negotiating with the facility developer, the Siting Council has the ultimate authority over the negotiated terms.

The process of compensation is more rigidly structured than in some other states (e.g. Alaska). Before beginning negotiations, the LPRC must choose either (1) to negotiate specific compensation and incentives with the developer, or (2) to receive set payments according to tip schedules delineated in the legislation. If the LPRC chooses to negotiate, the act suggests some potential terms:

-payments for decreased property values

-development of open space and recreational facilities

-purchase of a green belt buffer

-purchase of fire equipment

-road repair costs

-transport routes to the facility

-direct financial payments

Instead of negotiating, the municipality can choose a set payment. Every quarter, the operator reports the volume of hazardous waste received to the CEO, then pays a tipping fee or a gross receipts tax:

(1) \$.05/gal (\$13.50/yd^3) of hazardous waste received quarterly

(2) a percentage of quarterly gross receipts according to the following table:

QUARTERLY GROSS RECEIPTS	PAYMENT TO COMMUNITY
$0 - $1,250,000	10%
$1,250,000 - $2,500,000	5%
over $2,500,000	2.5%

In addition to the above types of compensation the host community receives funds for technical assistance in reviewing the hazardous waste facility proposal. The developer deposits with the Siting Council 1% of the total project costs (but not less than $1000 or greater than $30,000). The LPRC then submits the receipts for their expenses and is reimbursed (14). The legislation limits reimbursement to only expenses incurred for technical assistance (e.g. consultants, experts) in facility review.

As of November, 1986, the Connecticut Siting Council had not yet received an application for a hazardous waste management facility (15).

DELAWARE

The state of Delaware uses only a permitting process for new hazardous waste facilities. No forms of compensation are addressed. In fact, there are no commercial facilities at all in the states (16).

FLORIDA

Florida has no formal siting process for new hazardous waste facilities, only a permitting process (17). The state in currently in the midst of selecting a site for a multipurpose treatment facility. A landfill will not be included. The proposed facility's consistency with local land use plans, as well as possible changes in property values, must be considered in site selection (18). The only form of compensation explicitly established is a 3.5% gross receipts tax (19).

GEORGIA

Georgia has no formal siting process for new hazardous waste facilities. The state is currently trying to site a comprehensive waste treatment facility, using an ad hoc procedure based on proposals submitted voluntarily by counties. Proposed sites must comply with the state's siting criteria. Incineration will be the main treatment technology; no land disposal will be included. The total site including buffer zones will occupy 3000 acres. After construction, the facility will be privately operated but ownership shall be retained by the state (20). The state lists the following benefits to the host community from the facility:

1) Pays 1% gross receipts tax
2) Pays ad valorem tax on 3000 acres
3) Attracts industrial growth
4) Creates local jobs
5) State assures responsible operation

The state serves as the liaison between the community and the developer, and insures that local zoning and business license requirements have been met before a permit is issued. The only facility in progress is the state-owned one (21).

HAWAII

According to James Ikeda, state of Hawaii Deputy Director for Environmental Health, Hawaii "...does not have any legislation, policies, or specific experiences in the use of compensation/incentives for siting hazardous waste management facilities...." (22).

IDAHO

Hazardous Waste Facility Siting Process

1. A developer applies for a siting license from the Dept. of Health and Welfare and submits the license application review fee (not to exceed $7500).

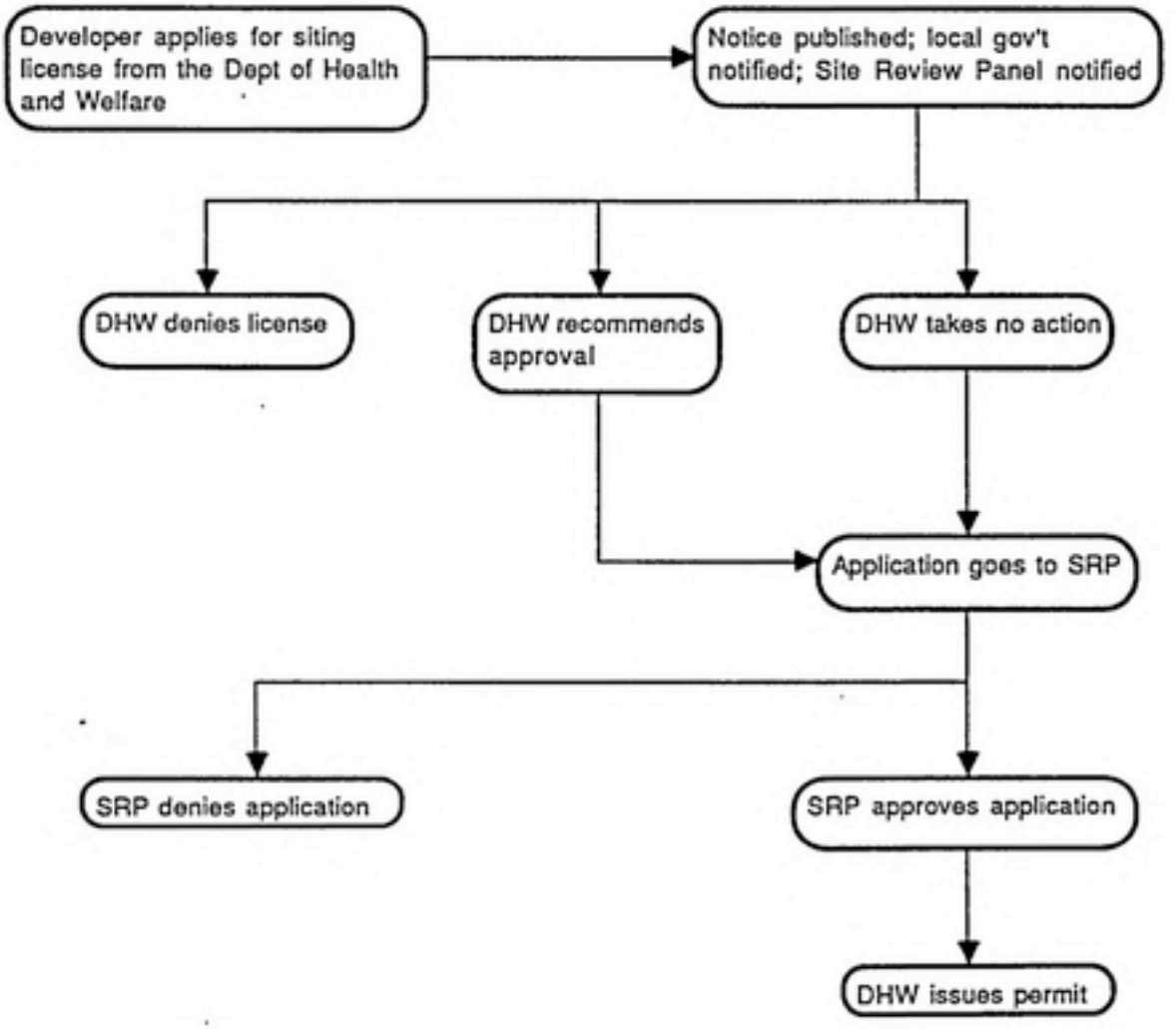
2. Notice is published in local newspapers; permanent members of the state Site Review Panel are notified; the local government of the proposed site is notified.

3. Within 75 days after receiving the application, the Director contacts the chairman of the Site Review Panel, who notifies the local city and county governments to appoint their members within 45 days.

4. If, 120 days after receiving the application, the Director of the Dept. of Health and Welfare has neither recommended approval for nor denied the permit, the application goes to the Site Review Panel for action.

5. The Site Review Panel meets within 20 days of creation to establish a timetable for considering the application and set up a public hearing.

IDAHO


Developer applies for siting license from the Dept of Health and Welfare
Notice published; local gov't notified; Site Review Panel notified
DHW denies license
DHW recommends approval
DHW takes no action
Application goes to SRP
SRP denies application
SRP approves application
DHW issues permit

cannot be issued until 30 days after notice of the application was published.

4. If the proposed facility does involve land disposal of hazardous waste, then the host county fiscal court (or the urban/county government or the governing body of the municipality where the site is located, whichever is appropriate) conducts a public hearing, whether or not one is requested. If the hearing is requested, the fiscal court must vote to approve/reject the facility within 30 days after the hearing. If no one requests the hearing, the court conducts one anyway and must vote within 60 days after notice of the application was published.

5. The NREPC can only issue the permit if the local fiscal court approves the facility.

Source: Kentucky Revised Statutes ch. 224.

Unlike Kentucky's siting process for a regional facility, this process involves the public and the local government to a great extent, at least for land disposal facilities. The local government holds complete veto power over these facilities. This degree of local control is unusual. Whereas the regional facility siting process

6. The Site Review Panel makes a determination on the application considering: (1) the risk/impact of accidents in transport, groundwater contamination and fires or explosions, (2) the impact of the facility on local government: its consistency with local planning and development, its impact on the safety and health of the community, and any costs to local government, and (3) any relevant ordinances.

7. The Site Review Panel approves or rejects the application within 120 days of its creation.

8. The Director issues or denies the permit accordingly.

Source: Idaho Hazardous Waste Facility Siting Act.

Idaho's siting process shows a willingness to include the local community and its concerns primarily through the Site Review Panel. The Site Review Panel is composed of six permanent members plus four temporary members (two each appointed by the city council and county commissioners of the proposed site). Its main objective is the consideration of the public's concerns and objections, and mitigation of these concerns by establishing additional stipulations to the permit. The Site Review Panel must also integrate "to the fullest extent practicable" any relevant local regulations.

(However, no local government can prohibit the siting of a hazardous waste facility).

A type of property value guarantee is provided in state legislation (23). For up to nine months after license approval of a hazardous waste facility, any person can bring action in court if he can prove that the construction of the facility will devalue his property. The court can order the owner of the facility to pay the plaintiff an amount equal to the value of the plaintiff's loss. This method of compensation for loss in property value seems biased toward the owner of a facility, especially with the nine month time limit.

The state of Idaho has only one facility operating under a RCRA Part A permit; no others have been sited, and thus the state has had no experience with the use of compensation (24).

ILLINOIS

Hazardous Waste Facility Siting Process

1. The developer of a hazardous waste facility notifies the property owners within 250 feet of the proposed site, the Illinois General Assembly Members from the district containing the site, and publishes notice of the proposed facility in local newspapers.

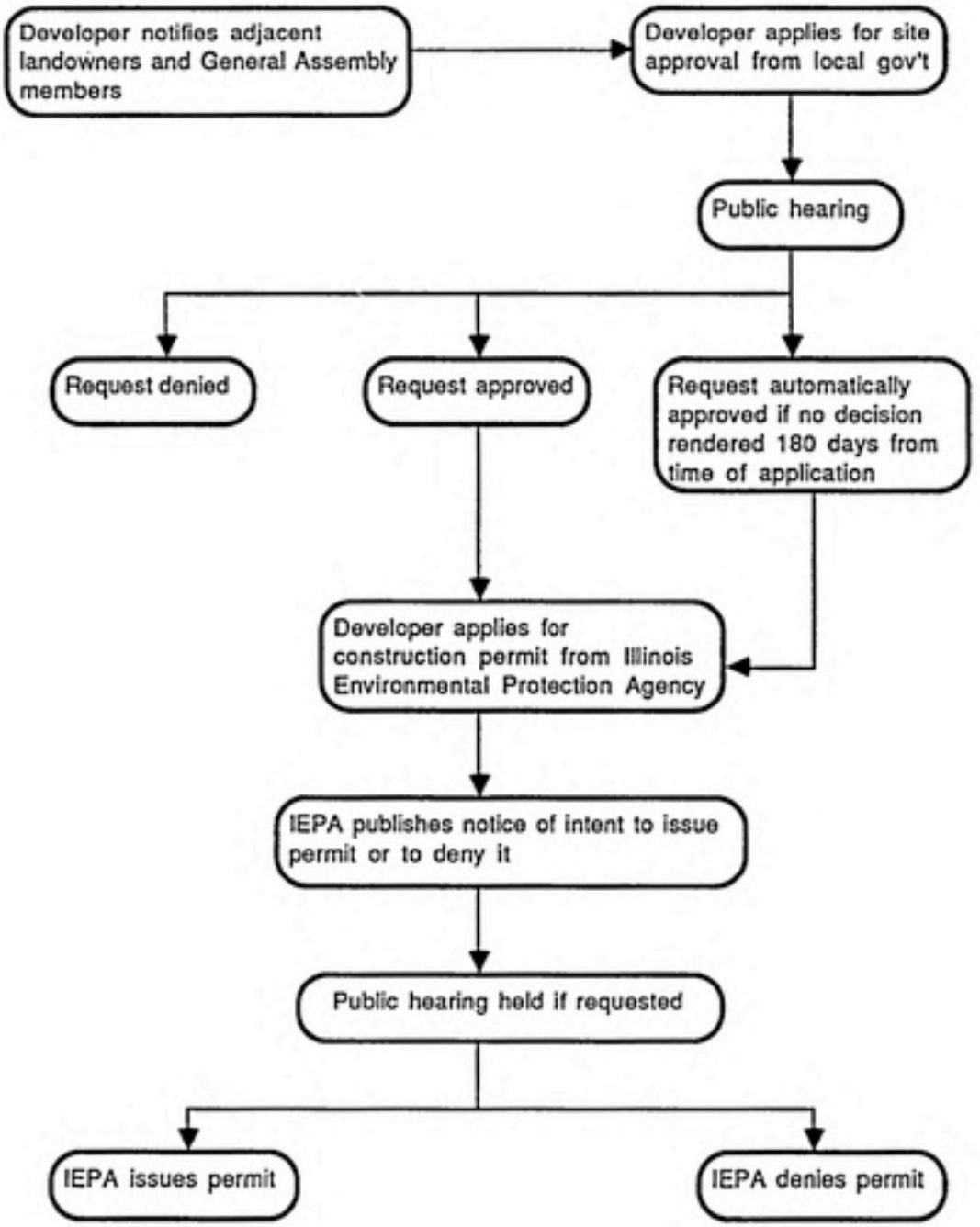
2. At least 14 days later, the developer files a site approval request with the county or municipal government.

3. 90-120 days after receiving the request, the local government conducts a public hearing.

4. The local government must render a decision on the request within 180 days of receipt or the site is automatically approved.

5. If the site approval request is denied, the developer can appeal to the Pollution Control Board within 35 days of the local government's decision. If the request is approved, the developer applies for a construction permit from the Illinois Environmental Protection Agency (25).

ILLINOIS


Developer notifies adjacent landowners and General Assembly members
Developer applies for site approval from local gov't
Public hearing
Request denied
Request approved
Request automatically approved if no decision rendered 180 days from time of application
Developer applies for construction permit from Illinois Environmental Protection Agency
IEPA publishes notice of intent to issue permit or to deny it
Public hearing held if requested
IEPA issues permit
IEPA denies permit

6. Within 90 days after receiving the permit application, the Illinois Environmental Protection Agency publishes notice of intent to issue or deny the permit.

7. If a public hearing is requested, notice is published. The hearing must be held 60-180 days after publishing notice.

8. The Illinois Environmental Protection Agency renders the final decision within 60 days after the hearing is completed.

Source: Illinois EPA. Pollution Control Facility Siting in Illinois. Doc. no. IEPA/GCA/87-002. January 1987.

In Illinois, the siting of hazardous waste management facilities is strictly a local issue; the state Environmental Protection Agency does not become involved until after local approval is obtained. The Illinois process is very similar to California's in that respect. However, in California the local governments have much broader authority in deciding to approve or disapprove a site. Illinois legislation requires that local government address these criteria, among others, in determining to approve a site:

1) the need for the facility is established.

2) the protection of public health safety and welfare is assured.

3) the facility will be located so as to minimize the effect on surrounding property values and any incompatibility with the area.

4) the facility will be located so as to minimize the effect on traffic patterns.

Most importantly the use of local zoning or land use plans to disapprove a facility is forbidden.

Results of the Illinois siting process are mixed at best. In the past five years, three facilities have received local approval and are fully permitted; 1) Petrochem Services treatment facility in Lemont 2) TWI, Inc. incinerator in Sauget and 3) McKessona Chemical storage facility in Chicago Heights. Two other facilities have been denied local approval, but won on appeal. A proposed hazardous waste treatment facility in Lockford was first denied local approval in 1983; appeals went all the way to the Supreme Court, which granted approval in late 1985. However, the company has not yet applied for a construction permit from IEPA. The reasons for their delay are not known. Another facility, Frank's Industrial Waste in Rockford, was denied local approval in 1983 but won an appeal in 1984. The RCRA Part B permit for this facility is pending. No compensation was negotiated in any of these sitings (27).

