

Indiana Department of Environmental Management
**DISTRICT SOLID WASTE
MANAGEMENT PLAN FORMAT**

**Volume II of III
Indiana Solid Waste Management Plan**

INDIANA SOLID WASTE MANAGEMENT PLAN

VOLUME II

DISTRICT SOLID WASTE MANAGEMENT PLAN FORMAT

1991

**Developed By: The Indiana Department of
Environmental Management
Evan Bayh, Governor
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INTRODUCTION

This document is intended as a guide for local officials who are involved in developing district solid waste management plans.

Our goal is to make the planning process as simple and straightforward as possible. To that end, we have provided an overview of planning requirements, and step-by-step instructions - with worksheets - for completing each component of a district plan.

If you have any questions when using this format guide, please contact the Office of Solid and Hazardous Waste Management, Indiana Department of Environmental Management, at 1-800-451-6027 or 317-232-3210.

OVERVIEW

CREATING A STATEWIDE SOLID WASTE MANAGEMENT PLAN: HEA 1240

On March 20, 1990 Governor Evan Bayh signed into law House Enrolled Act 1240, a comprehensive bill intended to avert a solid waste crisis in Indiana. HEA 1240 is designed to protect the environment, encourage the development of environmentally sound business and industry, and enable Indiana to effectively manage its own solid waste future.

PURPOSE, POLICY, AND GOALS

At the heart of this new bill, now incorporated into the Indiana Code, is a policy to reduce the amount of trash generated in Indiana. The legislature's goal is to reduce Indiana's solid waste by 35 percent before January 1996, and by 50 percent by 2001.

This policy addresses the problem of shrinking landfill capacity and enhances environmental protection and resource management through source reduction, recycling, and other alternatives. Incineration and landfilling are the least-favored disposal options.

HEA 1240 directs the Indiana Department of Environmental Management to develop a state solid waste management plan covering the next 20 years. Mandatory elements of the state plan, in priority order, are to:

- set voluntary goals for source reduction.
- establish criteria for alternatives to final disposal, including recycling, composting, and developing markets for recycled materials.
- establish general criteria for final disposal facilities such as landfills, waste-to-energy plants, or incinerators.
- develop criteria and other elements to be considered in adopting district solid waste management plans.

LOCAL PLANNING: SOLID WASTE MANAGEMENT DISTRICTS

HEA 1240 also mandates creation of solid waste management districts. The solid waste management districts will be responsible for local planning efforts and for managing solid waste. A district may consist of a single county or a group of two or more counties.

Counties must form solid waste management districts by July 1, 1991. If a county does not meet this deadline, the IDEM Commissioner will automatically designate it as a district.

Districts are to be governed by a board of directors made up of local government officials. District boards are responsible for all aspects of solid waste management within their district. Representation on district boards is determined by a state formula, which includes county executive and fiscal officers and officials from municipalities of various sizes.

Districts are empowered to engage in all facets of developing, operating, and financing solid waste management programs and facilities, including setting disposal fees and levying taxes to pay for services. However, districts do not have the power of eminent domain, nor are they permitted exclusive control of collection or disposal of solid waste within their jurisdiction.

SUBMITTAL AND REVIEW OF DISTRICT PLANS

Your district plan must be submitted to the IDEM Commissioner by July 1, 1992. If your district does not submit a plan, the Commissioner may adopt one for you. The Commissioner will have 120 days to approve or disapprove your plan. If no action is taken within 120 days, the plan is considered approved. If your plan is disapproved, the Commissioner will provide written comments on changes to make it acceptable. You will then have 90 days to hold a public hearing, revise the plan, and resubmit it. If the revised plan is disapproved, after another 120-day review period, the Commissioner may adopt a plan for your district.

Your district must reconsider its plan at least once every five years and amend the plan if necessary to respond to changing demographics and conditions. (Appendix A contains the portions of HEA 1240 pertaining to the development of district plans.)

PUBLIC INVOLVEMENT

Interested citizens and representatives of key sectors of the community will have a voice in developing local solid waste management strategies. To ensure that the public's concerns are addressed in the plan, each district board must appoint a Solid Waste Management Advisory Committee (SWMAC). The committee will be made up of citizen representatives with an interest in environmental issues and representatives from the solid waste management industry in the district. The SWMAC will not have voting powers, but it will make recommendations to the board.

In addition, during the planning process the district must hold at least one public meeting and consider public comment in drafting the district plan. A public hearing must also be held before the district can adopt the plan in final form. To ensure that the public involvement program can effectively develop the support and cooperation needed to make the plan successful, the State recommends that the district expand its outreach programs beyond the required elements. An outline of the recommended approach is included under Section 4.5 in this volume.

The schedule below summarizes important planning and compliance deadlines.

SOLID WASTE PLANNING GUIDE

DATE	ACTION
January 1, 1991	State solid waste management plan adopted.
January 1, 1991	State solid waste management fees imposed.
July 1, 1991	Counties must form solid waste management districts.
July 1, 1992	Districts must submit solid waste management plans to the IDEM Commissioner for approval.
January 1, 1996 January 1, 2001	State goals to reduce amount of solid waste incinerated and disposed of in landfills - by 35 percent - 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.

CONTENTS OF THE PLAN

The plan document should begin with an Executive Summary. The summary has two purposes:

- to provide IDEM with a brief overview of the essential elements of your district's plan, and
- to serve as a vehicle for public information.

For both purposes, brevity - without omitting important information - is the key. You may wish to present some of your information - demographics and waste generations rates, for example - in graphic form for variety and ease of understanding. If the body of your plan contains complex or technical information, consider writing the summary from a lay person's perspective.

The body of the district plan should be as detailed and technical as necessary to enable IDEM to assess your district's current situation and strategy for meeting the waste management goals. Use tables, graphs, spreadsheets, and any other appropriate techniques to communicate your points.

Part 1 of the plan seeks administrative information about your district and its management.

In Part 2, you are asked to compile data on current population and waste management practices, and project that information into estimates of the facilities your district will need in the future.

Part 3 codifies the district's solid waste management plan, and Part 4 describes your approach to putting it in place - and financing its programs.

USING THIS WORKBOOK

This manual has been designed to simplify the mechanics of documenting your district solid waste management plan. For each point of information requested, you will find line-by-line instructions and - where appropriate - explanations of why the information is important. Throughout the workbook, all explanatory and instructional material is presented on the left-hand pages, and the information you are asked to provide appears on the right-hand pages.

Example spreadsheet schedules have also been included, showing hypothetical projections and estimates for the full planning period, 1992-2011. Although you are required to show only 5-, 10-, and 20-year projections, you will probably find it useful for district planning purposes to develop the information in annual increments. Therefore, the examples in the manual are presented in that format.

Sections 1 through 4 of the table of contents to this manual are designed to serve as the table of contents for your district plan. Those sections list all of the information that must be presented and the order in which it is to appear. If you want to present additional material, please feel free to add it at the end of the appropriate section or include it in an appendix. If we have requested information that does not apply to your district, indicate "None" or "N/A" in the table of contents. Please do not change the order of presentation shown in the table of contents.

