Indiana Department of Environmental Management

INDIANA SOLID WASTE MANAGEMENT PLAN POLICY SUMMARY

Volume I of III
Indiana Solid Waste Management Plan

INDIANA SOLID WASTE MANAGEMENT PLAN

VOLUME I

1991

Developed By: The Indiana Department of
Environmental Management
Evan Bayh, Governor
Kathy Prosser, Commissioner

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OFFICE OF THE GOVERNOR
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EVAN BAYH
GOVERNOR

Fellow Hoosiers:

Thank you to the citizens across our State who contributed time and energy to make this plan possible. The enormous challenge of setting a new course for the management of solid waste requires that every man, woman and child do their part. By the thousands, Hoosiers are showing that they accept that challenge.

In 1980, Indiana had 150 licensed, operating landfills. Half that number remain open today. By the end of this decade, the number will again drop by half. Our experience reflects a national trend. Over 50 percent of national landfill capacity was filled to the brim in the 1980s, and gates continue to lock on landfills every day. Yet we still throw away tons of recyclable materials every single day.

Counties, cities, towns, neighborhoods and private organizations have all pitched in to help reduce the flow of solid waste into Indiana landfills. Action is being taken not simply to save landfills, but to do what is needed to preserve and protect our natural resources and the health of our citizens, their children and their grandchildren.

We have taken some important steps. Last year the General Assembly adopted our environmental agenda laid out in House Bill 1240. This law sets up a framework for a partnership between the State and local communities in tackling this difficult problem.

The law also formalizes our policy that waste reduction and recycling are better ways of dealing with the problem of solid waste than simply creating more landfills and incinerators. We have set goals to bring down the total amount of our solid waste by 35 percent over the next four years and by 50 percent before the end of the year 2000. We have also taken aggressive enforcement action and will continue to make pollution prevention one of our highest priorities.

This 20-year plan is an important step along the path of meeting these goals and addressing the problem of solid waste. As regional solid waste districts develop their own plans, as

citizens take an active part in recycling and waste reduction, we can and must reverse the tide of garbage being disposed of in Indiana.

As we set out to implement this plan, we can be proud of the foundation that has been laid. As each goal is met, we can be prouder of the commitment we have shown to a cleaner and healthier future for ourselves and for future generations of Hoosiers. Working together, we will make a difference.

Sincerely,

Evan Bayh

EB/tlb

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CHAPTER 1

Introduction

The comprehensive solid waste management bill, House Bill 1240, was initiated by Governor Bayh and passed by the Indiana General Assembly in the 1990 General Session. This bill set bold new directions for solid waste management in Indiana. It mandated the development of 20 year solid waste management plans at the state and local levels. With the development and implementation of these plans, Indiana proudly takes its place as a national leader in solid waste management.

Many of the policies and programs described in the State Plan are identified as potential actions, which must be investigated further; supported with additional legislation or rulemaking; or applied in light of changing federal regulations. Therefore, the State Plan is a long term commitment. The State of Indiana will persevere in its pursuit of environmentally sound, sustainable solid waste management to serve Hoosiers into the next century.

Further, the State is committed to proceeding prudently, weighing the impact of each policy; phasing in dramatic changes and working closely with districts and citizens to ensure that new strategies and requirements are feasible when local and state resources are combined. The plan is an active working document, not a bureaucratic showpiece. It will be updated every year to reflect successes that have been achieved and new challenges that have been developed.

The State Plan is organized into three volumes:

- **Volume I: Policy Summary**

  Volume I briefly reviews the background for the State Plan and details policies for both state agencies and local solid waste management districts.

- **Volume II: The District Solid Waste Management Plan Format**

  Volume II contains a step-by-step format, provided as a guide for local districts as they develop district solid waste management plans.

- **Volume III: Technical Guide**

  Volume III provides more detailed technical background on different solid waste management methods and planning issues, as well as the history of solid waste management.

(For a more thorough outline of the State Plan, see Chapter 3)

This chapter provides a brief summary of related background information and an overview of the entire Plan.

THE SOLID WASTE MANAGEMENT CHALLENGE

Solid waste management - what we do with our garbage - is an increasing problem in the United States.

The amount of solid waste we generate is growing and there is a growing concern about toxins and other health and environmental threats from the municipal waste stream. Environmental problems and concerns about solid waste management have led to new, stringent federal regulations governing solid waste disposal. As a result, landfills and other solid waste disposal facilities are becoming more expensive. They are also more difficult to site.

To compound the problem, existing landfills nationwide are closing because they are full. Many areas of the country are generating mountains of trash and have no place to put them. Many states, including Indiana, are feeling the pressure to reduce the amount of waste we generate and address our capacity problems.

At the same time, a realization that our natural resources are limited is leading this nation to an understanding that discarded items are a valuable resource. If we can recover and reuse (recycle) a portion of the waste stream, we maximize our use of natural resources while minimizing our need for disposal capacity. This is becoming the goal for solid waste management nationwide.

THE INDIANA SITUATION

Indiana is not immune from the problems facing the rest of the country. The state's waste disposal facilities are aging, and rapidly reaching capacity. The cost of solid waste management will inevitably rise.

The life expectancy of many facilities has been dramatically shortened in recent years. The state is generating more and more trash and the amount of wastes from other states is increasing every year. In the last ten years, over half of the state's landfills have closed. In the next ten, there will be another 50 percent reduction if solid waste is being generated at the same rate as today.

More solid waste management and disposal facilities are needed and they must meet the rigors of strict environmental protection standards, public approval, and economic realities.

The cost of solid waste management is rising sharply. As the supply of disposal capacity diminishes and the demand increases, the cost to "tip" a load of garbage into a landfill will increase. In addition, new regulations will make new facilities much more expensive to build, operate and close. Landfill capacity has become a premium commodity, worth conserving, and while disposal costs skyrocket, waste reduction and recycling programs become much more cost-effective in comparison.

However, unlike many other states - notably those on the eastern seaboard - Indiana still has time to avert a garbage crisis, plan ahead, and provide Indiana communities with more sustainable solid waste management systems that include effective waste reduction, recycling and pollution prevention programs.

The alternative new systems will also cost more; however, this cost can be less in the long run. Today, solid waste management systems incorporate a range of solid waste management approaches. Though these new programs and facilities must be designed and financed, they are actually more cost-effective,:

- Conserving valuable landfill space;
- Recovering useful materials;
- Preventing costly pollution; and
- Encouraging new industry and business.

THE INDIANA SOLUTION

Recognizing the potential problems and an opportunity to avoid them, Governor Bayh and the state legislature have determined to work with local governments to:

- Reduce the amount of waste disposed in Indiana; and
- Ensure long-term, sustainable systems to handle and dispose of solid waste.

In 1990, the legislature passed a law proposed by Governor Bayh. House Enrolled Act 1240 (HEA 1240), now Public Law 105-1990, builds the foundation for a comprehensive solid waste management solution. In designing a sustainable solid waste solution, the State determined that:

- The Indiana waste stream must be measureably reduced;
- Disposal facilities must be developed in concert with other strategies for managing solid waste;

- Alternatives to disposal such as source reduction, recycling, and composting must be pursued first, as part of a comprehensive approach for dealing with solid waste;
- Recycling and composting must be supported by stable, permanent markets for recovered commodities; and
- Everyone must be involved.

Setting Goals

HEA 1240 attacks the solid waste problem from both ends, seeking to reduce the amount of waste which is disposed, while ensuring adequate, safe disposal capacity to handle that waste which cannot be managed in any other manner. To support its waste reduction objective, the State developed a measuring stick - a set of voluntary waste reduction guidelines and deadlines. Based on HEA 1240, the State is committed to working with districts, industry and citizens to reduce the Indiana waste stream by:

- 35 percent by 1996
- 50 percent by 2001

Setting Priorities

As a first step, the State supports comprehensive solid waste management planning. Comprehensive planning seeks to find the best way to manage each part of the waste stream, combining different solid waste management methods to:

- Maximize the recovery of useful materials;
- Minimize negative environmental and public safety impacts; and
- Minimize the amount of waste that is disposed.

As such, the State favors solid waste management methods that can be applied to avoid final disposal and supports comprehensive planning which applies methods in the following priority order:

- **Source Reduction:** reduce the volume of waste generated in the first place.
- **Recycling and Composting:** apply methods which will divert part of the waste stream away from final disposal; recover valuable commodities; and support new business enterprises; and
- **Final Disposal:** dispose of the remaining wastes in final disposal facilities (landfills or incinerators), which are designed and operated to protect the environment and public health.

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Markets - The Key to Successful Recycling and Composting

To ensure that recycling and composting are a real option in Indiana, the State recognizes that it must develop a support system of stable markets for the recovered commodities and products. The State also views the need for new or expanded markets as an opportunity for healthy, diversified economic development. HEA 1240 establishes funding and technical assistance tools which the State will apply to:

- Encourage existing businesses to use recovered materials in manufacturing new products and buy recycled products;
- Court new enterprises that rely on a supply of recovered materials; and
- Promote new technologies for using recycled materials.

The funds will also be applied to support the State's number one priority - source reduction- by assisting businesses that are developing waste reducing products.

A Collaborative Approach

A sustainable solid waste management system for Indiana cannot be created by state government alone: all levels of government and all sectors of society must play a part.

Successful solutions will rely on the support and cooperation of local officials, educators, citizens, businesses, and industries, as well as state agencies. We must work together to shape the strategies and make them work.

Basic goals and priorities have been established by the state through legislation - most notably in HEA 1240 - but responsibility for developing the best means of achieving these goals will be at a local level. Plans can be effective only if they are formulated to meet the differing needs of Indiana communities. The people who live in those communities know best what will work. To support successful local planning, the State must provide a framework of education, technical assistance, regulation, legislation, and other statewide initiatives (see Chapter 4 - The State Action Plan).

With guidance and support from the state, local officials have authority to act on their best judgement, devising plans for meeting goals that are appropriate to local conditions. To that end, HEA 1240 mandates formation of local solid waste management districts. These districts may cover one or more counties, giving counties the flexibility they need to take advantage of economies of scale or other benefits of regional planning and management.

Regardless of which policies and programs government pursues, successful solutions will always require the support and cooperation of individual citizens. To achieve the new waste stream reduction goals, people will need

to make real changes in their attitudes and habits. To ensure success, state and local officials must keep citizens informed and involved in the planning an implementation of waste management strategies. To that end, the state stresses public participation in district formation and district plan development (See District Action Plan).

Participation by business and industry will also be critical. As generators of over forty percent of the municipal waste stream, these enterprises will be major players in helping keep waste free of toxins and reducing the amount of waste for final disposal.

Finally, the perspectives of the business community will be valuable for helping to ensure that plans are practical and can enhance economic development. They will also be called upon for ideas and initiatives to help deal with diverted wastes through recycling or composting. HEA 1240 and other recent statutes provide incentives designed to give businesses an active role in the solution. As discussed earlier, these incentives will be used to encourage and assist interested businesses that establish or expand recycling operations, use recycled materials, or produce waste-reducing products. Incentives will also be applied to promote:

- Reuse or recycling of materials used in commercial enterprise; and
- Proper disposal of non-recyclable wastes.

ONE SOLUTION CORNERSTONE: THE STATE PLAN

In the solid waste management solutions set forth by executive and legislative mandate, effective solid waste management must be founded on effective, formal planning, at both the state and local levels. To support a statewide effort, involving districts and local communities, HEA 1240 charges the Indiana Department of Environmental Management (IDEM) to develop and adopt a state plan by January 1, 1991. Figure 1-1 summarizes the schedule for state and district plan development.

According to HEA 1240, the Indiana Solid Waste Management Plan (State Plan) must be designed to fulfill a set of 20 year priorities:

- Establish voluntary goals for waste reduction at 35 percent reduction by 1996 and 50 percent reduction by 2001;
- Establish criteria for alternatives to final disposal, including recycling, composting, and the availability of markets for recovered materials;
- Establish general criteria for siting, constructing, operating and closing final disposal facilities; and

FIGURE 1-1

SOLID WASTE PLANNING GUIDE	
DATE	**ACTION**
March 20, 1990	HB 1240 signed into law
March 22, 1990	County solid waste planning fees may be charged.
June 30, 1990	Solid waste haulers must certify the origin of solid waste disposed of in or taken out of Indiana.
July 1, 1990	Recycling Promotion and Assistance Fund is established.
July 1, 1990 - January 1, 1993	Districts may apply to DEM for a planning loan.
September 1, 1990	Draft state solid waste management plan submitted to the EPC by DEM.
January 1, 1991	State solid waste management plan adopted.
January 1, 1991	State solid waste management fees imposed.
January 1, 1991	Districts must follow solid waste management plan model format provided by DEM.
July 1, 1991	Counties must form solid waste management districts.
January 1, 1992	Voluntary guidelines issued by Packaging Waste Reduction Task Force and Recycled Paper Task Force.
July 1, 1992	Districts must submit solid waste management plans to the DEM Commissioner for approval.
	State goals to reduce amount of solid waste incinerated and disposed of in landfills:
January 1, 1996	- by 35 percent.
January 1, 2001	- by 50 percent.
Date to be determined by Solid Waste Management Board.	Disposal of recyclable materials in a final disposal facility will be prohibited or restricted to the greatest extent practicable.

- Establish criteria and other elements to be considered in the adoption of district solid waste management plans.

Further, HEA 1240 stipulates that solid waste manangement methods that reduce the waste stream or recycle materials from the waste stream are preferred to final disposal methods, such as landfilling or incineration.

Finally, as stipulated in HEA 1240, the State Plan only addresses one part of the total Indiana waste stream - the municipal solid waste stream - solid wastes that can be legally disposed in sanitary landfills, as defined by state guidelines. This waste stream includes most of the solid wastes generated by individual households and commercial businesses, and some of the waste generated by industries. The Plan does not address wastes which are regulated as hazardous or infectious.

The Planning Process

Though HEA 1240 mandates a very strict schedule for adopting state and district level plans, the State recognizes that these plans are working documents. Especially during the first two years, the State expects changes and will work with districts as proposed policies and programs are investigated, clarified and adjusted to incorporate evolving data and events.

Further, the State is committed to keeping the planning and implementation process open to public scrutiny and influence. To pursue this commitment, the State works to keep the public informed and involved during the all phases of both the state and district plans. In keeping with its commitment, the State offers Indiana citizens direct access to information and technical assistance on different elements of solid waste management: from recycling to permits. The IDEM Hotline is open to all interested parties, during working hours.

IDEM HOTLINE: 1-800-451-6027

To ensure that the State Plan's success can be monitored and measured, the State has developed a preliminary schedule and budget. However, many of the details will be finalized during the first two years, the Early Implementation Phase. During the first two years, the State Plan is expected to change substantially, as policies and programs are adjusted and finalized. Further, many of the funding levels for some programs will not be known until late in 1991. To ensure that the schedule and budget reflect responsible projections, the State will update the schedule and budget as more specific targets for each program and funding stabilizes.

VOLUME I

CHAPTER 2

Background

THE HISTORY OF SOLID WASTE MANAGEMENT PLANNING IN INDIANA

Refer to Volume III of this Plan for more details on the following information.

NEW DIRECTIONS

Traditionally, solid waste management has meant disposing of trash in a landfill. More recently, the scope of solid waste management has expanded to include alternatives to conventional disposal such as recycling, composting, incineration and other, more experimental, options.

Though land disposal of solid waste must remain an important element of solid waste management, landfill capacity in Indiana, and nationwide, is dwindling. The option for final disposal through incineration has narrowed, due to concerns about cost and environmental impacts. New directions are needed to manage our solid waste future.

This change has been engendered by a number of factors: governmental action and public pressure for increased environmental protection; costs and availability of land for new landfills; requirements for more expensive and sophisticated landfill technology; and increasing amounts of waste.

Due to these factors, landfill capacity has become a scarce and expensive asset, which must be conserved for those wastes that cannot be managed in any other fashion. Methods to reduce waste are becoming routine elements of modern solid waste management strategies.

RECENT PROGRESS

Various federal and state laws, enacted over the last twenty-five years, clearly demarcate changes in waste management practices. Such legislation includes:

- **Indiana's Refuse Disposal Act of 1965:** The Act prohibits the open dumping of solid waste after January 1, 1971. This act spurred the development and use of sanitary landfills, now the predominant method of waste disposal in the state.

- **The Federal Resource Conservation and Recovery Act of 1976:** The Act mandates that all states develop individual solid waste management plans. The goal of the act was environmental protection and recovery of materials and energy.

Indiana responded to the RCRA with a state plan; however, loss of federal funding, coupled with the higher priority of hazardous waste clean-up prevented officials from putting the plan into effect.

- **Indiana's House Enrolled Act 1240 of 1990:** The Act mandates:
  - Developing a statewide solid waste management plan;
  - Creation of solid waste management districts by counties, established to develop local solid waste management plans; and
  - Applying preferred waste management methods to reduce the waste stream disposed at final disposal facilities.

  The Act also establishes voluntary guidelines to reduce the volume of solid waste disposed in final disposal facilities by 35 percent by 1996 and 50 percent by 2001.

In addition, several recently enacted laws have refined and clarified the State's goals and the State's role in solid waste management. These new laws address subjects such as training and certification of solid waste facility operators, governmental preferences for recycled products, tire and battery disposal rules, pollution prevention, and other matters related to how garbage is handled.

A later discussion, Recent Legislation, summarizes these new laws.

CURRENT STATUS OF INDIANA SOLID WASTE PROGRAMS AND FACILITIES

In early 1990, the Indiana Department of Environmental Management conducted a survey of existing collection, recycling, landfill, and incineration systems in Indiana. The findings of this study are outlined below.

Existing Solid Waste Disposal Facilities

- Permitted sanitary landfills, excluding solid fills, and ash and sludge disposal sites.
- Ten permitted ash disposal and monofill sites that specifically dispose of ash and/or scrubber sludge from coal or solid waste combustion, or sludge from municipal wastewater treatment.
- Seven permitted landfills (solid waste and restricted waste) on military reservations.
- Approximately 39 percent of the permitted solid waste disposal sites are publicly owned.
- Only 11 of Indiana's solid waste landfills have weigh scales to accurately record incoming trash flows.

- In 1989, 38 of the 79 permitted solid waste landfills did not submit required closure and post-closure plans to the state.
- Twelve percent of Indiana's landfills are 25 acres or smaller.
- There are two operating incinerators: one is permitted (Indianapolis); the second is currently operating without a permit (East Chicago), but the permit application is in process.
- Twenty-six of Indiana's 92 counties currently have no permitted solid waste facilities.
- Forty-five of the 79 existing landfills are projected to be closed before the end of this century.

Figure 2-1 shows the distribution of existing sanitary landfills and other permitted land disposal (restricted waste) sites.

Recycling Facilities and Activities

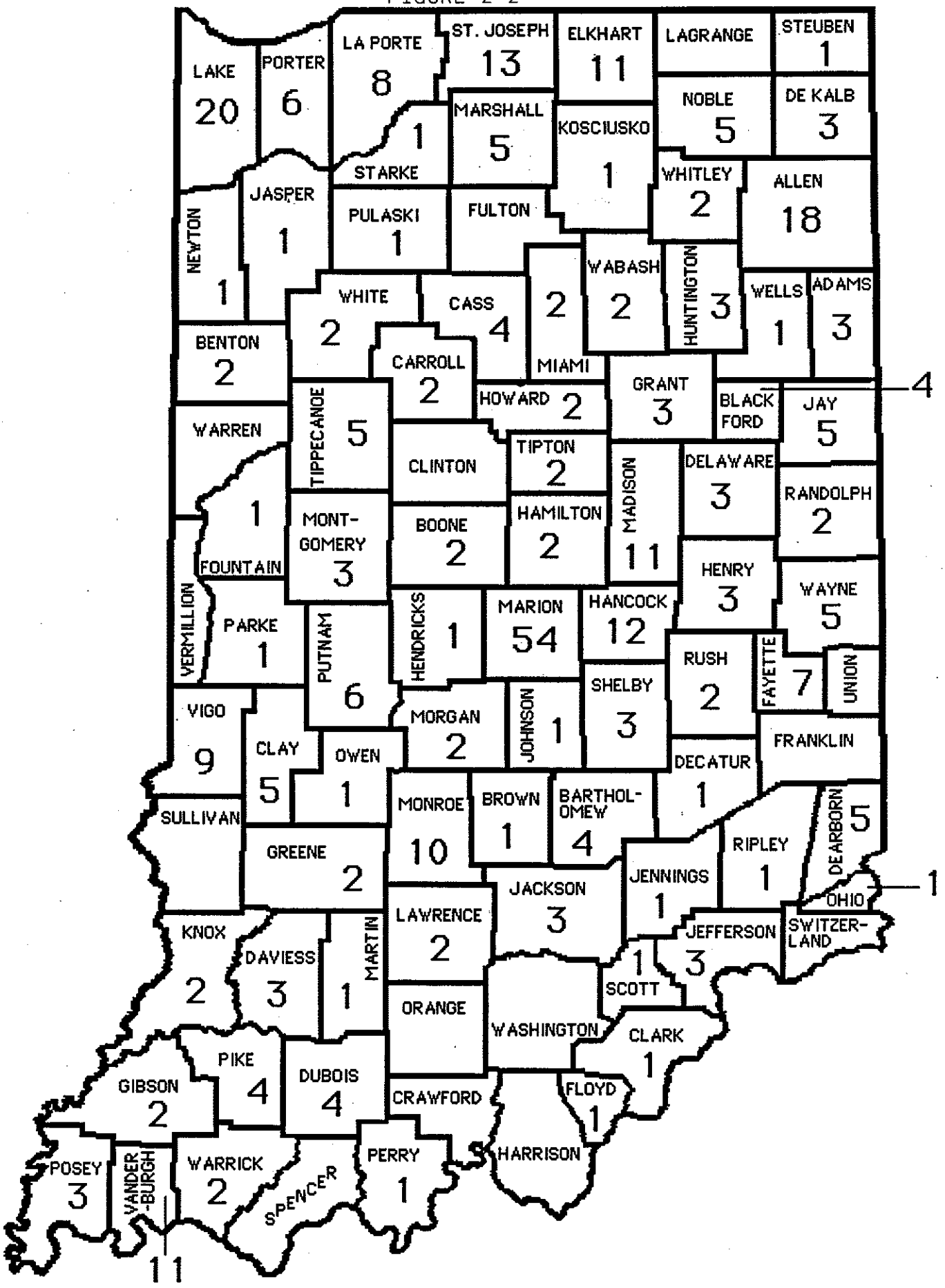
- There are over 400 (345) recycling facilities and programs of various kinds throughout the state, consisting mainly of drop-off or buy-back centers, processing facilities, and a few municipally run curbside recycling programs.
- Of Indiana's 92 counties, 78 reported some form of recycling activity or involvement.
- Twenty-nine communities in the state reported some organized recycling of aluminum, newspapers, plastics, tin, and white goods.
- Several of Indiana's transfer stations (see "Other Waste Management Facilities" below) also incorporate some form of material recovery for recycling in their operations.