INDIANA

Hazardous Waste Facility Siting Process

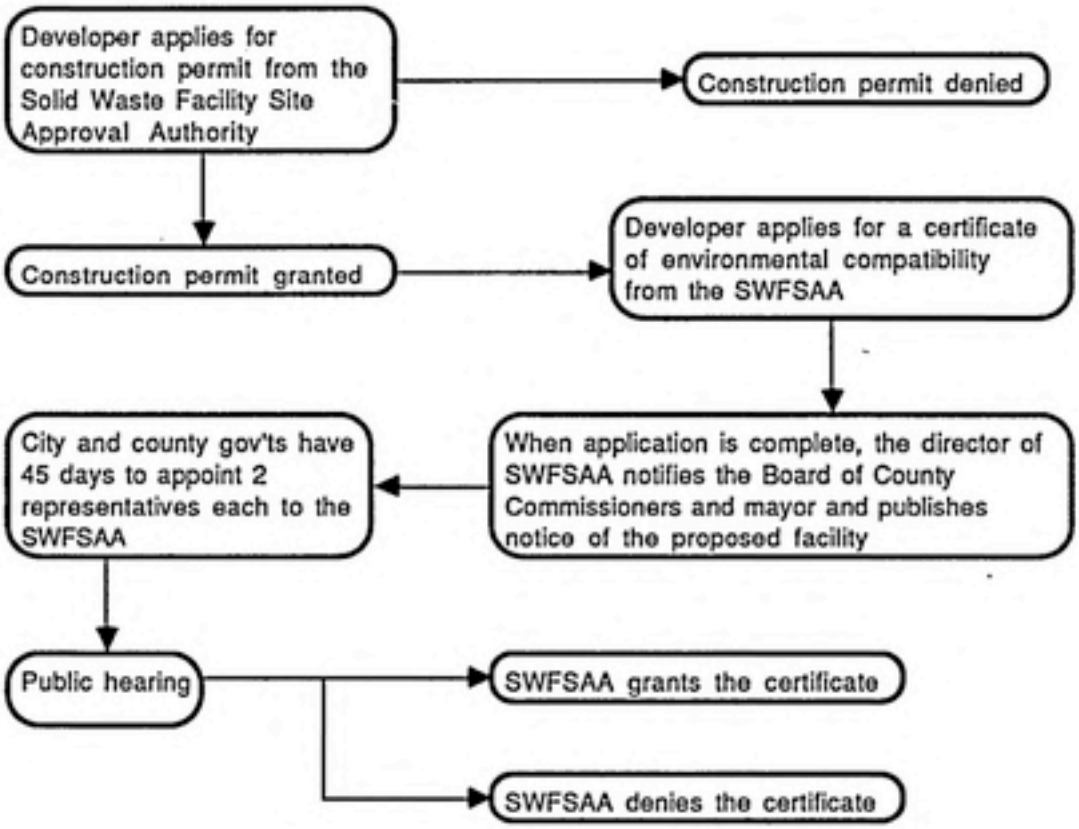
1. The developer of a hazardous waste facility must first apply for a construction permit from the Solid Waste Facility Site Approval Authority (SWFSAA).

2. After obtaining a construction permit, the developer applies for a Certificate of Environmental Compatibility from SWFSAA.

3. Upon receipt of a completed application, the Director of SWFSAA notifies the Board of County Commissioners and the mayor of the closest city to the proposed facility. A notice is published in a county newspaper describing the siting process, giving the location of the proposed facility, and indicating where a copy of the application can be reviewed.

4. The Director notifies the city and county governments that they each have 45 days to appoint two representatives to SWFSAA. If these four representatives are not appointed, SWFSAA is not precluded from continuing its review of the facility application.

INDIANA


Developer applies for construction permit from the Solid Waste Facility Site Approval Authority
Construction permit denied
Construction permit granted
Developer applies for a certificate of environmental compatibility from the SWFSAA
When application is complete, the director of SWFSAA notifies the Board of County Commissioners and mayor and publishes notice of the proposed facility
City and county gov'ts have 45 days to appoint 2 representatives each to the SWFSAA
Public hearing
SWFSAA grants the certificate
SWFSAA denies the certificate

5. A public hearing is scheduled and held in the host community.

6. After the conclusion of the public hearing, SWFSAA evaluates the impact of the proposed facility on the host community. They must consider 1) the risks and probable impacts from accidents or leaks; 2) the consistency with local planning and development; 3) the probable environmental impacts; 4) measures to mitigate any adverse effects; and 5) any concerns or objections voiced by the public.

7. SWFSAA grants or denies the certificate of environmental compatibility.

Source: Indiana Environmental Management Act.

Indiana's siting process for hazardous waste facilities affords a moderate degree of host community participation. Aside from the public hearing and notices, the only mechanism for local participation is the four representatives appointed to SWFSAA by city and county government. However, SWFSAA has only five statewide members, so the local representatives constitute 44% of the membership. This ratio of local to statewide members is larger than is seen in some other states (e.g. Connecticut).

Another distinctive feature of Indiana's process is its administrative method of compensation rather than legislated or negotiated. The SWFSAA is mandated to consider the public's concerns and ways to mitigate adverse impacts but all specific issues and details of compensation are left to the authority's discretion. For example, if SWFSAA determines that additional training or equipment will be necessary for local emergency response personnel and officials, it can require the owner of the proposed facility to deposit an amount annually in the Hazardous Waste Training Trust Fund. The amount deposited is based on the amount of training that is necessary. The SWFSAA appears to have broad authority to dispense other types of compensation: "The Authority may mitigate specific concerns and objections to the facility by attaching conditions and limitations to the certificate for the facility..." In addition, the Authority will integrate local ordinances and requirements "to the fullest extent practicable" with the certificate, which preempts any local zoning or other regulations. The compensation received by a local community hosting a hazardous waste facility could be substantial, depending on the Authority's interpretation of its mandate, its review of the facility's impact, and the concerns voiced by the public.

There have been no attempts to site a facility under this process. According to Joseph Snyder (Director, Hazardous Waste Facility Site Approval Authority), the state should receive its first application around January 1988 (29).

IOWA

According to Mr. John Seyb, Planning Bureau, Iowa Dept. of Water, Air and Waste Management, "The state of Iowa has no legislation or programs relating to compensation or incentives to communities hosting waste management facilities" (30).

KANSAS

Hazardous Waste Facility Siting Process

1. The developer of a hazardous waste facility applies for a permit from the Dept. of Health and Environment.

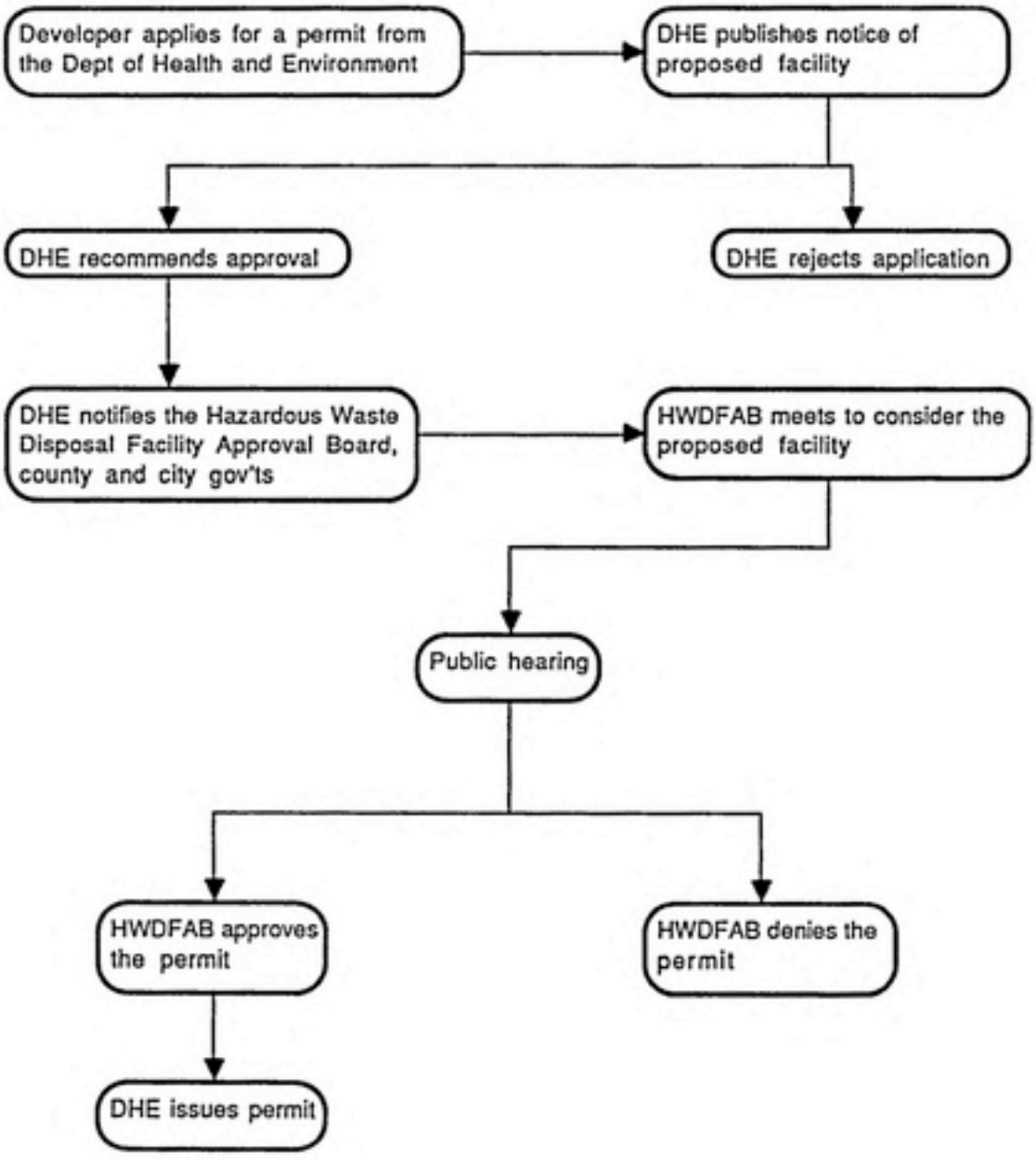
2. The Secretary of the Dept. of Health and Environment publishes notice of the proposed facility once a week for three weeks in a site area newspaper.

3. After reviewing the application for compliance with all state regulations, the Secretary either rejects the permit application or recommends approval. He must act within 240 days of receiving the application.

4. At the time of approval (or 150 days after receipt of application if the Secretary has not rejected it), the Hazardous Waste Disposal Facility Approval Board, the county commissioners, and the city governments within 10 miles of the proposed facility are notified.

5. The Hazardous Waste Disposal Facility Approval Board meets within 10 days to consider the proposed facility.

KANSAS


Developer applies for a permit from the Dept of Health and Environment
DHE publishes notice of proposed facility
DHE recommends approval
DHE rejects application
DHE notifies the Hazardous Waste Disposal Facility Approval Board, county and city gov'ts
HWDFAB meets to consider the proposed facility
Public hearing
HWDFAB approves the permit
HWDFAB denies the permit
DHE issues permit

6. After considering 1) the impact of the proposed hazardous waste facility on the area, 2) the associated risks, 3) consistency with local land use and planning and local ordinances, and 4) the public's concerns and objections, the Hazardous Waste Disposal Facility Approval Board decides to approve or deny the permit.

7. If the Hazardous Waste Disposal Facility Approval Board approves the permit, the Secretary of the Dept. of Health and the Environment issues the permit.

Source: Kansas Statutes Ann., ch. 65 art. 34. May 1986

The Kansas siting process for hazardous waste facilities provides only minimal public participation. No local representation on the Hazardous Waste Disposal Facility Approval Board is allowed; the only avenue for host community input is one public hearing. However, the Hazardous Waste Disposal Facility Approval Board must consider the public's concerns as well as the degree to which the proposed facility conforms to local regulations, and to these ends "...shall facilitate efforts to provide that the concerns and objectives are mitigated by establishing additional stipulations specifically applicable to the proposed site..." [65-3434(h)]. In addition, the Board will integrate local

provisions into the permit requirements "to the fullest extent practicable". These measures in the Kansas legislation are very similar to those in Indiana's legislation. Like Indiana's, the techniques for compensation are administrative, because specific compensation issues are left to the Hazardous Waste Disposal Facility Approval Board's discretion.

No facilities have been sited under this process to date (32).

KENTUCKY

The state of Kentucky has two siting processes: one for siting a "regional integrated waste treatment and disposal facility," and another for siting any type of hazardous waste management facility. In 1986, the state developed a policy to promote the establishment of a regional facility that would include a secure landfill and a high-temperature incinerator (33). In addition, the facility would include an industrial park contiguous to the site which would be designed to use the energy byproducts of the waste treatment processes. The state is not mandated to site such a facility within a given time, but is authorized to accept applications from private industry and to expend state funds in the development of the facility. The Regional Integrated Waste Treatment and Disposal Facility Siting Board will review applications over the course of time, with the objective of eventually selecting one site for the facility.

The other siting process applies to any type of hazardous waste management facility. The only distinction made is for facilities involving land disposal, which must have local government approval.

A. Siting Process for a Regional Integrated Waste Treatment and Disposal Facility

1. An interested developer applies for a construction permit from the secretary of the Natural Resources and Environmental Protection Cabinet.

2. The Secretary, after reviewing the application, may publish the intent to issue the permit.

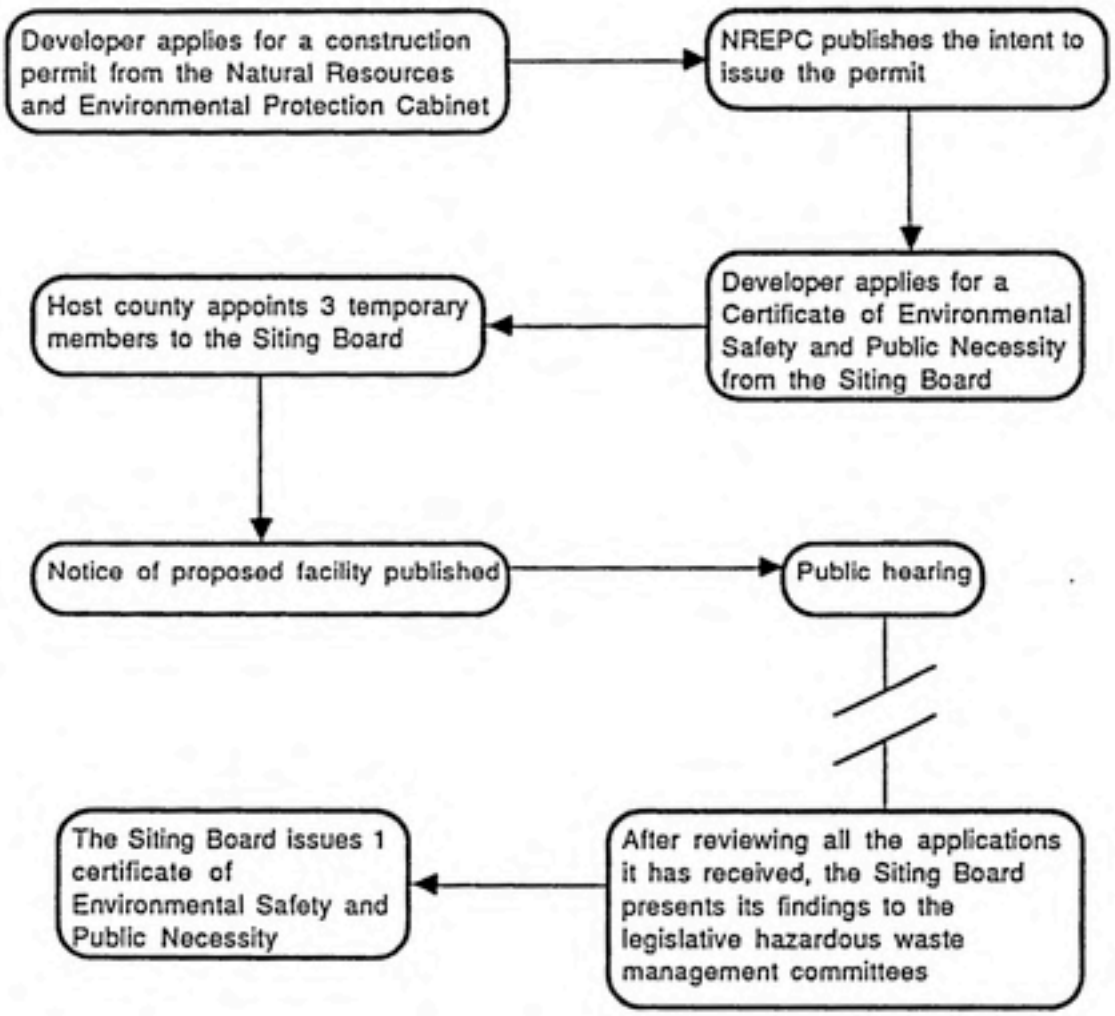
3. The developer then applies for a Certificate of Environmental Safety and Public Necessity from the Regional Integrated Waste Treatment and Disposal Facility Siting Board.

4. Every time an application for a Certificate is submitted, three temporary members (residents in the proposed host county) are appointed to the Siting Board's nine regular members. Appointments are made by the county judge/executive of each proposed host county.

5. Within 10 days of receiving a complete application, the Siting Board publishes notice of the proposed facility in the host county and all contiguous counties.

KENTUCKY

REGIONAL INTEGRATED HAZARDOUS WASTE TREATMENT & DISPOSAL FACILITY



6. Between 30 and 45 days after notice is published, a public hearing is held in the proposed host county. An applicant may request a delay.

7. At some point in the future, after reviewing all the applications they have received, the Siting Board presents their findings to the hazardous waste management committees of the state legislature.