PREPARATION TIPS:

- Although the Executive Summary will be the first section of your plan document (replacing this Introduction), we recommend preparing it last.
- Use sections 1 through 4 of the table of contents as a checklist to assure that all the required information is included in your plan.
- Before beginning your information-gathering process, remove the forms (right-hand pages) and reproduce enough copies to prepare a draft and final version. Then, return the original pages to the manual for easy reference to the instructions applying to each item.
- The forms have been designed to be prepared on a typewriter using double spacing. However, if you are using an automated word processing system, the easiest approach will be to retype the forms along with the data being reported. For that reason, we have attempted to keep to a minimum the material that must be typed.
- When retyping the forms, please use double spacing; one-inch top, bottom, right, and left margins; and 12-pitch type size.

1
ADMINISTRATIVE INFORMATION

This section presents information about the district - its composition, management, and representation.

HEA 1240 establishes certain requirements for solid waste management districts, depending on whether they are single-county or joint (multi-county) districts. All districts must appoint boards of directors representing:

	<u>Single- County Districts</u>	<u>Joint Districts</u>
County executive	3	1 each county
Fiscal body	1	1 each county
Largest population - city OR	1 city executive	1 city executive each county
Largest population - town	1 town fiscal	1 town fiscal each county
Largest population - either	1 legislative	1 legislative each county
Smaller municipalities	1 city executive OR 1 town fiscal/all cities	
District with:		
At least 2 second-class cities	1 executive each city	1 executive each class of city
3 second-class cities	1 county executive 2 county fiscal 1 executive each 2nd or 3rd class city 1 member of the fiscal body of each town	
Consolidated city	Public Works Board is District Board	
Additional members		Executive, each county based on population 1 executive, largest county, to created uneven number

The district board of directors is directed to appoint a solid waste management advisory committee of citizens, including representatives of the solid waste industry operating in the district, who are knowledgeable about and interested in environmental issues. All members of the committee must be residents of the district.

- 1.1 Self-explanatory.
- 1.2 Self-explanatory.
- 1.3 Municipalities in the district - list the cities, towns, and unincorporated areas. State the class of municipality - First, Second, Third, Consolidated.
- 1.4 Board of Directors - for each board member, list name, title, branch (executive, fiscal, or legislative), and municipality represented.
- 1.5 Solid Waste Management Advisory Committee - for each committee member, list name and representation (municipality, industry, or civic group).
- 1.6 Solid Waste Plan Administrator - self-explanatory.

1.1 DISTRICT NAME, BUSINESS ADDRESS, TELEPHONE

1.2 COUNTIES IN DISTRICT

1.3 MUNICIPALITIES IN DISTRICT

<u>Name</u>	<u>Class</u>	<u>Name</u>	<u>Class</u>
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1.4 BOARD OF DIRECTORS

<u>Name</u>	<u>Title</u>	<u>Branch</u>	<u>Representing</u>
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1.5 SOLID WASTE MANAGEMENT ADVISORY COMMITTEE

<u>Name</u>	<u>Representing</u>
-------------	---------------------

1.6 SOLID WASTE PLAN ADMINISTRATOR

Name
Title
Agency
Address
Telephone

DEMOGRAPHIC INFORMATION/
FACILITIES INVENTORY

An important part of the planning process is compiling baseline data on existing population, waste types and quantities, and waste disposal facilities. That baseline information - for calendar year 1992 - will form the basis for projecting population and waste disposal needs for the full 20-year study period, 1992 through 2011.

For five, 10, and 20 years after the district's plan is adopted, HEA 1240 requires you to:

- predict the total population,
- describe the origin, content, and weight of the solid waste to be generated,
- describe the number and type of waste management facilities needed, and
- assess current and future waste management problems.

Plans can be reassessed at any time; however, they are required to be reviewed every five years. Any changes made to help districts accomplish solid waste management goals require that the plan go through the approval process again.

Unless you have conducted a formal waste characterization study for your district, you may use national averages to estimate the content of residential and commercial wastes. You may use the data from "Characterization of Municipal Solid Waste in the United States, 1960 to 2000," prepared by Franklin & Associates for the United States Environmental Protection Agency, 1990. If you believe other data better represent the wastes generated in your district, feel free to use them; in that case, please document your sources.

2.1
POPULATION
Instructions

1, 2, 3

Provide population projections for each county in the district for the entire planning period, calendar years 1992 through 2011. The projections for Indiana counties (Appendix A) may be used, or you may use your own projections; if you do, please indicate the source.

2.2
WASTE GENERATION
Instructions

- 4 For "Alpha County" compute the residential and commercial waste to be generated during the study period, 1992 through 2011. NOTE: For illustrative purposes only, we have omitted several years from the table. You may want to print your table in LANDSCAPE orientation, two rows of 10 years each, to present the computations for all years of the study period on a single page.

The base year, calendar year 1992, will be the first full year for which complete landfill disposal quantity information will be available. That data will form the basis for projecting future waste quantities according to the USEPA's daily per capita generation rates. The 1988 rates are provided below. These figures are updated annually and districts should use the most recent figures when calculating projections. To obtain the most recent figures, contact IDEM at 1-800-451-6027 or (317) 232-3210.

RESIDENTIAL/COMMERCIAL WASTE GENERATION RATES*
Pounds Per Capita Per Day (PCD)

1992	3.72	1997	3.86	2002	4.00	2007	2.14
1993	3.75	1998	3.88	2003	4.03	2008	4.17
1994	3.75	1999	3.91	2004	4.06	2009	4.21
1995	3.80	2000	3.94	2005	4.09	2010	4.24
1996	3.85	2001	3.97	2006	4.11	2011	4.27

If you use another basis for these projections, please explain in a footnote to your table.

- 5 Compute the industrial waste generated in the district for the baseline year. We recommend conducting a survey to determine representative actual quantities of industrial waste being generated (a sample form is included in Appendix D.) The per capita rates shown above should not be used to project industrial waste generation. Those projections may be based on your assessment of the likely economic growth and industrial distribution in the district, or on some other reasonable measure that you determine. Please explain your rationale in a footnote to your table.
- 6 The sub-total is the amount of waste generated in Alpha County. Repeat these computations as necessary for each county in the district.
- 7 Show the total waste generated in the district on this line.

POINTS TO REMEMBER:

HEA 1240 mandates reducing the amount of waste incinerated and landfilled. This may be achieved by employing strategies such as waste minimization, recycling, composting, etc. The state has already taken action to reduce or eliminate some wastes. For example, HEA 1391 prohibits disposal of lead acid batteries in landfills. Certain recyclables - including yard waste - may also be banned from landfill disposal. Be sure to count your projected reduction of these materials toward the state goals.

In your industrial survey, be sure to ask about industrial wastes recycled, because these amounts should also be credited toward the state goals.

Please include a copy of your survey instrument in an appendix to your district plan.

*Developed from Table 6, "Characterization of Municipal Solid Waste in the United States, 1960 to 2000 (update 1987)" USEPA, 1988.