Figure 2-2 illustrates the number and location by county of recycling facilities and programs identified in the survey.

Other Waste Management Facilities

- There are several small-scale composting operations either in operation or being planned in various communities.
- Indiana has 42 transfer stations.
- More than 200 private commercial incinerators operate in Indiana. All are small, privately owned commercial facilities serving hospitals, food markets, and animal shelters.

FIGURE 2-2


LAKE 20
PORTER 6
LA PORTE 8
ST. JOSEPH 13
ELKHART 11
LAGRANGE
STEUBEN 1
NOBLE 5
DE KALB 3
MARSHALL 5
KOSCIUSKO 1
STARKE 1
WHITLEY 2
ALLEN 18
JASPER 1
NEWTON 1
PULASKI 1
FULTON
WABASH 2
HUNTINGTON 3
WELLS 1
ADAMS 3
WHITE 2
CASS 4
2
BENTON 2
CARROLL 2
MIAMI
GRANT 3
BLACK FORD
JAY 5
4
WARREN
TIPPECANOE 5
HOWARD 2
TIPTON 2
CLINTON
DELAWARE 3
RANDOLPH 2
MADISON 11
1
FOUNTAIN
MONT-GOMERY 3
BOONE 2
HAMILTON 2
HENRY 3
WAYNE 5
VERMILLION
PARKE 1
PUTNAM 6
HENDRICKS 1
MARION 54
HANCOCK 12
RUSH 2
FAYETTE 7
UNION
VIGO 9
CLAY 5
OWEN 1
MORGAN 2
JOHNSON 1
SHELBY 3
FRANKLIN
DECATUR 1
SULLIVAN
GREENE 2
MONROE 10
BROWN 1
BARTHOL-OMEW 4
RIPLEY 1
DEARBORN 5
JENNINGS 1
JACKSON 3
1
OHIO
KNOX 2
DAVIESS 3
MARTIN 1
LAWRENCE 2
JEFFERSON 3
SWITZER-LAND
SCOTT 1
ORANGE
WASHINGTON
CLARK 1
PIKE 4
DUBOIS 4
GIBSON 2
CRAWFORD
FLOYD 1
POSEY 3
VANDER-BURGH
WARRICK 2
SPENCER
PERRY 1
HARRISON
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TRENDS IN SOLID WASTE MANAGEMENT

Final Disposal

Indiana has followed the national trend in terms of landfills: capacity is rapidly declining. In 1980, the state had approximately 150 permitted sanitary landfills for disposal of solid waste. Ten years later, the total number has decreased to 79, an attrition rate of approximately 50 percent. Although 22 requests for expansion permits have been filed in recent years, only one new landfill has been approved, along with expansions for several existing landfills.

Further, according to current projections, over one-half of Indiana's 79 disposal facilities will reach full capacity and close before the year 2000. If waste continues to flow into landfills at the current rate and no additional capacity is added, the state's remaining landfill capacity will last approximately seven to eight years.

Recycling

In 1988, the Indiana Department of Environmental Management (IDEM) identified 65 recycling facilities and programs in the state. In a follow-up survey in 1990, research revealed more than 345 - a dramatic increase in only two years. Likewise, the number of counties reporting recycling efforts jumped significantly, from 29 to 78. Governor Bayh's Recycling Grant Award Program helped to increase the number of recycling programs by awarding $300,000 in recycling grants to local communities in 1990.

In 1988 about five percent of the waste stream was diverted by recycling programs. No figures are available for 1990, but increased activity indicates that a larger percentage may now be recycled, and that there is sufficient public interest to warrant optimism about reaching the State's goals for solid waste reduction in the next ten years.

Role of Governments

The evolution of our waste management practices has had implications for government at both the state and the local level. Historically, local governments have had the greatest involvement with collection and disposal of solid waste generated within their jurisdictions. This role will expand, but local officials will be supported by a broadened role for state agencies. The State will increase its technical assistance and inter-jurisdictional coordination to ensure that local efforts produce statewide benefits. In addition, the State will work to support local efforts through the development of statewide networks. For example, the State is pursuing statewide market development to provide markets for locally collected recyclables.

Regional Systems

The formation of local districts, coupled with the rising costs of management and disposal, is likely to encourage the development of regional waste management systems throughout Indiana. Around the country, regional development and planning organizations are cooperating to share the cost and benefits of large-scale recycling or composting programs, transfer stations, and final disposal facilities.

RECENT LEGISLATION

Over the last two years, the over a dozen laws have been passed, refining and clarifying the state policy and regulations governing solid waste management in Indiana. These new laws govern a broad range of issues, including:

- State and local level planning;
- Education and technical assistance to promote disposal options;
- Landfill bans and other control mechanisms for recyclable materials and problem wastes;
- Permit restrictions on new or expanding landfills; and
- Training for waste management facility operators.

Figure 2-3 summarizes key elements of this legislation.

WHO MANAGES SOLID WASTE IN INDIANA?

Everybody is responsible for sound solid waste management throughout the state. However, each sector of society plays a unique role in the solid waste management system, and there are a number of government agencies and private sector enterprises that have responsibility for administration of different solid waste management systems and regulations.

CITIZENS

Each of us makes choices everyday related to solid waste: products we buy, things we throw away, materials we take to a recycling center.

Also, each of us can influence solid waste policy and planning by voicing our ideas and concerns to government representatives. Citizens have a role to play in developing district solid waste management plans by participating in public meetings and hearings and by communicating with elected officials or Solid Waste Citizen Advisory Committees in each district (see "Solid Waste Management Districts" under "Local Government" below).

FIGURE 2-3

INDIANA LEGISLATION AFFECTING SOLID WASTE MANAGEMENT
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Law	Provision	Options Affected	Responsibility Level
HEA1472 1990 (P.L.109-1990)	• Demonstrate need for solid waste management facility (see HEA1240, Art 9.5, Section 13 [p11] for definition).	LF, INCIN, PF	State
	• Licensing, inspection, and manifesting of municipal waste transportation vehicles - excluding those transporting recyclables - facilities may not accept unlicensed, unmanifested waste. Processors must manifest waste sent out.	LF INCIN PF	State Local
	• Good character requirements for solid waste facility operators.	LF, INCIN, PF	State
HEA1414 1990 (P.L.108-1990)	• Training and certification requirements for solid waste management facility operators.	LF INCIN, PF, MRF Compost Special-HHW	State
HEA1391 1990 (P.L.19-1990)	• Procurement preferences to supplies with at least 50% recycled content, purchase cost of recycled portion is at least 50% of production cost, or other percentage IDEM determines.	Source Red Recycling	State
	• Lead-acid battery recycling - prohibits disposal in conventional landfills, requires retailers to accept old batteries.	Recycling/ Problem	Local State
	• Information clearinghouse on source separation, recycling compost, hazardous and solid waste min/reduction (defined).	All	State
	• Establishes requirements for permits to central processing and transfer facilities.	LF, INCIN, PF	State
	• Tires - exempts recyclers and recycler suppliers from waste tire storage permit if less than 1,000 tires are stored inside. Establishes waste tire management fund and task force.	Recycling/ Problem	State

Source Red = source reduction
INCIN = incineration
LF = landfills
MRF = materials recovery facility
PF = processing facilities
Problem = problem waste management programs/facilities

(dj/412)

FIGURE 2-3

INDIANA LEGISLATION AFFECTING SOLID WASTE MANAGEMENT
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Law	Provision	Options Affected	Responsibility Level
HEA1240 (P.L. 10-1990)	• Encourages projects to create markets and products made from recycled materials.	Recycling	State
	• Establishes Recycling Promotion and Assistance Fund.	Recycling	
	• Establishes source reduction and recycling preferred over incineration and landfill.	Recycling Source Red	State
	• Establishes state/district waste reduction goal of 35% by 1995, 50% by 2000.	LF, INCIN	
	• Establishes recycling education programs.	Recyling	State
	• Establishes packaging/waste reduction task force.		
	• Establishes paper recycling task force.		
	• Haulers must certify waste origin.	LF INCIN	State
	• Solid Waste Management Board may ban or restrict recyclables from final disposal.		State
	• Counties must form solid waste management districts.	All	District
	• IDEM must develop state solid waste plan and model format.	All	State
	• District must develop solid waste plans.	All	District
	• Establishes state solid waste management fund for programs to promote recycling.	Recycling	State
	• Imposes $.50/ton fees on waste disposal.	LF, INCIN	State
	• Provides loans for developing district plans.	All	State
	• Sets deadlines for accomplishing goals.	All	State District
HEA1106 1990 (P.L.105-1990)	• Establishes pollution prevention entities to disseminate information, collect data, and award grants. Develop policies and programs to reduce generation of municipal wastes, including hazardous waste and reduce toxic material in consumer products. May need federal reporting and permitting authority under US Solid Waste Disposal Act. "Programs shall not discourage environmentally sound recycling . . . for pollution that has not been prevented."	All	State

Source Red = source reduction
INCIN = incineration
LF = landfills
MRF = materials recovery facility
PF = processing facilities
Problem = problem waste management programs/facilities

(dj/412)

FIGURE 2-3

INDIANA LEGISLATION AFFECTING SOLID WASTE MANAGEMENT

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Law	Provision	Options Affected	Responsibility Level
HEA1030 1990 (P.L.70-1990)	• Statute requires commissioner to designate ten landfill inspectors.	LF/PF	State
	• Requires longer closure and post-closure financial responsibility for landfill and transfer station permit holders.	LF/PF	State
	• Prohibits trucks transporting solid waste from back hauling food within 15 days unless properly sanitized.		State
HEA1926 1989 (P.L.167-1989)	• Establishes Indiana Institute on Recycling to develop concepts, methods, and procedures for assisting in solid waste recycling.	Recycling	State
*HEA1310 1989 (P.L.326-1989)	• Establishes "solid waste separation and recycling fund." (Passed but not funded.)	Recycling	State
SEA430 1989 (P.L.31-1989)	• Requires state agencies and colleges to purchase degradable plastic disposables if available and economically appropriate.	Source Red Recycling LF	State
SEA415 1989 (P.L.30-1989)	• Requires state agencies and colleges to collect and recycle paper. Revenues to promote waste reduction programs.	Source Red Recycling LF	State
SEA219 (P.L.165-1989)	• Requires material coding of plastic containers.	Recycling	State

*Act expires 7/1/91

Source Red = source reduction
INCIN = incineration
LF = landfills
MRF = materials recovery facility
PF = processing facilities
Problem = problem waste management programs/facilities

(dj/412)

BUSINESS AND INDUSTRY

Solid waste collection, hauling, and disposal are often handled by the private sector as for-profit ventures. Many of the proposed State Plan initiatives will have direct impacts on these parties - sometimes offering new opportunities and sometimes changing the requirements and costs for doing business in Indiana.

In addition, some private enterprises haul their own wastes and some have landfills known as "captive sites" - disposal facilities which are dedicated to wastes generated by that particular industry. These captive sites are subject to all state and federal regulations governing landfills, but are exempt from the solid waste management planning process being undertaken as a result of HEA 1240.

LOCAL GOVERNMENT

Although federal and state governments have promulgated regulations covering solid waste facility design and operation, the primary responsibility for solid waste management systems has traditionally fallen to local governments. Local government agencies often own and operate solid waste facilities and programs. In addition, counties and/or municipal governments have the authority to require that all solid waste disposal systems within their jurisdictions be subject to local government approval.

Zoning and Siting

In Indiana, local governments are responsible for zoning, and therefore, have the primary role in siting final disposal facilities. Zoning laws vary among local governments; some have no laws, while others have specific ordinances governing solid waste disposal facilities.

Those local governments without zoning laws are vulnerable to outside enterprises siting landfills in their area without local approval. When zoning laws are in place, potential solid waste management facilities must meet these laws before applying to the State for a solid waste permit.

In some cases, counties require a "special exception" to site a landfill or equivalent facility. The procedure to obtain such exceptions will vary from county to county, so interested parties need to contact zoning departments or other responsible agencies within their jurisdictions for detailed information.

Siting may also be influenced by local rules that have been developed to tighten existing state and federal regulations. Such rules may require review by local engineering and planning departments. County health departments may also require inspection and permitting of solid waste management facilities.

SOLID WASTE MANAGEMENT DISTRICTS

Formation of solid waste management districts, comprised of one or more counties, is required by HEA 1240. Their basic mandate is to develop and implement district solid waste management plans. The districts are to be formed no later than July 1, 1991, and they will be governed by boards of directors made up of local government officials.

Districts must develop plans within guidelines provided by the state; these plans are to be submitted to the Indiana Department of Environmental Management for review and approval by July 1, 1992. (See Volume II, District Format.)

Districts are granted broad authority by HEA 1240. They are directed to "do all things necessary for the reduction, management and disposal of solid waste and recovery of waste products from the waste stream." To that end they may impose user fees, borrow money, accept gifts and grants, levy taxes and issue bonds. However, districts do not have the power of eminent domain, nor are they permitted exclusive control of collection or disposal of solid waste within a district flow control. Further, they may not impose different operating requirements or fees on publicly and privately owned facilities, nor may they impose fees on captive disposal facilities.

For further detail, refer to Chapter 5 of this document.

STATE GOVERNMENT

In the past, state level responsibility for solid waste management has focused on enforcement of federal and state regulations. The traditional role of state government in solid waste management has included:

- Statewide planning for solid waste management;
- Permitting and inspecting facilities, according to state and federal regulatory requirements;
- Enforcing rules on illegal dumping and burning; and
- Providing technical assistance on recycling and composting.

Recently, state responsibilities have been expanded to encompass more technical assistance to local governments and districts, and to business and industry. The State is also undertaking statewide education programs for the general public.

The various state organizations and their respective roles in solid waste management are listed below.

Executive Branch and the State Legislature

By executive and legislative mandate (see detailed summary in Chapter 1), the Executive Branch and the Indiana Legislature have worked together in recent years to set the course for state and local solid waste management.

The Legislature has also established a group to consider the state's long-term needs and evaluate its environmental programs - the Environmental Policy Commission. The Commission advises the legislative branch on environmental policy matters, and will be responsible for reviewing the State Plan every five years.

State Agencies

A number of state agencies share responsibilities related to solid waste management, including:

- **Department of Environmental Management:** This is the central organization for developing and administering the State Plan. IDEM's responsibilities include:

  - Enforcing solid waste management regulations;
  - Coordinating with local districts to provide technical assistance on district plans and inter-district communications;
  - Coordinating statewide education programs on solid waste issues and management methods;
  - Coordinating with other state agencies on in-house solid waste projects;
  - Working through the Solid Waste Management Board to promulgate new rules;
  - Working with the executive branch and the state legislature to develop new legislation; and
  - Coordinating with the Environmental Policy Commission to review and update the State Plan.

  Various tasks related to solid waste management are divided between technical and policy staff, as well as a number of advisory and administrative bodies including:

  - The Solid Waste Management Board;
  - The Office of Solid and Hazardous Waste Management;

- The Office of Air Management;
- The Office of Water Management; and
- The Office of Pollution Prevention and Technical Assistance (created in 1990).

- **Department of Commerce:** Concentrates on market development and economic development issues related to solid waste management. HEA 1240 changed the Energy Development Board to the Recycling and Energy Development Board, which is responsible for administering a Recycling Promotion and Assistance Fund.

- **Department of Administration:** Responsible to implement state procurement policies and administer office recycling programs in the state offices.

- **Department of Education:** Coordinates with IDEM in developing and distributing solid waste management information through a K-12 curricula.

- **Department of Natural Resources:** In addition to managing solid waste within the parks system, including landscape waste collection centers and mulching programs, the Department administers regulations regarding landfill siting above or near underground mines, disposal of mining waste and coal ash, and protection of fragile environments and native species.

- **Department of Transportation:** Coordinate with IDEM for promoting use of recycled materials in transportation projects.

- **Department of Corrections:** Mandated by HEA 1240 to investigate the feasibility of training and using prison labor for recycling efforts.

- **Corporation for Science and Technology:** The Corporation is directed, under HEA 1240, to consider programs involving creation of markets for recycled materials and new products manufactured from recycled materials.

- **Board of Health:** The Board coordinates with IDEM inspectors to regulate landfilling of infectious waste, including inspection of baled waste at landfills.

- **All State Agencies:**

  IDEM coordinates with all state agencies to encourage in-house waste reduction/recycling programs related to:

  - Office equipment procurement guidelines; and
  - Office recycling.

VOLUME I

CHAPTER 3

The State Plan - An Overview

ONE CORNERSTONE TO THE INDIANA SOLUTION

In business, "planning" is a basic precept of "management." In the solid waste management solutions set forth by executive and legislative mandate, effective solid waste management must also be founded on effective, formal planning, at both the state and local levels.

HEA 1240 mandates the formation of single or multi-county solid waste management districts and places responsibility for guidance, review, and coordination on the state.

To support this statewide effort, HEA 1240 charges the Indiana Department of Environmental Management (IDEM) to develop and adopt a state plan by January 1, 1991. Prior to adoption, a draft plan must be submitted to the Environmental Policy Commission (EPC) for review.

According to HEA 1240, the Indiana Solid Waste Management Plan (State Plan) must be designed to fulfill a set of 20 year priorities:

- Establish voluntary goals for waste reduction at 35 percent reduction by 1996 and 50 percent reduction by 2001;
- Establish criteria for alternatives to final disposal, including recycling, composting, and the availability of markets for recovered materials;
- Establish general criteria for siting, constructing, operating and closing final disposal facilities; and
- Establish criteria and other elements to be considered in the adoption of district solid waste management plans.

Further, HEA 1240 stipulates that solid waste manangement methods that reduce the waste stream or recycle materials from the waste stream are preferred to final disposal methods, such as landfilling or incineration.

POLICY APPROACH

The State Plan is designed to address the problems of Indiana's dwindling disposal capacity through serious efforts to reduce the amount of waste being disposed of in Indiana and through the carefully planned siting of new disposal facilities. Even when much of the waste stream is recycled, there will always be a fraction of the waste that must be disposed at final disposal facilities.

Further, the commitment to strong reduction goals is balanced with the need to proceed prudently. The State Plan is designed to be flexible, allowing time to:

- Weigh the impact of each policy before it is adopted;
- Phase in dramatic changes, using reasonable timelines and effective communication with affected communities and businesses;
- Help new recyclables markets to grow with the new supply of recovered recyclables; and
- Adjust legislated policy and funding allocations, as needed to ensure Plan success.

For further detail, refer to the later discussion on Scheduling and Funding,

Finally, the State is committed to working closely with local governments and citizens to ensure that new strategies and requirements are feasible when local and state resources are combined. The State Plan is designed with open-ended policies to support district efforts, rather than dictate or mandate district activities.

THE PLANNING PROCESS AND PUBLIC INVOLVEMENT

Though HEA 1240 mandates a very strict schedule for adopting state and district level plans, the State recognizes that these plans are working documents. Especially during the first five years, the State expects changes and will work with districts as proposed policies and programs are investigated, clarified and adjusted to incorporate evolving data and events.

Further, the State is committed to keeping the planning and implementation process open to public scrutiny and influence. To pursue this commitment, the State will work to keep the public informed and involved during all the phases of both the state and district plans.

Planning Schedule

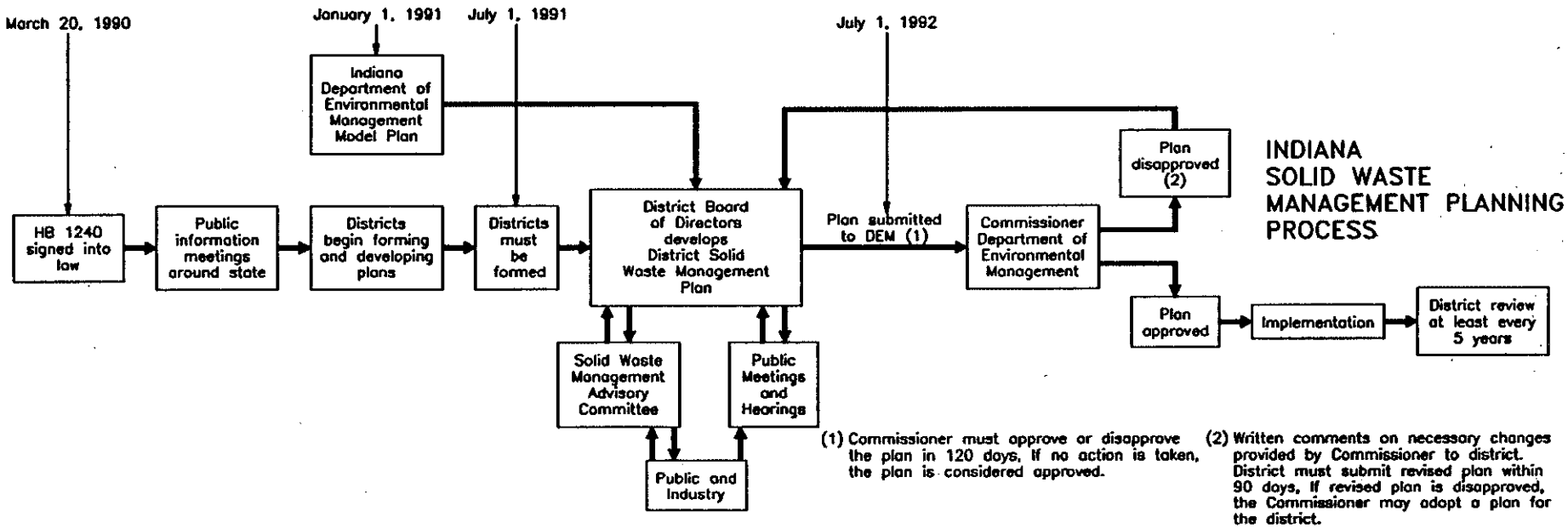
The formal schedule and planning process are summarized on the next page in Figure 3-1 and requires that the State Plan be adopted by January 1, 1991. District plans must be adopted and submitted to IDEM by July 1, 1992.