8. The Siting Board issues one certificate of Environmental Safety and Public Necessity. The Board must consider, among other things, the social and economic impacts of the facility, possible changes in property values, community reputation, and other "psychic costs." The Board must also consider the relationship of the proposed facility to local planning and development. In granting the certificate, the Board may provide for mitigation of local impacts, including payments by the facility owner to local government as compensation.

Source: Kentucky Revised Statutes ch. 224.

Kentucky's process for siting a regional hazardous waste facility allows only minimal public participation. Three members from proposed host counties are allowed on the Siting Board but constitute only one quarter of the Board's

membership. However, compensation can be administered by the Siting Board. There is no indication in the legislation of how specific compensation measures would be chosen, or if the local community would have any input other than through the local members of the Siting Board. The intent to address compensation issues is clear, but the statute does not provide a well-developed framework for doing so. The matter rests solely with the Siting Board. As of Nov. 1986, this siting process was still in progress, and no compensation mechanisms had been implemented (34).

B. Siting Process for Hazardous Waste Management Facilities

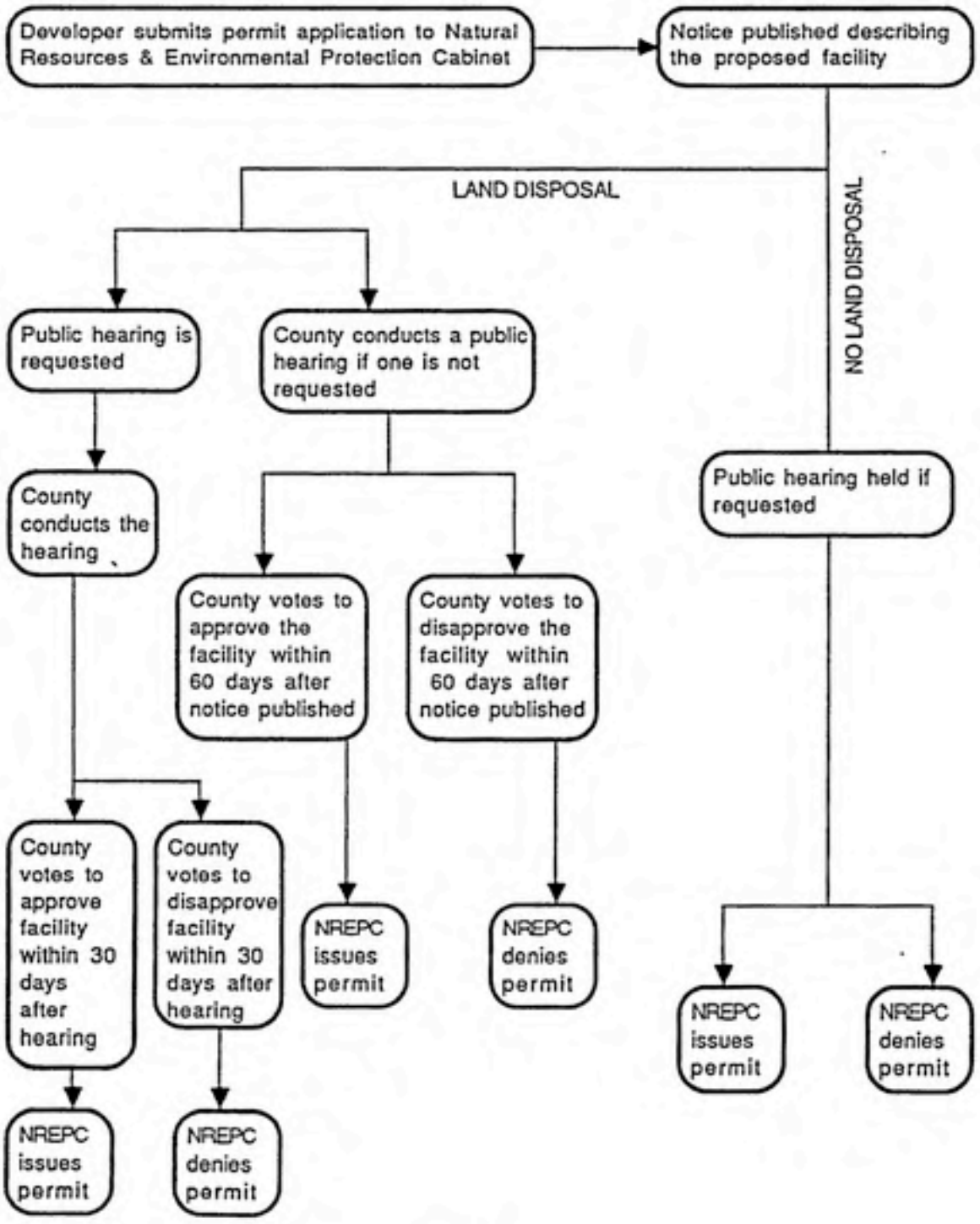
1. Developer applies for a permit from the Natural Resources and Environmental Protection Cabinet.

2. Notice is given in a site area newspaper of the proposed facility, including a brief description of the facility and a statement indicating that a public hearing may be requested.

3. If the proposed facility does not involve land disposal of hazardous waste, then a hearing is held only if requested and the NREPC issues/denies the permit after the hearing. If no hearing is requested, the permit

KENTUCKY

HAZARDOUS WASTE MANAGEMENT FACILITIES



provided little local participation but did provide for compensation, this siting process allows extensive local participation but has no provisions for compensation. In reviewing the facility proposal the fiscal court must consider the social and economic impacts (e.g. property values, community perception), consistency with local planning and development, and any additional public services or improvements that would be needed by the facility (e.g. sewer and water services, road maintenance). However, no provision is made to compensate for these impacts. The act does not specifically allow the fiscal court to approve a facility with stipulations.

According to Abbie Meyer, Program Development Branch, Dept. of Environmental Protection, "...to date no company has proposed to site a disposal facility and face fiscal court veto" (34).

LOUISIANA

The state of Louisiana has no formal procedures for siting hazardous waste management facilities, only the permit application review process to assure the facility complies with location standards (35). Legislation does establish some guidelines and forms of compensation, however.

The Hazardous Waste Advisory Board is authorized to mediate disputes between host communities and developers of hazardous waste facilities (36). The local impact assistance program under the Board gives grants to local governments for the purpose of determining the impact of a proposed hazardous waste facility, planning for additional infrastructural needs and mitigating any adverse impacts. No limits on the amount of the grant are mentioned in the legislation; the source of the funds is left to the discretion of the Board. However, this fund has yet to be established (37).

The local government with jurisdiction over a proposed hazardous waste management facility site must prepare an infrastructure assessment report to determine the community's ability to monitor the proposed facility and respond to emergency situations. Funds for the preparation of the report come from a fee levied on the developer. The amount of the fee must be less than or equal to 5% of the permit application fee; a portion of the money is then allocated to the local government by the Hazardous Waste Advisory Board.

The exact amount of the grant is determined by the Board. The infrastructure assessment report must be considered by the Secretary of the Dept. of Environmental Quality in his recommendation for permit approval or disapproval.

The state has had no experience with these measures in siting a hazardous waste facility to date (36).

MAINE

Hazardous Waste Facility Siting Process

1. Developer of a hazardous waste facility applies for a permit from the Dept. of Environmental Protection.

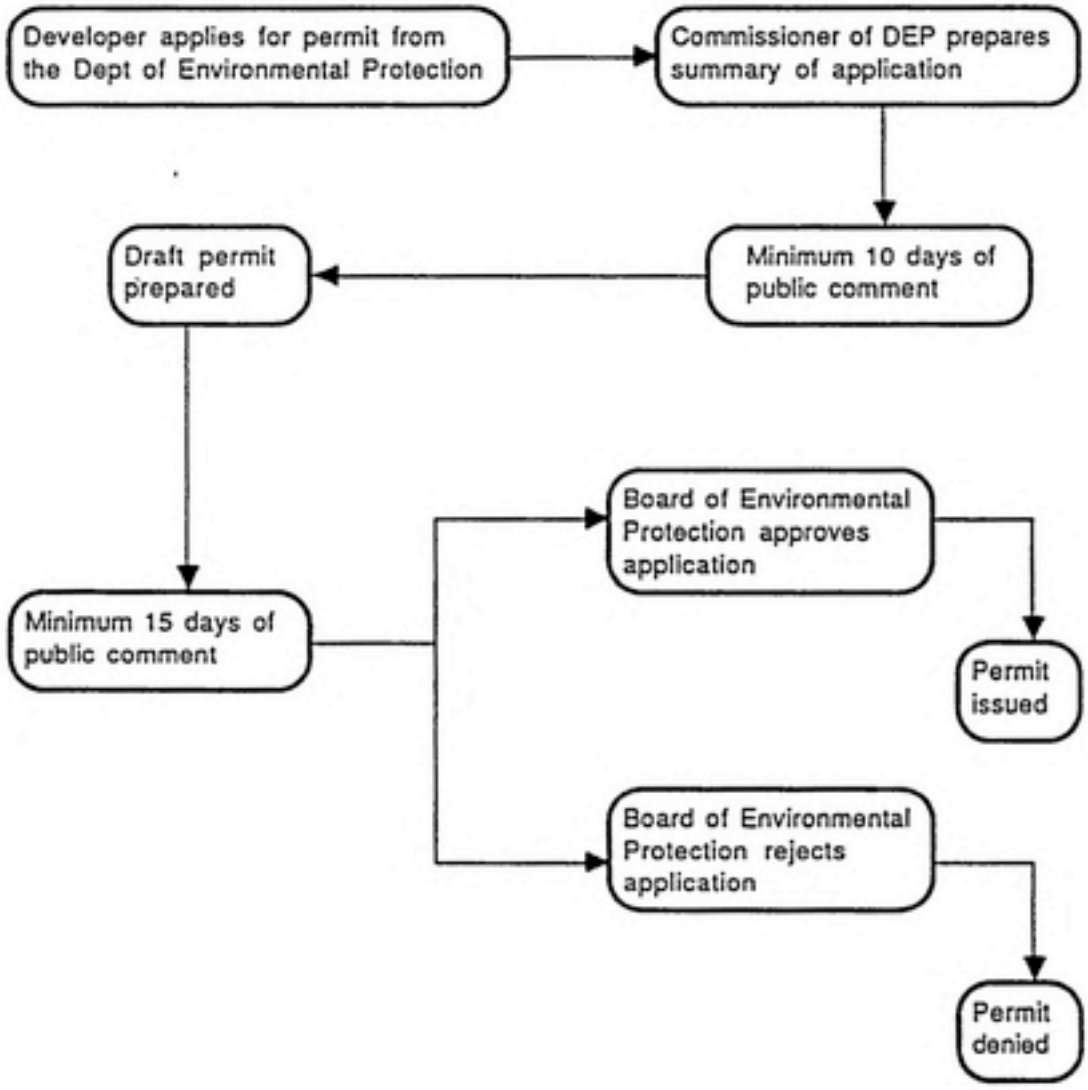
2. The Commissioner of Environmental Protection prepares a summary of the application for the Board of Environmental Protection, other governmental agencies, and any interested parties.

3. There must be at least 10 working days available for public comment on the application prior to the preparation of a draft permit.

4. The draft permit must be available to the public for at least 15 working days.

5. The Board of Environmental Protection approves or disapproves the permit application no later than 105 working days after receipt of the application. If the applicant requests, and two-thirds of the Board agrees, this time limit may be waived.

MAINE


Developer applies for permit from the Dept of Environmental Protection
Commissioner of DEP prepares summary of application
Minimum 10 days of public comment
Draft permit prepared
Minimum 15 days of public comment
Board of Environmental Protection approves application
Permit issued
Board of Environmental Protection rejects application
Permit denied

Source: Maine's Hazardous Substance, Matter, and Waste Management Laws, Oct. 1986.

Maine's siting process is one of the least complicated and has one of the shortest timetables of all the states' processes. It can be so straightforward partly because the compensation measures are not incorporated into the process itself, but are established by statute.

Legislation requires the Board of Environmental Protection to incorporate local requirements "to the fullest extent possible" into the permit. The Dept. must also reimburse the host community for facility review costs up to $5000. The Governor of Maine may appoint someone to facilitate communication between the host community and the developer, or between the host community and the state. The legislative body of the host community can appoint four temporary members to the Board of Environmental Protection, who may participate only in matters relating to the hazardous waste facility site review. Additionally, the host municipality can levy a maximum 2% gross receipts tax on the facility.

Although Maine does provide for compensation, the siting process does not provide much opportunity for public participation. It also leaves little room for a community to find solutions to specific concerns it may have about a facility. The mediator appointed by the Governor would function in this area, but the act is silent on the matter of

establishing binding agreements between the host community and the developer or the state.

The state has received three applications under this process: one facility was sited, one application was denied, and one application is pending. The facility that was sited is a PCB storage and processing unit. The host community did elect to appoint their four members to the Board of Environmental Protection, but did not apply for the facility review grant, and have not yet assessed the gross receipts tax. The pending application is for a solvent storage facility. Like the first community, this one did not receive the grant but did appoint members to the Board. However, the second community has expressed interest in the gross receipts tax (39).

MARYLAND

Hazardous Waste Facility Siting Process

1. If the local government does not grant the necessary approvals for a proposed facility the developer may submit an application for a Certificate of Public Necessity to the Hazardous Waste Facility Siting Board.

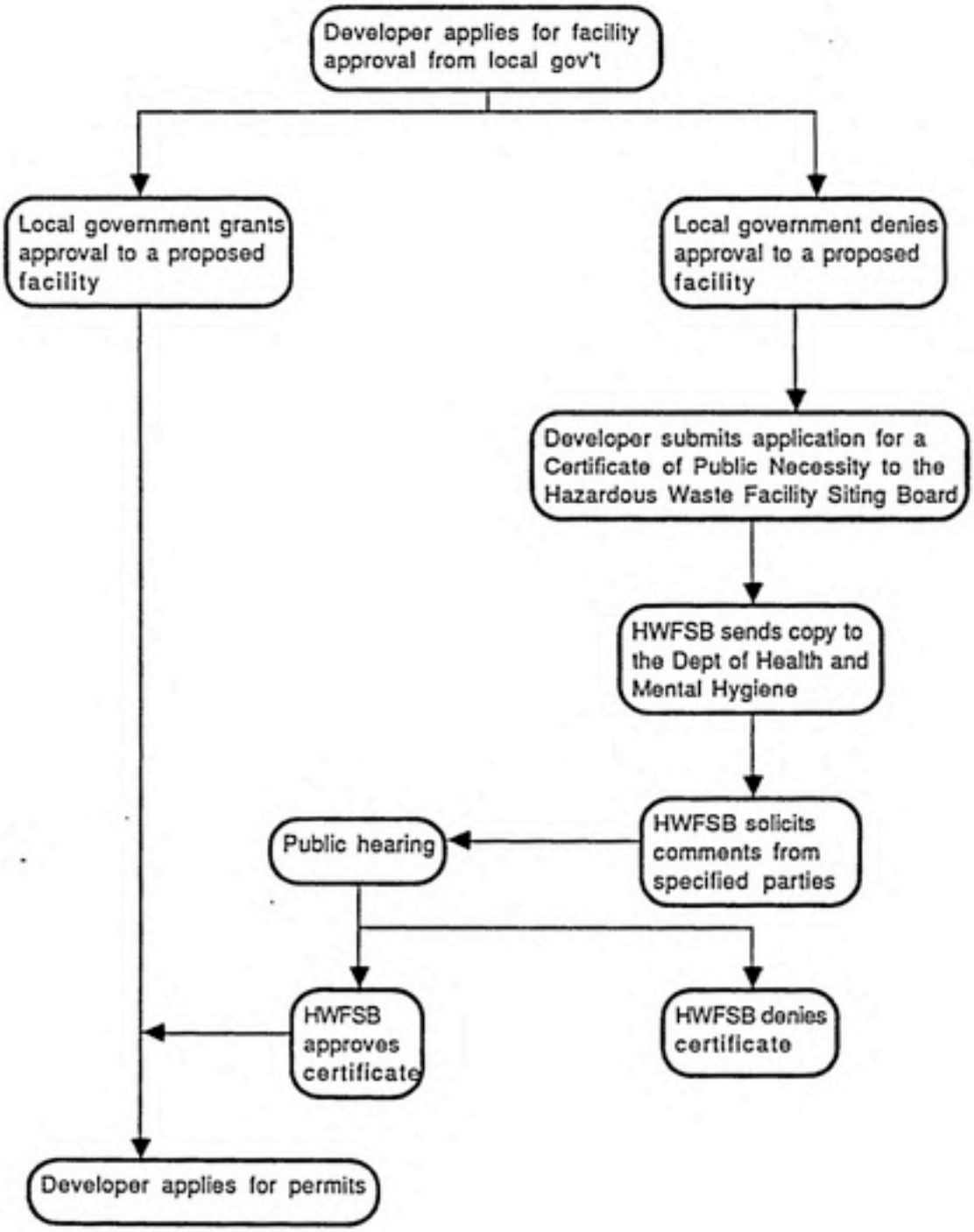
2. The Hazardous Waste Facility Siting Board forwards a copy of the application to the Department of Health and Mental Hygiene.

3. At least 90 days before issuing a certificate, the Hazardous Waste Facility Siting Board solicits comments from various state agencies, the local government of the proposed host community, and each adjacent property owner to the proposed site.