POPULATION

	BASE YEAR							2011
	1992	1993	1994	1995	1996	1997	1998 ----->	
1 Alpha County.....	90,000	90,400	90,900	91,400	91,900	92,400	92,900 ----->	99,400
2 Beta County.....	60,000	60,300	60,600	60,900	61,200	61,500	61,800 ----->	65,700
3 Total District.....	150,000	150,700	151,500	152,300	153,100	153,900	154,700 ----->	165,100

2.2

WASTE GENERATION

	BASE YEAR							2011
	1992	1993	1994	1995	1996	1997	1998 ----->	
(Tons per Year)								
Alpha County								
4 Residential & Commercial								
Waste.....	61,100	61,800	62,600	63,400	64,200	65,000	65,800 ----->	77,200
5 Industrial Waste.....	35,000	35,400	35,900	36,400	36,900	37,400	37,900 ----->	44,500
6 Sub-Total.....	96,100	97,200	98,500	99,800	101,100	102,400	103,700 ----->	121,700
Beta County								
4 Residential & Commercial								
Waste.....	40,700	41,200	41,700	42,200	42,800	43,300	43,800 ----->	51,000
5 Industrial Waste.....	19,000	19,200	19,400	19,600	19,900	20,100	20,300 ----->	23,600
6 Sub-Total.....	59,700	60,400	61,100	61,800	62,700	63,400	64,100 ----->	74,600
7 Total Waste Generated in District.....	155,800	157,600	159,600	161,600	163,800	165,800	167,800 ----->	196,300



2.3

**WASTE REDUCTION, REUSE, AND RECYCLING IN DISTRICT
Instructions**

- 7 Total waste generated in district (carried forward from schedule 2.2).
- 8 Show current recycling by industry for the base year, using data obtained from a survey of industries in the district. (IDEM will not allow credit for recycling by industry unless it is substantiated by such a survey.) Then, project future recycling for the study period as described in 2.2, item 5.
- 9 Include privately and publicly owned/operated facilities that are available to the public. These may include curbside collection, drop-off and buy back centers, etc. Compute recycling for the base year, as well as future projections based on your estimates of growth plus increases needed to meet the state goals.
- 10 In a footnote, provide a narrative description of any other programs.
- 11 The sub-total, the sum of 8, 9, and 10, is the amount of recycling projected to occur in the district. In a footnote to this schedule, provide a breakdown of recyclables by type.
- 12 The anticipated reduction in waste resulting from waste minimization and reduction programs* to be conducted or promoted by the district should be included here. The district's management plan (Part 3) should include a narrative of how these results are to be achieved.
- 13 The amount of yard waste which is diverted from final disposal should be listed here.
- 14 MSW composting includes processed municipal solid waste and may include yard waste. If so, do not include yard waste on line 13 (no double counting!) Enter the net reduction: the amount composted, less the residue that goes to final disposal. If sludge is used in a co-composting process, do not count the sludge as part of the MSW.
- 15 Indiana HB 1391 prohibits lead acid batteries from being disposed of in anything other than a hazardous waste disposal site and requires retailers to accept batteries for recycling. Lead acid batteries entering the waste stream amount to about one battery per ten persons per year with the average weight being 36 pounds. The quantity of waste batteries recycled should be accounted for on this line.
- 16 Tires entering the waste stream amount to about one tire per person per year. The average weight of a tire is about 23 pounds. Anticipated decreases in the quantity of tires entering the waste stream should be included here. (Note that Indiana HEA 1391 establishes programs for dealing with waste tire piles.)
- 17 Add other waste reduction programs proposed by the district and include a narrative description in the district plan, Part 3.
- 18 Total all waste reduction, reuse, and recycling activities (lines 11-17).
- 19 The percentage of waste diverted from final disposal for each future year is calculated by dividing the amount of waste reduction shown on line 18 by the total waste generated in the district for the base year 1992 (line 7).
- 20 The total waste generated within the district is line 7 less line 18.

POINTS TO REMEMBER:

- The amount of waste that the district must finally dispose of (Schedule 2.4) is the net of; 1) the amount generated within the district, 2) and the amount imported into the district, less the amount exported from the district. Estimate the amount of waste in each category to assess the needs of your district and your neighbors and to assess the impact of waste from outside the state.
- Future increases in waste amounts reduced should be estimated based upon the management programs proposed by the district. Note that the state goals are stated in terms of reducing the amount of waste disposed of by incineration or landfilling. Therefore incineration is not a recognized means of waste reduction for meeting the state goals.

*As defined in HEA 1391, Sections 20 and 21, "Waste Minimization means a process that leads to
- preventing the creation of waste or
- a diminution in the volume of waste.
Waste Reduction means a process that leads to the prevention of the creation of waste.

	BASE YEAR		(Tons per Year)					1998 ----->	2011
	1992	1993	1994	1995	1996	1997			
7 Total Waste Generated in District.....	155,800	157,600	159,600	161,600	163,800	165,800	167,800 ----->	196,300	
Recycling:									
8 Industrial.....	10,900	11,000	11,200	11,300	11,500	13,900	16,400 ----->	24,700	
9 Publicly Available.....	4,700	9,500	14,400	19,400	24,600	27,400	27,700 ----->	32,400	
10 Other.....	500	510	520	530	540	550	560 ----->	690	
11 Sub-Total.....	16,100	21,010	26,120	31,230	36,640	41,850	44,660 ----->	57,790	
12 Waste Reduction.....	200	200	200	200	200	220	240 ----->	970	
13 Yard Waste.....	3,100	6,300	9,600	12,900	16,400	19,900	21,800 ----->	25,500	
14 MSW Composting.....	1,600	1,600	1,600	1,600	16,400	16,600	16,800 ----->	19,600	
15 Lead Acid Batteries.....	270	270	270	270	280	280	280 ----->	300	
16 Tires.....	1,730	1,730	1,740	1,750	1,760	1,770	1,780 ----->	1,900	
17 Other.....	310	320	320	320	330	330	340 ----->	390	
18 Total.....	(23,310)	(31,430)	(39,850)	(48,270)	(72,010)	(80,950)	(85,900)----->	(106,450)	
19 Recycling and Reduction as % of District Waste.....	15%	20%	26%	31%	46%	52%	55%----->	68%	
STATE RECYCLING AND REDUCTION GOALS					35%	50% year 2001			
					====	====			
20 Waste from District for Disposal.....	132,490	126,170	119,750	113,330	91,790	84,850	81,900 ----->	89,850	

2.4

ORIGIN AND DESTINATION OF WASTE FOR DISPOSAL
Instructions

- 20 Waste from district for disposal (carried forward from Schedule 2.3)
- 21, 22 Show the amount of MSW the district expects to send to other districts in Indiana. Show the amount for each district if more than one. The total should include incinerator ash, compost residue, etc., as appropriate.
- 23, 24 Show the amount of waste sent from the district into other state(s) for disposal. Show the amount for each state if more than one. The total should include incinerator ash, compost residue etc. as appropriate.
- 25 This is the total waste exported from the district for disposal elsewhere.
- 26 This is the amount of waste originating and disposed of in the district. (line 20 less line 25).
- 27, 28 Show the amount of MSW (including incinerator ash, compost residue, etc.) the district expects to receive from other districts in Indiana. Show the amount for each district if more than one.
- 29, 30 The amount of MSW (including incinerator ash, compost residue, etc.) the district expects receiving from other state(s). Show the amount for each state if more than one.
- 31 Waste imported into the district from other districts and from out of state.
- 32 Total the waste for final disposal in the district (line 26 plus line 31).
- 33 This is the total waste disposed of in the district by incineration (may include waste that is imported from other districts or from out of state).
- 34 The net of the total amount of waste for final disposal, less the amount incinerated, is the amount of waste to be landfilled for final disposal (line 32 minus line 33).
- 35 Add incinerator ash residue that is landfilled within the district.
- 36 Total the amount of waste landfilled in the district (line 34 plus line 35).