IDEM Hotline

In keeping with its commitment to an open process, the State offers Indiana citizens direct access to information and technical assistance on different elements of solid waste management: from recycling to permits. The IDEM Hotline is open to all interested parties, during working hours.

IDEM HOTLINE: 1-800-451-6027

FIGURE 3-1


March 20, 1990
January 1, 1991
July 1, 1991
July 1, 1992
Indiana Department of Environmental Management Model Plan
HB 1240 signed into law
Public information meetings around state
Districts begin forming and developing plans
Districts must be formed
District Board of Directors develops District Solid Waste Management Plan
Plan submitted to DEM (1)
Commissioner Department of Environmental Management
Plan disapproved (2)
Plan approved
Implementation
District review at least every 5 years
Solid Waste Management Advisory Committee
Public Meetings and Hearings
Public and Industry
INDIANA SOLID WASTE MANAGEMENT PLANNING PROCESS
(1) Commissioner must approve or disapprove the plan in 120 days. If no action is taken, the plan is considered approved.
(2) Written comments on necessary changes provided by Commissioner to district. District must submit revised plan within 90 days. If revised plan is disapproved, the Commissioner may adopt a plan for the district.

Public Involvement: State Plan

In addition to the IDEM Hotline, the State has designed its own planning process to keep information flowing between State representatives and interested officials and citizens. Rather than waiting to get public comments on a finished document, the planning process was designed to invite public comment at the very start and through out the Plan's drafting and implementation.

To get started, the State sponsored two rounds of public meetings to register public perspectives and ideas on how the Plan could best serve Indiana. During the first month of planning, May, 1990, the State sponsored sixteen public meetings around Indiana, asking for opinions on what solid waste issues are most important, which solid waste management alternatives will work the best and how the State can best serve the new solid waste management districts.

Based on the public comments and the requirements of HEA1240 and other recent legislation (see next discussion), the State developed a Working Draft for the State Plan and submitted it for public review at a second series of statewide meetings in July, 1990. The second meeting series was advertised through mailings to local officials and the register of attendees from the first sixteen meetings. The follow-up meetings were held in six cities around Indiana. A summary of the public comments from both meeting series was sent to each registered meeting attendee. A copy of the summaries is included in Volume III.

As the State Plan underwent the EPC review and approached final adoption, a copy of the final draft was made available at central libraries in each county. This system was adopted, based on comments from the public meetings. Notice of the library postings was sent to all elected officials and all registered attendees of the public meetings.

As the adopted State Plan evolves over time and conditions around Indiana change, the State recognizes that on-going public perspective and assistance are critical to the success of this far-reaching strategy. As such, the State will continue to use its general education outreach to keep Indiana citizens and officials informed of the Plan's progress and changes. Copies of the Plan are posted at central libraries in each county and updated on a regular basis.

The State will also keep it clear how citizens can stay involved; how to view updates on program progress and how to make suggestions for improvements and course changes. For more detail, see the section in this chapter titled, Implementation: EPC and Public Review.

Public Involvement: District Formation and District Plans

Public involvement is also an important part of establishing districts and developing and implementing district plans. HEA 1240 mandates that districts hold:

- At least one public meeting to receive public comments on a district plan before it is finalized; and

- One public hearing to present a proposed final plan and register formal public comment before the plan is adopted by the district board.

However, the success of any district will depend in large part on the support and cooperation of area citizens and businesses. To ensure that each district's strategies are successful, the State recommends that districts keep the public informed and involved from the very beginning and throughout the implementation of district plans. This will be especially important during the development and siting of facilities.

To ensure that the public can be effective partners in district formation and planning, the State recommends that districts:

- Pursue public input for District formation decisions. Whether county forms a single county district or joins with other counties is a major decision which is best made with constructive comments from affected citizens;

- Expand the role of the advisory committee to include consultations during the implementation and operation periods; and

- Schedule additional public meetings to discuss the plan and get public comments throughout the planning and implementation periods.

STATUTORY REQUIREMENTS/RELATED REGULATION

To support the State Plan, HEA 1240 and related legislation clarify state policy; tighten current regulations and create assistance resources. Following is an overview of generally applicable requirements; however, more specific elements of each law are cited in the State Action Plan, under the appropriate action program (e.g.: source reduction, recycling, etc.). The document is designed this way to ensure that a reader can receive adequate information on a topic of interest, without reading the entire document.

HEA 1240 (PL 10-1990)

- Establishes a State policy "that source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods". Incineration and landfill are defined as final disposal options.

- Establishes a preferred solid waste management strategy which emphasizes use of source reduction, recycling and composting methods to reduce the waste stream before it is disposed in final disposal facilities (landfills and incinerators).

- Requires IDEM, with the cooperation of other state agencies, to provide education on the benefits of solid waste recycling and source reduction.

- Creates task forces on packaging/source reduction and recycling paper to help accomplish goals.

- Expands the Indiana Energy Development Board to include recycling and changes the group's name to the **Indiana Recycling and Energy Development Board.** This board administers the **Recycling Assistance and Promotions Fund**, created to support economic development through recycling businesses (see funding discussions below).

- Emphasizes local control by mandating creation of solid waste management districts, each of which will be made up of one or more counties. Empowers districts to engage in all facets of developing, operating and financing solid waste management programs and facilities, including setting disposal and user fees to pay for services.

- Requires each district to develop a 20-year solid waste management plan for its area. Plans must be submitted to IDEM for review and approval by July 1, 1992.

- Stipulates that districts will be governed by a board of directors made up of local government officials. The board must appoint a solid waste management advisory committee to ensure public and private sector views are considered in planning efforts.

HEA 1106 (PL 105-1990)

- Establishing an IDEM Office of Pollution Prevention and Technical Assistance. This office is to disseminate information, collect data, sponsor pilot projects, and award grants to develop techniques and programs for preventing pollution. Specifies solid waste management as a target issue.

- Mandates the IDEM commissioner to "develop policies and programs to reduce the generation of municipal wastes . . . ." It further authorizes the commissioner to create uniform pollution prevention standards and reporting and permitting requirements, seeking authority if necessary from USEPA and existing federal pollution control laws, including the federal Solid Waste Disposal Act.

- Authorizes establishment of a Pollution Prevention and Safe Materials Institute within an Indiana university or not-for-profit corporation. The Institute shall provide curriculum and training, perform R&D, and work with business on planning and measuring pollution prevention programs.

HEA 1391 (PL 19-1990)

- Stipulates that the commissioner set up an information clearinghouse on source reduction - including composting, separation and recycling, and minimization of hazardous waste.

- Stipulates that IDEM will develop a set of requirements for issuance of permits to build and operate a solid waste management facility. The act defines "facility" as "a structure . . . used for the disposal, storage, recovery, processing, or transferring of solid waste . . ."

HEA 1414 (PL 108-1990)

- Calls for training and certification programs for operators of permitted solid waste management facilities " . . . whose operation could have an adverse impact on the environment, if not operated properly."

HEA 1472 (PL 109-1990)

- Requires that local need for a solid waste management facility be demonstrated. A rule stating this requirement has been adopted by the Solid Waste Management Board as Rule 329IAC2-8.

- Stipulates a set of "good character" requirements that must be met by parties applying for permits on new or expanded solid waste management facilities.

- Requires IDEM to operate a municipal waste collection and transportation vehicle licensing and inspection program.

PLANNING: PLAN SCOPE AND STRUCTURE

SCOPE

As stipulated in HEA 1240, the State Plan addresses the municipal solid waste stream - solid wastes that can be legally disposed in Class I sanitary landfills, as defined by state guidelines. This waste stream includes most of the solid wastes generated by individual households and commercial businesses, and some of the waste generated by industries.

Currently, federal and state regulations allow household hazardous wastes and conditionally exempt quantities of hazardous waste to be disposed in Class I facilities and these wastes are included in the targeted waste stream. The Plan does not address the management of wastes which are banned from Class I facilities and/or regulated as non-exempt hazardous wastes or infectious waste. It also excludes management of diminimus quantities of low-level radioactive waste.

Further, HEA 1240 mandates formation of single or multi-county solid waste management districts and stipulates that the State Plan will incorporate guidelines and other technical assistance to support development of 20-year district plans. While this mandate excludes Marion County from the planning process, it does not exclude Marion County from the reduction/recycling goals, which all Indiana communities will be expected to meet.

Finally, HEA 1240 stipulates that the district will address waste management at "captive sites", final disposal facilities owned and operated by private companies and dedicated to wastes generated by that company. However, these sites are subject to the State or District Solid Waste Management Fees.

STRUCTURE

The State Plan is organized into three volumes.

- Volume I: Policy Summary
- Volume II: District Solid Waste Management Plan Format
- Volume III: Technical Guide

Volume I: Policy Summary

Volume I briefly reviews the background for the State Plan and details policies for both state agencies and local solid waste management districts. State and local policy discussions are organized as action plans for each level of government.

The State Action Plan is presented in the next chapter, Chapter 4, and details specific actions that the State will pursue to:

- Reduce the waste stream generated by state agencies;
- Support districts as they pursue their 20-year plans;
- Coordinate with districts to achieve the State waste reduction/recycling goals;
- Identify and develop markets for recyclables; and
- Develop additional legislation and regulations, as needed, to support the State's efforts.

The Action Plan is described as a set of separate programs (e.g.: recycling, landfilling, waste tire management, etc.). Each program is detailed with a set of specific statutory requirements and actions targeted to that aspect of solid waste management. Based on this approach, readers can scan the document for topics of particular interest without missing the context for each program.

The District Action Plan is presented in Chapter 5, setting forth tools and frameworks to help districts craft 20-year solid waste management plans that are appropriate to local needs and compliment statewide efforts. Without prescribing the methods districts must employ, the District Action Plan does establish planning guidelines, considering such factors as:

- District planning and reporting procedures;
- Local priorities for achieving the voluntary source reduction goals;
- Evaluating waste management alternatives to pursue those priorities;
- Development of new programs; and
- Siting and development of new facilities.

Volume II: The District Solid Waste Management Plan Format

Volume II complements the District Action Plan with a step-by-step solid waste management plan format. The format is provided as a guide for local districts as they develop district solid waste management plans. Designed to be self-guided, the format features a two-page layout that directs the reader through each plan component.

Volume III: Technical Guide

Volume III provides more detailed technical background on different solid waste management methods and planning issues, as well as information on the history of solid waste management in Indiana. It is geared to state leel considerations and does not include detailed analyses.

While the guide does contain a great deal of information that will be of interest to district level planners, it is not intended to serve as a comprehensive tutoring resource on district level planning. To better assist district planners, IDEM supplements the State Plan with additional technical assistance documents and staff support.

IMPLEMENTATION: SCHEDULING

To help ensure and measure success, the State Plan will be structured with deadlines and planning windows. However, many of these windows and deadlines will be finalized during the first two years, the Early Implementation Phase.

This does not mean that the State will not be accountable for progress on the Plan. Rather, the Early Implementation Phase, recognizes that the Plan will change considerably as policies and programs are initially evaluated, finalized and phased-in. Further, the Early Implementation Phase, establishes a commitment to complete and report on these early efforts, within a two year window.

During this early phase, the State will take very specific actions, while preparing for new initiatives. The new rules, mandated in recent laws, will be promulgated in the first two years and IDEM will launch an extensive education and technical assistance program. Budgets for this education campaign were prepared in 1990, as part of the budget request for the new Office of Pollution Prevention and Technical Assistance. The Office was established under HEA 1106.

In pursuing other State Plan initiatives, the State will use the Early Implementation Phase to evaluate and finalize policies and programs, and their related implementation schedules. These initiatives will evaluated based on factors such as:

- The cost of each approach, relative to that approach's impact on the waste reduction goals.

- The potential effects of each approach on other state conservation and pollution prevention goals. For example, landfill bans can increase illegal dumping and some recycling processes produce hazardous by-products or use more net energy than virgin product processes.

- The potential conflicts with other laws or changing federal regulation.

- The need for additional legislation and/or funding sources.

IMPLEMENTATION: ENVIRONMENTAL POLICY COMMISSION AND PUBLIC REVIEW

To further ensure and measure success, the State Plan provides opportunities for both the state legislature's Environmental Policy Commission (EPC) and public oversight as the plan evolves and policies or programs are implemented.

Each year, the State Plan will be updated to reflect evolving policies and programs. The updated version will be submitted to the EPC for review at the beginning of each fiscal year.

The State Plan also provides for public review and comment on the evolving policies and programs through an open update process. A copy of the State Plan will be posted at a central public library in each county. An additional copy will be provided to each Board of County Commissioners or to districts.

Every 12 months, IDEM will distribute updates to the counties and participating libraries. The updates will be produced as inserts and page replacements, featuring redlined text for each affected section.

Amendments will reflect:

- New planning windows and deadlines;

- The status of state education and assistance programs;

- Newly adopted rules or legislation affecting solid waste management in Indiana;

- Changes in district guidelines; and

- The status of state funding sources.

Following the update process, IDEM will invite written public comments on the changes for a period of 60 days.

The update and comment process will be announced through a mass mailing to all parties listed on the State Plan mailing list. Names and addresses can be submitted to Solid Waste Management Plan mailing list by calling the IDEM Hotline:

1-800-451-6027

IMPLEMENTATION: BUDGETS AND FUNDS

A STATE PLAN BUDGET

The State recognizes that, to succeed, State Plan initiatives must be adequately financed and expenditures must be carefully monitored. Careful budgeting and cost monitoring will enhance the State's efficiency and accountability for plan progress.

As described above, IDEM is scheduled to complete a formal budget as part of the State Plan's Early Implementation Phase. A preliminary budget is included in the Plan; however, during the first two years, the State Plan is expected to change substantially, as policies and programs are adjusted and finalized. Further, many of the funding levels for some programs will not be known until late in 1991. To ensure that the budget reflects responsible projections, the State will produce the Plan's budget as each program and fund stabilizes.

FUNDING STATE PLAN PROGRAMS

Many State Plan programs and initiatives will be implemented as part of the daily responsibilities of existing state agency staff and will not require additional funding. However, if adopted, many of the initiatives being investigated under the State Plan would call for increased investment in all or some of the following program elements: enforcement officials or technical assistance specialists; production of education and technical assistance materials; media and other educational outreach strategies; state agency recycling programs and procurement policies; or regional facility development.

Two sources are designated for additional funds to cover the costs of programs under the State Plan: Solid Waste Management Fund (SWM Fund) and the state general fund.

Under HEA 1240, the state will levy SWM Fees on waste disposed at in-state landfills. At a rate of $0.50 per ton, the SWM Fees are estimated to generate over two million dollars for the SWM Fund, each year. In turn, the Fund can be applied to meeting source reduction and recycling goals at the local level, as well as the Recycling Promotion and Assistance Fund (see below).

In addition, the State Plan calls for the State to investigate sources of additional funding. Options to be considered include an increase in the State

Solid Waste Management Fees (see below) or avoided disposal fees (ADF) which are applied as a per purchase fees on specified items. Such funding mechanisms are proposed to develop targeted funds, designated to help the State manage a specific type of problem waste.

FUNDING DISTRICT AND PRIVATE SECTOR INITIATIVE

Some of the HEA 1240 funds will be managed as state-administered grants or loans, earmarked to:

- Support district level planning and plan implementation; and
- Promote new recycling programs and businesses.

In addition, HEA 1240 gives districts the power to generate their own funds for planning or facility development. The following figure summarizes available funding sources.

Funds to cover costs for State Plan programs are designated to come from:

FIGURE 3-2

Funding Source	Designated Fund	Designated Applications
State SWM Fees (effect: 1.1.91)	State Solid Waste Management Fund	• State Plan programs • Recycling Promotion and Assistance Fund
Funding Source	**Designated Fund**	**Designated Applications**
State general fund	Additional IDEM budget allocation	Costs for the new Office of Pollution Prevention and Technical Assistance and general State Plan implementation
County SW Planning Fees (avail: 3/22/90, until County joins district or 12/31/92	County SW Planning Fund (fee to be determined by each county)	County costs to develop district plan

FIGURE 3-2 (Continued)

State general funds; gifts; donations (avail: 7/1/90 through 1/1/93)	District Planning Revolving Loan Fund	Up to $20,000 available per county in the district
District Final Disposal Fees (avail: 1/1/92	District SWM Fund	Planning and program costs for district
User Fees	District SWM Funds	Funds can be applied at district's discretion for related capital and maintenance costs
Waste Management District Bonds	District SWM Funds	Discretionary district funds - payable from special property fee
Revenue Bonds	Facility financing package	Applied to finance new facility - payable only from pledged revenues from that facility

VOLUME I

CHAPTER 4

State Action Plan

THE PLAN FOR STATE-LEVEL ACTION

OVERALL OBJECTIVES OF STATE LEVEL ACTIONS

As designed, the State Plan requires state agencies to assume a proactive role, undertaking direct actions to:

- Reduce the waste stream generated by state agencies;
- Reduce the waste stream generated by individuals, businesses, industries and institutions throughout Indiana;
- Identify and develop markets for recyclables;
- Support districts as they pursue their solid waste management plans;
- Coordinate with districts to achieve the State waste reduction/recycling goals; and
- Develop additional legislation and regulations, as needed, to support State Plan initiatives.

APPROACH

To achieve these objectives, the plan for State-level action involves programs and policies which provide either:

- General support for statewide efforts;
- General support for state agency initiatives; or
- Targeted support, designed to address a specific waste management challenge.

General Support

The State will develop comprehensive public education and technical assistance programs to inform all Indiana citizens about the state's solid waste management problems; the advantages and disadvantages of different solid waste management solutions; and the role of each person, business and institution in applying those solutions.

These programs will be available to districts, institutions, industries, businesses and the general public and will focus on promoting solutions which involve everyone and incorporate a mix of solid waste management methods. As part of its technical assistance programs, the State will coordinate with all districts to promote inter-district communications and ensure that combined efforts achieve the State's waste reduction and recycling goals.

The State will further its own commitment to sound solid waste management by promoting employee and agency programs for waste reduction and office recycling. Key elements include inter-agency cooperation, a pervasive network of educational programs and technical assistance for agencies pursuing procurement and materials salvage policies.

In addition, the State will work to identify and develop a statewide network of new markets for recyclable waste materials and will consider developing a network of regional facilities to assist with transporting or processing waste materials.

Finally, the State will provide general support by monitoring and sponsoring research into new waste management technologies.

Targeted Support

To promote comprehensive solid waste management solutions, the State Plan identifies specific policies and programs, targeted to encourage effective use of different solid waste management methods, such as source reduction, recycling, composting, final disposal - landfilling or incineration. Refer to Volume III, Technical Guide, for detailed discussions on each option.

Additional State actions are targeted to address specific Problem Wastes - waste materials which have been identified as problematic, due to excessive volume and/or toxicity. A technical paper in Volume III, Technical Guide, details issues and policy options related to some of the most problematic waste materials.

Finally, the State continues its commitment to control the flow and content of out-of-state waste through all available means.

The "tools" used in this targeted campaign include:

- Governor Bayh's testimony before Congress on controlling out-of-state waste;
- Targeted education and technical assistance for individuals, businesses and institutions;
- Proactive, in-house programs for state agencies;
- Market development to support recycling and use of composted products;

- Regional facility development or promotion;
- New solid waste management rules or legislation, as appropriate to reinforce safe, sustainable solid waste management practices;
- Vigorous enforcement of related solid waste management regulations, including strong penalties for violators and tight scrutiny of permit applicants for new waste management facilities;
- Additional funding sources to support specific programs; and
- Guidelines and requirements for local districts to follow in developing plans that fit into a comprehensive, statewide system.

As part of this effort, the State continues to work to enhance and streamline the permitting process for new facilities, without compromising the quality of its technical review and rules enforcement. Refer to Volume III, Technical Guide, for a summary of the State permitting process.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/REGULATIONS

All of the new laws described in Chapter 2 affect the State Action Plan and its component programs. However, the following laws have a broad effect on the action plan initiatives.

Later discussions on individual action programs refer to additional sections of these laws, which are specifically targeted to each aspect of solid waste management (e.g.: recycling, landfilling, waste tire management, et cetera). The State Action Plan is designed in this fashion to ensure that readers can

still get adequate information on each program without having to read the entire document. For example, someone interested in how the State will approach recycling may only be interested in laws targeted to regulate or support recycling initiatives. The recycling program section gives the reader a sound context, reviewing applicable aspects of each new law and referring back to this general section.

HEA 1106 (PL 105-1990)

- Establishes an IDEM office of Pollution Prevention and Technical Assistance. This office is to disseminate information, collect data, sponsor pilot projects, and award grants to develop pollution prevention techniques and programs. Solid waste management is one of the Office's target issues.

- Mandates the IDEM commissioner to "develop policies and programs to reduce the generation of municipal wastes . . . . " It further authorizes the commissioner to create uniform pollution prevention standards and reporting and permitting requirements, seeking authority if necessary from USEPA and existing federal pollution control laws, including the federal Solid Waste Disposal Act.

- Authorizes establishment of a Pollution Prevention and Safe Materials Institute within an Indiana university or not-for-profit corporation. The Institute shall provide curriculum and training, perform R&D, and work with business on planning and measuring pollution prevention programs.

HEA 1391 (PL 19-1990)

- Requires permits to build and operate a solid waste facility. The act defines "facility" as "a structure . . . used for the disposal, storage, recovery, processing, or transferring of solid waste . . ." This law will directly affect many of the recycling, composting and hazardous material treatment facilities that will be developed in the next years. Incineration and waste-to-energy facilities would also be included, since they process wastes.

HEA 1414 (PL 108-1990)

- Calls for training and certification programs for operators of solid waste disposal facilities.

HEA 1472 (PL 109-1990)

- Requires that need for a solid waste management facility be demonstrated. A rule stating this requirement has been adopted by the Solid Waste Management Board as Rule 329IAC2-8.

- Good character requirements must be met by solid waste facility operators.

DEDICATED FUNDING

Funds to support all or parts of the State Action Plan will be available from a number of sources, including:

- Appropriations from the general fund to support the new Office of Pollution Prevention and Technical Assistance, which will be administered by IDEM and will develop solid waste management programs;

- The State Solid Waste Management Fund, which is financed through a $0.50/ton disposal fee; and

- The Indiana Recycling Promotion and Assistance Fund, which is financed through appropriations from the general fund, the Solid Waste Management Fund, mentioned above, gifts and donations. The RPAF can be used to help educate the public and businesses about recycling.

However, the available funding sources have multiple priorities and not specific amount of monies is dedicated support any part of the State Action Plan. Discussions of each action plan program refer to funds dedicated to support recent initiatives.