4. A public hearing is held in the host community at least 60 days before a Certificate is issued.

5. The Hazardous Waste Facility Siting Board decides to approve or deny the Certificate.

MARYLAND


Developer applies for facility approval from local gov't
Local government grants approval to a proposed facility
Local government denies approval to a proposed facility
Developer submits application for a Certificate of Public Necessity to the Hazardous Waste Facility Siting Board
HWFSB sends copy to the Dept of Health and Mental Hygiene
HWFSB solicits comments from specified parties
Public hearing
HWFSB approves certificate
HWFSB denies certificate
Developer applies for permits

6. If the Certificate is issued, the developer may apply for applicable state permits.

Source: Maryland Hazardous Waste Facility Siting Law. Natural Resources Code, Title 3, Environmental Programs, Subtitle 7, as amended.

Maryland's siting process gives the local government a chance to approve a proposed facility with no state interference. If the local government denies approval, the process provides a mechanism for state preemption via the Hazardous Waste Facility Siting Board. According to William Sloan, Executive Director of the Hazardous Waste Facility Siting Board, the policy of the board is to encourage negotiation between the developer and the host community, and to use the preemptive process only as a last resort (41). The issuance of a Certificate of Public Necessity automatically exempts a facility from local zoning ordinances or other approvals. The only type of compensation specifically addressed in the legislation is payment in lieu of property taxes, which state-owned facilities must provide (40).

One hazardous waste landfill has been sited under this process near Baltimore; details were unavailable.

MASSACHUSETTS

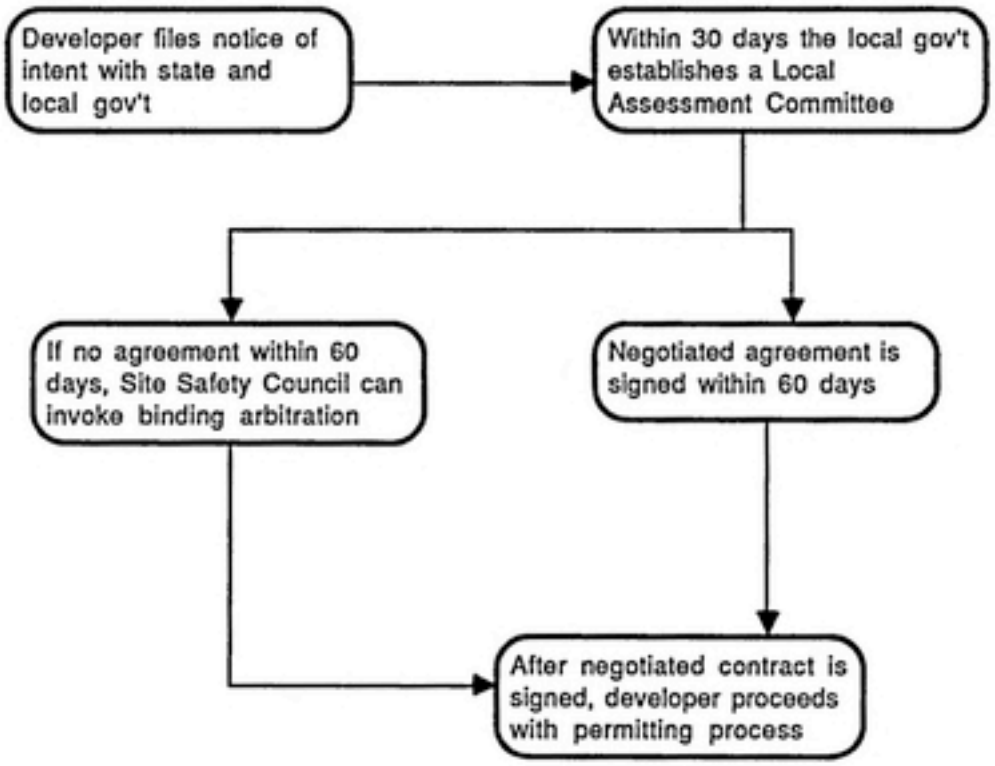
Hazardous Waste Facility Siting Process

1. A developer files a notice of intent with state and local government.
2. Within 30 days of receiving this notice the host community establishes a Local Assessment Committee to negotiate with the developer.
3. Within 60 days a negotiated agreement must be signed, or the state Site Safety Council can invoke binding arbitration.
4. After an agreement is reached, the developer proceeds in the permitting process.

Source: Andrews, R. N. L., and Pierson, Terence K. Hazardous Waste Facility Siting: A Comparison of State Approaches. UNC-CH IES Report, Oct. 1983.

Massachusetts' siting process requires negotiation between the developer and the host community via a Local Assessment Committee. A notable feature of the process is that representatives from adjacent communities may be included on the committee, and may petition the state to receive compensation (43). The state provides grants to host communities for technical assistance in reviewing the application. The amount is determined by the Site Safety

MASSACHUSETTS



Council on a case by case basis, but must be less than $15,000. The host community may request additional funds if the need arises. Limitations on the use of the funds is left to the discretion of the Council.

The statute provides no guidelines on types of compensation that may be negotiated, but suggests that terms of the facility's construction and operation be included. These standards may be more stringent than those required by the state.

No new facilities have completed the siting process yet, but one is presently under review. A proposed rotary kiln incinerator at Braintree, Massachusetts, has received preliminary approval and is in the process of negotiation with the Local Assessment Committee (44).

MICHIGAN

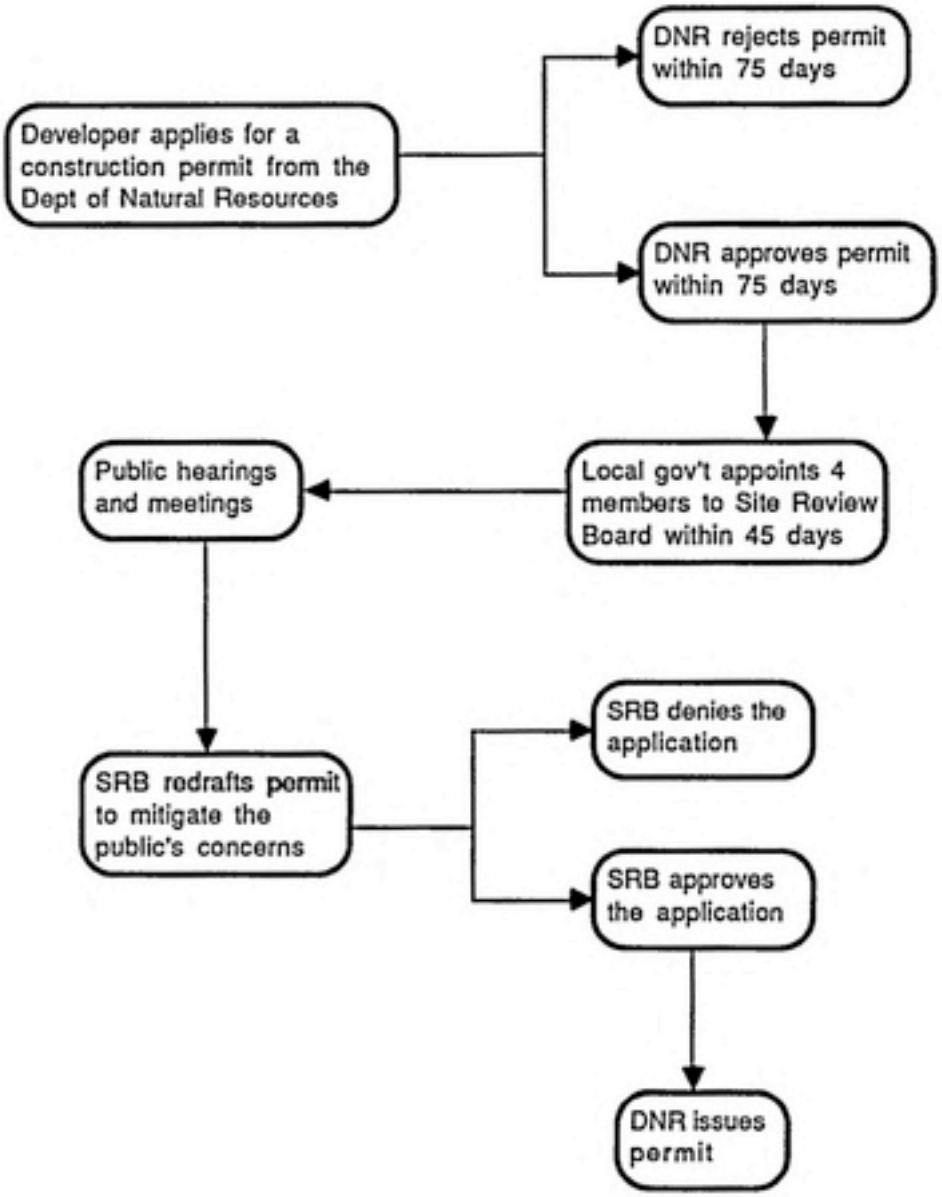
Hazardous Waste Facility Siting Process

1. The developer submits a construction permit application to the Department of Natural Resources, which has 75 days to reject or recommend it. Rejection of the permit discontinues the review process.
2. If the Department recommends approval, the local government has 45 days to appoint four temporary members to the state Site Review Board. The Board has five permanent members.
3. The Site Review Board convenes for public information meetings and public hearings, and redrafts the construction permit to mitigate the concerns of the public.
4. Within 120 days, the Board must vote to approve or disapprove the permit application.

Source: Andrews, R. N. L., and Pierson, Terence K. Hazardous Waste Facility Siting: A Comparison of State Approaches. UNC-CH IES Report, Oct. 1983.

Michigan's siting process is simple and straightforward. Public participation is limited to public hearings, although the state does stress local input into the facility design

MICHIGAN


Developer applies for a construction permit from the Dept of Natural Resources
DNR rejects permit within 75 days
DNR approves permit within 75 days
Local gov't appoints 4 members to Site Review Board within 45 days
Public hearings and meetings
SRB redrafts permit to mitigate the public's concerns
SRB denies the application
SRB approves the application
DNR issues permit

and location before the developer submits his construction permit. Negotiations are encouraged, but lack legislative guidelines. The state recommends that the local government establish a broad-based Citizen Information Committee to facilitate public information and involvement, but no formal provisions or funding are established.

No specific compensation measures are mentioned. Points the Site Review Board must consider include:

1) the facility's consistency with local ordinances
2) potential economic impacts on the host community
3) measures to mitigate any adverse impacts.

Any compensation would be determined administratively on a case-by-case basis.

No facilities have completed the siting process yet, but two are in progress. Both are treatment facilities to be located in Detroit. No compensation for the host has been proposed to date (45).

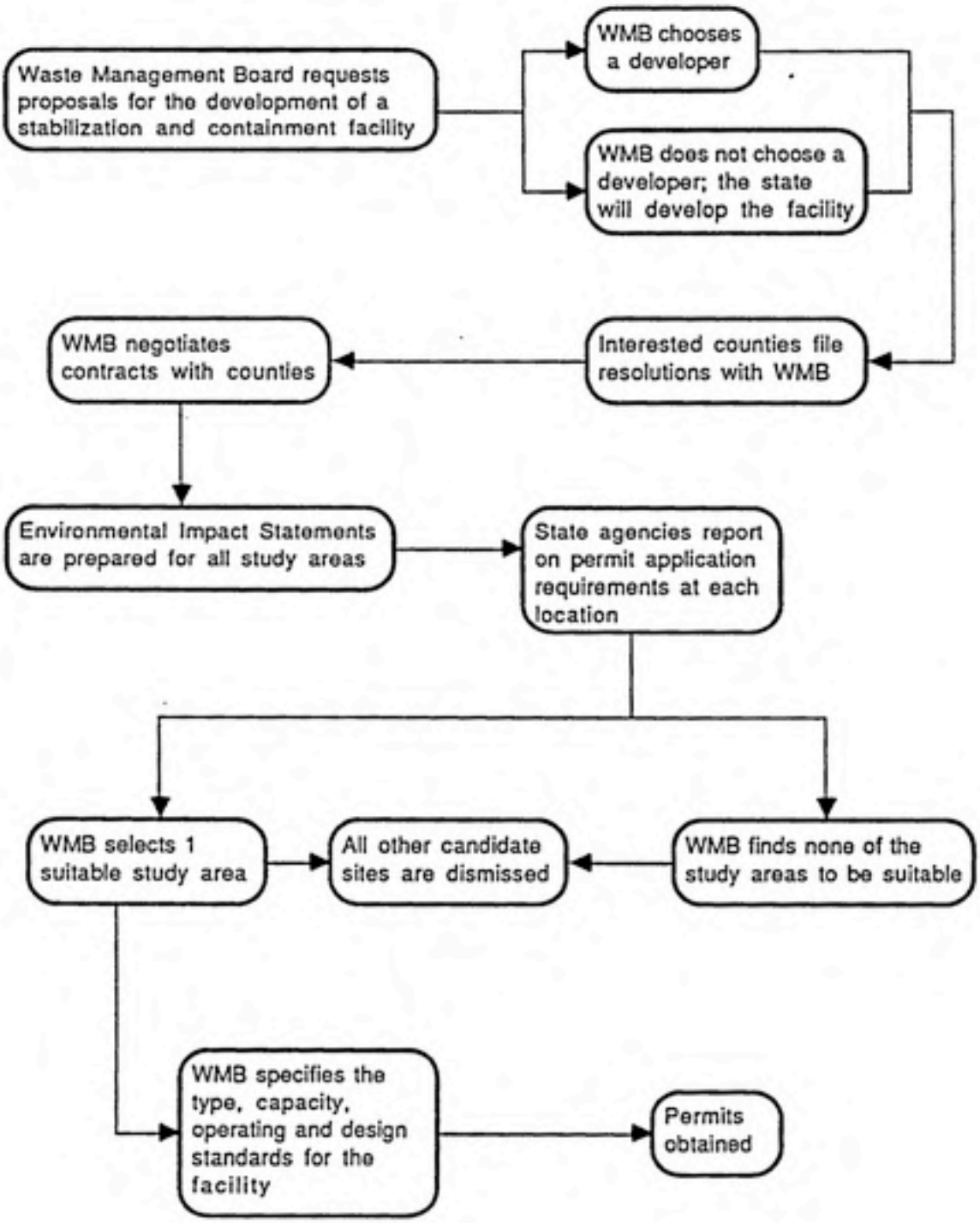
MINNESOTA

Hazardous Waste Facility Siting Process

1. The Waste Management Board requests proposals for the development of a stabilization and containment facility.
2. The WMB decides whether or not to select a developer.
3. Any interested counties can file a resolution with the WMB indicating their interest in hosting a stabilization and containment facility and assuring cooperation in evaluating study areas within the county.
4. The WMB negotiates contracts with these counties.
5. Environmental impact statements are prepared for each study area in all the contracted counties, and submitted to the WMB for evaluation.
6. Within 30 days after determining the adequacy of the EIS's, the permitting state agencies issue reports on permit application requirements at each location.
7. Within 90 days after the EIS's are determined to be adequate, the WMB selects 1 of the study areas, if one is suitable, and specifies the type, capacity, operating and design standards for the facility.

Source: Minnesota Waste Management Act of 1980, amended 1986.

MINNESOTA


Waste Management Board requests proposals for the development of a stabilization and containment facility
WMB chooses a developer
WMB does not choose a developer; the state will develop the facility
Interested counties file resolutions with WMB
WMB negotiates contracts with counties
Environmental Impact Statements are prepared for all study areas
State agencies report on permit application requirements at each location
WMB selects 1 suitable study area
All other candidate sites are dismissed
WMB finds none of the study areas to be suitable
WMB specifies the type, capacity, operating and design standards for the facility
Permits obtained

Minnesota's siting process is a completely voluntary one in which interested counties agree to be considered for the location of a stabilization and containment facility for hazardous waste. The state has the option of selecting a private developer, or acquiring a site for future development by the state.

Counties interested in hosting the facility file a resolution with the WMB. They receive $4000 per month from the state as long as they are eligible to negotiate a contract. A county may then enter into a contract with the WMB whereby the county agrees that the study areas in the contract are subject to evaluation and selection, and the state agrees to provide specified benefits to the county. No restrictions are placed on the terms of negotiation. The act mentions:

1) terms of site evaluation and selection
2) terms of construction, operation and maintenance of the facility
3) procedures for WMB/county cooperation
4) services or compensation provided the county by the state, such as
   - -payments in lieu of taxes
   - -property value guarantees for landowners adjacent to the site
   - -payments for increased public services
   - -provision of services or benefits to enhance the well-being and economic development of the county

Any county government with a contract shall receive an amount per year, set forth in the contract, not to exceed $150,000 per year for no more than two years after the contract is executed.

The WMB has not yet begun accepting formal notification from counties interested in hosting the hazardous stabilization and containment facility; therefore, no results of the Minnesota siting process are available (47).

MISSISSIPPI

No formal process is used by Mississippi for siting hazardous waste management facilities. The state of Mississippi has imposed a moratorium on the siting of any commercial landfill hazardous waste facilities until the Environmental Protection Agency has completed its studies on land disposal of hazardous waste (48). Legislation provides two incentives for hosting hazardous waste facilities. The Mississippi Board of Economic Development administers the Hazardous Waste Facility Siting Fund to provide loans to local governments hosting commercial hazardous waste facilities. The loans can be used to construct roads, railroads, or utilities; or to purchase and develop land for industrial purposes (49). In addition, all commercial hazardous waste facilities pay the state tax commission $5/ton (or $2/55 gal drum) of hazardous waste handled, 70% of which goes to the general fund of host city or county. There are no restrictions on the use of these funds.