ORIGIN AND DESTINATION OF WASTE FOR DISPOSAL

	BASE YEAR		(Tons per Year)					1998 ----->	2011
	1992	1993	1994	1995	1996	1997			
20 Waste from District for Disposal.....	132,490	126,170	119,750	113,330	91,790	84,850	81,900 ----->	89,850	
Waste for Disposal Out of District									
Sent to Other District(s):									
21 District A.....	4,000	4,100	4,200	4,300	4,400	4,500	4,600 ----->	5,900	
22 District B.....	1,200	1,200	1,200	1,200	1,200	1,200	1,200 ----->	1,200	
Sent to Other State(s):									
23 State A.....	2,000	2,000	2,000	2,000	2,000	2,000	2,000 ----->	2,000	
24 State B.....	17,500	17,800	18,100	18,400	18,700	19,000	19,300 ----->	23,200	
25 Total.....	24,700	25,100	25,500	25,900	26,300	26,700	27,100 ----->	32,300	
Waste for Disposal In District:									
26 Originating In District.....	107,790	101,070	94,250	87,430	65,490	58,150	54,800 ----->	57,550	
Originating in Other District(s):									
27 District A.....	25,000	25,400	25,800	26,200	26,600	27,000	27,400 ----->	33,200	
28 District B.....	5,000	5,100	5,200	5,300	5,400	5,500	5,600 ----->	6,900	
Originating Out of State:									
29 State A.....	2,000	2,000	2,000	2,000	2,000	2,000	2,000 ----->	2,000	
30 State B.....	17,500	17,800	18,100	18,400	18,700	19,000	19,300 ----->	23,200	
31 Sub-Total Imported Waste....	49,500	50,300	51,100	51,900	52,700	53,500	54,300 ----->	65,300	
32 Total Waste Managed in District.....	157,290	151,370	145,350	139,330	118,190	111,650	109,100 ----->	122,850	
Waste Incinerated									
33 in District.....	0	0	0	0	0	0	91,250 ----->	91,250	
34 Net.....	157,290	151,370	145,350	139,330	118,190	111,650	17,850 ----->	31,600	
35 Ash Residue.....	0	0	0	0	0	0	25,550 ----->	25,550	
Waste Landfilled in									
36 District.....	157,290	151,370	145,350	139,330	118,190	111,650	43,400 ----->	57,150	

An important element of your planning for future solid waste management needs is determining what facilities are in place today. In addition, this information will be useful to IDEM in assessing the current status of Indiana's waste management facilities in light of emerging federal and state regulations.

In this subsection you will be asked to provide basic data about the disposal and management facilities operating in your district today.

For ease of completion, we suggest that you remove the forms (right-hand pages) and reproduce enough copies to prepare a draft and final version. Then, return the pages to the manual for easy reference to the instructions applying to each item. You will notice that each form contains space to report on one or more facilities; if your district contains more facilities than provided for on a form, reproduce additional sheets as necessary. The forms are designed to be prepared on a typewriter using double line spacing. However, if you are using an automated word processing system, the easiest approach may be to retype the forms along with the data being reported. For that reason, we have attempted to keep the material to be typed to a minimum, with explanatory and instructional material on the left-hand pages. When retyping the forms, please use double spacing; one-inch top, bottom, right, and left margins; and 12-pitch type size.

When the inventory is complete, number the pages sequentially in the upper right corner, beginning with 2.5-1, 2.5-2, etc.

We have tried to keep the information requested as consistent as possible for all of the facilities cataloged. However, since there are differences among their purposes and operations, you will need to compile slightly different data for each type of facility.

2.5.1

OVERVIEW OF EXISTING SOLID WASTE MANAGEMENT FACILITIES/PROGRAMS
Instructions

This page summarizes the information on the existing solid waste programs in your district. While it is presented as the first page of this subsection, you may find it more convenient to complete this page after you have finished the facilities inventory.

- 1 Facility - The facilities to be summarized are listed in the lefthand column.
- 2 Number - list the number of facilities of each type.
- 3 Design capacity - where applicable, state the total capacity the facilities were designed to accommodate (tons or tons per day [tpd]).
- 4 Remaining capacity - state the remaining capacity based on historical data.
- 5 Quantity in base year - state the total amount managed from January 1 to December 31 of the base year.

2.5.1
**OVERVIEW OF EXISTING SOLID WASTE MANAGEMENT
 FACILITIES/PROGRAMS**

1	2	3	4	5
Facility	Number	Design Capacity	Remaining Capacity (tons)	Quantity in Base Year _____
Landfills				
Collection Services		N/A	N/A	
Transportation Services		N/A	N/A	
Transfer Station			N/A	
Incinerators/ Waste-to-Energy Facilities			N/A	
Recycling Programs		N/A	N/A	
Compost Facilities		N/A	N/A	
Solid Waste Collection Centers			N/A	

2.5.2
LANDFILLS
Instructions

- 1 Name - name of the landfill.
- 2 Site address - street address or site location.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 6 Permit number - self-explanatory.
- 7 Waste types - list the types of currently waste accepted at this landfill; for example, MSW, demolition/construction debris, asbestos, yard waste, other (specify).
- 8 Phone - operator's telephone number (include area code).
- 9 Original design capacity - state in tons the facility's intended capacity when it was put into service
- 10 Remaining capacity (tons) - state the current expected capacity based on the most recent professional estimate.
- 11 Remaining life (years) - state the current expected lifespan based on the most recent professional estimate.
- 12 Quantity accepted in base year - state the total amount managed from January 1 to December 31 of the base year.
- 13 Access - is this landfill open to the public, or is it restricted to use by a single entity or waste type? Answer public or captive (dedicated to a single entity that generates and disposes of its own waste.)
- 14 List the name, registration, and company of the professional who developed the estimates for items 10 and 11. Include the date that estimate was completed.