STATE ACTION - PUBLIC EDUCATION

In the past, people never had to think much about where garbage when, or how it got there. They just put it on the curb and it disappeared. However, all Indiana citizens need to think twice about how they handle garbage. To ensure that we all have safe, cost-effective waste management alternatives for the future, we need new approaches to solid waste management.

These new approaches often require changes in behavior and attitude - changes that people will make only after understanding the reasons for them. This requires that public education be a cornerstone of Indiana's solid waste management efforts.

PROGRAM OBJECTIVES

The State will develop programs to inform children, adults, businesses, industries and institutions about:

- The solid waste situation in Indiana;
- The alternative methods available to handle solid waste;
- The advantages, disadvantages and real costs of each management method;
- The uses of recyclable materials and the problems with non-recyclable products; and
- How individuals and companies can help make new solid waste management efforts work.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this effort will be affected by many of the new laws summarized in Chapter 2. However, it will be most directly affected by the following legislation.

HEA 1106 (PL 105-1990)

- Establishes an IDEM Office of Pollution Prevention and Technical Assistance. The office is to disseminate information, collect data, sponsor pilot projects, and award grants to develop pollution prevention techniques and programs. Solid waste management issues are included in its responsibilities.

- Authorizes establishment of Pollution Prevention and Safe Materials Institute with an Indiana university or not-for-profit corporation. The Institute shall provide curriculum and training for college level students, perform R&D, and work with business on planning and pollution prevention programs.

HEA 1240 (PL 10-1990)

- Requires IDEM, in cooperation with other state agencies, to provide education on the benefits of solid waste recycling and source reduction.

HEA 1391 (PL 19-1990)

- Stipulates that the commissioner set up an information clearinghouse on source reduction - including composting, separation and recycling, and minimization of hazardous waste.

DEDICATED FUNDS

The IDEM Office of Pollution Prevention and Technical Assistance and the Pollution Prevention and Safe Materials Institute will be funded through appropriations for IDEM. Solid waste management education is one of the issues identified for OPPTA attention.

PROGRAM APPROACH

To achieve public education objectives, the State will:

- Develop a coordinated statewide program;

- Develop curriculum materials for grades K-12 students;

- Develop university-level curriculum materials;

- Conduct a statewide media campaign;

- Produce and distribute informational publications;
- Conduct workshops; and
- Create an information clearinghouse on solid waste management.

Using this approach, the State will:

Coordinate Statewide Educational Programs

- Hire an educational coordinator to develop and coordinate waste reduction and recycling education at the state level.
- Advertise the IDEM hotline number: 1-800-421-6027.
- Develop a comprehensive solid waste management educational program which coordinates all the state and local agencies involved.
- Tap into the existing, grassroots education networks and volunteer pools.
- Explore using part of the Recycling Promotion and Assistance Fund for this purpose.

Develop Curriculum Materials for Grades K-12

- Develop multi-faceted curriculum materials for Indiana public schools. Work will be a cooperative effort between the IDEM and the Department of Education. Curriculum may include:
  - Lesson plans;
  - Audio-visual materials such as instructional video tapes and slide shows;
  - Computerized learning games; and
  - Activities such as experiments and field trips to solid waste facilities.
- Incorporate topics to be covered in the curriculum into standard subject, and cover the same topics listed under "Conduct Statewide Media Campaign" above.

Develop College Level Curriculum Materials

- Work through the Pollution Prevention and Safe Materials Institute to develop and offer curriculum materials for students, faculty and IDEM staff. This shall be accomplished through cooperative programs with public and private colleges and universities.

Conduct Statewide Media Campaign

- Develop a logo, theme and strategy for a statewide media campaign which uses print media, electronic media, and public gatherings to deliver information on:
  - Comprehensive solid waste management;
  - The role and importance of personal waste reduction and recycling;
  - How to select products that use less packaging and/or are made of recycled/recyclable materials;
  - The "true costs" and economics of solid waste management alternatives; and
  - The advantages and disadvantages of each management approach.
- Ensure adequate coverage for all Indiana residents by determining if Indiana communities are served by media markets in neighboring states [e.g.: the Chicago market serves the Northwest region of Indiana]. Incorporate such markets in the media campaign.

Produce Informational Publications

- Produce and distribute informational publications on solid waste management which are targeted to specific audiences, such as citizens, businesses, churches, industries, small quantity generators of hazardous materials, offices, schools, etcetera.
- Produce a recycling "yellow pages" which lists what, how, where, and why to recycle. Include basic specifications for each type of recyclable commodity.
- Produce a guide on waste reduction and recycling for businesses, including a business waste audit.
- Produce a fact sheet on funding sources (public and private) available to support community recycling.

Create Information Clearinghouse

- Establish an information clearinghouse on solid waste management, probably building upon the existing IDEM hotline and informational programs. Information on all of the materials and programs discussed above - in addition to information developed elsewhere - will be resources for the clearinghouse.

Conduct Business and Industry Education Programs

(See Next Section on Technical Assistance)

STATE ACTION - TECHNICAL ASSISTANCE

PROGRAM OBJECTIVES

The State will provide advisory consultation and develop technical evaluative tools, as needed, to promote technically sound solid waste management strategies around the state. Technical assistance programs will be designed to:

- Assist counties as they evaluate options for district formation;
- Assist districts and local communities as they plan and implement district plans;
- Assist businesses as they plan and implement waste reduction and recycling programs; and
- Assist districts, businesses and communities to develop pollution prevention strategies.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a compliment to public education, the State's technical assistance programs will be developed under the same statutory mandates described in the previous section. IDEM will be the lead state agency, working through the agency's staff of technical professionals and the newly formed Office of Pollution Prevention and Technical Assistance. This office may be contacted at (317) 232-8172 or by calling the IDEM Hotline at 1-800-451-6027.

DEDICATED FUNDING

The funds described in the previous section will also be available to support technical assistance programs.

PROGRAM APPROACH

To achieve the technical assistance program objectives, the State will assist with:

District Formation Process

- Help counties, on request, to assess options for district formation, including evaluation of such technical issues as the economies of scale in facility development and the availability of facility sites within county borders that could meet federal and state standards for hydrogeology, habitat, etcetera.

District Plans Development

- Conduct workshops for public officials and community leaders on solid waste management and the requirements of HEA 1240 and state-mandated programs.

- Communicate regularly with districts to advise on specific questions and general planning considerations (such as the logistics of program and facility development). Make district representatives and residents aware of the IDEM hotline: 1-800-451-6027.

- Provide limited, on-site advisory visits to districts.

District Plan Implementation

- Develop a set of technical evaluation tools and guidelines which can be employed by districts for:

  - Designing district collection or processing programs;

  - Projecting costs and revenues for recovered commodity markets; and

  - Sizing, costing and siting facilities.

Tools will include cost range tables for programs and facilities, market prices, and different types of solid waste management facilities. The state will also develop a series of state maps indicating areas which are excluded for landfill sites, based on federal and state regulations. The maps will include indicators including acquifers, protected habitats, designated historical landmarks, etcetera.

Business Waste/Reduction/Recycling Programs

- Provide technical assistance to the business community by:
  - Developing and distributing a source reduction guide book to all businesses in Indiana;
  - Publishing a directory of recycled products for businesses;
  - Ensuring development of a waste audit program for private sector businesses; and
  - Employing a staff member responsible to work directly with the business community to advise businesses on:
    - How to conduct a waste audit (applying the State waste audit program);
    - Design source reduction and recycling strategies; and
    - How to comply with changing statutory requirements, such as disposal bans.

Industry Waste Reduction/Recycling Programs

- Provide technical assistance to Indiana industries by:
  - Ensuring development of a waste audit program for private sector businesses;
  - Employing a staff member responsible to work directly with industry and businesses to advise businesses on:
    - How to conduct a waste audit (applying the State waste audit program);
    - Design source reduction and recycling strategies; and
    - How to comply with changing statutory requirements, such as disposal bans.
  - Developing and distributing a source reduction guide book to all businesses and industries; and
  - Publishing a directory of recycled products for businesses.

STATE ACTION - SOURCE REDUCTION

Source reduction is the preventative side of solid waste management. It means reducing waste at its source: making products more durable or re-using them, using less packaging or material in product design, or avoiding use of certain products.

Behavior change is central to source reduction, and government programs to cut the amount of waste we generate often involve legislation, regulation, financial incentives, and education. Variable disposal fees, product bans, product content standard, and procurement specifications are all examples of actions that have been taken by communities to reduce waste.

Though source reduction will always be an important tool, its effects are long term and will never eradicate the entire waste stream. Other management methods must be used to address those wastes which continue to be generated.

PROGRAM OBJECTIVES

The State will pursue policies that reflect the State's preference for waste management alternatives which reduce the disposed waste stream. As such, the State will:

- Promote reuse of materials and products;
- Reduce the amount of waste generated in Indiana;
- Reduce the amount of specific materials found in the waste stream; and
- Reduce the amount of waste disposed at Indiana's final disposal facilities.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

(SKL/223)

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this effort will be affected by many of the new laws summarized in Chapter 2. However, it will be most directly affected by the following legislation.

HEA 1240 (PL 10-1990)

- Establishes source reduction policies.
- Establishes a State policy "that source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods." Incineration and landfill are defined as final disposal options.
- Creates a packaging/waste reduction task force to help accomplish goals.
- Requires IDEM, with the cooperation of other state agencies, to provide education on the benefits of solid waste recycling and source reduction.

HEA 1391 (PL 19-1990)

- Establishes state procurement preferences for products with at least 50 percent recycled content.
- Stipulates that the commissioner set up an information clearinghouse on waste reduction - including source reduction, composting, separation and recycling, and minimization of solid and hazardous waste.

PROGRAM APPROACH

To achieve the source reduction program's objectives, the State will:

- Develop statewide education and technical assistance programs;
- Implement in-house source reduction programs;
- Institute new waste management rules and standards;
- Increase enforcement of illegal dumping regulations;

- Establish requirements and guidelines for district level programs;
- Continue developing new approaches, working with the two state task forces; and
- Develop a feasibility study for specific numerical source reduction goals.

The State's efforts will be supported by the work of the Packaging and Waste Reduction Task Force, established under HEA 1240 (see above). The task force will work with IDEM staff to evaluate and recommend source reduction policy and programs.

Using this approach, the State will:

Education and Technical Assistance

- Include source reduction in all of the statewide education programs:
  - Encouraging citizens to "pre-cycle" by purchasing or using items with (1) less packaging and (2) more recycled material content; and
  - Illustrating the hidden costs for "disposable" products, while clarifying when "sanitary disposables" are legitimately needed.
- Provide technical assistance to businesses by:
  - Developing and distributing a source reduction guide book to all businesses in Indiana;
  - Publishing a directory of recycled products for businesses;
  - Ensuring development of a waste audit program for private sector businesses in the state; and
  - Employing a staff member responsible to work directly with the business community to:
    - Assist businesses with using the waste audit program developed above;
    - Provide technical assistance in designing source reduction strategies;
    - Keep businesses advised of changing statutory requirements, such as disposal bans; and
    - Make business managers aware of the state waste exchange program at Purdue.

- Provide technical service to industry by:
  - Offering all of the above assistance, plus
  - Offering technical assistance to help companies change product designs and manufacturing processes to allow use of recycled materials and reduce non-recyclable products.

State Agency Programs

- Hire an in-house source reduction/recycling coordinator, responsible to:
  - Develop and implement state agency programs to sources reduction, recycling, and composting of waste materials generated by each agency; and
  - Use education programs to encourage employees to participate in the agency programs to reduce waste at home.
- Establish procurement guidelines with preference mechanisms to advocate procurement of recycled products.
- Work with state institutions to develop and submit plans for eliminating single-use products.
- Work with state department supervisors, during the budget process, to develop source reduction plans, including an analysis of budget impacts from anticipated actions.
- Promote duplex copying for all reproduced materials by:
  - Requiring duplex copies of all materials over two pages;
  - Training all personnel on how to make duplex copies; and
  - Attempting to purchase or rent high-speed photocopying machines with capacity for duplex copying.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Consider establishing a rule requiring business waste audits for businesses in the state.
- Respond to HEA 1240 (PL 10-1990) by:
  - Establishing the appropriate time frames for banning final disposal of recyclable materials; and

- Implementing those bans which are determined to be feasible.

- Materials under consideration will include:
  - Packaging products (such as non-degradable six-pack carrier rings, as well as polystyrene foam, plastic, steel, steel/aluminum, glass and aluminum);
  - Paper products (such as newspaper, catalogs, grocery bags, office paper, corrugated cardboard, phone books, magazines, etcetera);
  - Waste oil;
  - Lead and non-lead batteries;
  - Non-processed construction and demolition waste;
  - Wood waste;
  - Paper waste;
  - Disposable diapers;
  - White-goods/appliances; and
  - Waste sludge.

New Legislation

Make recommendations to the General Assembly on:

- Banning consumer product and packaging sales if:
  - An established recovery rate for the materials has not been achieved within four years of the program implementation; and
  - Containers are not technically recyclable (due to lack of existing, viable markets).
- Establishing and enforcing minimum content standards. Mechanisms which will be considered include:
  - Mandatory recycled content for metal, glass, plastic, and paper containers that have monthly in-state sales of more than 10,000 units;
  - Mandatory recycled fiber content for newspapers, magazines, and related publications that have a monthly in-state circulation of more than 10,000 units; and

- Scheduled increases in mandated content levels.

Enforcement

- Prohibit all waste disposal that is inconsistent with the State's disposal bans and other source reduction laws.
- Work with districts to provide effective enforcement mechanisms for controlling illegal dumping of banned materials. Mechanisms considered will include:
  - Reduced tipping fees for citizens who haul their own refuse combined with stiffer penalties for violations;
  - Random inspection of hauling vehicles;
  - Fines for haulers found with banned materials; and
  - Denial of disposal privileges within the State for chronic violators.

Additional Funding Sources

- Investigate new funding mechanisms to assist the State and districts in developing reduction, collection and processing alternatives for targeted waste materials. Mechanisms to be considered include:
  - Advance disposal fees; and
  - Additional solid waste management fees.

District Requirements

- Require districts to publish specific costs for disposal and collection services in the District Plan.
- Require districts to include an Illegal Dumping Enforcement Strategy in the District Plan.

District Guidelines

- Recommend that districts work with local government to publicize the real cost of solid waste management.
- Recommend that districts have waste haulers (public or private) offer a variable weight waste collection service for residential customers. To be successful, such service would need to be carefully scheduled, allowing communities sufficient lead time to implement the program. They should be designed to reward people for setting out less waste for final disposal.

(SKL/223)

STATE ACTION PLAN - RECYCLING

is recovering materials from waste and using them to remanufacture new goods. Many materials - paper, glass, aluminum, scrap metal, plastic - can be recycled. However, what - and how - a community recycles depends on a great many factors: markets for materials; population size; cost and convenience of collecting and processing materials; and desired results of the program. Further, given the state of existing recycling technologies, cost-effective recycling can only be used to address part of the waste stream. Other waste stream components must be managed using other methods.

Dwindling landfill capacity, rising disposal fees, and increasing public concern about the environment has spawned numerous recycling programs throughout the United States.

Recycling programs can be most readily categorized according to the size and characteristics of the population served. For example, urban areas may have curbside collection of materials; often set out in special bins or bags. Materials are then sorted and processed for distribution to manufacturers who will remake them into new products.

For small towns and rural areas, drop-off recycling services are more typical. Being less convenient than home collection, such programs generally have less participation. However, local governments or private businesses sometimes institute incentives (like buy-back centers) or conveniences (like drop-off centers at landfills) that boost program effectiveness.

Processing is often done at a centralized facility where hand-labor or mechanized systems are used to ready materials for market. Many materials handling facilities (MRF's) are designed to handle materials which have been separated by the citizens and businesses who generate them. Other MRF's are designed to eliminate the need to get waste generator cooperation, they risk producing more contaminated commodities. Increasingly, MRF's are developed as regional facilities to help defray costs and allow efficient transportation of commodities to market.

PROGRAM OBJECTIVES

The State will pursue policies to:

- Reduce the volume of recyclable materials deposited at Indiana's final disposal facilities;
- Develop recyclables markets that will help ensure the future of recycling in Indiana and contribute to the State's economic growth; and
- Establish means to measure impacts of recycling efforts.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this effort will be affected by many of the new laws summarized in Chapter 2. However, it will be most directly affected by the following legislation.

HEA 1240 (PL 10-1990)

- Recycling is implicit in this act's goals of reducing waste by 35 percent by 1996 and 50 percent by 2001.
- Establishes a State policy "that source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods." Incineration and landfill are defined as final disposal options.
- Expands the mandate of the Indiana Energy Development Board to include recycling, changing it to the Indiana Recycling and Energy Development Board.
- Empowers the State Solid Waste Management Board to ban recyclables from disposal, or if disposal is necessary, to restrict it to the greatest extent possible.
- Requires IDEM, with the cooperation of other state agencies, to provide education on the benefits of solid waste recycling and source reduction.

- Establishes a Recycling and Promotion Assistance Fund. (See "Available Funding" below.)

- Establishes a recycling paper task force to develop voluntary guidelines for recycling newsprint and other paper products, and information on the availability and use of newsprint and other paper products that contain recycled fiber.

- Requires the Department of Corrections to conduct a feasibility study on using prison labor and facilities for recycling enterprises.

HEA 1391 (PL 15-1990)

- Establishes state procurement preferences for products with at least 50 percent recycled content.

- Stipulates that the commissioner set up an information clearinghouse on source reduction - including composting, separation and recycling, and minimization of hazardous waste.

- Material recovery facilities (MRF's), which are centers for processing recyclables for market, would be included in a requirement to obtain a permit to build and operate a solid waste facility. "Facility" is defined as "a structure . . . used for the disposal, treatment, storage, recovery, processing, or transferring of solid waste."

HEA 1926 (PL 167-189)

- Establishes an Indiana Institute on Recycling at Indiana State University to develop concepts, methods, and procedures for assisting in efforts to recycle solid waste.

SEA 219 (PL 165-1989)

- Requires that plastic containers sold in Indiana be coded according to type to facilitate separation and reclamation; effective January 1, 1990. (Only certain types of plastics are recyclable and many plastic resins are not compatible for recycling.)

SEA 430 (PL 31-1989)

- Requires state agencies and higher learning institutions to purchase degradable plastic disposables - if available and economically appropriate.

DEDICATED FUNDS

The State Recycling Promotion and Assistance Fund will be financed through appropriations from the general assembly, the Solid Waste Management Fund (fund monies are from the $0.50 per ton disposal and incineration fee, beginning in 1991) and from gifts, donations and loan repayments. The Recycling Fund will be used to focus economic development efforts on business and projects involving recycling.

PROGRAM APPROACH

Action Plan initiatives are designed to balance the need to recover recyclable materials with the need to ensure that there are stable, healthy markets for those materials. Further, the initiatives are based on the understanding that, to ensure long-term success, recycling programs must seek to change individual attitudes and waste management habits.

To achieve recycling program objectives, the State will:

- Continue supporting and funding Governor Bayh's recycling grants program;
- Develop statewide education and technical assistance programs;
- Implement state agency recycling programs;
- Develop markets for recyclable products; including use of a state product logo;
- Consider developing a statewide network of materials recovery facilities;
- Institute new waste management rules and standards;
- Give priority to permitting recycling facilities;
- Explore new funding sources to support state and district programs, such as advanced disposal fees on target products;
- Support research seeking new uses for waste materials;
- Establish requirements and guidelines for district level programs; and
- Continue developing new approaches, working with the state task forces.

In pursuing this program, the IDEM will work with the Indiana Institute on Recycling at Indiana State University (established in HEA 1926). The Institute is charged to develop concepts, methods, and procedures for assisting in efforts to recycle solid waste. The work of the Institute is intended to ensure consistency and efficiency in state policies and programs and to give recycling initiatives a central focus.

In addition, the State's efforts will be supported by the work of the Packaging and Waste Reduction Task Force and the Recycling Paper Task Force, established under HEA 1240. The task forces will work with IDEM staff to evaluate and recommend recycling policies and programs.

Using this approach, the State will:

Education

- Include recycling in all of the statewide public education programs, as described in the first part of this chapter, emphasizing:
  - The role of consumers and manufacturers in making durable, recyclable products, using more recycled materials;
  - How to consume carefully to support products which use less packaging and are made of recyclable materials;
  - The need to scrutinize claims of recyclability or biodegradability; and
  - The role and importance of personal waste reduction and recycling.
- Fulfill the requirements of HEA 1391 (PL 19-1990) by:
  - Publishing a statewide recycling yellow pages (as part of the information and education program); and
  - Advertising the existing IDEM hotline as a source for recycling information.
- Conduct statewide workshops for district employees and elected officials as described in Public Education Discussion in the first part of this chapter.
- Provide technical assistance and instructional materials to businesses around the state, including assistance in developing waste reduction/recycling program (also see Source Reduction).

State Agency Programs

- Hire an in-house source reduction/recycling coordinator, responsible to develop and implement:
  - State agency programs for source reduction, office recycling, and composting of waste materials generated by each agency; and
  - Employee education programs on how to participate in the agency programs and how to reduce waste at home.
- Institute an aggressive procurement program by:
  - Complying with HEA 1391 (PL 19-1990) to establish procurement guidelines with price preference mechanisms which meet or exceed the law's required 10 percent preference for products that are recycled and recyclable;
  - Establishing a regularly revised list of available materials and products, including a content guide and price preferences. (The list may include products such as paper, tires, building insulation, lubricating oil, compost and compost products, and plastics.);
  - Requiring that all vendors who intend to supply products containing recycled materials estimate, in writing, the recycled content of such products. Successful bidders would provide certification of such content; and
  - Requiring that government contractors and consultants demonstrate that they use recycled and recyclable products.
- Evaluating the feasibility of additional procurement policy provisions to ensure the broadest possible range of products containing recycled materials. The State will evaluate the following policy provisions:
  - Minimum recycled content standards that meet or exceed EPA Guideline Standards;
  - Stipulations that allow and encourage all State agencies, local jurisdictions, and school districts to specify the use of recycled and recyclable products on all purchase requests;
  - Requirements that the words "Printed on Recycled Paper" and the recycling logo be printed on letterhead and the title page of all reports;

- Requirements that all State agencies, local jurisdictions and school districts increase the use of recycled and recyclable products;

- Requirements that all State agencies, local jurisdictions and school districts use recycled paper for letterhead on all new orders after a designated date; and

- Designation of a State agency to participate in the development of national (American Society of Testing Materials) standards and to be responsible for monitoring and enforcing this policy.