MISSOURI

The state of Missouri has no provisions for compensation or incentives for communities hosting hazardous waste facilities. However, legislation encourages the use of citizen advisory committees to enhance the public participation in the siting process for hazardous waste management facilities (50).

MONTANA

The state of Montana utilizes no form of compensation in siting hazardous waste facilities (51).

NEBRASKA

Nebraska has no disposal sites for hazardous waste facilities. Since it is primarily an agricultural state, siting problems have not arisen, and consequently Nebraska has no type of compensation or incentives for host communities (52).

NEVADA

The state of Nevada is currently involved in writing a hazardous waste facility siting process, but according to Thomas J. Fronapfel (environmental engineer, Waste Management Section, Nevada Division of Environmental Protection), the proposed process addresses neither compensation, incentives, nor expanded public participation in any way (53). However, compensatory measures have been used in siting one facility: a commercial PCB storage facility near Yerington, Nevada (54). In siting this facility, the Division of Environmental Protection agreed to conduct quarterly areal sampling to check for PCB spillage. The facility operator provided for the training of local emergency response personnel, and donated foam-generating fire equipment for the local fire department. The operator also agreed to obtain additional levels of liability insurance. The above measures were not negotiated with the local community, but are administrative forms of compensation, decided upon by the Administrator of the DEP and based upon comments received in a public hearing. Mr. Fronapfel believes the use of compensation in this instance set a precedent in the state, but adds that this precedent has not been tried, since Nevada has had no other controversial sitings where compensation or incentives would have been useful (54).

NEW HAMPSHIRE

Hazardous Waste Facility Siting Process

1. The developer of a proposed hazardous waste management facility applies for a standard permit from the Office of Waste Management.

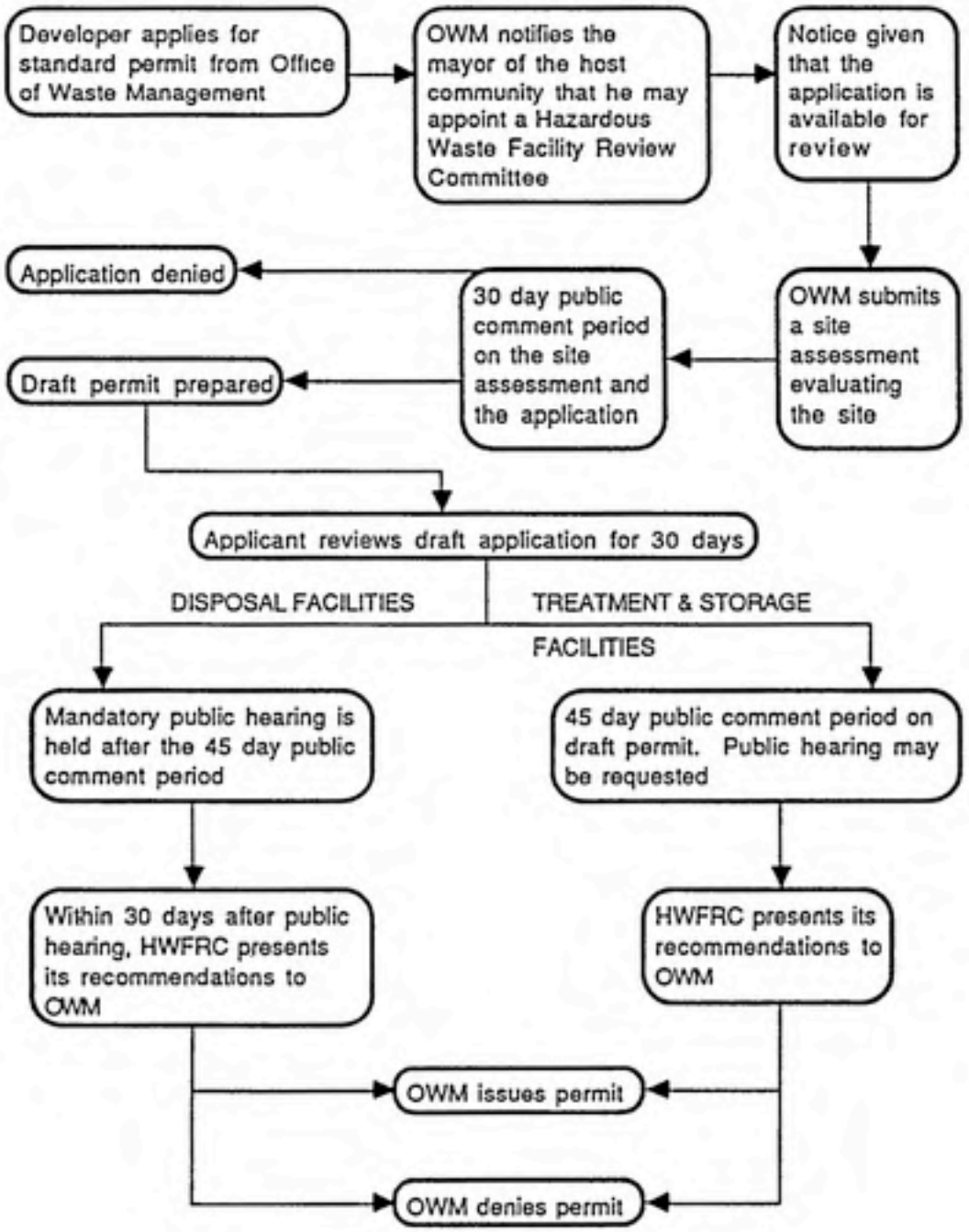
2. The OWM must notify the mayor of the proposed host community upon receiving a complete application. The mayor has the option of appointing a Hazardous Waste Facility Review Committee.

3. Within 15 days after receiving a complete application, public notice is given that the application is available for review. However, neither public comments nor hearing requests are received at this time.

4. The Administrator of OWM assigns an engineer to prepare a technical review and site evaluation of the facility. The time frame for these reports is determined on a case-by-case basis.

5. After completing the technical review and site evaluation, the engineer submits a site assessment, stating his professional opinion on whether or not the

NEW HAMPSHIRE



proposed facility would meet applicable state and federal standards, and discussing probable impacts of the facility on public health and the environment.

6. The application and the engineer's site assessment undergo a 30 day public comment period, during which time any person may submit written comments or request a public hearing.

7. OWM either decides to deny the application or to prepare a draft permit.

8. If a draft permit is written, the applicant has 30 days in which to review it.

9. After the applicant review period, the draft permit is made available for 45 days for public review.

10. In the case of proposed treatment or storage facilities, a public hearing is not mandatory but may be requested during either of the comment periods. The Administrator of OWM is required to grant a public hearing if (1) there are a "significant" number of requests for one, or (2) he receives written notice of opposition to the draft permit and a request for a hearing during the 45 day comment period. If a public hearing is held, the

HWFRC presents its recommendations to OWM within 30 days. OWM then either issues or denies the permit.

11. In the case of hazardous waste disposal facilities, a public hearing must be held after the close of the 45 day comment period. After the hearing, the HWFRC presents its recommendations to OWM, which then decides to issue or deny the permit. If OWM plans to issue the permit while the HWFRC believes that the public health is not adequately protected, the HWFRC can appeal to the Commissioner of the Department of Health and Welfare.

Source: New Hampshire Code of Admin. Rules, Part He-P 1905.08.

The New Hampshire siting process provides ample opportunity for public comment, but little for active participation. A local review committee may be appointed if the community wishes, but the committee's exact role is somewhat nebulous. Its primary responsibility is to represent the municipality in all matters relating to facility review, including public hearings. It has access to the same information that the OWM has. However, no mention of committee/developer negotiations is made, and although the HWFRC submits recommendations to OWM regarding the issuance of a permit, the status of those recommendations is not clearly defined. The regulations require OWM to consider all

information, including public comments, in deciding to issue a permit, but the local committee's recommendations are not mentioned by name, and no specific provision is made to incorporate any recommendations into the final permit.

A somewhat unusual feature of New Hampshire's process is that no provision is made for the HWFRC to conduct a site evaluation. In other states (e.g. Connecticut, New Jersey), the local committee is given technical assistance by the state and grants to assist them in their own facility review studies. Since the HWFRC has access to all information the OWM has, it could conduct its own review, but might be lacking in technical expertise or in the funds to hire consultants. Another notable feature of this process is the distinction made between treatment/storage facilities and disposal facilities. Similar distinctions are made in Kentucky and Mississippi.

Although the siting regulations do not provide for any compensation or incentives to host communities, other legislation does (56). A municipality may impose a tipping fee of up to $0.003/lb hazardous waste received on any facility located within its jurisdiction. Fees are to be paid quarterly; there are no restrictions limiting the use of the money. The tipping fee was created as an incentive to persuade towns to allow facilities to be located within their borders.

New Hampshire has had limited experience with their siting process. Two applications were received in 1981, but

both developers withdrew around 1984 because of public opposition. Both of the towns involved did create a HWFRC -- each of which opposed their proposed facility. No more applications have been submitted to date (57).

NEW JERSEY

Hazardous Waste Facility Siting Process

1. The Hazardous Waste Facilities Siting Commission must propose new hazardous waste sites for the number and type of needed facilities designated by the hazardous waste management plan.

2. For each proposed site, the HWFSC provides a grant to local government for conducting site suitability studies.

3. The local government must complete the site review within six months and submit it to the HWFSC.

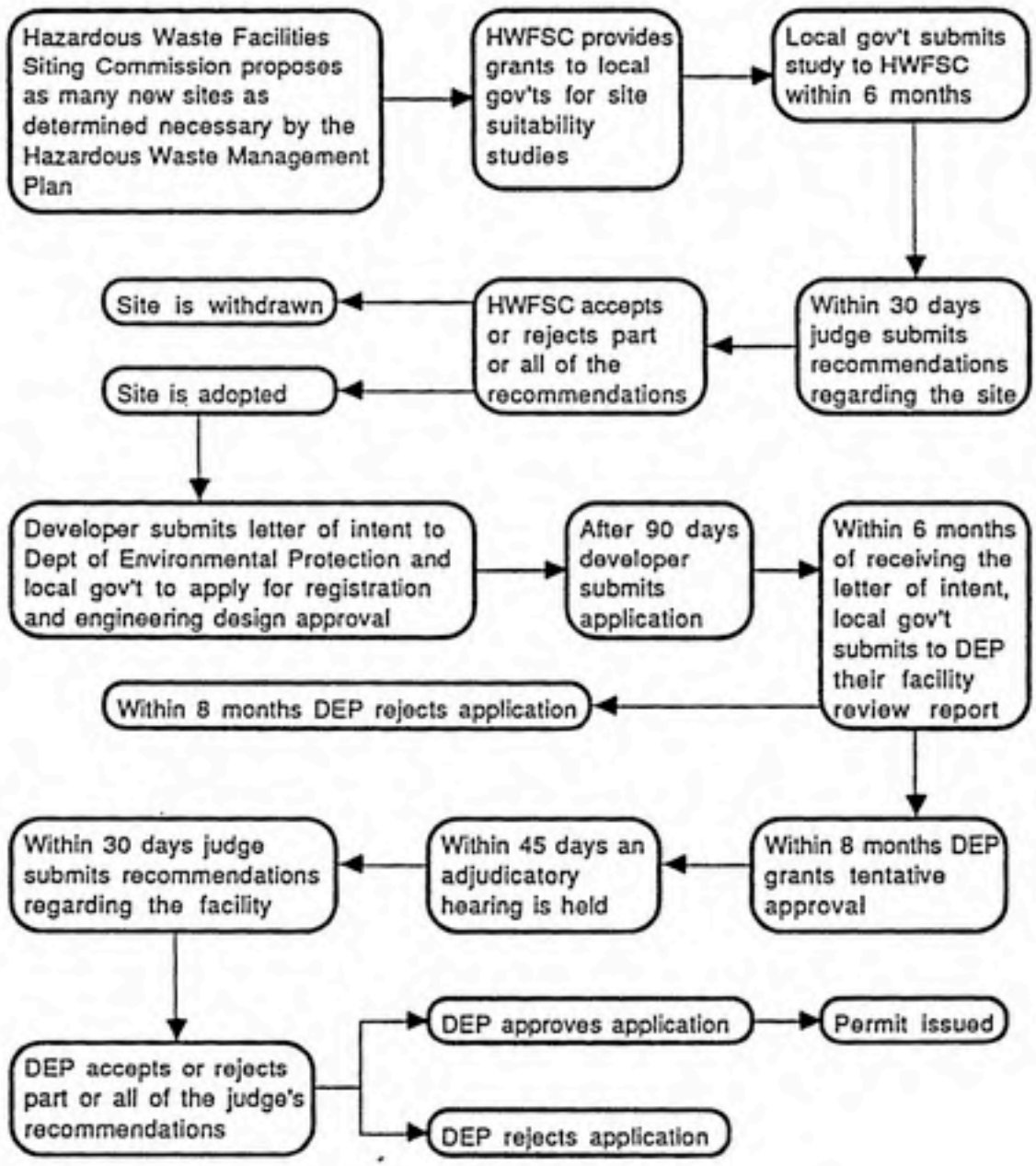
4. An adjudicatory hearing is conducted within 45 days.

5. The administrative law judge presiding over the hearing submits his recommendations on the site within 30 days.

6. Within 30 days of receiving the recommendations, the HWFSC accepts or rejects part or all of them, and consequently adopts or withdraws the site in question.

7. An interested developer submits a letter of intent to both the Department of Environmental Protection and the

NEW JERSEY


Hazardous Waste Facilities Siting Commission proposes as many new sites as determined necessary by the Hazardous Waste Management Plan
HWFSC provides grants to local gov'ts for site suitability studies
Local gov't submits study to HWFSC within 6 months
Within 30 days judge submits recommendations regarding the site
HWFSC accepts or rejects part or all of the recommendations
Site is withdrawn
Site is adopted
Developer submits letter of intent to Dept of Environmental Protection and local gov't to apply for registration and engineering design approval
After 90 days developer submits application
Within 6 months of receiving the letter of intent, local gov't submits to DEP their facility review report
Within 8 months DEP rejects application
Within 8 months DEP grants tentative approval
Within 45 days an adjudicatory hearing is held
Within 30 days judge submits recommendations regarding the facility
DEP accepts or rejects part or all of the judge's recommendations
DEP approves application
Permit issued
DEP rejects application

local government to apply for registration and engineering design approval. The proposed facility must be of the type designated for the proposed site.

8. After 90 days the developer submits the application for approval.

9. The local government submits to the DEP a review of the proposed facility and operator within six months of receiving the letter of intent.

10. After receiving the local government's facility review, the DEP has eight months to grant tentative approval or reject the application.

11. An adjudicatory hearing is held within 45 days if tentative approval is granted.

12. The presiding judge submits his recommendations within 30 days.

13. The DEP accepts, conditionally accepts, or rejects the recommendations within 60 days, and approves or denies the application.

Source: New Jersey Major Hazardous Waste Facilities Siting Act of 1981.

New Jersey's siting process for hazardous waste facilities allows extensive public input. The local government is given the opportunity to conduct its own review of both the proposed site and the proposed facility and operator. Money for the site review grant may come from state, federal, or other funds. $100,000 of state funds were appropriated for this purpose in 1981 (59). The cost of the facility review study is borne by the applicant, to a maximum of $15,000. The exact method of disbursement for the latter funds has not been decided. Richard Gimello, Director of the HWFSC, suggests that the money be channeled through the Commission, and that the grant function as an extension of the first grant for site review (59). In the site review grant, the HWFSC and the local government enter into a negotiated contract stating explicitly for what purposes the funds may or may not be used. No limitations or guidelines for use of these grants are mentioned in the legislation.

If the local government's facility review study concludes that the proposed facility should not be approved, but the DEP grants tentative approval (step no. 10 above), the Department must state its reasons for granting approval contrary to local government findings.

Unlike other states, New Jersey does not provide for a local committee to facilitate communications, nor are any local representatives appointed to the HWFSC. All local community participation is via the local government or the

public hearings. Compensation is provided for in the legislation.. Hazardous waste facilities are taxed like other real property, but if they become exempt for any reason they must make payments in lieu of property taxes to the local government. In addition, all hazardous waste facilities must pay host municipalities an annual gross receipts tax of 5% before January 25 of each year. The act stipulates that the money can be used for:

(a) extra emergency personnel or equipment costs
(b) facility inspections by the local health department
(c) road maintenance costs caused by the presence of the facility
(d) any expenses directly caused by the facility's impact on the municipality

The local government may petition the HWFSC for additional money if it provides information indicating that 5% is inadequate to cover its expenses. By the same token, if the facility operator provides data showing that a lesser amount would adequately cover the municipality's expenses, he may petition the Commission to lower the tax. Twelve hazardous waste facilities are currently paying the gross receipts tax; all but one have negotiated a lower amount than 5% with the host municipality (60).