1 Name	6 Permit No.
2 Site Address	7 Waste Types Accepted
3 Mailing Address	
4 Owner	
5 Operator	8 Phone

9 Original Design Capacity (tons)	13 Access
10 Remaining Capacity (tons)	14 Current Capacity Estimated By
11 Remaining Life (years)	
12 Quantity Accepted in Base Year ____ (tons)	Date

1 Name	6 Permit No.
2 Site Address	7 Waste Types Accepted
3 Mailing Address	
4 Owner	
5 Operator	8 Phone

9 Original Design Capacity (tons)	13 Access
10 Remaining Capacity (tons)	14 Current Capacity Estimated By
11 Remaining Life (years)	
12 Quantity Accepted in Base Year ____ (tons)	Date

2.5.3
COLLECTION SERVICES
Instructions

- 1 Name - name of the collection service.
- 2 Address - location of management and address for business correspondence. Include ZIP code.
- 3 Owner - name owner of record (private or municipal entity).
- 4 Operator - name entity or individual responsible for day-to-day operations of the service.
- 5 Permit number - self-explanatory. *Country
city? No State yet.*
- 6 Phone - owner's business telephone number (include area code).
- 7 Quantity collected in base year - state the total amount collected from January 1 to December 31 of the base year.

1 Name	5 Permit No.
2 Address	
3 Owner	6 Phone
4 Operator	7 Quantity Collected in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	
3 Owner	6 Phone
4 Operator	7 Quantity Collected in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	
3 Owner	6 Phone
4 Operator	7 Quantity Collected in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	
3 Owner	6 Phone
4 Operator	7 Quantity Collected in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	
3 Owner	6 Phone
4 Operator	7 Quantity Collected in Base Year ____ (tons)

2.5.4
TRANSPORTATION SERVICES
Instructions

Transportation services provide bulk hauling of MSW. Transporters most commonly haul material from transfer stations to landfills or other disposal facilities. Transportation modes can include trailer trucks, rail cars, or river barges.

- 1 Name - name of the transportation service.
- 2 Address - location of management and address for business correspondence. Include ZIP code.
- 3 Owner - name owner of record (private or municipal entity).
- 4 Operator - name entity or individual responsible for day-to-day operations of the service.
- 5 Permit number - self-explanatory.
- 6 Phone - business telephone number (include area code).
- 7 Type - list types of transport vehicles used; for example, trailer trucks, rail cars, barges, other (list).
- 8 Quantity collected in base year - state the total amount collected from January 1 to December 31 of the base year.

2.5.4
TRANSPORTATION SERVICES

1 Name	5 Permit No.
2 Address	6 Phone
3 Owner	7 Type
4 Operator	8 Quantity Transported in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	6 Phone
3 Owner	7 Type
4 Operator	8 Quantity Transported in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	6 Phone
3 Owner	7 Type
4 Operator	8 Quantity Transported in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	6 Phone
3 Owner	7 Type
4 Operator	8 Quantity Transported in Base Year ____ (tons)

1 Name	5 Permit No.
2 Address	6 Phone
3 Owner	7 Type
4 Operator	8 Quantity Transported in Base Year ____ (tons)

2.5.5
TRANSFER STATIONS
Instructions

- 1 Name - name of the facility.
- 2 Site address - street address or site location.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 6 Permit number - self-explanatory.
- 7 Phone - operator's telephone number (include area code).
- 8 Functions - state the types of services provided at this facility; for example, transfer only, accepts recyclables from the public, retrieves recyclables from received wastes, etc.
- 9 Design capacity (tpd) - state the maximum daily capacity the facility can manage.
- 10 Quantity received in the base year (tpd and total) - state the average daily tonnage from January 1 to December 31 of the base year and the total tonnage for that period.

-
- 1 Name
 - 2 Site Address
 - 3 Mailing Address
 - 4 Owner
 - 5 Operator

- 6 Permit No.
- 7 Phone
- 8 Functions

9 Design Capacity (tpd)

10 Quantity Received
in Base Year _____ (tpd)
_____ (total)

-
- 1 Name
 - 2 Site Address
 - 3 Mailing Address
 - 4 Owner
 - 5 Operator

- 6 Permit No.
- 7 Phone
- 8 Functions

9 Design Capacity (tpd)

10 Quantity Received
in Base Year _____ (tpd)
_____ (total)

-
- 1 Name
 - 2 Site Address
 - 3 Mailing Address
 - 4 Owner
 - 5 Operator

- 6 Permit No.
- 7 Phone
- 8 Functions

9 Design Capacity (tpd)

10 Quantity Received
in Base Year _____ (tpd)
_____ (total)

2.5.6
INCINERATORS/WASTE-TO-ENERGY FACILITIES
Instructions

All incinerators and waste-to-energy facilities should be included in this inventory, including large hospital incinerators (7 TPD or more), and industrial and commercial facilities. All of these facilities should have permits.

- 1 Name - name of the facility.
- 2 Site address - street address or site location.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Permit number - self-explanatory.
- 6 Phone - operator's telephone number (include area code).
- 7 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 8 Product - if some type of energy recovery is employed, describe the type; for example, electricity, district heating, steam sales. If no energy is produced, enter "none."
- 9 Design capacity (tpd) - state the maximum daily capacity the facility can manage.
- 10 Quantity processed in the base year (tpd and total) - state the average daily tonnage from January 1 to December 31 of the base year and the total tonnage for that period.
- 11 Ash for disposal (tons) - state the annual tonnage of residual ash for disposal.
- 12 Ash disposal sites - list the names and locations of all ash disposal facilities used.

2.5.7
PUBLICLY AVAILABLE RECYCLING SERVICES
Instructions

- 1 Name - name of the facility.
- 2 Address - location of management and address for business correspondence. Include ZIP code.
- 3 Owner - name owner of record (private or municipal entity).
- 4 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 5 Phone - operator's telephone number (include area code).
- 6 Description - describe the type of service provided; for example, drop-off centers, reverse vending machines, processing facilities (materials recovery/intermediate processing centers), etc. Include not-for-profit entities such as Goodwill and Salvation Army outlets.
- 7 Processing capacity (tpd) - state daily processing capacity.
- 8 Total quantity collected in the base year - state total tonnage.
- 9 Itemize total materials collected in the base year - state tonnage of materials processed by type. Total should be same as in 8 above.

1 Name 5 Phone
 2 Address 6 Description
 3 Owner
 4 Operator

7 Daily Processing Capacity (tpd) 8 Total Quantity Collected in the Base Year ____ (tons)

9 Itemize Materials Collected in the Base Year ____

<u>Material</u>	<u>Tons</u>	<u>Material</u>	<u>Tons</u>	<u>Material</u>	<u>Tons</u>
Aluminum		Clothing		Other (list)	
Glass		Appliances			
Paper		Yard Waste			
Corrugated		Tires			
Plastic		Batteries			
Ferrous Metals					

1 Name 5 Phone
 2 Address 6 Description
 3 Owner
 4 Operator

7 Daily Processing Capacity (tpd) 8 Total Quantity Collected in the Base Year ____ (tons)

9 Itemize Materials Collected in the Base Year ____

<u>Material</u>	<u>Tons</u>	<u>Material</u>	<u>Tons</u>	<u>Material</u>	<u>Tons</u>
Aluminum		Clothing		Other (list)	
Glass		Appliances			
Paper		Yard Waste			
Corrugated		Tires			
Plastic		Batteries			
Ferrous Metals					

2.5.8
COMPOST FACILITIES
Instructions

- 1 Name - name of the facility.
- 2 Site address - street address or site location.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 6 Permit number - self-explanatory.
- 7 Phone - operator's telephone number (include area code).
- 8 Materials composted - specify yard waste, MSW, other.
- 9 Quantity processed in 1992 - state total in tons.
- 10 Product - list product or products resulting from composting process (mulch, landfill cover material, etc.)
- 11 Residue for disposal - state tonnage of material not converted to useful product that remains for final disposal (landfilling or incineration).
- 12 Disposal sites - list sites and locations.