Market Development

- Adopt an official statewide logo and review criteria for products which may use the logo to signify they contain a minimum of 50 percent recycled materials.

- Promote awareness and use of the State's procurement pool for recycled products. The pool is available to local governments, offering them access to reduced pricing through a state-administered program.

- Investigate the feasibility of imposing standards for (1) minimum content of recycled materials and (2) minimum standards for recyclability of products and packaging.

- Court recycling end-use industries to locate in Indiana, actively recruiting through national conferences and advertisement.

- Investigate the feasibility of establishing additional economic incentives to encourage market growth (see New Legislation).

- Coordinate market development efforts with the Department of Commerce.

Facility Development

- Investigate the feasibility of funding plans, design, and construction of a statewide network of regional material recovery facilities - such a network would be intended to serve whole regions and, when appropriate, aligned with district waste sheds. As part of this investigation, the State will explore appropriate ownership options for these facilities.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Determine items and schedule for banning recyclable materials from landfilling, as stipulated in HEA 1240. (See details under Source Reduction.)

- Review the Indiana Administrative Code to determine that all future federal regulatory requirements are addressed.

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of mandating minimum recycled content standards for a range of products sold within the state. (Also refer to the discussion of source reduction policies.) The State will consider mechanisms including:

  - Phased implementation;

  - Consideration of pricing, quality, and availability of products meeting the content standards, emphasizing the highest possible quality in each product;

  - Easy and reasonable documentation and reporting procedures; and

  - Monitoring regional conditions to ensure that the Indiana rules are consistent and compatible with other regional efforts aimed at increasing recycled content in different products.

- The feasibility of establishing additional market incentives, using:

  - Consumption tax credits;

  - Tax incentives to offset capital costs for complying with environmental regulations; and

    Diversion payments to subsidize diversion of low value commodities.

Enforcement

- Give priority consideration to permitting recycling facilities that will not be subject to permitting under HEA 1391. Pursue this policy without compromising the technical evaluation of the facilities' potential environmental impacts.

- Use IDEM to:

  - Assist businesses in obtaining permits and meeting other requirements when constructing new capacity for use of recyclable materials; and

  - Provide information on the status of recyclables markets for both governments and businesses.

- Work to identify and reduce economic and licensing barriers for the transport of recyclable commodities.

Additional Funding Sources

- Explore the feasibility and need for increasing the disposal surcharge to provide additional funding to the Solid Waste Management Fund.

- Explore the feasibility of implementing a general advanced disposal fee on products, with the funds going to a general pool in the Solid Waste Management Fund.

- Investigate the feasibility of using advanced disposal fees on targeted products to fund recovery programs for those products (also see source reduction).

Research

- Work with the Recycling Institute to research, identify, and develop:

  - New uses for recyclable materials and

  - Increased demand for these recyclable materials.

District Requirements

- Require districts to include plans to collect data and report quarterly on the amount and type of recyclable materials recovered and sold.

District Guidelines

- Recommend that districts mandate provision of recycling and yard waste drop-off services at all solid waste facilities in the state.

- Recommend that districts consider mandating provision of multi-material residential curbside collection for all municipalities with a population of 5,000 persons or more with weekly collection and household containers provided to residents, such service to be provided to all housing units up to 25 units per building.

- Recommend that districts consider:
  - Requiring owners of multi-family complexes to provide a specialized recycling service to residents of the complexes, including provision of household containers;
  - Requiring that future building codes be modified to require that new or remodeled single or multi-family living units be designed to include adequate recycling storage container space (i.e., recycling friendly architecture); and
  - Requiring provision of multi-material recycling services for communities that do not have solid waste facilities.

STATE ACTION PLAN - COMPOSTING

Many communities are diverting organic materials such as yard wastes, food wastes and, even, organic sludges from landfills and composting them instead. Composting is essentially a process for managing the natural decay of organic matter - resulting in a biologically stable end product that is a valuable soil enhancer.

Why compost? A one example, yard waste accounts for 15-20 percent of the refuse disposed in landfills. This waste is troublesome, since it is dense and bulky, and contributes to methane gas and leachate production in the landfill environment. Other organic wastes, including food waste and organic sludges, also represent high volume materials that are best diverted from landfills.

Composting helps conserve landfill space and, in addition, the end product of organic waste composting is a rich material useful for maintaining lawns and gardens, public parks, and landscaping projects. However, to be successful, composting operations must be creative in finding markets for the resulting materials. Some communities use the material as a replacement for purchased soil products; others give the material away to local residents and business.

In addition, product quality can be a concern requiring knowledgeable operation of facilities and scrutiny of the feedstock. Currently, there is some debate about co-composted sludge and State and Federal agencies are evaluating sludge regulations that may restrict this practice in the future.

Programs which encourage backyard composting and provide for the centralized collection and processing of yard and other organic wastes have proved to be viable components of solid waste management efforts in many locations here and abroad.

PROGRAM OBJECTIVES

The State will pursue policies to:

- Conserve landfill capacity by diverting high volume organic wastes (e.g., yard waste, organic sludge and organic construction or wood waste); and

- Promote use of composting to reduce the volume of these wastes and convert them into useful products.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2. However, it will be most directly affected by the following legislation.

HEA 1391 (PL-1990)

- Some composting facilities, which process materials for market, would be included in a requirement to obtain a permit to build and operate a solid waste facility. "Facility" is defined as "a structure . . . used for the disposal, treatment, storage, recovery, processing, or transferring of solid waste . . ."
- Stipulates that the commissioner set up an information clearinghouse on source reduction - including composting, separation and recycling and minimization of hazardous waste.

HEA 1472 (PL 109-1990)

To achieve composting program objectives, the State will:

- Include composting in statewide education and technical assistance programs;
- Work with State departments (such as Department of Transportation or Department of Natural Resources) to implement in-house composting programs;
- Develop markets for compost products;
- Consider developing a statewide network of composting facilities;
- Establish stricter rules and requirements governing composting facilities;

- Tighten enforcement of applicable regulations; and
- Monitor research on new composting technologies.

Based on this approach, the State will:

Education and Technical Assistance

- Include composting in all statewide education programs (described earlier in this chapter), emphasizing:
  - How to compost yard and kitchen waste materials in a backyard;
  - Where citizens and businesses can take their organic wastes to centralized composting facilities; and
  - Alternative use for composted material (e.g., soil conditioners, animal bedding).
- Coordinate with the county extension service agents to provide comprehensive information, without duplicating efforts.
- Provide technical assistance to districts, as needed, to implement projects to collect and/or compost waste materials.
- Inform districts about the benefits and barriers of using co-composting waste streams from two different sources, such as waste water sludge and yard waste.

State Agency Programs

- Encourage state departments to use compost products; and
- Work with state departments to establish procurement guidelines which specify:
  - Compost content standards in soil amendments, as well as
  - Top soil requirements.

Facility Development

- Investigate the feasibility of funding the plan, design, and construction of a statewide network of composting facilities - such a network would be intended to serve whole regions and, when appropriate, aligned with district waste sheds. As part of this investigation, the State will explore appropriate ownership options for these facilities.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Exploring means to control the quality and environmental impact of composting facilities, without imposing undue regulatory constraints. The State will explore mechanisms which include:
  - Requiring compost projects to register with the State and meet a set of minimum standards for design and operation.
  - Requiring compost project operators to make regular reports to the State on plant operations and chemical content of compost.
- Review the Indiana Administrative Code to determine that all future federal regulatory requirements are addressed.
- Consider implementing additional measures, including:
  - Banning yard waste from final disposal facilities, per HEA 1240's stipulation.
  - Providing tax incentives to public and private projects using compost materials.
- Work with Air Pollution Control Board to strength rules restricting or banning burning of yard waste.

Enforcement

- Track changes in federal regulations governing composting and composted products.

Research

- Work with state universities to monitor innovations in composting science and technologies and post-process usage, including the composting of MSW that is left over after recycling.

District Requirements and Guidelines

Require solid waste management districts and their constituent communities to consider:

- Stricter enforcement of the open burning and illegal dumping regulations;

- Coordinating with the State to employ State-developed educational programs and materials;
- Cooperating with county extension agents and the IDEM to increase public awareness and educate the public about composting local opportunities (back yard and central);
- Mandating separation of yard waste from municipal solid wastes;
- Sponsoring neighborhood clean-ups to collect yard waste and transport it to a central composting facility;
- Coordinating with public or private hauling services to consider a seasonal curbside collection program for yard waste, including fall leaf collection;
- Coordinating with interested public and private solid waste management facility operators to develop a central composting facility as an alternative to landfill disposal for excess yard waste and other organic wastes, including waste water sludge;
- Supporting central yard waste processing by working to develop a transfer system (transfer stations and storage facilities) which allow the collected materials to be cost-effectively transported to a central facility;
- Supporting local yard waste processing facilities by adopting procurement guidelines which favor use of compost products for ground cover and soil amendment products; and
- Encouraging residents to use (and maybe purchase) mulch and other products from central yard waste compost facilities.

STATE ACTION PLAN - LANDFILLING

Adequate landfill capacity is an essential part of each district's solid waste management plan. Even when the waste stream is reduced by source reduction, recycling, or other methods, people will always generate waste that must be landfilled.

Also, Indiana faces a scarcity of landfills. In 1980 Indiana had 150 permitted municipal solid waste landfills. In 1990 that number dropped to 79.

New landfills which meet strict new State and Federal design and performance standards must be built. These will be technologically intricate and expensive facilities and many communities are opting to work together to share the burden.

Such modern sanitary landfills are basically engineered containers for solid waste. They can take a number of forms, depending upon the topography of the site.

At a typical landfill, each day's accumulation of trash is compacted into a "cell" and covered with earth or another acceptable material. Cells are landfill building blocks: sections of the fill that will typically hold two to three years' waste accumulation. Their design varies, but typically each has a liner at its base and an elaborate system for draining and diverting fluids. A system for collecting and using methane gas is also needed.

When a cell is full, a permanent earth cover or cap is constructed so that the refuse is sealed. With careful pre-planning, the area can eventually be converted to other uses.

PROGRAM OBJECTIVES

Though much of the new executive and legislative mandate concentrates on efforts to reduce the use of final disposal facilities, the State recognizes that landfill capacity will always be a critical need. Therefore, the State will pursue policies to:

- Protect public health and safety;
- Ensure that there are an adequate number of permitted landfills to serve local needs throughout the state;
- Conserve the existing capacity of sanitary landfills;
- Comply with HEA 1240 (PL 10-1990) by addressing landfilling as a final disposal option, to be considered after waste reduction and recycling approaches have been pursued;

- Control the flow and content of out-of-state wastes disposed in Indiana; and

- Eliminate illegal dumping.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and

- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2. However, it will be most directly affected by the following legislation:

HEA 1240 (PL 10-1990)

- Establishes a State policy "that source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods." Incineration and landfill are defined as final disposal options.

- Requires haulers to certify to the landfill operator the county and state of origin of the wastes being brought in for disposal.

- Requires landfill owners or operators to collect and remit state and district disposal fees. The owner or operator may retain 1% of the fees as compensation.

HEA 1391 (PL 19-1990)

- Requires permits to build and operate a solid waste facility. The act defines "facility" as "a structure...used for the disposal, storage, recovery, processing, or transferring of solid waste..." Landfill facilities would be included.

HEA 1414 (PL 108-1990)

- Calls for training and certification programs for operators of solid waste disposal facilities "whose operation could have an adverse impact on the environment if not operated properly."

HEA 1472 (PL 109-1990)

- Requires that local need for a solid waste management facility be demonstrated. A rule stating this requirement has been adopted by the Solid Waste Management Board as Rule 329IAC2-8.
- Good character requirements must be met by solid waste facility operators.
- Prohibits landfill operators from accepting unmanifested wastes and wastes from unlicensed collection vehicles.

HEA 1388 (PL 107-1990)

- Requires that permit applicants for a land disposal facility have proof that the applicant has a net worth of at least $250,000.

DEDICATED FUNDS

Many of the funds described in the first part of this chapter could be applied to the landfill program; however, the following funds are specifically dedicated to support landfilling policies.

The Waste Facility Operator Trust Fund is established by the Solid Waste Management Board to cover costs of training and certification. Financing of the fund will be provided by fees of not less than $50 charged to operators. However, no fee shall be charged to an operator of a facility wholly owned and operated by a local government.

PROGRAM APPROACH

To fulfill landfill programs objectives, the State will:

- Include landfilling as part of statewide education and technical assistance programs;
- Grant permits based on proof of local need;
- Establish new waste management rules and standards;
- Provide training for facility operators;
- Develop technical siting tools;
- Tighten enforcement of new and existing regulations; and
- Support research on capacity saving technologies.

Using this approach, the State will:

Public Education and Technical Assistance

- Comply with HEA 1414 (PL 108-1990) by conducting landfill operator certification training and testing. The training will include information on the newest technologies and management approaches for maximizing use of landfill capacity.
- Educate district and local zoning officials about guidelines for an effective siting process, including:
  - Technical (mapping/economics preference criteria/etc.) and
  - Process (public involvement) considerations.
- Provide district and local zoning officials with technical assistance tools for siting, including a series of state maps featuring exclusion criteria data (hydrogeology/endangered species/etc.)

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Apply Rule 329IAC2-8 to grant landfill permits based on proof of local need

- Continue efforts to streamline the process for permitting new landfill operations, without comprising the quality of technical review.

- Review the Indiana Administrative Code to determine that all future federal regulatory requirements are addressed.

- Apply HEA 1240 to determine and schedule disposal bans on recyclables and identify management alternatives for the banned materials (see Source Reduction).

- Continue developing a rule to implement the requirement for documenting waste quantities disposed of at landfill sites. This rule requires each landfill receiving more than 50 tons per day to provide for better waste quantity tracking by installing a scale at the gate.

- Consider a rule to require documentation of estimated composition in loads weighed at landfills. Such a rule could be applied to help determine the "quality" of materials being landfilled (i.e., recyclables).

Enforcement

- Prioritize enforcement of any disposal bans for materials of (1) high volume and (2) high toxicity.

- Establish a prioritized schedule for closing all open dumps in the state to ensure that all landfills not meeting current or future regulations will be closed within the time schedule anticipated from the USEPA.

- IDEM staff will enhance inspection systems for monitoring specific changes which may be required by future Subtitle D regulations, including:

  - Exclusion of hazardous waste;

  - Exclusion of liquid wastes;

  - Requirements of daily cover material; or

  - Monitoring for explosive gases.

- IDEM staff will enhance mechanisms to receive and respond to citizen complaints about illegal dumping and improper management of solid waste and hazardous materials.

Research

- Investigate technologies that might be used at landfill sites to minimize the amount of airspace used each day. Subject technologies include:
  - Compost or synthetic materials;
  - Landfill "mining" for materials recovery; and
  - Balefills.
- Monitor research findings on landfill management alternatives, including:
  - New leachate treatment systems; and
  - Methane gas recovery and treatment systems.

STATE ACTION PLAN - INCINERATION

Waste incineration plants burn solid waste to reduce the amount of material that must be landfilled. Some facilities recover energy, using refuse as a fuel to generate steam for heating or electricity generation.

Such facilities are generally an option when there is a need to reduce landfill waste disposal, and where there is a large, steady amount of solid waste available for incineration.

There are two primary types of facilities: mass burn plants and refuse-derived fuel fired plants. Mass burn plants are designed to burn refuse with a minimum of pre-processing. Refuse-derived fuel plants are designed to burn refuse that has been pre-processed; however, there is a wide range of fuels - from coarsely processed mixed waste to densified pellets to "fluff" (finely processed and segragated waste materials).

The decision to choose this technology requires careful analysis of costs and environmental impacts. Incineration projects are expensive to build and operate and must usually be developed as a regional facility. Further, incineration technologies are the source of protracted controversies about impacts on public and environmental safety. Much of the concern centers on:

- Control of toxic or corrosive air emissions; and
- Disposal of residue ash as either a municipal or hazardous waste.

In addition, because incinerators need a continual and consistent supply of waste to operate economically, they tend to retard recycling efforts and encourage the continuation of the throw away attitude.

Volume III, Technical Guide, contains a technical paper on issues related to waste-to-energy plants.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

Open Burning

Open burning of waste materials is generally prohibited in Indiana per 326 IAC Article 4. Open burning is not considered a final disposal option for any waste stream that is continuously generated. Under certain circumstances, certain celebratory, residential or farm burning may occur. Other burning of wood products may be approved upon approval of a variance application by the Indiana Department of Environmental Management. The Department does not approve open burning variances for waste material that is continuously generated.

HEA 1240 (PL 10-1990)

- Requires haulers to certify to the final disposal facility operator the county and state of origin of the wastes being brought in for disposal.
- Establishes a State policy "that source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management methods." Incineration and landfilling are defined as final disposal options.
- Requires final disposal facility owners or operators to collect and remit state and district disposal fees. The owner or operator may retain 1 percent of the fees as compensation.

HEA 1414 (PL 108-1990)

- Calls for training and certification programs for operators of solid waste disposal facilities.

HEA 1472 (PL 109-1990)

- Requires that need for a solid waste management facility be demonstrated. A rule stating this requirement has been adopted by the Solid Waste Management Board as Rule 329IAC2-8.
- Good character requirements must be met by solid waste facility operators.

DEDICATED FINDS

Many of the funds described in the first part of this chapter could be applied to the State Action Plan program for landfilling. However, the following funds are specifically dedicated to support landfilling policies.

The Waste Facility Operator Trust Fund is established by the Solid Waste Management Board to cover costs of training and certification. Financing of the fund will be provided by fees of not less than $50 charged to operators. However, no fee shall be charged to an operator of a facility wholly owned and operated by a local government.

PROGRAM APPROACH

To achieve incineration program objectives, the State will:

- Include incineration and energy recovery in statewide education and technical assistance programs;
- Train and certify facility operators;
- Tighten new waste management rules and standards; and
- Enforce new and existing regulations to ensure that operating facilities are properly operated.

Using this approach, the State will:

Education

- Include incineration in statewide education programs on comprehensive solid waste management (described earlier in this chapter), emphasizing:
  - The current debate on issues such as ash management and emission control; and
  - Other points about the advantages and disadvantages of incineration as a waste management method.
- Comply with HEA 1414 (PL 108-1990) by conducting facility operator certification training and testing. The training will include information on the newest technologies and management approaches for controlling environmental impacts.
- Keep districts and facility operators apprised of changing federal and state regulations affecting incineration facility development and operation.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Determine and schedule banning of recyclables from incinerators, as stipulated by HEA 1240;

- Coordinate between IDEM and the Air Pollution Control Board to adopt more comprehensive emissions guidelines to be applied to incineration facilities;
- Consider banning waste materials associated with hazardous emissions; and
- Review the Indiana Administrative Code to determine that all future federal regulatory requirements are addressed.

Research

- Evaluate disposal strategies for residue ash from future incineration projects and promote disposal of ash from all incinerators, which has not been determined to be hazardous, in landfills which are designed, operated and maintained according to the most stringent federal and state standards.

District Guidelines

- Provide districts with facility development and operation guidelines (see related discussion in Chapter 5, District Action Plan).

STATE ACTION PLAN - OTHER WASTE MANAGEMENT METHODS

PROGRAM OBJECTIVES

While the State will not pursue policies to invent high-tech waste management technologies, it will monitor developments in these technologies and will work closely with those who wish to test technologies in Indiana facilities. Volume III contains information on two such technologies, pyrolysis and anaerobic digestion of organic waste.

The State will pursue policies to:

- Protect public health and safety; and
- Identify and promote use of safe, cost-effective innovations in solid waste management.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2.

Since each waste management alternative has different attributes, each resulting facility will be subject to different treatment. For example, a pyrolysis plant would likely be treated like a final disposal facility; while an anerobic digestion facility might be treated as a waste diversion, composting facility. However, since less tested technologies can pose less predictable threats to local environments, it is likely that facilities for most other management alternatives will be subject to permitting, under HEA 1391 (PL 19-199) and operator training, under HEA 1414 (PL 108-1990).

Further, some of these alternatives will be considered final disposal and subject to further legal scrutiny and constraints stipulated under HEA 1472 (PL 109-1990) and HEA 1388 (PL 107-1990). See the discussion on landfilling for details on these new laws.

DEDICATED FUNDS

While this program will be eligible for funds from most the broad sources cited in the opening discussion of this Chapter, there are no funds dedicated to research and development of waste management alternatives. Rather, the State will stay current by monitoring active research. Further, funds available for new businesses, through the Recycling Promotion and Awareness Fund, may apply to some proposed test facilities in Indiana.

PROGRAM APPROACH

To achieve program objectives, the State will:

- Include information on new waste management technologies in its education programs on comprehensive solid waste management;
- Monitor the findings of research on alternative methods; and
- Work closely with facilities using new technologies to ensure that the operation complies with the strictest state and federal standards.

STATE ACTION PLAN - PROBLEM WASTE - OIL WASTE

Typically contaminated by toxic substances such as lead, arsenic, and zinc - and sometimes by know carcinogens - used oil, improperly disposed, can pollute drinking water, destroy soil, and poison fish and wildlife. While oil is readily amenable to recycling, less than 10 percent of the estimated 200 million gallons generated annually by the country's do-it-yourselfers is recycled. Most people simply dump the oil on the ground or put it in the trash.

Most oil that is recovered is reprocessed for use as fuel. Re-refining can return oil to almost virgin condition, but the process is expensive. Indiana processors currently have the capacity to manage all the waste oil generated in the state, but the key will be educating the do-it-yourselfers about the environmental consequences of improper disposal - and providing convenient alternatives to heedless dumping.

PROGRAM OBJECTIVES

The State has targeted waste oil as a problem waste, representing a waste material that has other uses and is a potential hazard when landfilled. As such, the State will pursue policies to increase recovery and recycling or proper disposal of used oil.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

None of the recent legislation specifically addresses waste oil; however, as a household hazardous municipal solid waste, waste oil is subject to all applicable pollution prevention policies and programs, Indiana codes and federal regulations. Further, because of potential toxicity, Indiana prohibits the use of waste oil for road surfacing or dust suppression.

(SKL/223)

PROGRAM APPROACH

To achieve waste oil program objectives the State will:

- Include waste oil management as part of state education programs;
- Implement state agency procurement programs supporting purchase of re-refined oil;
- Investigate the need for a statewide network of oil-recovery facilities;
- Promote new markets for waste oil;
- Establish new waste management rules and standards; and
- Identify additional funding sources to support waste oil recovery programs, such as advanced disposal fees.