New Jersey is currently still in the site designation process; most developers are waiting until that is finished to submit applications (60). Consequently, a facility

review grant has not been administered, and there is no indication as to whether the $15,000 maximum will generally by sufficient. Another compensation measure, the ability of local health departments to make weekly inspection of the facility at any time, is also untried and thus no results are available regarding its effect on community attitudes or the siting process. The gross receipts tax, which was grandfathered in the 1981 act to apply to existing as well as new hazardous waste facilities, has had the most positive effect in communities with existing facilities, and seems to be looked upon more favorably by local officials than local citizens. In short, according to Richard Gimello, this particular compensation measure "...has been more effective retroactively than proactively."(60)

NEW MEXICO

The state of New Mexico contains no commercial hazardous waste facilities, therefore specific siting issues have not yet arisen and no types of compensation or incentives are employed. However, the state and the city of Albuquerque have contracted a study of hazardous waste generated in New Mexico in an effort to determine the economic feasibility of siting a storage/transfer facility (61). There are no plans to use compensation in the siting of this facility (62).

NEW YORK

New York uses only a permitting process for commercial hazardous waste facilities. However, recent state legislation mandates that a hazardous waste management plan must be developed, including a study of possible benefits to host communities. A draft of this report should be available around March 1988 (63).

NORTH CAROLINA

The state of North Carolina has no formal siting process for hazardous waste facilities. An ad hoc procedure is being used presently to site a state-owned comprehensive facility consisting of a rotary kiln incinerator and a multipurpose chemical treatment plant. Several forms of compensation are established in legislation: a privilege license tax, a gross receipts tax, and grants for technical and impact review of a proposed facility. The privilege license tax is determined by the host county, and while there is no limit on the amount, it must be related to the costs incurred by the county as a result of the facility's presence (64, 65). The gross receipts tax is set at 0.5% up to $250,000. The money is to be deposited in a contingency fund for emergency response. Up to $50,000 may be used for emergency personnel, training, and equipment (65, 66). The Governor's Waste Management Board provides grants of up to $5000 to Citizen Involvement Committees for a community's technical and impact review of a proposed facility; a 20% matching provision is included. For state-owned facilities, legislation provides for monetary compensation to the local government up to the amount of lost ad valorem tax revenues (66). All facilities must comply with local ordinances to the maximum extent feasible (66).

NORTH DAKOTA

North Dakota has no commercial hazardous waste facilities and no siting proposals; therefore, the state has not yet addressed issues of compensation for communities hosting such facilities (67).

OHIO

HAZARDOUS WASTE FACILITY SITING PROCESS

1. Applicant submits permit application to the federal EPA.

2. EPA staff makes a preliminary determination of compliance with performance standards and agency regulations.

3. EPA director submits the application to the Hazardous Waste Facility Board.

4. The HWFB schedules a public hearing for 60-90 days after receipt of application, and publishes notice of the hearing and a summary of the application.

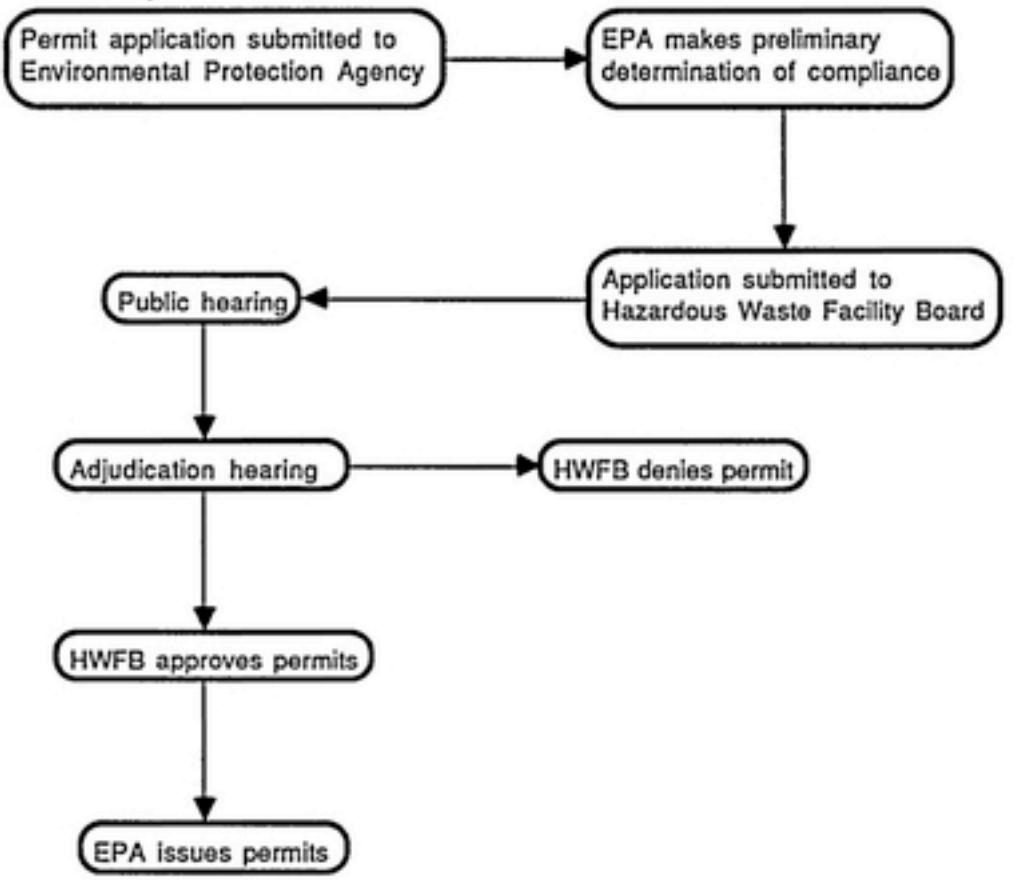
5. The HWFB schedules an adjudication hearing for 90-120 days after receipt of the application.

6. After the adjudication hearing, the HWFB approves or denies the application.

7. EPA issues or denies the permit accordingly.

Source: Ohio Revised Code 3734.05.

OHIO


Permit application submitted to Environmental Protection Agency
EPA makes preliminary determination of compliance
Application submitted to Hazardous Waste Facility Board
Public hearing
Adjudication hearing
HWFB denies permit
HWFB approves permits
EPA issues permits

Since Ohio is not authorized to implement the Resource Conservation and Recovery Act, applicants must obtain federal EPA approval as well as state approval before constructing a new hazardous waste facility. The state site approval process provides no public participation other than public hearings, and no compensation or incentives are established. However, the HWFB has the power to decide all disputed issues between the parties (i.e. the applicant, EPA staff, local citizens, board of county commissioners, etc.), and may approve the permit application contingent upon any terms or conditions it deems necessary (68). Compensation for the host community could therefore be established administratively, although to date none has been (69).

OKLAHOMA

The state of Oklahoma has no site selection process for new hazardous waste facilities and no types of compensation or incentives for these facilities have ever been implemented. According to Robert A. Rabatine, Programs Coordinator, Oklahoma Waste Management Service, recent applications for commercial hazardous waste facilities have met with considerable public opposition. [70]

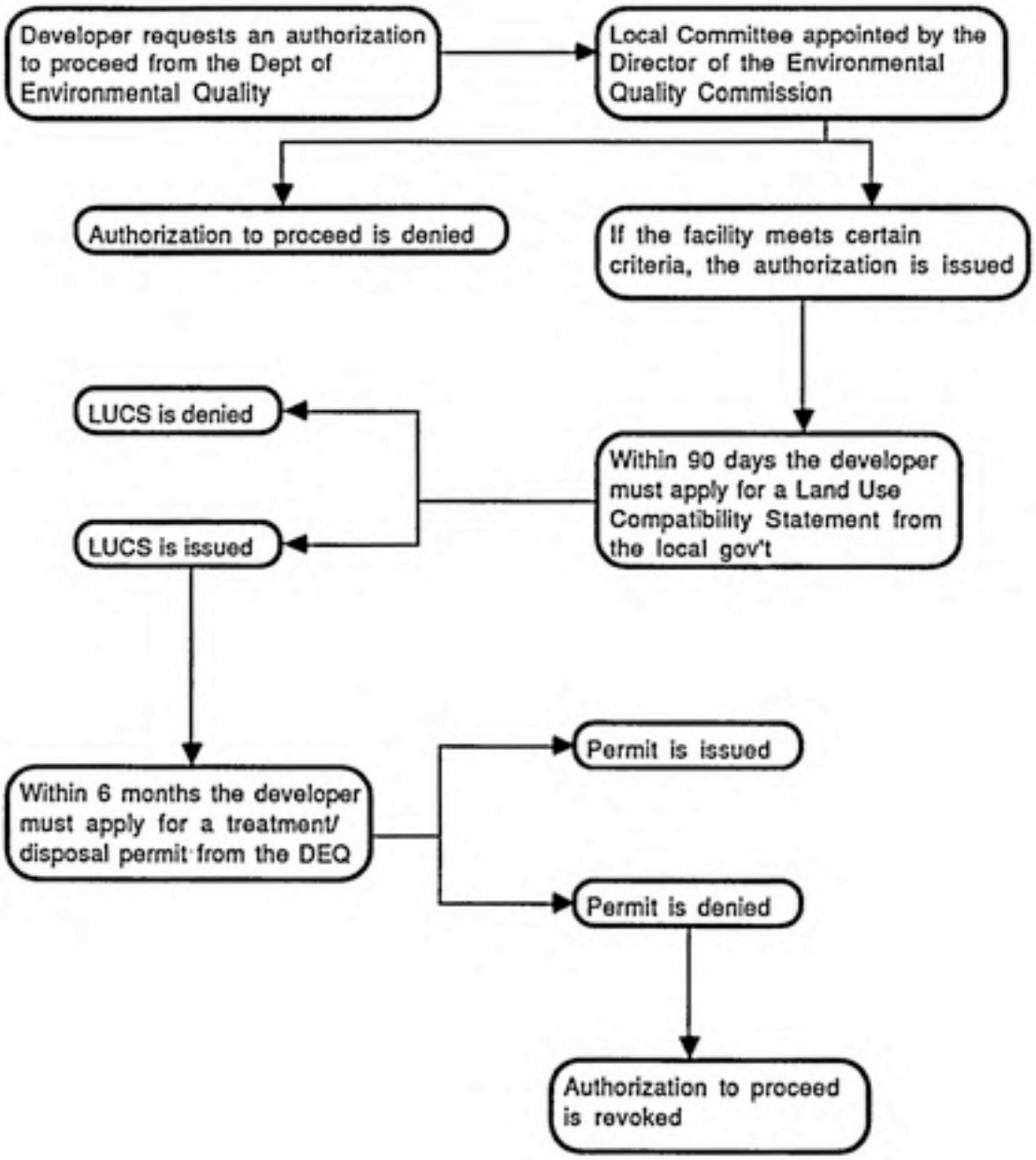
OREGON

Hazardous Waste Facility Siting Process

1. An interested developer requests an Authorization to Proceed from the Dept. of Environmental Quality. The DEQ only accepted these requests from May 15, 1986 to Jan. 1, 1987; after that date, the Environmental Quality Commission must find that there is a public need for a new facility before any more requests will be accepted. To obtain an Authorization, a new facility must meet several criteria regarding technology, location, capacity, groundwater protection, and the need for the facility.

2. As soon as possible after an Authorization to Proceed request is received, the Director of the Environmental Quality Commission appoints the members of a local committee. The group is to be comprised at least partly of people living adjacent to the site or along hazardous waste transport routes. Exactly one-half of the members must be appointed from a list submitted by the local government. The purpose of the Committee is to provide a forum for local concerns; it submits a report summarizing these concerns and how the applicant is addressing them.

OREGON


Developer requests an authorization to proceed from the Dept of Environmental Quality
Local Committee appointed by the Director of the Environmental Quality Commission
Authorization to proceed is denied
If the facility meets certain criteria, the authorization is issued
LUCS is denied
LUCS is issued
Within 90 days the developer must apply for a Land Use Compatibility Statement from the local gov't
Within 6 months the developer must apply for a treatment/ disposal permit from the DEQ
Permit is issued
Permit is denied
Authorization to proceed is revoked

3. Within 90 days after an Authorization to Proceed is received, the developer must apply for a Land Use Compatibility Statement from the local government with land use jurisdiction in the site area. In considering a request for a LUCS, a local government evaluates the proposed facility with regard to very specific location standards (e.g. proximity to schools, churches, hospitals, flood hazard areas, urban growth boundaries, etc.). Also to be considered is the facility's consistency with existing development in the site area and its degree of compliance with local development regulations. The local government has 180 days to consider requests for LUCS. If the local government defaults on their review of a request, the DEQ will review the facility's compliance with the criteria.

4. After a LUCS is issued, the developer has 6 months in which to apply for a treatment or disposal permit from DEQ. If the permit is denied, the developer's Authorization to Proceed is revoked. If the LUCS is denied, the permitting process is halted.

Source: Oregon Div. 120. Hazardous Waste Management: Additional Siting and Permitting Requirements for Hazardous Waste and PCB Treatment and Disposal Facilities.

Oregon's siting process for hazardous waste facilities provides for a great deal of community involvement. The local committee is created as soon as possible and brought into the siting process. The DEQ recommends that the applicant and the local community negotiate a siting agreement. Possible issues they suggest are:

--loss in property values

--emergency response training and equipment

--road improvements and maintenance

--on-site and off-site monitoring of worker's and community health

One slightly unusual feature of Oregon's process is the structure of the local committee. In most other states with this feature, the local committees are made up entirely of host community residents. In many of the states, appointments to the committee are the sole privilege of the Chief Executive Officer of the host municipality or county. Oregon, on the other hand, retains much more control over the creation of the local committees. In other states the specific membership of the committee is often carefully delineated and its duties and methods clearly spelled out;however, in Oregon the local committees have no set number of members, no time constraints on their negotiations, and no restrictions on the terms of their agreements. In this manner Oregon's framework for local committees is less

structured and allows the committees more autonomy with less oversight from the state.

Perhaps the most unique portion of Oregon's process is the Land Use Compatibility Statement. Without a LUCS, a treatment/disposal permit cannot be obtained; all three steps of the siting process must be fulfilled: 1) Authorization to Proceed, 2) LUCS, and 3) permit. Effectively, local governments have the power to veto proposed facilities. According to Bob Danko of the Oregon Hazardous and Solid Waste Division, however, counties must follow a very structured, even legalistic process of reviewing LUCS', and cannot deny one without sound evidence for their decision. (72). The effect of the siting process and compensation on host communities' and developers' attitudes toward siting cannot be ascertained yet; the Oregon rules are untried to date (73).

PENNSYLVANIA

Hazardous Waste Facility Siting Process

1. An applicant applies for a permit from the Department of Environmental Resources.

2. The Department either denies the application or issues a draft permit.

3. As soon as a draft permit is prepared, public notice is given and a 45-day public comment period begins.

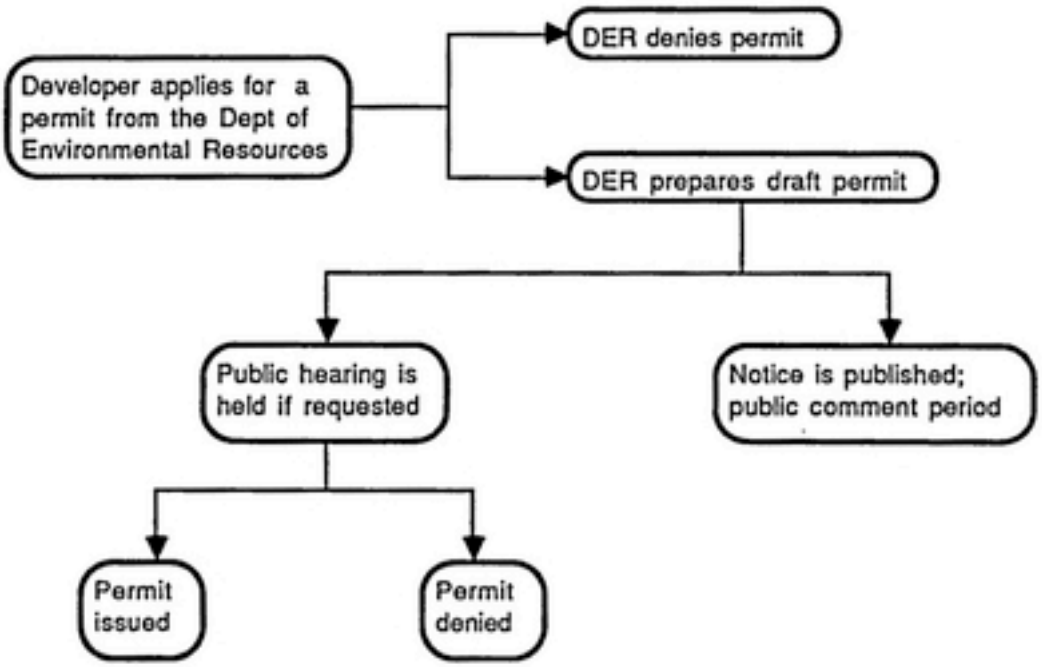
4. If a public hearing is requested, 30 day notice is given before the hearing is scheduled.

5. After the hearing, the Department either issues the final permit or denies it.

Source: Pennsylvania Subchapter D: Hazardous Waste Regulations.