1 Name	6 Permit No.
2 Site Address	7 Phone
3 Mailing Address	8 Materials Composted
4 Owner	
5 Operator	

9 Quantity Processed in the Base Year ____ (tons)	10 Product
11 Residue for Disposal (tons)	12 Disposal Sites

1 Name	6 Permit No.
2 Site Address	7 Phone
3 Mailing Address	8 Materials Composted
4 Owner	
5 Operator	

9 Quantity Processed in the Base Year ____ (tons)	10 Product
11 Residue for Disposal (tons)	12 Disposal Sites

1 Name	6 Permit No.
2 Site Address	7 Phone
3 Mailing Address	8 Materials Composted
4 Owner	
5 Operator	

9 Quantity Processed in the Base Year ____ (tons)	10 Product
11 Residue for Disposal (tons)	12 Disposal Sites

2.5.9
SOLID WASTE COLLECTION DEPOTS
Instructions

This is a collection center that receives MSW from the general public. These facilities are usually found in rural areas where curbside collection service may not be available.

- 1 Name - name of the facility.
- 2 Site address - street address or site location.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 6 Permit number - self-explanatory.
- 7 Phone - operator's telephone number (include area code).
- 8 Materials - specify materials accepted such as household trash, yard waste, recyclables, other (specify).
- 9 Attendant - is there an attendant on site to accept materials? Please answer yes or no.
- 10 Quantity in the base year - state total tonnage accepted.

2.5.10
WASTE TIRE PILES
Instructions

- 1 Name - name of the facility
- 2 Site location - street address if known.
- 3 Mailing address - location of management and address for business correspondence. Include ZIP code. (May be same as 2.)
- 4 Owner - name owner of record (private or municipal entity).
- 5 Operator - name entity or individual responsible for day-to-day operations of the facility.
- 6 Phone - operator's telephone number (include area code).
- 7 Size of site (acres).
- 8 Approximate number of tires.

1 Name	5 Operator
2 Site Location	6 Phone
3 Mailing Address	7 Size - Acres
4 Owner	8 Number of Tires

1 Name	5 Operator
2 Site Location	6 Phone
3 Mailing Address	7 Size - Acres
4 Owner	8 Number of Tires

1 Name	5 Operator
2 Site Address	6 Phone
3 Mailing Address	7 Size - Acres
4 Owner	8 Number of Tires

2.5.11
OPEN DUMPS
Instructions

- 1 Site location.
- 2 Owner - name owner of record (private or municipal entity).
3. Size of site (acres).

1 Location

2 Owner

3 Size (acres)

1 Location

2 Owner

3 Size (Acres)

1 location

2 Owner

3 Size (acres)

2.5.12
MAP OF EXISTING FACILITIES
Instructions

Please prepare a map of the district showing the existing facilities in the preceding inventory. Use a scale of 1:_____ and indicate the facilities using this key:

- | | |
|---------------------|----------------------|
| 1) Landfill | 5) Recycling Center |
| 2) Transfer Station | 6) Compost Facility |
| 3) Incinerator | 7) Collection Depots |
| 4) Waste-to-Energy | |

Please include the map as an Appendix of your plan document.

2.6
PROJECTION OF NEEDED FACILITIES/ACTIVITIES
Instructions

Once you have:

- projected the amount of waste generated in the district,
- determined the effectiveness of various waste reduction strategies proposed to meet state goals, and
- determined the amount of waste for final disposal,

you can assess the capacity of existing facilities and determine what additional facilities are needed. You will probably have to go through this exercise several times to arrive at the best mix of strategies, weighing the cost and effectiveness of various combinations of waste reduction methods and final disposal options. When you have settled on a preferred plan and the facilities it will require, identify each facility or activity on the form shown on the facing page. Provide the requested information for new facilities/activities and for additions or expansions of existing ones.

- 1 Type - State type of facility or activity needed (compost facility, drop-off center, curbside collection, waste-to-energy plant, materials recovery facility, landfill, etc.).
- 2 Location - address for existing facility, general location for new facility.
- 3 Material processed - MSW, newspapers, mixed recyclables, yard waste, etc.
- 4 Existing/new - indicate one.
- 5 Capacity - express needed capacity in tons per day and tons per year for facilities such as composting, recycling processing. Indicate the amount of material to be processed for activities such as recycling programs. For landfills, state the total capacity in tons.
- 6 Year to begin operation - self explanatory.

PROJECTION OF NEEDED FACILITIES/ACTIVITIES

1 Type	4 Existing/New
2 Location	5 Capacity (tpd) (tpy) (total tons)
3 Material Processed	6 Year to Begin Operations

1 Type	4 Existing/New
2 Location	5 Capacity (tpd) (tpy) (total tons)
3 Material Processed	6 Year to Begin Operations

1 Type	4 Existing/New
2 Location	5 Capacity (tpd) (tpy) (total tons)
3 Material Processed	6 Year to Begin Operations

1 Type	4 Existing/New
2 Location	5 Capacity (tpd) (tpy) (total tons)
3 Material Processed	6 Year to Begin Operations

2.7
CURRENT AND FUTURE PROBLEMS
Instructions

From your knowledge of the history, politics, and economics of your district, please provide a narrative discussion of the solid waste problems the district is now experiencing and those that may develop in the future.

This assessment will help you evaluate your district's needs and will form the basis for the district's solid waste management policy. That in turn will lead to the development of the district's solid waste plan, set forth in Section 4.

[Insert discussion here, adding
additional pages as necessary]

SOLID WASTE MANAGEMENT PLAN

Please develop a solid waste management plan and policy for the period 1992 through 2011. This should be presented in narrative form and summarized in a table which lists each proposed solid waste management strategy and the estimated amount of material diverted or disposed of as a result of employing that method.

Your policy should address the district's needs and provide an integrated approach to solid waste management that includes:

- source reduction;
- alternatives to complete or partial dependence on final disposal facilities, including recycling and composting; and
- final disposal facilities.

Describe your strategy for accomplishing your goals. Discuss specific tactics such as curbside collection, drop-off centers, mandatory versus voluntary participation, restriction of out-of-district and out-of-state wastes, developing markets for collected recyclables, and so forth. Discuss your approach to handling wastes such as lead-acid batteries and tires. Also describe how you will measure compliance and maintain public cooperation in the waste reduction effort throughout the study period.

Your plan should identify alternative means of achieving your goals and objectives, developed from your assessment of the problems and needs set forth in the previous section.