Using this approach, the State will:

Education and Technical Assistance

- Provide aggressive publicity and education programs at both the state local levels to:
  - Increase public awareness of waste oil;
  - Promote the proper disposal and collection of all used oil; and
  - Promote the use of re-refined oil by both businesses and citizens.

State Agency Programs

- Encourage government departments to recover used oil and procure and use re-refined oil during fleet maintenance.

Facility Development

- Explore the feasibility and need to support development of a statewide network of regional oil recovery and processing facilities, especially for do-it-yourself oil changers (see following discussion).

Market Development

- Explore mechanisms which could be used to relieve qualified and responsible oil collectors from potential environmental liability for contaminants contained in used oil that might be present despite their best efforts to prevent pollution.

- Explore feasibility of establishing a new advanced disposal fee for motor oil and use the fees to help fund used oil education and collection program.

- Explore ways to promote expansion of "Do It Yourself" (DIY) waste oil collection sites by:

  - Requiring distributors of new motor oil to develop and fund "no-charge" collection centers to collect DIY-generated used oil in all areas where their products are distributed:

  - Establishing incentives for the development of used oil collection sites; and

  - Designating funds for purchase of storage tanks, containers or other collection equipment.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules.

- Investigate banning waste oil from final disposal. This investigation would be part of the overall response to HEA 1240 (PL 10-1990)'s requirement that the State seek to ban recyclable materials from final disposal (see waste reduction).

District Guidelines

- Require that districts assist the State effort by:

  - Promoting the efficient and sustained collection, recovery and use of used oil; and

  - Increasing public awareness of used oil and promoting appropriate disposal and re-use by both businesses and citizens.

STATE ACTION PLAN - PROBLEM WASTE - WASTE TIRES

The problem is dramatically illustrated by the periodic tire dump fires that may smolder for weeks on end, belching toxic black smoke into the air for miles around. Such fires are only the visible sign of the tire disposal problem: tire piles also provide an excellent breeding ground for disease-bearing insects and rodents. Burying used tires is not the answer for several reasons - they take up an enormous amount of valuable landfill space and their resiliency helps them resist compaction. Shredding improves the landfill problem, but it is expensive. Retreading is a declining industry in the United States, and there are few end-users of waste tires in Indiana.

PROGRAM OBJECTIVES

The State has targeted waste tires as a problem waste, representing a waste material that can be safely reused or recycled, requires excessive volume when landfilled and can be a health hazard when stockpiled. The State will pursue policies to:

- Increase the recovery and reuse of recycling of waste tires; and
- Reduce existing stockpiles of used tires.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2. However, the following laws directly apply to waste tire management.

HEA 1391 (PL 19-1990)

- Sets forth permitting and reporting requirements for tire storage sites (Outdoor sites containing 500 or more tires), but exempting those supplying tires for recycling.
- Establishes a Waste Tire Management Fund. (See "Dedicated Funds" below.)
- Establishes a Waste Tire Task Force to seek markets for waste tires and develop guidelines for waste tire disposal.
- Exempts tire recyclers and their suppliers from waste tire storage permit is less than 1,000 tires are stored.

DEDICATED FUNDS

The Waste Tire Management Fund, financed through storage permit fees, is established to assist IDEM in removing tires from unpermitted sites.

PROGRAM APPROACH

To achieve the waste tire program objectives, the State will:

- Include waste tire management as part of state education programs;
- Implement in-house procurement programs promoting proper tire maintenance and supporting purchase of waste tire products;
- Promote new markets for waste tires;
- Institute new waste management rules and standards which will eliminate stockpiling and illegal dumping; and
- Identify additional funding sources to support waste tire recovery programs, such as advanced disposal fees.

The State's efforts will be supported by the work of the Waste Tire Task Force, established under HEA 1391 (see above). The task force will work with IDEM staff to evaluate and recommend policy and programs.

Education

- Provide education programs and literature to increase consumer knowledge of the waste tire problem and ways to help, including:
  - Informed purchase of durable, retread tires; and
  - Proper tire maintenance so that more used tires are suitable for retreading.

State Agency Programs

- Work with state departments to implement a model waste tire reduction/recycling program for State-operated fleets by:
  - Promoting good tire maintenance programs which will produce waste tires suitable for retreading;
  - Establishing a procurement preference for purchasing retreaded tires, based on minimum standards for durability; and
  - Encouraging and monitoring use of rubberized asphalt by State departments (e.g., Department of Transportation).

Market Development

- Encourage new markets for used tires by identifying small scale uses for used tires and monitoring innovations which are being tested around the country. The State will use this research to report on:
  - Which uses are environmentally acceptable;
  - Which uses do not require extensive capital and could be undertaken by small businesses or incorporated into existing processes; and
  - How many tires could be diverted from disposal by applying uses which meet the above criteria.
- Identify and implement measures to promote use of rubberized asphalt by local governments and businesses around the state.
- Determine if the diversion rates projected above are sufficient and evaluate the feasibility to using more capital-intensive options (e.g., pyrolysis or recycled tire material) to increase the cumulative tire diversion rate.
- Investigate the feasibility of providing economic incentives (e.g., tax credits for new equipment, tax credits on sale of retread tires) for new shredding or retreading enterprises.

Additional Funding Sources

- Explore the feasibility of creating additional funds for waste tire management, using an advanced disposal fee on new vehicle tires.

New Rules

Apply the power vested in the Solid Waste Management Board to evaluate and promulgate new waste management rules:

- Investigate the feasibility of banning whole tires from landfill disposal.
- Comply with HEA 1391 to set forth requirements for tire storage sites, including minimum facility design and operating standards.

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of:
  - Banning whole tires from landfill disposal;
  - Setting minimum standards for tire life and size and disallowing the sale of tires that do not meet those standards;
  - Establishing waste tire collection and disposal regulations with the purpose of reducing illegal dumping and obtaining accurate data on waste tires; and
  - Instituting a certification requirement for retreaders.

STATE ACTION PLAN - PROBLEM WASTE - BATTERIES

Americans discard over 2.5 billion batteries each year. Depending on the type, batteries contain toxic heavy metals such as mercury and lithium, and caustic chemicals like mercuric oxide and potassium hydroxide - substances that can pose serious threat to public health and the environment. Household batteries are typically thrown into the household trash, where they make their way to incinerators or landfills. When incinerated, they create toxic emissions, and when landfilled, may leak toxic chemicals into the groundwater. Automotive batteries contain lead and sulfuric acid. In landfills, the lead can reach with acids commonly found in household garbage, producing the potential for toxic leakage into groundwater.

While there are strict controls over incinerator emissions and landfill management, the potential for contamination still exists. Moreover, not all potentially toxic substances are effectively controlled by existing technology and the long-term effects of some of these substances have not been thoroughly investigated.

PROGRAM OBJECTIVES

The State has targeted all types of batteries as problem wastes, representing waste materials that are a potential hazard when landfilled and can be reclaimed for useful purpose. The State will pursue policies intended to:

- Eliminate environmentally harmful disposal of batteries;
- Provide for increasing separation and collection of batteries;
- Increase the recycling of batteries that have markets and develop new markets for currently unrecycled batteries;
- Promote the use of less toxic and rechargeable batteries; and
- Assure end-use, storage and disposal options.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

As a solid waste management program and a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2. However, the following laws directly apply to battery management.

HEA 1391 (PL 19-1990)

- Bans disposal of lead acid batteries in conventional landfills.
- Requires retailers of lead-acid batteries to post notices concerning recycling of batteries and that improper battery disposal is illegal. Also requires that sellers collect one used lead-acid battery for every one sold. The Act spells out appropriate disposal and recycling procedures.

PROGRAM APPROACH

To achieve the battery management program objectives the State will:

- Include battery management as a subject to the statewide education and technical assistance programs;
- Promote state agency programs to recover used batteries and procure rechargeable batteries or batteries using less toxic materials;
- Identify additional funding sources for battery management programs, such as advanced disposal fees;
- Institute new waste management rules and product standards;
- Promote and monitor research into battery management technologies; and
- Establish requirements and guidelines for district level programs.

Based on this approach, the State will:

Education

- Develop and implement an education program to:
  - Increase public and corporate awareness of battery disposal problems;

- Educate citizens and businesses on environmentally sound battery management and disposal; and
- Promote awareness and use of less toxic and rechargeable batteries.

- Target education program to inform retailers about on-site collection options and HEA 1391 retailer recovery requirements.

State Agency Programs

- Undertake battery recycling programs for batteries generated by State agencies.
- Establish procurement guidelines, using preference mechanisms to support purchase of less toxic and rechargeable batteries, when such batteries are an alternative.

Additional Funding Sources

- Investigate the feasibility of levying environmental impact taxes or advance disposal fees to:
  - Encourage manufacturers to decrease the negative environmental impact of their products (including all types of household hazardous wastes); and
  - Fund battery and other material recycling programs.

New Rules

Apply the power vested in the Solid Waste Management Board to evaluate and promulgate new waste management rules:

- Explore the feasibility of establishing rules to:
  - Establish state battery management demonstration programs; and
  - Ban landfill of dry cell batteries, once separation and collection systems have been developed (see Research section above).

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of:
  - Restricting sale mercury content in alkaline batteries;

- Mandating non-lead acid battery recovery;
- Mandating recycling and provide funds to start up local programs;
- Establishing a deposit system for batteries; and
- Banning or taxing appliances using "hard-wired" dry cell batteries unless the manufacturer provides for extraction and collection of used batteries before product disposal.

Enforcement

- Make the public and businesses aware that HEA 1391 (PL 19-1990) requires:
  - That lead acid batteries be banned from disposal in conventional landfills;
  - That retailers of lead-acid batteries:
    + Post notices concerning recycling of batteries and that improper battery disposal is illegal;
    + Collect one used battery for every one sold; and
    + Establish guidelines for appropriate disposal and recycling procedures.

Research

- Monitor national research on:
  - Systems for labeling dry cell batteries according to cell type and contents;
  - Processes for removing dry and wet cell batteries from mixed solid waste;
  - Strategies to collect recovered batteries;
  - Technologies available to control heavy metal emissions from municipal waste incinerators; and
  - Processes to extract "hard-wired" dry cell batteries from appliances.

District Guidelines

- Require that districts:
  - Educate citizens and businesses about proper battery management and disposal methods available in the community;
  - Establish voluntary battery collection programs at battery retail outlets, final disposal facilities, or recycling drop-off sites;
  - Include batteries as part of household hazardous waste collection programs;
  - Offer curbside collection of batteries as part, or separate from, other curbside recycling programs; and
  - Adopt procurement guidelines with preferences for rechargable batteries.

STATE ACTION PLAN - PROBLEM WASTE - CONSTRUCTION AND DEMOLITION DEBRIS

Although construction debris generally poses little thread of toxicity, it is extremely bulky and uses up valuable landfill space. Equally important, much of the materials are readily recyclable, offering large cost savings to contractors and governments. Concrete from demolished bridges, for example, creates large amounts of useful, contaminant-free material that can be crushed into aggregate for stabilizer and road base. Asphalt can be recycled into new road surfaces, at a fraction of the cost of new material. Metals and wood can be turned into useful products, as can cardboard. Even rock and dirt can be used as fill for new construction projects.

PROGRAM OBJECTIVES

The State has targeted construction and demolition (C&D) debris as a problem waste, representing waste materials that can be safely reused or recycled and requires excessive volume when landfilled. The State will investigate and pursue policies which will:

- Conserve sanitary landfill space through appropriate management or C&D debris;
- Increase business and citizen awareness of C&D debris recycling and disposal options; and
- Stop illegal dumping of C&D debris.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

None of the recent legislation specifically addresses C&D debris; however, as a municipal solid waste, the debris is subject to all applicable pollution prevention policies and programs, Indiana codes, and federal regulations. Also, as a part of the State Plan, this program will be affected by many of the new laws summarized in Chapter 2.

PROGRAM APPROACH

To achieve program objectives, the State will:

- Promote awareness and use of C&D debris recycling and disposal options around the state;
- Implement in-house C&D debris recovery and recycling programs;
- Explore ways to promote development of a statewide network of C&D debris processing centers;
- Institute new waste management rules and standards;
- Tighten enforcement of existing regulations governing C&D disposal; and
- Monitor innovations in C&D debris management.

Using this approach, the State will:

Education

- Publish information on C&D debris recycling and disposal options and opportunities around the state.

State Agency Program

- Implement a model program for recovering and recycling C&D debris on state construction and highway projects.
- Explore the feasibility of giving contractors preference if they propose to use a percentage of recycled C&D materials, without compromising minimum product standards, and implement a C&D debris recovery program as part of the contracted work.
- Develop procurement guidelines which include: (1) a preference for materials using recycled C&D debris and, if feasible, (2) a preference for construction contractors which use a percentage of recycled C&D materials.
- Encourage and monitor use of reclaimed asphalt in State projects (e.g., Department of Transportation).

(SKL/223)

Facility Development

- Explore the feasibility and need to support development of a statewide network of C&D debris processing centers as an alternative to C&D debris landfills.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules:

- Explore the feasibility of instituting new rules to ban C&D debris from sanitary landfills, as provided for in HEA 1240.

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of establishing economic incentives for recycling C&D debris as either a debris generator or a debris recycler.

Enforcement

- Eliminate or adjust current regulations which restrict salvage of materials from a demolition construction site.
- Tighten enforcement of bans on open burning of C&D debris.

Research

- Evaluate and monitor innovations in C&D debris recycling.
- Identify ways to develop markets for C&D debris.

District Guidelines

- Require that districts:
  - Consider giving permit preference to contractors proposing to use a percentage of recycled C&D materials;
  - Educate citizens and businesses about recycling and disposal opportunities in the area;
  - Adopt procurement guidelines with a preference for recycled C&D materials; and
  - Contact the State for information on the State's research.

STATE ACTION PLAN - PROBLEM WASTE - HOUSEHOLD HAZARDOUS WASTE

These are common household cleansers, solvents, paints, oils, insecticides, and other products that are ignitable, reactive, or toxic. They become hazardous waste when they are discarded into the household trash or the environment. Although only about 1 percent of the total municipal waste stream, household hazardous wastes (HHW) accumulate to the thousands of tons per year. HHW in the solid waste stream can explode or burn, in landfills can exacerbate leachate problems, and in incinerators can produce toxic dioxins and furans. In wastewater systems, HHW can damage pipes and treatment equipment, contaminate sludge and septic tanks, and threaten the health of workers. In the home, the substances may poison children and pets or cause toxic fumes during a fire. Even if householders are aware of the potential dangers of these substances, few safe disposal options are open to them. So the containers simply go into the trash, posing a threat.

PROGRAM OBJECTIVES

The State has targeted household hazardous wastes (HHW) as problem wastes, representing waste materials that are a potential hazard when landfilled or incinerated. The State will pursue policies to:

- Protect public safety, health, and property and minimize environmental impacts from the adverse effects resulting from improper handling and disposal of HHW;
- Develop public awareness and responsibility for the management of HHW;
- Support the development of adequate collection, storage and treatment facilities; and
- Manage HHW in a way that is consistent with the following order of priority: source reduction, recycling and reuse, treatment, and residual disposal.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

None of the recent legislation specifically addresses household hazardous waste; however, as a municipal solid waste, HHW is subject to all applicable pollution prevention policies and programs, Indiana codes, and federal regulations. This program is affected by many of the new laws summarized in Chapter 2.

PROGRAM APPROACH

To achieve program objectives, the State will:

- Emphasize household hazardous waste management as part of the statewide education and technical assistance programs;
- Investigate the feasibility of supporting development of a set of HHW collection centers around the State;
- Work with the industrial community to reduce the amount of hazardous materials used in products;
- Identify and develop additional funding mechanisms to support collection, treatment and proper disposal;
- Establish minimum standards for all such facilities;
- Institute new waste management rules and standards governing storage and disposal of HHW; and
- Establish requirements and guidelines for district level programs.

Using the approach, the State will:

Education and Technical Assistance

- Provide an aggressive education program designed to:
  - Increase public awareness of the problem;
  - Educate citizens and small businesses about non-hazardous alternatives to hazardous products;
  - Educate citizens on proper disposal of different materials; and
  - Promote use of local collection programs, where available.

- Provide technical guidelines to districts or communities wishing to establish a HHW collection program.
- Provide technical assistance to businesses and industry to reduce the use of hazardous materials in their products.

Facility Development

- Explore the feasibility and need to support development of:
  - Permanent collection centers in areas of high population density; and
  - Mobile collection centers designed to serve several counties.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules:

- Explore the feasibility of rules to establish minimum standards for facilities used to collect, store and/or treat HHW.

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of:
  - Establishing advance disposal fees on selected HHW products; and
  - Using ADF's or some other mechanism to support a HHW program fund.

District Guidelines

- Require that districts:
  - Implement a citizen education program on proper HHW management options and local disposal opportunities (if applicable); and
  - Consider sponsoring and funding HHW collection programs, using either permanent centers or designated collection days.

STATE ACTION PLAN - PROBLEM WASTE - CONDITIONALLY EXEMPT HAZARDOUS WASTE

The State has targeted this special category of hazardous wastes as problem wastes, representing waste materials that are a potential hazard when disposed at sanitary landfills or incinerators.

By State and Federal code definition, a hazardous waste is conditionally exempt from hazardous waste disposal requirements if the waste is produced by a generator who generates less than 100 kg of the waste each month. As such, these conditionally exempt quantities of waste are not required to be manifested and can be disposed at sanitary landfills. Common sources for conditionally exempt hazardous wastes (CEHW) are small businesses (such as dry cleaners or photo labs) and farming operations.

For the purposes of this Plan, the CEHW's are distinguished from wastes generated by Small Quantity Generators who generate hazardous waste in amounts between 100 and 100 kg each month. These small quantity generator wastes are now subject of State requirements for manifesting and controlled disposal.

PROGRAM OBJECTIVES

To address CEHW, the State will pursue policies to:

- Protect public safety, health and property and minimize environmental impacts from the adverse effects resulting from improper handling and disposal of CEHW;
- Develop public and corporate awareness and responsibility for the management of CEHW generators; and
- Promote management of CEHW in ways that are consistent with the following order of priority: waste reduction, recycling and reuse, treatment and residual disposal.

THE ACTION PLAN AS PART OF STATE POLICY

Every element of the State Plan is founded on the same policy goals and principals, seeking to reduce the amount of waste that is disposed, while ensuring adequate, safe disposal capacity to handle wastes that cannot be managed in any other manner.

In pursuing this policy, the State:

- Set a voluntary goal of reducing the amount of waste disposal in Indiana by 35 percent by 1996 and 50 percent by 2001; and
- Supports comprehensive planning, seeking to maximize the recovery of useful materials; minimize negative environmental affects and minimize the amount of disposed waste.

As such, HEA 1240 (PL-10-1990) states that ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

STATUTORY REQUIREMENTS/RELATED REGULATIONS

None of the recent legislation specifically addresses CEHW; however, as wastes that are only conditionally exempt from a much stricter set of regulations, CEHW's are subject to all applicable pollution prevention policies and programs, Indiana codes, and federal regulations. Further, if CEHW's are stored or transported in amounts greater than 100 kg, these waste materials are no longer exempt and are subject to hazardous waste regulations.

DEDICATED FUND

At this time, there are no funds earmarked to specifically address CEHW; however, the funds supporting the IDEM Office of Pollution Prevention and Technical Assistance, and the Pollution Prevention and Safe Materials Institute could be applied for CEHW education.

PROGRAM APPROACH

To achieve program objectives, the State will:

- Develop an education and technical assistance program targeted to CEHW generators;
- Investigate the feasibility of supporting development of a network of CEHW collection centers around the state;
- Institute new waste management rules and standards; and
- Establish guidelines for district level programs.

Using this approach, the State will:

Education and Technical Assistance

- Provide an aggressive education program designed to:
  - Increase public aware ness of the problem;
  - Educate citizens, farmers and small businesses about non-hazardous alternatives to hazardous products;
  - Educate businesses and citizens on proper disposal of hazardous materials; and
  - Promote use of local collection programs, where available.

- Provide technical guidelines to districts or communities wishing to establish a CEHW education and/or collection program.

- Coordinate with organizations representing farmers and small businesses who are potential small quantity generators to promote generator awareness and responsible waste management.

- Explore the feasibility of initiating a direct outreach project, by establishing a database of potential small quantity generators and using this network to keep them apprised of:

  - Existing and new regulations;

  - Proper disposal approaches;

  - Local disposal opportunities; and

  - Pollution prevention techniques, and alternatives to hazardous products.

Facility Development

- Explore the feasibility and need to support development of:

  - Permanent collection centers in areas of high population density.

  - Mobile collection centers designed to serve several countries.

New Rules

Apply the power invested in the Solid Waste Management Board to evaluate and promulgate new waste management rules:

- Explore the feasibility of rules to:

  - Regulate CEHW as hazardous waste;

  - Lowering the limits for what amount qualifies as CEHW;

  - Require stiffer reporting mechanisms for generators of identified CEHW materials.

- Explore the feasibility of rules to establish minimum standards for facilities used to collect, store and/or treat HHW.

New Legislation

Make recommendations to the General Assembly on:

- The feasibility of:
  - Establishing advance disposal fees on selected CEHW materials; and
  - Using ADF's or some other mechanism to support a CEHW program fund.

District Guidelines

- Require that districts:
  - Implement a citizen education program on proper CEHW management options and local disposal opportunities (if applicable); and
  - Coordinate with local agencies and organizations representing small businesses, farmers and other potential CEHW generators.

VOLUME I

CHAPTER 5

The District Action Plan

ROLE OF THE DISTRICT

Each solid waste management district in Indiana has a key role in implementing the State Plan. HEA 1240 (PL-10-1990) gave each district considerable power to manage its solid waste. With that power, came responsibility to plan for and implement responsible waste management.

Districts have considerable autonomy in developing their own plans; however, the legislature also required the State, primarily through IDEM, to plan for waste management at the state level. Therefore each district cannot conduct its planning in a vacuum; consideration must be given to regional and state-wide solid waste management issues. Each district can obtain direction as to what should be considered from several sources:

- HEA 1240 (PL-10-1990);
- Other relevant solid waste legislation;
- Rules adopted by IDEM; and
- The State Plan.

The District Action Plan is designed to:

- Review district planning considerations and guidelines; and
- Guide district actions that will complement IDEM's statewide planning efforts.