Pennsylvania's siting process for hazardous waste facilities is straightforward and uncomplicated. Public participation consists solely of one public hearing. The

PENNSYLVANIA



Department must consider any comments in issuing a permit and respond publicly to questions and concerns.

Although the Pennsylvania process in no way involves expanded public participation, compensation for adverse economic effects is provided. If the proposed facility will cause a net loss in local revenues, then the Department will determine the amount of compensation needed to offset the loss, based on information provided by the developer of the facility. The developer must also provide information regarding the effect of the facility (1) on the cost of services provided by local government; (2) on monitoring costs; (3) on property values; and (4) on the local economy in general. If operation of the facility will cause net increases in costs to local government, or will adversely affect property values or the local economy, the Department is authorized to assess means of mitigating these effects.

These forms of compensation are a combination of legislated and administrative compensation, in that the areas of attention are delineated in the act, but specific measures of compensation or mitigation are decided by the DER. One feature of this process is worth noting. All information on the facility's impacts is provided by the applicant to the DER for analysis; the local community and government are not consulted. In other states, the local government has a chance to assess the impacts of a facility themselves, and suggest proper compensation.

Experience with the Pennsylvania process remains scanty. Only two projects are actively pursuing an operating permit, and public opposition is stronger than ever. In short, the incentives don't seem to be working (75).

RHODE ISLAND

Hazardous Waste Facility Siting Process

1. Developer receives a construction permit from the Dept. of Environmental Management.

2. Within 45 days after receiving the construction permit, the Local Assessment Committee must be formed.

3. Negotiations between the LAC and the developer commence. If an agreement has not been reached by the end of 90 days, the parties must submit to binding arbitration.

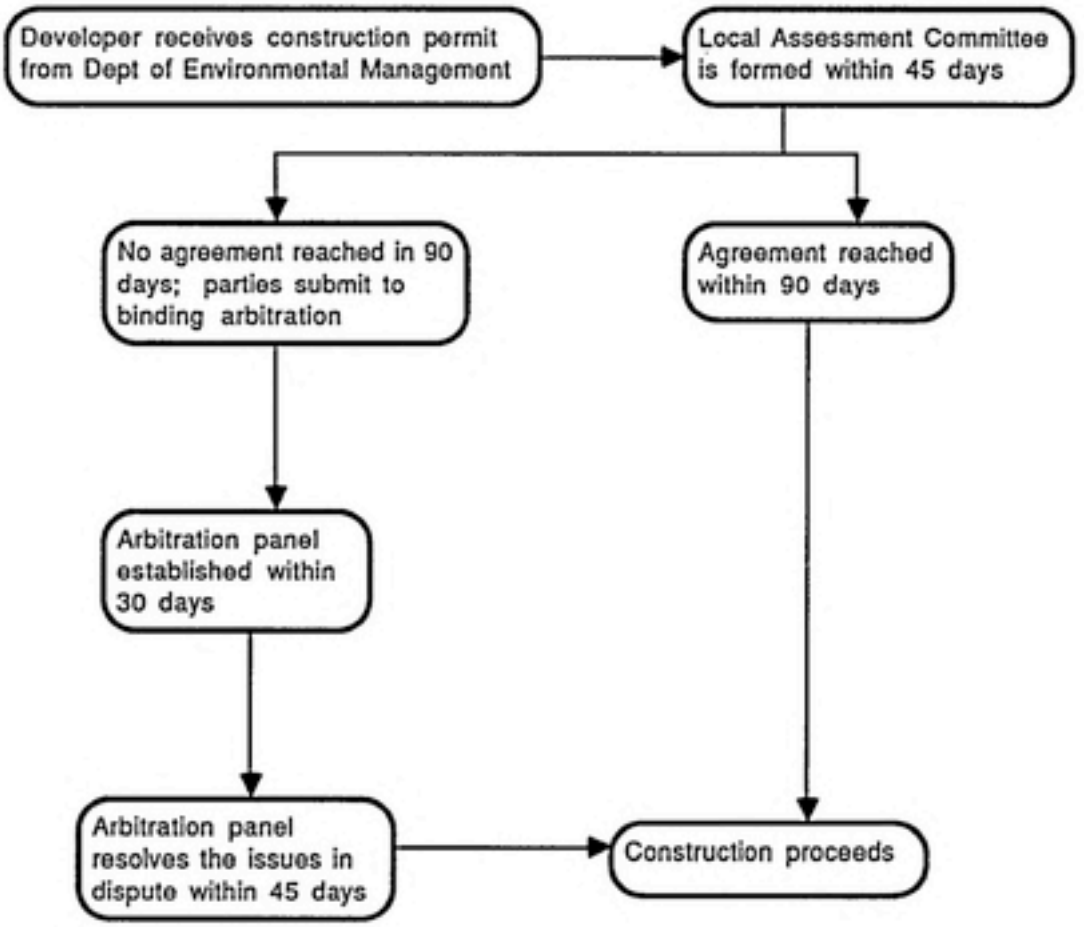
4. An arbitration panel is established within 30 days after binding arbitration is invoked.

5. Within 45 days after establishment, the arbitration panel shall resolve the issues in dispute.

Source: Rhode Island Hazardous Waste Management Facilities Act of 1982.

Rhode Island has a siting process geared heavily toward public participation through the Local Assessment Committee.

RHODE ISLAND



The LAC consists of five to nine members, including the Chief Elected Official of the host municipality, the town council president, the chairman of the planning commission, and at least two public members appointed by the CEO (one must be knowledgeable in environmental matters). The LAC is empowered to represent the community in negotiations with the developer of the facility, and to negotiate a siting agreement to protect public health, safety and the environment, "...as well as to promote the fiscal welfare of the community through special benefits and compensation." [76, sec. 23-19.7-6]. The LAC can also conduct public hearings, and enter into a contract with the developer, subject to ratification by the town council.

The legislation suggests some items that may be addressed in the siting agreement: facility construction, maintenance, closure, and operation standards; monitoring procedures; health and safety measures; and any form of compensation. No restrictions are placed on subjects of negotiation.

The act specifies that the developer pays for expenses incurred by the community, such as costs of conducting studies hiring consultants, and negotiating. The amount is limited: $10,000 to 1% of the gross cost of the hazardous waste facility, with a maximum of $100,000. The LAC can request reimbursement for additional costs above this amount; they must also return unused funds plus interest after the siting agreement is completed.

In addition to participation in siting via the LAC, municipalities are empowered to regulate and even prohibit hazardous waste landfills and underground injection wells. They can also regulate hazardous waste management facilities in watersheds or recharge areas of existing or potential drinking water sources (with proper hydrologic analysis). However, municipalities cannot change the zoning of an area after a hazardous waste management facility permit application has been submitted. They may change the zoning after the application is withdrawn or denied.

The arbitration panel consists of three members: one selected by the community, one by the developer, and one agreed upon by both parties. The panel awards reasonable costs to the community for the expenses of negotiation, arbitration, assessments, and so forth.

Through negotiation and arbitration, Rhode Island's siting process provides a structured yet very flexible means of addressing a host community's concerns. One hazardous waste facility has been sited using this process, the Eticam Corp. facility in Warwick, R.I. (77). For a complete discussion of the siting of that facility see Chapter 4.

SOUTH CAROLINA

South Carolina does not have a siting program for hazardous waste facilities. There is little perceived need to site any because of the operating hazardous waste facility at Pinewood, S.C. (78). However, legislation does provide that $1/ton of hazardous waste be disbursed annually from the Hazardous Waste Contingency Fund to counties hosting hazardous waste land disposal sites (79). In 1987, the hazardous waste management act was amended to add a tipping fee of $0.50/ton for the town of Pinewood Hazardous Waste Contingency Fund. (Sumter County, where Pinewood is located, still receives $1/ton.)(80) The money may be used by local law enforcement, fire, emergency units and health care personnel to provide protection, assistance and emergency preparedness for contingencies.

SOUTH DAKOTA

The state of South Dakota has no programs of compensation/incentives for host communities of hazardous waste facilities (81).

TENNESSEE

State legislation mandates that no commercial hazardous waste facility can be permitted in Tennessee unless the county and/or municipal government approves of the location (82). Onsite facilities or facilities receiving wastes generated at sites operated by the same corporation are not considered "commercial" facilities. There is no formal siting procedure.

Tennessee has one of the largest incentive measures in amy of the states. The Responsible Waste Disposal Incentive Fund was created in 1983, and $2 million were appropriated to it within two years (83, 84). A local government could receive all of the money if it meets the following requirements:

1) it is the first to apply for the money
2) the proposed hazardous waste facility has both land disposal and high temperature incineration.
3) the proposed facility is designed to operate for at least 20 years.
4) local regulations are no more stringent than state regulations governing hazardous waste facilities.

The facility must be permitted, constructed, and operational before the funds are released to the local government. If the proposed facility is located in more than one jurisdiction, the money is apportioned between the eligible

governments. 25% of the funds are earmarked in the legislation for local government's monitoring costs, as well as risk assessment and hazard identification. There are no guidelines nor limitations on the use of the remaining funds. Once the money in the fund is disbursed, the fund will cease to exist.

The same legislation authorizes the host government to levy tipping fees, paid quarterly by the facility operator, on hazardous waste: (1) up to $5/ton of waste that is landfilled (2) up to $2.50/ton of waste that is treated. Since the fund was established in 1983, it has accumulated interest and now totals about $2.5 million. According to Ruth H. Neff of the Tennessee Environmental Policy Group, no county has claimed the incentive fund and no applications are pending. The fund will probably fall prey to those in the legislature who wish to divert its moneys to other programs (84).

A notable feature of the Tennessee incentive program is the requirement that a proposed facility, to render its host government eligible for the incentive fund, must include a landfill. This seems noteworthy in light of the controversy over the risks posed by hazardous waste landfills, and the recent trend in many states away from landfills and toward incinerators or treatment/storage units (85). Perhaps Tennessee's experience supports the assertion that communities cannot be merely "paid off" to accept a facility, without concomitant assurances of the need for the facility,

the acceptability of the risks, and of mitigation of nonmonetary impacts.

TEXAS

Hazardous Waste Facility Siting Process

1. An applicant for a new hazardous waste facility chooses whether or not to use a Local Review Committee, and notifies the proper officials to appoint members.

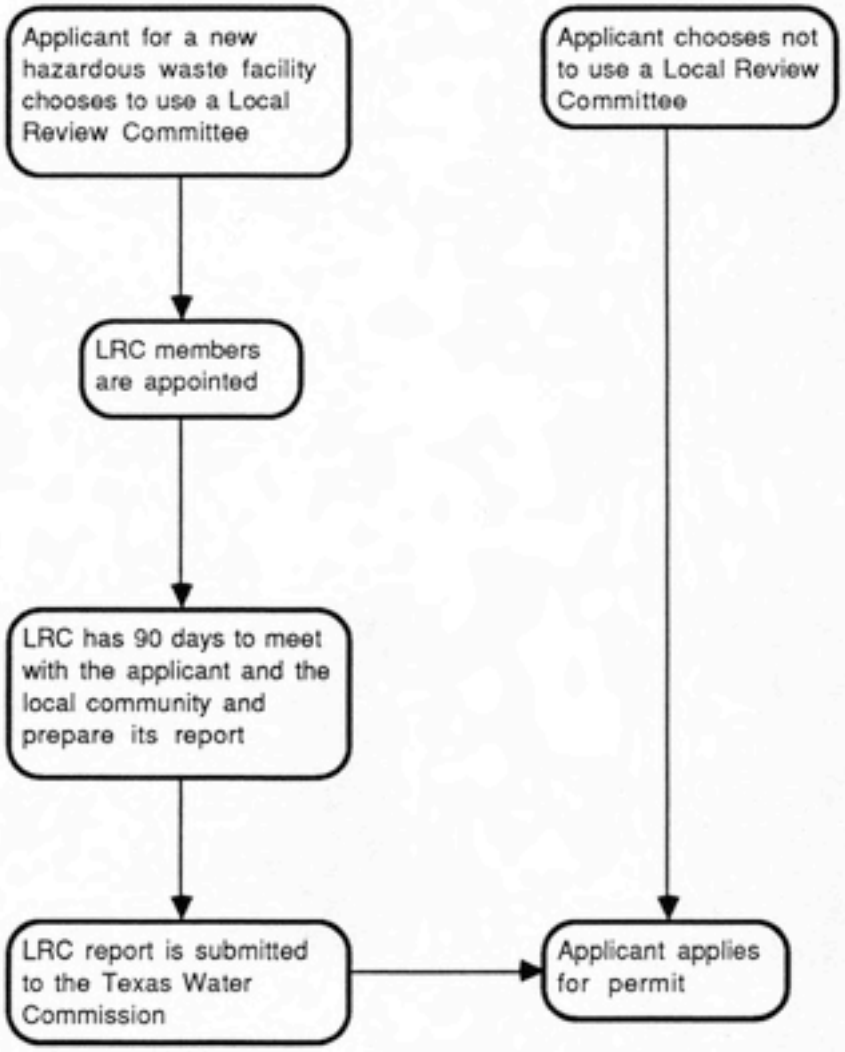
2. The mayor of the host city and/or the county judge appoint 4 local members. A regional entity (the specific one would vary across the state) appoints eight members representing environmental groups, industry, academia, land use planning, business, public health, and citizens active on environmental issues.

3. The LRC has 90 days to meet with the applicant and members of the community, and to prepare its report documenting resolved and unresolved issues, any unanswered questions, and local concerns.

4. Either the applicant or the LRC can call in a mediator if necessary.

5. The report of the LRC is submitted to the Texas Water Commission (the permitting agency).

TEXAS


Applicant for a new hazardous waste facility chooses to use a Local Review Committee
Applicant chooses not to use a Local Review Committee
LRC members are appointed
LRC has 90 days to meet with the applicant and the local community and prepare its report
LRC report is submitted to the Texas Water Commission
Applicant applies for permit

6. The applicant applies for a permit from the state.

Source: Keystone Siting Process Group. The Keystone Siting Process Handbook: A New Approach to Siting Hazardous and Nonhazardous Waste Management Facilities. Texas Water Commission, Revised Jan. 1987.

The above steps are part of the Keystone Process for siting hazardous waste facilities. This process involves the negotiation between a LRC and the site developer before the developer applies for any state permits. It is extraneous to the state permitting process: the use of the Keystone Process is encouraged, but is not mandatory (87). The Keystone process is used entirely at the developer's discretion; he could choose to bypass it entirely.

The process does not delineate specific compensation or incentive measures, but these could be established in the negotiations. However, no mention is made of incorporating negotiated agreements into the permit. The use of the LRC report is left to the discretion of the staff of the Texas Water Commission; there are no provisions for assuring that its contents are considered in the permit review process. In general, the whole process seems to lack teeth, in large part because participation in it is purely voluntary.

One type of compensation is established by statute. Anyone (e.g. local government, citizen group) who incurs

expenses gathering information that (1) will be used in the decision making process and (2) is presented at the public hearing for a proposed facility is entitled to reimbursement from the applicant, up to $25,000. However, for communities that go through the Keystone Process, this provision is valid only if it is made a part of the negotiated agreement (88).

The success of the Keystone Process as it has been implemented in Texas is uncertain; only 2 attempts have been made to use the process in siting new hazardous waste facilities (86). Both applications are still pending. One is for a salt dome disposal project, and the other is for a hazardous waste incinerator (88).

UTAH

The state of Utah has only a permit approval process for new hazardous waste management facilities. The Utah Solid and Hazardous Waste Act provides for a disposal fee at commercial hazardous waste facilities of $3/ton (89). The fee is to be paid monthly by the operator, and 10% of the funds are remitted to the host county for the purpose of carrying out its hazardous waste monitoring and emergency response programs. The remainder of the fee goes to the state hazardous waste management program.

Dennis R. Downs, Assistant Director of the Utah Bureau of Solid and Hazardous Waste, states that the fee "...has had a positive impact on facility siting" and suggests that further siting incentives may be developed by the Bureau in the future (90). However, no new facilities have been permitted to date (91).

VERMONT

No siting program for commercial hazardous waste facilities exists in Vermont, and issues of compensation or incentives have not been addressed (92).