The district plan must take into account all existing permitted disposal facilities and must incorporate all recycling activities currently in place.

The plan should be fair. Although HEA 1240 allows you to restrict or prohibit out-of-state wastes, any restrictions must be within your constitutional rights to impose. District powers do not extend to exclusive control of waste collection and disposal. Further, any operating requirements you impose must apply equally to both privately and publicly owned facilities. Finally, the plan must consider contracts with private parties.

Using the data from Section 2.3 and 2.4, the table showing waste reduction reuse and recycling, and the table showing waste origin and destination, you should demonstrate if your plan will meet state goals of reducing the amount of solid waste for final disposal by 35% by 1996 and 50% by 2001. Please repeat the tables from Section 2.3 and 2.4 in Section 3 so that readers have a convenient summary of your solid waste management plan.

3
SOLID WASTE MANAGEMENT PLAN
WASTE REDUCTION, REUSE, AND RECYCLING IN DISTRICT

	BASE YEAR		(Tons per Year)						2011
	1992	1993	1994	1995	1996	1997	1998 ----->		
7 Total Waste Generated in District.....	155,800	157,600	159,600	161,600	163,800	165,800	167,800 ----->	196,300	
Recycling:									
8 Industrial.....	10,900	11,000	11,200	11,300	11,500	13,900	16,400 ----->	24,700	
9 Publicly Available.....	4,700	9,500	14,400	19,400	24,600	27,400	27,700 ----->	32,400	
10 Other.....	500	510	520	530	540	550	560 ----->	690	
11 Sub-Total.....	16,100	21,010	26,120	31,230	36,640	41,850	44,660 ----->	57,790	
12 Waste Reduction.....	200	200	200	200	200	220	240 ----->	970	
13 Yard Waste.....	3,100	6,300	9,600	12,900	16,400	19,900	21,800 ----->	25,500	
14 MSW Composting.....	1,600	1,600	1,600	1,600	16,400	16,600	16,800 ----->	19,600	
15 Lead Acid Batteries.....	270	270	270	270	280	280	280 ----->	300	
16 Tires.....	1,730	1,730	1,740	1,750	1,760	1,770	1,780 ----->	1,900	
17 Other.....	310	320	320	320	330	330	340 ----->	390	
18 Total.....	(23,310)	(31,430)	(39,850)	(48,270)	(72,010)	(80,950)	(85,900)----->	(106,450)	
19 Recycling and Reduction as % of District Waste.....	15%	20%	26%	31%	46%	52%	55%----->	68%	
STATE RECYCLING AND REDUCTION GOALS					35%	50% year 2001			
					****	****			
20 Waste from District for Disposal.....	132,490	126,170	119,750	113,330	91,790	84,850	81,900 ----->	89,850	

SOLID WASTE MANAGEMENT PLAN
ORIGIN AND DESTINATION OF WASTE FOR DISPOSAL

	BASE YEAR		(Tons per Year)						2011
	1992	1993	1994	1995	1996	1997	1998 ----->		
20 Waste from District for Disposal.....	132,490	126,170	119,750	113,330	91,790	84,850	81,900 ----->	89,850	
Waste for Disposal Out of District									
Sent to Other District(s):									
21 District A.....	4,000	4,100	4,200	4,300	4,400	4,500	4,600 ----->	5,900	
22 District B.....	1,200	1,200	1,200	1,200	1,200	1,200	1,200 ----->	1,200	
Sent to Other State(s):									
23 State A.....	2,000	2,000	2,000	2,000	2,000	2,000	2,000 ----->	2,000	
24 State B.....	17,500	17,800	18,100	18,400	18,700	19,000	19,300 ----->	23,200	
25 Total.....	24,700	25,100	25,500	25,900	26,300	26,700	27,100 ----->	32,300	
Waste for Disposal In District:									
26 Originating In District.....	107,790	101,070	94,250	87,430	65,490	58,150	54,800 ----->	57,550	
Originating in Other District(s):									
27 District A.....	25,000	25,400	25,800	26,200	26,600	27,000	27,400 ----->	33,200	
28 District B.....	5,000	5,100	5,200	5,300	5,400	5,500	5,600 ----->	6,900	
Originating Out of State:									
29 State A.....	2,000	2,000	2,000	2,000	2,000	2,000	2,000 ----->	2,000	
30 State B.....	17,500	17,800	18,100	18,400	18,700	19,000	19,300 ----->	23,200	
31 Sub-Total Imported Waste....	49,500	50,300	51,100	51,900	52,700	53,500	54,300 ----->	65,300	
32 Total Waste Managed in District.....	157,290	151,370	145,350	139,330	118,190	111,650	109,100 ----->	122,850	
Waste Incinerated									
33 In District.....	0	0	0	0	0	0	91,250 ----->	91,250	
34 Net.....	157,290	151,370	145,350	139,330	118,190	111,650	17,850 ----->	31,600	
35 Ash Residue.....	0	0	0	0	0	0	25,550 ----->	25,550	
Waste Landfilled in									
36 District.....	157,290	151,370	145,350	139,330	118,190	111,650	43,400 ----->	57,150	

IMPLEMENTATION AND
FINANCING PLAN

HEA 1240 grants district boards latitude in financing matters. You may impose fees, borrow money, purchase or lease facilities and equipment, and levy taxes.

This section presents the nuts and bolts of the district solid waste management plan: what it will take in time and money to meet your goals.

4.1
IMPLEMENTATION PLAN
Instructions

Using the list of needed facilities developed for Section 2.7, prepare an implementation chart similar to the example presented on the facing page. (The example shows only the first 10 years of the planning period. Yours should show the total time required to put your planned facilities and activities in place. In addition, your plan may not include all the options listed in the example; your schedule should list only those that will be part of your district's plan.)

For programs such as recycling or waste reduction, the schedule should show (at least) planning and implementation. Where facilities such as a compost facility or landfill are to be built, the schedule should show planning, siting, design, permitting, and construction phases. You may wish to prepare your schedule in more detail than shown here; however, a graphic schedule will be sufficient for the submittal to IDEM.

	1992	1993	1994	1995	1996	1997	1998	----->	2011
Recycling:									
Curbside Programs	+Plan	-----	-----	Implement	-----	-----	-----	-----	----->
Drop-Off Programs	+Plan	-----	-----	Implement	-----	-----	-----	-----	----->
Recyclables Processing Facility	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->
Transfer Station(s)	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->
Transportation System				+Plan	-----	Implement	-----	-----	----->
Waste Reduction	+Plan	-----	-----	-----	-----	Implement	-----	-----	----->
Yard Waste Collection	+Plan	-----	-----	-----	-----	-----	-----	-----	----->
Yard Waste Composting	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->
MSW Composting	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->
Landfill	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->
Incineration	+Plan	+Site	+Design	+Permit	+Construct	-----	-----	-----	----->

4.2
SCHEDULE OF CAPITAL COSTS
Instructions

Develop a schedule showing capital expenditures for all proposed facilities. The example includes a line for each major category. These costs may include items such as land purchase, roads, clearing, engineering, etc. (Include only the equipment and facilities proposed for your plan and extend the time required as necessary to meet your implementation goals.) Appendix C provides a detailed list of cost items that may be associated with different facilities. The totals for each category should only be shown in the submittal to IDEM; the detailed list is provided for your planning efforts.