The District Action Plan does not address specific district formation issues. For more information on districting, please refer to HEA 1240 (PL 10-1990) or contact the Office of Solid and Hazardous Waste Management through the IDEM Hotline:

IDEM HOTLINE: 1-800-451-6027

DISTRICT PLAN OBJECTIVES AND CRITERIA

HEA 1240 (PL-10-1990) stipulates a set of goals and criteria intended to guide district plans and achievements. These are:

- Reduce waste by 35 percent by 1996, 50 percent by 2001;
- Meet criteria and other elements set forth in state plan;

- Consider public comment received during all public meetings held for purpose of receiving public comment on the district plan;
- Project need for facilities in the district 5, 10 and 20 years after the district plan is adopted;
- Establish solid waste management policy that reflects the needs of the district and provides an integrated approach that includes the following: source reduction, alternatives (including recycling and composting) to final disposal facilities, final disposal facilities;
- Set forth goals and objectives for the district;
- Identify alternative means of achieving these goals and objectives;
- Describe operational and capital costs of implementing the district plan and the proposed means of financing it;
- Set forth the basis for setting fees, rates and charges;
- Designate a person to supervise plan implementation;
- Describe surveillance and enforcement procedures to ensure compliance with the district plan;
- Consider contracts with private persons;
- Take account of permitted final disposal facilities in operation at the time the district plan is adopted; and
- Incorporate all recycling activities in progress in the district at the time the district plan is adopted.

STATE ASSISTANCE

As part of its HEA 1240 mandate to coordinate district efforts into a statewide solid waste management effort, the State, working primarily through IDEM, will offer districts technical assistance and guidance throughout the planning and implementation of district plans. As detailed in the State Action Plan (Chapter 4), this assistance will take the form of:

- **Planning Tools:** tools will include a district plan format, a statewide map indicating regulatory constraints on siting areas, and facility sizing and costing guidelines.
- **Technical Assistance and References:** as detailed in Chapter 4, IDEM staff will provide direct assistance, including orientation workshops for district planners, planning references, limited on-site visitation and access to all staff members through the IDEM Hotline

(see above). Some of these planning references and technical resources are included in the Technical Guide appendix to the State Plan.

- **Enforcement:** IDEM will pursue vigorous enforcement of operating violations at solid waste disposal facilities and will work closely with districts to coordinate on monitoring facilities operating within each district.

- **Statewide Education Program:** as detailed in Chapter 4, IDEM will manage a comprehensive statewide education program to make residents, businesses, industries and institutions aware of the issues and how they can help district efforts succeed. The program will offer materials that can be used by districts in their communities.

- **Public Involvement Assistance:** IDEM staff will be made available as such as possible to present information at public meetings held during the planning or implementation of district plans. The staff can present details on district planning guidelines or related solid waste management issues, including technologies and regulatory issues.

- **Promotion of Private Sector Solutions:** The State will actively promote the development of private industries that can offer districts alternatives to final disposal for some part of the waste stream. The State Plan provides for efforts to establish regional markets for recycled or composted commodities, by encouraging development of those types of businesses in Indiana.

  As detailed in sections of Chapter 4, the State will pursue policies and programs designed to give businesses an incentive to do business here. To primary state objectives are: 1) to build the demand of recycled products through new product content and procurement policies; and 2) to develop markets in Indiana for secondary materials. In addition, the State will administer the Recycling Promotion and Assistance Fund, described below, designed to assist in establishing an expanding recycling businesses as well as assisting businesses to reuse or recycle secondary materials.

DEDICATED FUNDS

HEA 1240 provides for a number of funding sources to help finance different district plan elements and phases. Districts are given the authority to develop funds to cover costs for both planning and implementation, using fees, bonds and a state-administered Revolving Loan Fund. Chapter 3, State Plan Overview, summarizes these resources.

Specifically, the law has dedicated funds to encourage public solutions or private enterprises that can help districts meet their recycling needs. The Recycling Promotion and Assistance Fund is supported by state solid waste management fees, which are levied at all municipal solid waste landfills. The Indiana Department of Commerce is responsible for administering this fund.

(SKL/171)

DISTRICT ROLE IN PLANNING

In preparing its plan, each district is required by HEA 1240 to:

- Assess the capacity of the existing solid waste management facilities;
- Determine the districts solid waste management needs for the next 20 years; and
- Identify a combination of solid waste management methods to help the district comply with the state waste reduction goals and the State hierarchy for solid waste management.

In completing its plan, each district must first ensure that its own waste management needs will be met, as defined by the capacity of existing facilities to address the waste volumes and regulatory changes. Many of the districts needs will be influenced by requirements of HEA 1240 (PL-10-1990) and related legislation or IDEM rules. One of the important and immediate considerations is to ensure sufficient waste management capacity within the plan period (20 years). At the same time the district must show how it intends to meet the waste reduction goals of 35 percent (1996) and 50 percent (2001).

To get started, HEA 1240 (PL-10-1990) requires that each district get a clear picture of what facilities and technologies are already in place. Further, the law requires that districts determine their needs for additional programs, facilities, or technologies to meet the State's reduction and recycling goals as well as to manage that portion of the waste stream that cannot be diverted.

Each district will have to make provisions for implementing waste management within its boundaries. This may require each district to plan for:

- Siting and constructing facilities;
- Planning and implementing waste management programs;
- Financing facilities;
- Collecting fees sufficient to support district plan; and
- Educating the public and soliciting public input on district decision making.

Regional considerations already have a real effect on waste management for many districts. Existing landfills that do not function as regional facilities are likely to be the exception. Districts will be wise if they coordinate with each other to identify mutual needs and opportunities. These can include situations such as:

- Sharing of facilities;
- Municipalities located in more than one district;

- Enforcement and monitoring of waste haulers working in neighboring districts; and
- Sharing of collection services.

Districts will also need to work closely with their municipalities in developing and implementing their plan. Many municipalities already own and operate collection systems, recycling centers and landfills. They are experienced in the nuts and bolts operation of waste management systems and will be an important resource for the districts.

Working With Private Enterprise

As Districts learn more about their needs, they may find some of their solutions by exploring private enterprises as a community resource. Privatization of solid waste management services is a growing trend around the country, and such opportunities can be expected to increase. Parts of HEA 1240 (PL-10-1990) and the State Plan are specifically targeted to encourage the growth of recycling industries in Indiana (see last sections titled STATE ASSISTANCE AND DEDICATED FUNDS).

Increasingly, local and regional governments are turning to public/private partnerships as a way to relieve some of the risk and long-term debt involved with providing more complex waste management services. As with any Privatization option, the key is to identify a good private partner and determine what balance of risk and responsibility best serves the district's residents. A discussion follows in the next section on the advantages and disadvantages of different partnership configurations and incentives that can be used to encourage private solutions.

Public Involvement During the Planning Period

As specified in HEA 1240 (PL-10-1990), each District is required to establish a solid waste advisory committee, consult with that committee during the planning period and hold a minimum number of public meetings and hearings before adopting a District plan. However, because the success of the District plan will depend on public support and cooperation, the State recommends that Districts:

- Assure that the membership of the advisory committee includes all interested parties;
- Expand the committee's role to continue consultations throughout plan implementation (see next section); and
- Provide additional public forums during the planning and implementation periods.

Advisory Committee's Role During the Planning Period

The solid waste advisory committees established by each district (as required by HEA 1240 (PL-10-1990)) will serve to:

- Advise the district on different aspects of the district plan; and
- Help inform and involve the public during preparation of the district plan.

District's also have the opportunity to expand the role of the advisory committees and to continue to use them throughout the implementation and operation phases. This element is covered in the next section on implementation.

Public Meetings or Hearings During the Planning Period

To further ensure that the general public has opportunities to contribute, the districts are required to hold one public meeting during the planning process and one public hearing to discuss the final plan.

However, to ensure that the public can be effective partners in District plans, the State strongly recommends that Districts keep the public informed and involved from the very beginning. The State advises that Districts provide, at a minimum, the following information and public forums for area citizens and businesses.

- PUBLIC MEETING
  Time: Before forming a district
  Purpose:
  County officials hold meeting to discuss proposals for single or multi-county formation.

- PUBLIC MEETING
  Time: Starting during the first month of planning
  Purpose:
  Newly formed Districts hold open advisory committee meetings to discuss the plan's objectives, criteria for how the plan will be evaluated, and drafts of the plan as they are developed.

- PUBLIC MEETING (qualifies for the meeting required by HEA1240)
  Time: Within the first two months of planning
  Purpose:
  Advisory committee sponsors a public meeting to inform interested citizens about the planning process and get public comments on key issues and objectives that the plan should address. Also, it will get comments on the criteria that should be applied to approve plan.

- INTERIM
  Advertise how citizens can get a copy or check out a copy of the draft District plan, after it is released to the advisory board for review.

- PUBLIC MEETING (qualifies for the meeting required by HEA1240)
  Time: At least one month before plan is finalized
  Purpose:
  Advisory committee sponsors a public meeting to present the draft plan, report how public comments were addressed and request final comments.

- PUBLIC MEETING (required by HEA1240)
  Time: After draft plan is finalized, but before final adoption
  Purpose: Public hearing to discuss final plan.

- THROUGHOUT PLANNING PERIOD
  Publish a record of all public meetings or hearings, including related public comments. Distribute that record to the advisory committee and make copies available to interested citizens.

District Plan Format Design

The format for district plans has been developed as required by HEA 1240 (PL-10-1990). The format is Volume II of the State Plan. Major headings are:

- Introduction;
- Overview;
- Administrative Information;
- Demographic Information/Facilities Inventory;
- Solid Waste Management Plan;
- Implementation and Financing Plan;
- Surveillance and Enforcement Procedures; and
- Appendices.

The format is intended to provide clear and concise guidance by example whenever possible. It serves to assure that information from the districts is in a form that facilitates review by the State. This is especially important since all plans have the same submittal deadline and the state has a limited time for review. Where appropriate, forms are provided that the districts can use to fill in the needed data. The appendices include:

- Population projections developed by the state;
- Cost factors for facilities;
- Survey form for industries;
- Text of HEA 1240 (PL-10-1990); and
- Glossary.

DISTRICT ROLE DURING IMPLEMENTATION AND OPERATION

There is a logical sequence of actions that districts must follow in implementing their plans. Some are spelled out in HEA 1240 (PL-10-1990) while others result from the district's waste management responsibilities.

Most of the major decisions center on the District's responsibilities to develop, operate and administer the necessary programs and facilities. Especially important are the District's decisions about the role of public or private entities in fulfilling these responsibilities. (See the Figure at the end of this section for a snapshot look at the pro's and con's of various public/private options.)

First, the district must determine who should own the facilities:

- Will the district own all facilities or will it contract with private sector owners?

Another major decision centers on facility operations: Districts will need to administer daily operation of existing programs and facilities. This may include an oversight of existing municipal operations or it could extend to acquiring the operating role presently played by municipalities.

- Will it hire its own operating personnel or will it contract for services?

Implementing plans also means that facilities will have to be constructed and collection services must be provided. This can be accomplished in several ways and different programs or facilities may require lesser or greater private involvement.

- Will it seek a full service contract for design, construction and operation of facilities or can district staff supply the necessary skills and support?

- Will the district undertake new collection services (e.g.: recycling) or seek a private contractor?

Districts may have sufficient staff to design their own facilities such as collection or transfer centers which can then be built under conventional construction contracts. More complex facilities, such as material recovery facilities, may be best developed through a full service contract.

Implementing services such as collection of residential recyclables may mean setting up a district operated collection service. Such an approach will usually require the district to assume a considerable capital debt and additional overhead and staffing costs. The same level of service may also be accomplished by contracting with the private sector. Finally, it will be imperative that the district set up a system for collecting and administering the revenues needed to support the waste management system it will put in place. Fee structures, financing, accounting and other fiscal systems will have to be designed. Many districts will also find that they need a full-time manager. Responsibilities could include operations, contracts, personnel, finance, enforcement, education, permits, and public involvement.

The next section discusses the advantages and disadvantages of different public/private configurations and incentives that districts could use to develop opportunities for private sector participation.

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PUBLIC INVOLVEMENT DURING IMPLEMENTATION AND OPERATION

Just as it is important to build public support by involving citizens during the planning period, it is critical to keep public confidence high and encourage active public cooperation during the implementation and operation of the District plan's new programs and facilities. Keeping the public informed and involved will be especially important during the decisions about the need for, or use of, certain recycling or disposal facilities. It will also be needed during the development and siting of such facilities.

After the plan is adopted, the State recommends that, at a minimum, Districts provide the following information and public forums for area citizens and businesses:

- Keep the plan posted in a public place (e.g.: planning office or library) or let people know how they can get a copy of the plan. Be sure to update the posted copy, if changes are made.

- During the first two years, publish updates on the plan's progress at least twice a year. This could be a separate letter or part of municipal update publications for local governments.

- Once per year, hold an open advisory committee meeting to inform committee members and interested citizens about the plan's progress and how that progress measures up to the criteria that was established during the planning process. Use this meeting to receive public comments on how implementation or operations could be improved.

- Publish a record of the annual update session and the related public comments. Distribute that record to the advisory committee and make copies available to interested citizens.

POTENTIAL ROLE OF PRIVATE SECTOR DURING IMPLEMENTATION

As Districts determine if and how they will work with private contractors, it is important to understand that possible variations and the benefits and risks associated with each. The debate will usually center of how to maintain enough control to protect the public interest, while deferring some of the risks associated with owning and operating solid waste management systems and facilities.

The stakes go up every year, as regulatory constraints tighten and pollution testing grows more rigorous. On balance, governments are finding it increasingly attractive to allow waste management professionals to accept a good deal of the risk, as well as higher profits. As such, it is also important for Districts to understand how to attract and maintain reliable private partners.

Ownership of Final Disposal Facilities

The most contested ownership issues revolve around who will own, and thus ultimately control, solid waste management facilities. If the public owns a landfill they will have more control; but, if a private concern owns the landfill, taxpayers are relieved of potential liabilities associated with facility operation and closure.

Concerns run especially high regarding landfills. The costs to construct, operate, close and monitor landfills have increased sharply in recent years. Also, potential changes in RCPA Subtitle D will increase requirements for post-closure monitoring (i.e., longer liability). Landfill capacity has become a community asset, worth guarding to ensure that local needs are served. As such, many communities have determined that the public will own these facilities.

Public ownership offers the advantage of increased control. If they choose, local governments can use local ordinances to effectively exclude wastes generated outside designated communities. The price for such control is increased regulation of local waste management systems and increased exposure to long-term liability if there is any resulting pollution (i.e., Superfund clean-ups). As facility costs have risen, so has the potential liability associated with operating and monitoring these high tech operations.

In some areas, local officials have determined that they should defer or at least share such risks. Increasingly, private waste management firms are finding willing communities who will support private development of single, large capacity sites, capable of serving entire regions. In other areas, communities are more interested in sharing the risk, by contracting with private companies to run the increasingly technical affairs at modern landfills.

Operation

Though solid waste management is still a fundamental part of many communities' basic utility operations, such services are not immune from recent trends toward Privatization.

Contracting with private collection or facility operators has several advantages. Such an approach offers the community a flexibility that is often needed when introducing new waste management options, such as recycling or composting. Relying on professional operators can also protect taxpayers from undue liability for pollution or other potential problems. However, <u>owners (public or private) always share some level of liability!</u>

In addition, contracting can save communities money up front. Many collection and processing contractors are willing to make the initial capital investment for land, facility development, equipment and vehicles. Applying today's technologies, such investments can be substantial. However, each community

must carefully weigh these benefits against the loss of control over rate hikes and service quality. Further, in the case of recycling or composting, communities must weigh the advantages against potential revenue losses when recyclables and compostables are turned over to private contractors. Though such revenue potential is currently low, it is important for communities to consider five and ten years ahead.

In fact, most contracts are structured to address these issues and most recycling contracts include some risk sharing by both parties. Due to normal commodity market fluctuations, private contractors will often seek some assurance that they will receive a minimum amount for each collected commodity. Such assurance can be structured as minimum thresholds, with the community paying any differences when prices don't meet the threshold. In these types of arrangements, both parties may also share the benefits of higher prices, splitting the difference on pre-agreed terms.

Facility Design and Construction

Regardless of their decisions on ownership and operation, most local or regional governments will need to contract for some or all of the design and construction of many solid waste management facilities. Marked exceptions could include construction of simple drop-off bins or transfer stations, which can be constructed using the skill base available in many public works or roads departments.

Even if some larger departments have the necessary staff skills, it is important to weigh the risks and to consider how a busy public works can afford to free the needed staff's time.

As with many major public works projects, some contractors may offer a full service contract to design, build and operate the facility. Others may offer a "turn-key" project. When construction and start-up are complete, the community must operate the plant or contract for such operations with another party.

As the technology and regulation of solid waste management grows more complex, it is important for a community to carefully evaluate the pro's and con's of various ownership and operation configurations.

The following figure outlines the benefits and risks associated with each basic configuration for ownership, operation, design and construction of solid waste management facilities and equipment.

FIGURE 5-1

Basic Risks and Benefits
of
Different Public and Private Sector Relationships

RELATIONSHIP	BENEFITS TO PUBLIC SECTOR	RISKS TO PUBLIC SECTOR
Public ownership Public operation Public development	• Control of rates • Greater quality control • Potential to protect facility capacity	• Total liability • Total cost • Total market risk (recycling)
Public ownership Public operation Priv. design/construction	• Control of rates • Good quality control • Potential to protect facility capacity • Technical expertise • Market benefits	• Majority of liability • Majority of costs • Total market risk
Public ownership Private operation Private design/construction	• Shared liability • Technical expertise • Shared market benefits • Potential to protect facility capacity	• Less control of rates • Less quality control • Shared market risk
Private ownership Private operation Private design/construction	• Much less liability • Technical expertise • No market risk	• Less control of rates • Little quality control • No potential to protect capacity • No market benefits

NOTE: In all public ownership configurations, the District has the power to accept or refuse to take out-of-district wastes. If the facility is privately owned, the District does not have the power to control what wastes the private facility takes. However, such agreements could be outlined in a contract between the District and the facility. The contract is very important. It should be comprehensive, applicable to facilities and sources provided, including tests and guidelines for all sources, as well as penalties for non-compliance and guarantees on the part of the vendor.

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INCENTIVES FOR PRIVATE SECTOR

As solid waste management technologies and strategies change to address increasingly complex needs, the private sector will always play a vital role. Further, the new "garbage" businesses can mean new industry and growth for host communities. Such businesses range from waste management companies to recycling processors and manufacturers of recycled products. Many of these enterprises represent small to medium level employers and are relatively benign to local environments.

As such, it can be important for local governments to assist such firms in their early success. Incentive structures used to recruit such businesses into host communities are similar to those used to fuel most economic development efforts. The approaches vary, but many concentrate on relieving the initial burdens of starting and building a business in a young, volatile market.

Examples of incentives offered by host communities include:

- Tax structures that relieve all or part of the sales or property tax burden for the first few years;
- Public development of industrial parks, dedicated to recycling or related businesses;
- Ordinances designed to lower barriers to collection of recyclables or compostables (e.g., providing a variance on a ban designed to prevent mobile vendors from setting up shop by allowing mobile recycling collection stations or temporary drop-off stations);
- Ordinances designed to increase the supply of recyclables in the area (e.g., mandated recycling collection);
- Contracts that feature substantial risk sharing by local governments;
- Private low interest loan funds, established and supported by local lenders; or
- Public information campaigns designed to increase local interest and demand for related services and products.

In addition, districts may want to offer incentives to a community that is willing to host a final disposal facility, such as:

- A percentage of the tipping fee;
- Greater control over decisions affecting the facility, as well as district solid waste management decisions; and
- An exemption from certain district fees.

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STATE POLICY AND DISTRICT PLANS

District plan contents are specified by HEA 1240 (PL-10-1990); however, there are other sources of additional requirements which will affect plan contents and development. These are the plan format (described above), additional legislation and IDEM rules (existing and future).

Plan Format

Development of the plan format for the districts raised several very important questions about how districts could clearly demonstrate their plans were responsive to the objectives and goals in HEA 1240 (PL-10-1990).

- **What waste reduction/recycling can districts take credit for in meeting the state goals? Can existing programs be included?**

Recognizing that some communities have already taken initiatives to reduce and recycle, it is proposed that districts include the results of all existing waste reduction and recycling programs as counting toward achieving the state goals. This would include public programs such as city curbside collection, drop-off centers, and buy-back centers operated by municipalities, not-for-profit agencies, and private businesses. Recycling by industry could also be counted; however, the district would have to perform a survey of industry to document the level of recycling currently being accomplished. This survey would also serve to document the amount of waste generated by industry. Districts would be able to count waste reduction resulting from state imposed bans on recyclables such as lead acid batteries. Also since the state has the mandate to consider bans on other recyclables in the waste stream such as yard waste, aluminum, etcetera, districts could take credit for reductions achieved by such bans. Overall it seems appropriate to take into account existing recycling and reduction efforts; not to do so would have the effect of making life more difficult for those who have already taken the initiative to reduce their waste. Since the objective is to reduce the amount of waste for final disposal, it seems appropriate to include all waste reduction/recycling activities regardless of whether they were initiated by the districts or resulted from a ban imposed by the state.

- **How should the districts calculate the percent of waste reduction/recycling they have achieved?**

An initial year (possibly 1991 or 1992) will be proposed as the baseline year for measuring if the district has met the state reduction/recycling goals. It is anticipated that 1992 is what most districts will use as the first planning year for their solid waste plans since the deadline for plans is July 1992. Also it is anticipated that landfills will have weighing scales in service at the beginning of 1991 and initial weight data for waste received may be available. District will need to estimate the amount of recycling/reduction for the base year and following years based on surveys conducted for their management plans. The percent recycling will be calculated by dividing the

amount of reduction/recycling in each year by the amount of waste in the base year. This procedure is responsive to the spirit of HEA 1240 (PL-10-1990) regarding reduction in waste for final disposal. It is simple in its application and it is clear regarding the goal to be achieved (no moving target).

- **How should districts measure or calculate the amount of waste they generate?**

The best source of such data is to weigh the vehicles bringing the waste to a disposal site(s). There are relatively few districts where this can be done without some complicating factor being present. Landfills may not have the necessary scales, they may receive waste from more than one district or there may be no final disposal site in the district. Except where existing conditions are such that weight data may be used, most districts will likely need to estimate the amount of waste they generate.

Waste from commercial and residential sources can be estimated using generally accepted national averages. The U.S. EPA report by Franklin on waste characterization in the United States (updated each year) is an industry accepted standard for this purpose. Comparison of estimates using the per capita rates from this report have shown good agreement with weight data.