VIRGINIA

Hazardous Waste Facility Siting Process

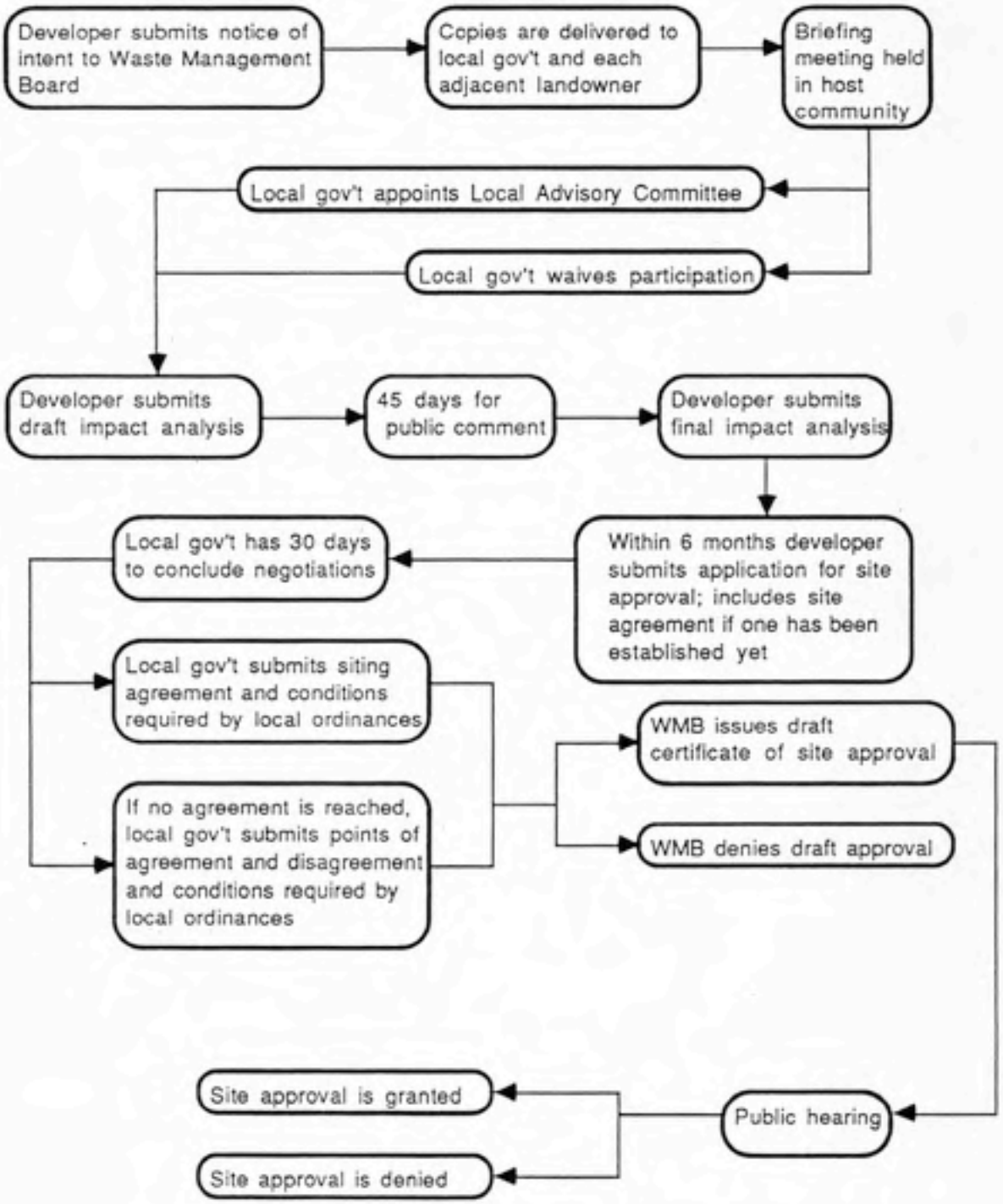
1. Developer submits a notice of intent to apply for a certification of site approval.

2. The Waste Management Board delivers a copy of the notice to the host community and to each adjacent property owner to the proposed site.

3. The WMB conducts a briefing meeting in the host community 60-75 days after delivery of the notice to the host community. The purpose of the meeting is to provide information on the proposed facility. The local government may waive participation in the process by notifying the WMB within 15 days after the briefing meeting, or it may appoint a Local Advisory Committee to facilitate communication with the developer and the state.

4. The developer submits a draft impact analysis, allows 45 days for public comment, then submits a final impact analysis which addresses the public's concerns.

VIRGINIA


Developer submits notice of intent to Waste Management Board
Copies are delivered to local gov't and each adjacent landowner
Briefing meeting held in host community
Local gov't appoints Local Advisory Committee
Local gov't waives participation
Developer submits draft impact analysis
45 days for public comment
Developer submits final impact analysis
Within 6 months developer submits application for site approval; includes site agreement if one has been established yet
Local gov't has 30 days to conclude negotiations
Local gov't submits siting agreement and conditions required by local ordinances
If no agreement is reached, local gov't submits points of agreement and disagreement and conditions required by local ordinances
WMB issues draft certificate of site approval
WMB denies draft approval
Public hearing
Site approval is granted
Site approval is denied

5. The developer submits an application for certification of site approval within 6 months after the final impact analysis is submitted. A siting agreement is included if one exists. Local government has 30 days after the application is submitted to conclude negotiations with the developer; this time limit may be extended by mutual agreement.

6. At the end of the 30 days the local government submits:
   1) siting agreement to the WMB, or a description of the points of conflict if no agreement has been reached.
   2) any conditions or restrictions on the construction or operation of the facility that are required by local ordinance.

7. Within 30 days of receipt of the local government's report, the WMB issues or denies a draft certification of site approval.

8. The Board conducts a public hearing on the draft.

9. Within 45 days after the hearing, the Board grants or denies the certification of site approval.

Source: Virginia Waste Management Act of 1986.

Virginia's siting process provides ample public participation as well as the means for addressing local concerns about a proposed facility. The Waste Management Board can assist in facilitating negotiations between the developer and the community. The siting agreement can discuss (1)mitigation of adverse impacts (2) financial compensation to the host community and (3) any terms and conditions concerning the facility. The developer's draft certification of site approval may be denied if the Board determines the developer has failed to negotiate in good faith. In addition, the developer must comply with local ordinances regarding the construction design and operation of the facility. Funds for site review, negotiation, technical assistance and so forth are provided to local government in a grant by the WMB; the amount is determined on a case-by-case basis.

No applications proposing new hazardous waste management facilities have been received since the above regulations went into effect (94).

WASHINGTON

The Washington Hazardous Waste Management Act establishes state preemption over regulating hazardous waste facilities (95). It instructs the Dept. of Ecology to develop siting criteria and siting policies for such facilities by Dec. 31, 1986 and June 30, 1987, respectively. The Solid and Hazardous Waste Program Planning Unit of the Dept. of Ecology is currently preparing a state hazardous waste management plan (96).

The legislation also requires local governments to propose their own hazardous waste management plans to deal with "moderate risk" waste, defined as (1) hazardous waste generated in quantities too small to be regulated and (2) household hazardous waste. The Dept. of Ecology furnishes grants to local governments for preparing and implementing these plans. Local government must provide funds to match at least a portion of the grant.

The act endorses the usefulness of negotiation in solving hazardous waste facility siting disputes, but no specific forms of compensation or incentives are mentioned. The Dept. of Ecology is directed to assist in conflict resolution between facility proponents and host communities, and to adopt rules of procedures for developers and communities to follow in siting. Such procedures could include required negotiation or mediation, and any agreements

could be written into the permit. The Solid and Hazardous Waste Program Planning Unit has sent out a Request for Proposals to consultants regarding recommendations on a negotiation process applicable to hazardous waste facility siting disputes (96, 97).

WEST VIRGINIA

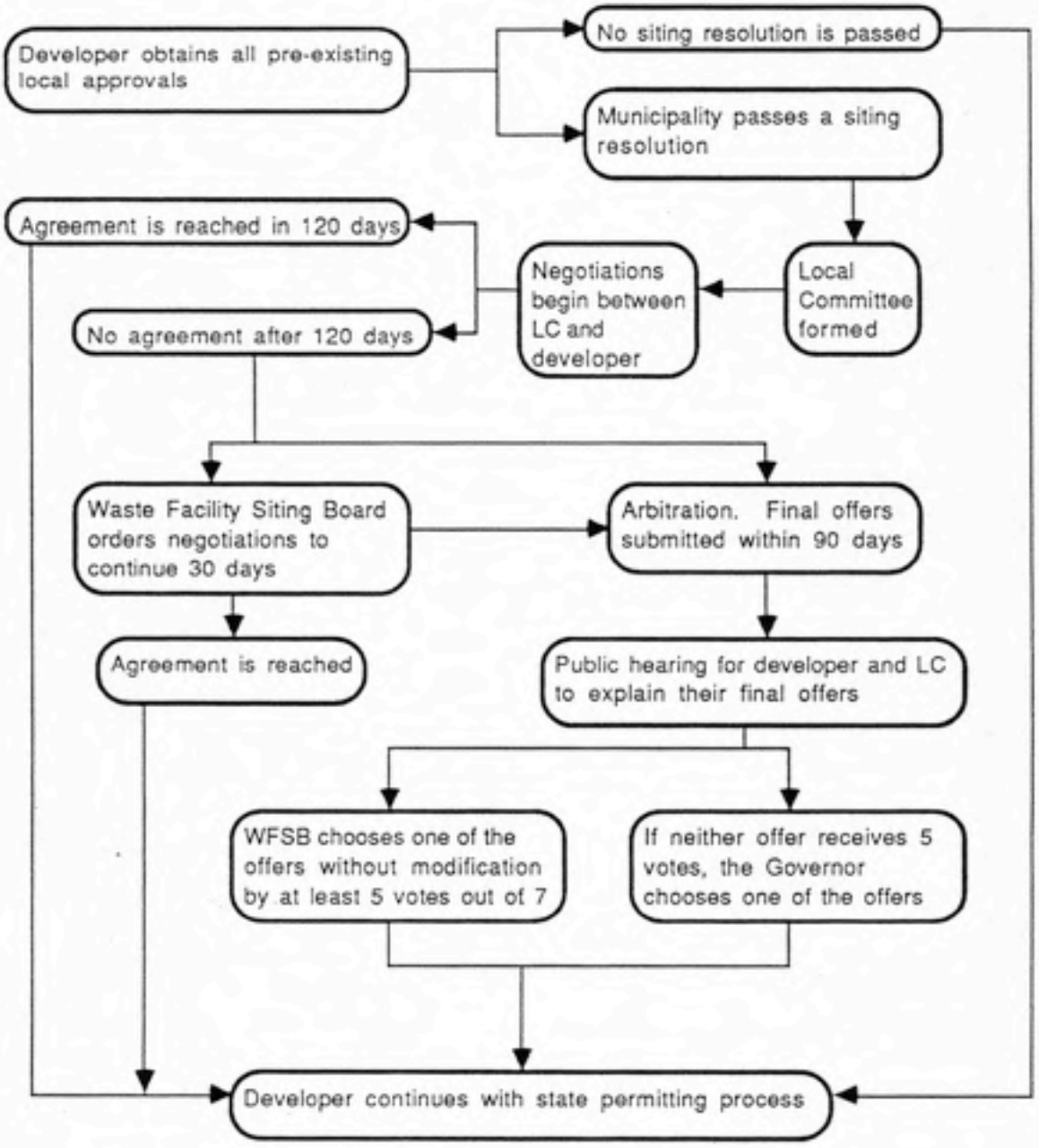
Regarding the siting of hazardous waste facilities, no compensatory measures are incorporated into statutes or Division of Waste Management policies (98).

WISCONSIN

Hazardous Waste Management Facility Siting Process

1. Developer requests a specification of all applicable local approvals (zoning variances, licenses, etc.) from affected municipalities (ones in which the facility is to be located or whose boundaries will be within 1200 feet of the facility). Only "pre-existing" regulations apply (those in effect at least 15 months before the applicant submits his initial report to the state licensing agency).
2. The affected municipalities must respond to this request within 15 days, whereupon the applicant must take the necessary steps to obtain each pre-existing local approval.
3. If a municipality wishes to negotiate with the applicant, it must pass a siting resolution within 60 days of receiving the above request, stating its intent to negotiate and if necessary arbitrate with the applicant concerning the proposed facility. If no siting resolution is passed, the municipality is not entitled to participate in negotiation and the proposed facility is not subject to any local approvals except pre-existing ones.

WISCONSIN


Developer obtains all pre-existing local approvals
No siting resolution is passed
Municipality passes a siting resolution
Local Committee formed
Negotiations begin between LC and developer
Agreement is reached in 120 days
No agreement after 120 days
Waste Facility Siting Board orders negotiations to continue 30 days
Arbitration. Final offers submitted within 90 days
Agreement is reached
Public hearing for developer and LC to explain their final offers
WFSB chooses one of the offers without modification by at least 5 votes out of 7
If neither offer receives 5 votes, the Governor chooses one of the offers
Developer continues with state permitting process

4. After passing a siting resolution, the local governing bodies appoint representatives to the Local Committee. Host cities are allowed four members, only two of which may be elected officials or municipal employees; host counties are allowed two members; municipalities within 1200 feet of the waste disposal area are granted one representative each.
5. Negotiations between the Local Committee and the developer begin. Any issue is negotiable except the question of the need for the proposed facility; however, state licensing requirements may not be made less stringent. If either party refuses to participate in negotiations, it can be found in default by the state Waste Facility Siting Board. For the applicant, this means forfeiting his right to construct the facility; for the Local Committee, it means forfeiting the right to negotiate.
6. If agreement cannot be reached among the parties, either may request the assistance of a mediator. Mediation must be approved by both parties. The mediator functions only to encourage a voluntary settlement and may not compel a settlement.
7. If, at least 120 days after the appointment of the Local Committee, consensus has not been attained, either party may petition the Waste Facility Siting Board for arbitration. At this point the Board has two options:

a) it may order negotiations to continue for another 30 days, after which the parties may petition again for arbitration, or

b) it may grant the petition, in which case both parties must submit their "final offers" within 90 days. These offers can include only items which were discussed in negotiations and that are arbitratable according to the statute. The eight items subject to arbitration are:

1) compensation for substantial economic impacts resulting from the facility
2) reimbursement of costs (not to exceed $2500) incurred by the Local Committee for negotiation/arbitration activities
3) screening and fencing related to the appearance of the facility
4) operational concerns such as noise, dust, and odors (excluding design capacity)
5) traffic flows and patterns resulting from the facility
6) uses of the site after the facility is closed
7) economically feasible methods for recycling or reducing the amount of waste at the facility
8) the applicability of pre-existing local approvals.

8. After the Board receives the arbitration packages, it must hold a public hearing for the parties to explain

their final offers. The Board then must choose either one of the other of the offers in its entirety, without modifications. The decision of the Board is binding on both parties. In the event that neither offer receives at least five votes from the seven-member board, the Governor makes the final decision.

Source: Rudd, P. J., and Werner, D. M. Wisconsin's Landfill Negotiation/Arbitration Statute. Wisconsin Bar Bulletin, Nov. 1985.

The Wisconsin negotiation/arbitration process parallels the state's permitting process. It is one of the most detailed processes in all the states; all facets of the developer - host community relationship are addressed. Though the process of interaction is highly structured, specific issues for negotiation are completely flexible. The only exceptions are the issue of need for the facility, and the stipulation that state regulations may not be made less stringent. Wisconsin's siting process has been so carefully crafted and so well thought out, it is considered a model of public participation and the use of negotiation in siting.

Through June 1987, the state had received 13 applications for hazardous waste facilities. Seven municipalities had waived their right to negotiate and four were pending negotiations; none of these had been licensed

yet. The remaining two had completed negotiations and reached a final agreement (100).

One of the two final agreements was between Milwaukee Solvents and Chemicals Corp. and the village of Menomonee, Wisconsin (101). MSCC applied for a permit to operate a hazardous waste storage facility. The Local Committee negotiated these terms:

1) the company agreed to compensate the village for costs incurred by the LC
2) MSCC agreed not to stack barrels of hazardous waste more than 3 high

The other agreement was between Aqua-Tech, Inc. and the city of Port Washington and Ozaukee County (102). Aqua-Tech had been operating a hazardous waste storage facility in the area for some time and applied for their Part B RCRA permit. The only negotiated term stated that the company would not load or unload hazardous waste during nonbusiness hours except in an emergency. Presumably the agreement was so brief because the company had already established a good reputation with area citizens.

WYOMING

Although Wyoming does not have a siting program specifically for hazardous waste management facilities, the state does have a process for siting large industrial facilities, defined as those valued at over $50 million in 1975 dollars (currently about $97 million). Any new commercial facility meeting this definition would go through the siting process described below.

1. Developer applies for a construction permit from the Industrial Siting Council.
2. 20 to 30 days after receiving the application, the ISC notifies the local government and publishes a summary of the application in a local newspaper.
3. A public hearing is held before the ISC between 90 and 120 days after the council received the application.
4. If the applicant demonstrates compliance with the required conditions, the ISC approves the permit within 60 days and stipulates the conditions and any mitigation for adverse impacts.

Source: Industrial Development Information and Siting Act of 1975.

This legislation was established as a means of coping with the environmental and socioeconomic impacts of large-scale industries (104). In order for the ISC to approve the permit, the applicant must show that:

1) the facility will comply with all applicable regulations
2) no serious injury to the environmental, social or economic condition of the area will result
3) the public health, safety and welfare will not be impaired

The provision regarding the social and economic condition of the area would certainly result in compensation to the host community of a proposed hazardous waste facility, in the somewhat unlikely event that the facility is valued at $97 million and thus falls under the scope of this process. The method of establishing compensation is administrative, since the ISC stipulates the types of mitigation for adverse impacts. However, in the Exxon LaBarge Project, recently sited in southwest Wyoming, Exxon negotiated the mitigation of adverse impacts with local officials, and the agreements were incorporated into the construction permit (105).

Several different types of mitigation have been required by the ISC in the past:

-direct payments to local government
-developer pays for a specific capital project
-payments to fire and police departments
-payments for street construction

-developer improves access roads to site

-applicant provides busing to reduce traffic to site

-applicant provides housing for construction workers

The state of Wyoming has had more than ten years of experience in ameliorating the impacts related to industrial projects; some of these measures may prove useful in hazardous waste facility siting (104).

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