Waste generation from industries is more difficult to estimate, since it is very dependent upon the type of manufacturing being done. It is proposed that districts conduct a survey of industry within the district to obtain data on the amount and composition of waste generated by industry. This will serve as the basis for estimating the total generated and will also allow the district to estimate the recycling being accomplished by industry which can then be counted toward meeting the state goals. A model survey form is provided in the plan format for use by the districts.

Other Legislation and IDEM Rules

District plans will also be affected by other state solid waste legislation such as HEA 1391 which prohibits disposal of lead acid batteries in non-hazardous waste landfills. The final State plan will include a section highlighting relevant state laws dealing with the subject. The IDEM is required (by HEA 1240 (PL-10-1990) and other laws) to implement legislation through administrative rules. For example HEA 1240 (PL-10-1990) empowers the solid waste management board to ban recyclable materials from final disposal. This could include materials such as aluminum, yard waste, etc. These bans are currently being developed and will have a direct impact on district management of solid waste.

Evaluating Waste Management Alternatives

How should the districts proceed in their evaluation of waste management alternatives? What guidance can the state provide on how they will evaluate districts on this point? How should the criteria proposed by the advisory committee and the public be weighed in the evaluation?

The districts will need to apply both state and local policy considerations when determining which solid waste management alternatives will best serve district needs. Some of the criteria will be developed in response to the new law or the State Plan's District Guidelines.

HEA 1240 (PL-10-1990) is very specific about which alternatives are preferred and the Districts will be required to follow this hierarchy, quoted as follows: ". . . source reduction, recycling, and other solid waste management alternatives are preferred over incineration and landfill disposal as solid waste management alternatives."

Districts must also determine how the proposed alternatives can be combined to meet the mandated 35 and 50 percent reduction goals.

In addition, the State recommends that districts work with the advisory committee and citizens attending public meetings to develop and apply a set of Community Criteria for evaluating management technologies and strategies.

Finally, the following criteria are proposed as additional yardsticks that districts should consider when evaluating alternatives. These questions focus on the central issues which districts will need to address as they select alternatives for the final plan. Some of these considerations may be included in the Community Criteria list.

- Do they employ proven technology;
- Are costs reasonable and within the means of the district;
- Can they be constructed in time to meet the state goals;
- Can they be constructed in time to meet the district's final disposal needs;
- Are they appropriate to the content of waste in the district;
- Do they account for existing recycling facilities and programs in district;
- Do they account for existing permitted final disposal facilities; and
- Is there adequate capacity in regional facilities which a district proposes to use?
- Does the district plan to show that public input was actually solicited in the district formation and plan development process?
    - Does the district plan show that the district will implement source reduction, recycling and composting initiatives in an effort to reduce their waste generation and disposal before additional disposal capacity is added?

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- Does the district plan show that the advisory council for the district has a balanced representation of all interested parties?
- Does the district plan show that the district has adequate financial and staff resources to implement the plan?
- Does the district plan address a strategy for marketing the recyclables and compost collected in the district?
- Does the district plan to address the economic and environmental impact of each solid waste management alternative?

These questions focus upon the central issues which districts will need to address in evaluating alternatives during the planning process. The Solid Waste Management Board will implement rules to evaluate the district plans.

Facility Development

Once the districts have determined the mix of facilities and programs they will implement they can then move forward with development. Experience has shown that there are some considerations, applicable to many types of waste management facilities, which districts should attend to as they enter the final stages of their solid waste program.

- Designs should incorporate proven and commercially available technologies from reputable and experienced vendors;
- Facilities should be designed with sufficient room to accommodate future expansion;
- Facilities should be designed to accommodate future pollution control equipment, if required;
- Design of facilities should include consideration of the latest control measures for:
  - Noise;
  - Odor;
  - Dust;
  - Wastewater; and
  - Gas emissions.
- Full consideration should be given to the appearance of the facilities and they should be landscaped and designed for maximum compatibility with their surroundings; and

- Ease of access and minimizing adverse effects on traffic should be considered in the design.

Facility Siting

Following are general criteria and procedures that are proposed for use by districts in siting solid waste management facilities. They are general enough to be applied to all types of solid waste facilities but should be modified as appropriate to the type of facility considered. For example, siting a rural drop-off site does not require the same level of effort as siting a landfill.

- Identify type(s) of facilities and their characteristics with respect to environmental and health related concerns. Some brief examples include:
  - Recycling centers - traffic, odors, noise, land requirements;
  - Material recovery facilities - traffic, noise, land requirements;
  - Compost centers - traffic, wastewater, odor, land requirements;
  - Transfer stations - traffic, noise, odor, land requirements;
  - Collection centers - traffic, litter, odor;
  - Landfills - land requirements, water pollution, air emissions, traffic; and
  - Incinerators - air emissions, wastewater, traffic, noise, land requirements.
- Identify the study area to be considered;
- Compile State and federal regulations and permitting requirements;
- Identify exclusion criteria for each type of facility - geology, population centers, parks, drinking water sources, lakes, rivers, flood plains etcetera. Coordinate criteria with state permit requirements and get input from district board and citizens;
- Compile available data (maps, reports, etcetera) and map exclusion areas within study area;
- Identify preference criteria for each type of facility - access to good roads, water supplies, wastewater treatment, good soils and geology, close to center of waste generation etcetera;
- Identify possible site areas - (after mapping exclusion areas);

- Identify candidate sites - after field inspection;
- Perform more detailed investigations - usually including field testing;
- Select acceptable sites and perform matrix ranking; and
- Select preferred site(s) and submit permit applications.

Specific siting standards for solid waste land disposal facilities can be found in 329IAC 2-10. The siting standards for solid waste processing facilities and incineration can be found in 329IAC 2-17.

VOLUME I

CHAPTER 6

Estimated Annual Budget for Implementation of the Indiana Solid Waste Management Plan

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SOURCE REDUCTION/RECYCLING STATEWIDE TECHNICAL ASSISTANCE

(1)	Environmental Branch Chief VI	33,060
(7)	Environmental Managers	182,546
	- Commercial Programs	
	- Municipal Programs	
	- Community Programs	
	- Composting Programs	
	- Industry Coordinator	
	- Business Coordinator	
	- Grants	

SOLID WASTE PLANNING TECHNICAL ASSISTANCE TO DISTRICTS

(2)	Environmental Managers II	49,400
(1)	Environmental Scientist III	21,918

MARKET DEVELOPMENT

Indiana Department of Environmental Management

(1)	PAT I	27,508
(1)	PAT II	24,440
	- Cooperative Marketing Programs	
	- Commodity Market Network	
	- "Buy Recycled Program"	
	- Stimulate New Markets	
	- Assist Small Recycling Businesses	
	- Foster Secondary Material Usage	

STATE GOVERNMENT RECYCLING AND SOURCE REDUCTION

(1)	PAT I - Collection Coordinator	27,508
(1)	PAT I - Procurement Coordinator	27,508
(3)	PAT II - Regional Coordinators (does not include site-specific coordinators)	73,320
	(3700 State Government Sites)	

EDUCATION		
(1) PAT I		27,508
(1) PAT II		24,440
- K-12 Curriculum/Materials		
- University level Curriculum		
- Teacher Training Program		
(1) EM II		26,078
(1) PAT II		24,440
(1) Information Director		30,440
- Statewide Media Campaign		
- Statewide Education Programs		
- Workshops		
- Industry, Business, Districts, Institutions, General Public		
- Publications		
LANDFILL OPERATOR TRAINING		
(0.5) Environmental Manager II		13,676
CLERICAL SUPPORT		
(2) Clerk Typists IV		30,000
	Salaries Subtotal	643,790
	Fringe 31.5%	202,793
	Indirect 39.2%	252,365
	Subtotal	1,098,948
OTHER		
Printing and Graphics Production		79,750
Graphics Design		20,000
Supplies and Equipment		145,000
Mailing Costs		20,250
Travel		80,350
Mobile Educational Unit		14,000
Videos		8,000
	Subtotal	367,350
	Salaries	1,098,948
	Other	367,350
ESTIMATED ANNUAL IDEM BUDGET:		$ 1,466,298

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INDIANA DEPARTMENT OF COMMERCE

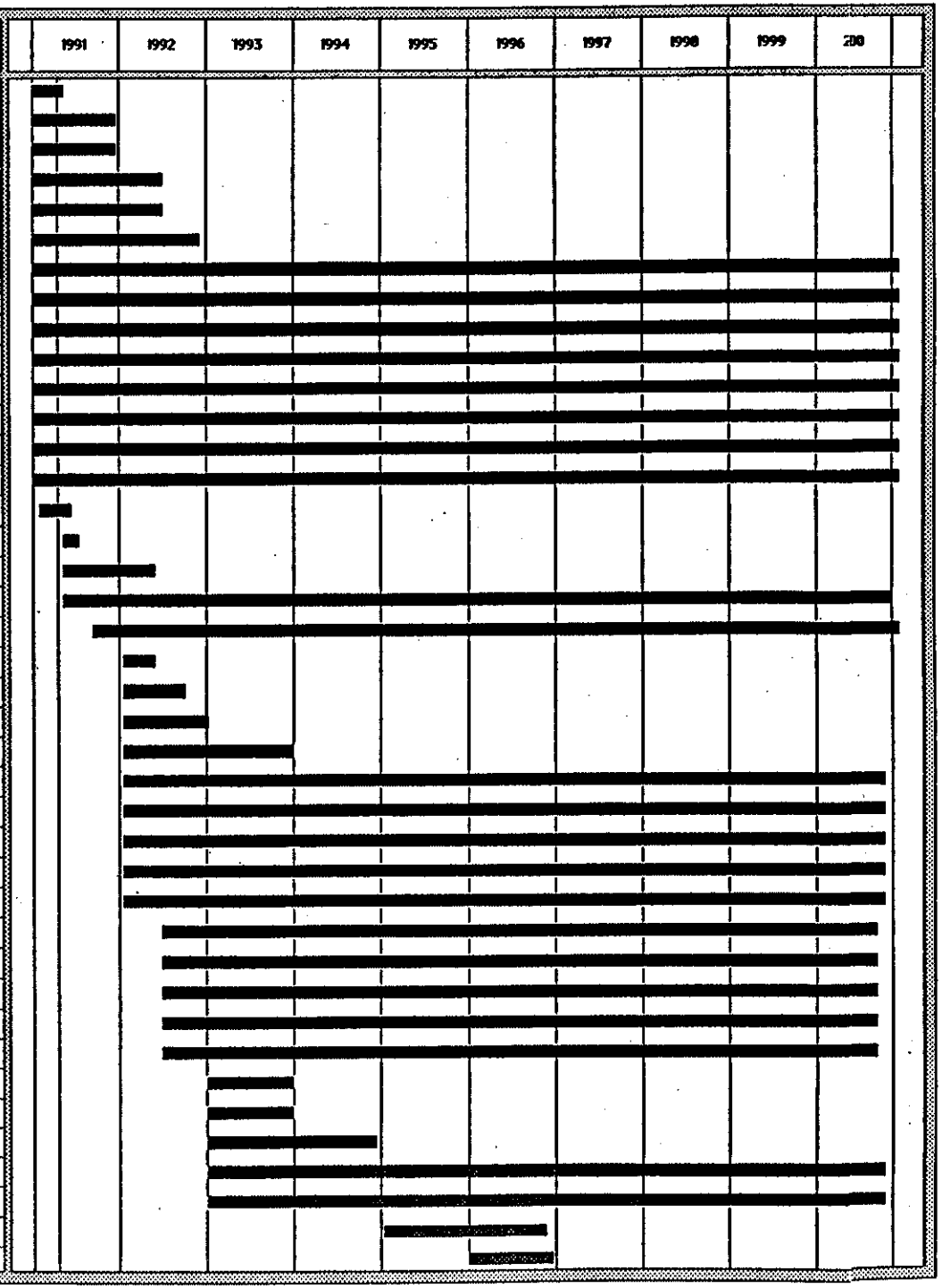
MARKET DEVELOPMENT/RECYCLING

(1)	E VI	
(1)	PAT I	
	plus expenses, etc.	$ 245,780
	- Promotion and Assistance Fund	
	- Recruit Recycling End-Use Industries	

TOTAL ESTIMATED ANNUAL STATE BUDGET
FOR IMPLEMENTATION OF THE INDIANA SOLID WASTE MANAGEMENT PLAN
(For the Indiana Department of Environmental Management and
the Department of Commerce only) $ 1,712,078

STATE SOLID WASTE MANAGEMENT PLAN IMPLEMENTATION TIME LINE

Task Name	Start Date	End Date
District Formation Assistance	1/2/91	5/8/91
Recycled Paper Task Force	1/2/91	12/18/91
Packag. Waste Reduc. Task Frce	1/2/91	12/18/91
District Plan Workshops/Assist	1/2/91	6/26/92
Revolving Loan Fund Applicat.	1/2/91	6/26/92
Develop Info. Clearinghouse	1/2/91	12/4/92
Source Red/Recyc Tech Asst/Wks	1/2/91	2/1/01
Produce Informational Public.	1/2/91	2/1/01
State Agency Recyc/Procurement	1/2/91	2/1/01
Market Development	1/2/91	2/1/01
Develop New Recyc. Legislation	1/2/91	2/1/01
Recycling Research	1/2/91	2/1/01
Develop New Disposal Legislat.	1/2/91	2/1/01
Research-Capacity Saving Tech.	1/2/91	2/1/01
Develop Recyclable Bans Rules	2/4/91	6/18/91
Hire Education Coordinator	5/8/91	7/8/91
Tire Task Force	5/8/91	5/27/92
Landfill Operator Training	5/8/91	12/29/00
Implement Recyclable Ban Rules	9/12/91	2/1/01
Dist. Plan Implement. Guidelns	1/22/92	5/27/92
Initial District Plan Review	1/22/92	9/30/92
Develop New Compost. Legislat.	1/22/92	1/7/93
Develop Curriculum - K-12	1/22/92	12/23/93
New Landfill Rules	1/22/92	11/28/00
Implement Recyc. Paper Guidelin	1/22/92	11/28/00
Imp. Pack. Waste Red. Guidelns	1/22/92	11/28/00
Composting Ed./TA Program	1/22/92	11/28/00
State Agency Compost. Programs	1/22/92	11/28/00
Deve. Comp. SW Educat. Program	6/26/92	10/25/00
Statewide Media Campaign	6/26/92	10/25/00
Bus. Waste Red/Recycling TA	6/26/92	10/25/00
Industry Waste Red/Recyc TA	6/26/92	10/25/00
Imp. Tire Task Force Guidelns	6/26/92	10/25/00
New Recycling Rules	1/7/93	12/23/93
New Composting Rules	1/7/93	12/23/93
Develop College Level	1/7/93	12/12/94
Info. Clearinghouse Library	1/7/93	11/28/00
Bus./Indust. Educ. Program	1/7/93	11/28/00
New Source Red. Legislation	1/13/95	11/14/96
Instit. New Source Red. Rules	1/2/96	12/17/96



APPENDICES

APPENDIX A

Glossary of Terms

APPENDIX A

Glossary of Terms

Advance Disposal Fees - a fee paid by consumers of certain products at the time of purchase to provide for the environmentally sound management of the products.

Balefill - is a solid waste land disposal facility designed to accommodate general types of solid waste, excluding waste regulated by 329 IAC 3, and operated by stacking the bales of wastes into cells.

Buy-Back Center - a facility where individuals bring recyclables in exchange for payment.

Co-Composting - simultaneous composting of two or more waste streams.

Composting - solid waste management method whereby an organic component of the solid waste stream is biologically decomposed under controlled conditions.

Construction/Demolition Waste - materials resulting from the construction, remodeling, repair, and demolition of buildings and other structures.

Drop-off Center - a method of collecting recyclable or compostable materials in which materials are taken by individuals to collection sites and deposited into designated containers.

Final Disposal Facility - means a landfill, incinerator, or a waste-to-energy facility.

Flow Control - a legal or economic means by which waste is directed to particular destinations within a governmental entity.

Household Hazardous Waste - are wastes from residential waste stream that are toxic, corrosive, inflammable, caustic, volatile, or explosive. There are thousands of household products that contain hazardous chemicals such as drain cleaners, oven cleaners, paints, polishes, and pesticides.

Incineration - the controlled combustion of organic matter that produces carbon dioxide, water, particulate matter, various gases, and ash.

Materials Recovery Facility - is a facility where recyclable materials are processed.

Mass-Burn - a municipal waste combustion technology in which solid waste is burned in a controlled system without prior sorting or processing.

Municipal Solid Waste - materials discarded by residential, commercial, institutional, and industrial sources of solid waste.

Open Dump - means the consolidation of solid waste from one or more sources or the disposal of solid waste at a single disposal site that does not fulfill the requirements of a sanitary landfill or other land disposal method as described by law or regulations, and that is established and maintained without cover and without regard to the possibilities of contamination of surface or subsurface waters.

Precycle - means making environmentally sound and effective waste management decisions at the point of purchase.

Pollution Prevention - means the employment by a business of a practice that reduces the industrial use of toxic materials or reduces the environmental and health hazard associated with an environmental waste without diluting or concentrating the waste before the release, handling, storage, transport, treatment, or disposal of the waste. The term includes changes in production technology, materials, processes, operations, or procedures, or the use of inprocess, inline, or closed loop recycling according to standard engineering practices.

Pyrolysis - the process of heating refuse in nearly oxygen-free environment to produce oil, gas, and/or a char as an end product.

Recyclables - those residential, commercial and industry generated materials capable of being recycled that would otherwise be processed or disposed of as solid waste.

Recycling - transforming or remanufacturing waste material into visible or marketable materials, and goods.

Refuse Derived Fuel - solid waste that is processed to remove metal, glass, and other unburnable materials. The organic residue is formed into pellets for fuel.

Sanitary Landfill - a solid waste land disposal facility designed to accommodate general types of solid waste, excluding waste regulated by 329 IAC 3, and operated by spreading the waste in thin layers, compacting it to the smallest practical volume, and covering it with cover material at the end of each working day.

Sludge - a semisolid substance consisting of settled solid combined with varying amounts of water and dissolved materials generated from a wastewater treatment plant or other source.

Soil Amendment - soil additive which stabilizes the soil, improves resistance to erosion, increases permeability to air and water, improves texture, eases cultivation or otherwise improves its quality.

Solid Waste Management - means the systematic administration of activities that provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.

Solid Waste Management District - a county or a group of counties that have formed a district as required by IC 13-9.5-2 and responsible for developing and implementing a 20-year solid waste management plan as required by IC 13-9.5-4.

Source Reduction - the design, manufacture, acquisition, and reuse of materials so as to minimize the quantity and/or toxicity of waste produced at the place of origin.

Transfer Station - means a facility at which solid waste is transferred into larger capacity vehicles or containers for further transportation but does not include neighborhood recycling collection centers or transfer activities at generating facilities.

Used Oil - oil which through use, storage, or handling has become unsuitable for its original purpose due to the presence of impurities or the loss of original properties.

Waste Reduction - is a process that leads to the prevention of the creation of waste.

Yard Waste - is uncontaminated and untreated natural growth solid waste including tree limbs, stumps, leaves, and grass clippings.

APPENDIX B

Assistance Directory

STATE ASSISTANCE DIRECTORY

SUBJECT	AGENCY/OFFICE	CONTACT	TELEPHONE NO.
Alternative Solid Waste Management Methods	DEM/OSHWM	Bruce Palin	317/232-8892
Composting Issues	DEM/OSHWM	Bruce Palin	317/232-8892
Corporation for Science & Technology	CST	James Thompson	317/635-3058
District Solid Waste Management Revolving Loans	DEM/OSHWM	Patrick Kotter	317/232-8896
Environmental Education	DEM/ OPPTA	Joanne Joyce	317/232-8603
Facility Siting Considerations	DEM/OSHWM	Bruce Palin	317/232-8892
Incineration Issues	DEM/OSHWM	Bruce Palin	317/232-8892
Landfilling Issues	DEM/OSHWM	Bruce Palin	317/232-8892
Open Dumping	DEM/OSHWM	Bruce Palin	317/232-8892
Packaging Waste Reduction Task Force	DEM	Joanne Joyce	317/232-8603
Pollution Prevention Initiatives	DEM/ OPPTA	Joanne Joyce	317/232-8603
Pollution Prevention Institute	DEM/ OPPTA	Joanne Joyce	317/232-8603
Problem Wastes	DEM/OSHWM	Bruce Palin	317/232-8892
Recycled Paper Task Force	DEM	Joanne Joyce	317/232-8603
Recycling Promotion & Assistance Fund	DOC	Bob Berlin	317/232-8961
Recycling & Energy Development Board	DOC	Bob Berlin	317/232-8961
Recycling/Composting Grants & Loans	DEM/ OPPTA	Joanne Joyce	317/232-8603
Recycling Institute	ISU	Norman Crampton	812/237-4365
Recycling Issues	DEM/ OPPTA	Joanne Joyce	317/232-8603
Solid Waste Management Board	DEM/OSHWM	Patrick Kotter	317/232-8896

SUBJECT	AGENCY/OFFICE	CONTACT	TELEPHONE NO.
Solid Waste Management Data	DEM/OSHWM	Patrick Kotter	317/232-8896
Solid Waste Management District Formation	DEM/OSHWM	Patrick Kotter	317/232-8896
Solid Waste Management District Plans	DEM/OSHWM	Patrick Kotter	317/232-8896
Solid Waste Management Facility Inspections	DEM/OSHWM	Bruce Palin	317/232-8892
Solid Waste Management Facility Permitting	DEM/OSHWM	Bruce Palin	317/232-8892
Solid Waste Management Facility Reporting	DEM/OSHWM	Patrick Kotter	317/232-8896
Solid Waste Management Legislative Issues	DEM/OSHWM	Bruce Palin	317/232-8892
Solid Waste Management Rules	DEM/OSHWM	Patrick Kotter	317/232-8896
Solid Waste Management Rules Enforcement	DEM/OSHWM	Bruce Palin	317/232-8892
Source Reduction Issues	DEM/ OPPTA	Joanne Joyce	317/232-8603
State Solid Waste Management Plan	DEM	Patrick Kotter	317/232-8896
Technical Assistance for Business & Local Govt.	DEM/ OPPTA	Joanne Joyce	317/232-8603
Waste Tire Task Force	DEM/OSHWM	Bruce Palin	317/232-8892

KEY

CST	Corporation for Science and Technology
DEM	Department of Environmental Management
DOC	Department of Commerce
ISU	Indiana State University
OPPTA	Office of Pollution Prevention and Technical Assistance
OSHWM	Office of Solid and Hazardous Waste Management