1 - 10

Self-explanatory.

11 Show total capital expenditures by year on this line. This is the amount the district will need to finance to meet its solid waste management goals.

	Dollars(000)							2011
	1992	1993	1994	1995	1996	1997	1998 ----->	
Collection Equipment								
1 Recycling.....		\$200	\$200				----->	0
2 Yard Waste.....		75	75				----->	0
Recycling Processing								
3 Facility.....					800	400	----->	0
4 Transfer Station(s).....					750	200	----->	0
5 Transfer Vehicles.....					250	500	----->	0
6 Yard Waste Composting.....				750			----->	0
7 MSW Composting.....					1,500		----->	0
8 Landfill(s).....					750	200	250 ----->	0
9 Incineration.....						2,000	30,000 ----->	0
10 Other.....							----->	0
11 Total Capital Expense.....	\$0	\$275	\$275	\$750	\$4,050	\$3,300	\$30,250 ----->	\$0

4.3
REVENUE REQUIREMENTS
Instructions

Develop a schedule showing the annual operation and maintenance expenditures for all facilities proposed. The example includes a line for each major category of program or facility. Include only the facilities and programs proposed for your plan. (Appendix C provides a detailed list of costs that may be associated with different facilities provided as a checklist for planning.)

1 - 11

- 1 Lists the costs of district-operated services. If any services are provided by municipalities or private collection entities, they need not be shown on this schedule.
- 12 A host community fee is a payment to a community where a waste management facility is located.
- 13 Other O&M expenses (e.g.: Hazardous Waste Special Collection Days).
- 14 District administrative costs may include items such as salaries and benefits, office rent, supplies etc.
- 15 Show state fees and surcharges paid to the state on solid waste received at district facilities.
- 16 Show total operating and maintenance expenses.
- 17 Debt service is the principal and interest payment required to pay for the capital expenses shown on the capital expenditures Schedule 4.2.
- 18 The entire cost of operating the district and all facilities needed for meeting its solid waste management goals.
- 19 Fees collected for the disposal of solid waste by the district. They may include gate fees (per ton) collected at the disposal facilities as well as direct payments from communities within the district.
- 20 Interest income may be derived from special funds required to be set aside by the district for financing purposes.
- 21 Revenues from sale of recyclable materials collected.
- 22 Any other related income.
- 23 It may be necessary to carry forward a surplus or deficit to smooth out increases/decreases in disposal fees.
- 24 Total revenue should equal total expenses for each year after accounting for surpluses or deficits.
- 25 Total revenue requirement divided by the amount of waste disposed of (Schedule 2.4, line 32). You may find it informative to compute this cost for each waste management strategy used.
- 26 Avoided disposal cost represents money not spent to dispose of waste that has been recycled, reduced, or otherwise diverted from final disposal. The avoided cost per ton for final disposal typically is the cost to landfill and may include collection and transportation costs. You will need to use your best judgement as to what this cost is or would be. The total cost savings is determined by multiplying the avoided cost per ton by the amount of waste reduced, recycled, etc., less existing recycling, reduction, etc. which occurred in the BASE YEAR.

REVENUE REQUIREMENTS

		Dollars(000)							
		1992	1993	1994	1995	1996	1997	1998 ----->	2011
Operation and Maintenance									
Collection									
1	MSW.....	\$0	\$0	\$0	\$0	\$0	\$0	\$0 ----->	\$0
2	Recycling.....	0	0	320	450	600	690	730 ----->	1,420
3	Yard Waste.....	0	0	160	230	300	380	430 ----->	840
4	Other.....	0	0	0	0	0	0	0 ----->	0
5	Recyclables Processing.....	0	0	0	0	0	790	880 ----->	1,900
6	Transfer Station(s).....	0	0	0	0	0	110	110 ----->	200
7	Transfer Vehicles.....	0	0	0	0	0	270	270 ----->	490
8	Yard Waste Composting.....	0	0	0	0	60	80	90 ----->	170
9	MSW Composting.....	0	0	0	0	200	210	220 ----->	430
10	Landfill(s).....	0	0	0	0	0	4,240	1,710 ----->	3,760
11	Incineration.....	0	0	0	0	0	0	7,810 ----->	13,000
12	Host Community Fee.....	20	20	20	20	20	30	30 ----->	40
13	Other.....	0	0	0	0	0	0	0 ----->	0
14	District Administration....	120	130	130	140	150	160	170 ----->	320
15	State Fees.....	80	80	70	70	60	60	20 ----->	30
Total Operation and									
16	Maintenance.....	220	230	700	910	1,390	7,020	12,470 ----->	22,600
17	Debt Service.....	0	30	60	140	590	950	4,260 ----->	4,510
18	Total Revenue Requirement..	220	260	760	1,050	1,980	7,970	16,730 ----->	27,110
Annual Revenues:									
19	Disposal Fees.....	152	142	582	802	1,662	7,602	16,352 ----->	26,382
20	Interest Income.....	15	15	15	15	15	15	15 ----->	15
21	Sale of Materials.....	50	100	160	230	300	350	360 ----->	710
22	Miscellaneous Income.....	3	3	3	3	3	3	3 ----->	3
Surplus(Deficit) from									
23	Previous Year.....	0	0	0	0	0	0	0 ----->	0
24	Total Revenue.....	220	260	760	1,050	1,980	7,970	16,730 ----->	27,110
25	Cost per Ton.....	1	2	5	8	17	71	153 ----->	221
Avoided Disposal Cost									
26	Cost per Ton.....					29	30	32 ----->	55
27	Total.....					240	500	800 ----->	3,440

If solid waste management facilities must be acquired, built, or modified to serve the needs of the district, the board may use a variety of methods to pay capital costs and facility operating and maintenance expenses.

USER FEES

The solid waste management district may levy a user fee on all persons who benefit from solid waste services and facilities. These user fees may be based on:

- a flat charge for a residence or building.
- the weight or volume of refuse collected.
- the average number of containers or bags of refuse received.
- the relative difficulty associated with collection and disposal of waste received.
- other criteria the board finds related to service, or any combination of criteria.

User fees may be imposed only after a public hearing.

REVENUE BONDS

To finance facilities, a district board of directors may borrow money and issue revenue bonds. Revenue bonds are special obligations of the district and are payable only from pledged facility revenues.

WASTE MANAGEMENT DISTRICT BONDS

The district board of directors is also authorized to issue waste management district bonds. These are payable out of a special property tax levied on real property.

4.4
FINANCING THE PLAN
Instructions

Please prepare a narrative describing the fees and other financing methods your plan will require. Describe the capital, operating costs and your proposed approach to funding those expenditures. Also describe how you arrived at the fees, rates, or other charges to be imposed for use of any facility.

RECOMMENDED PUBLIC INFORMATION AND INVOLVEMENT PROGRAMS

The district's new solid waste management programs will mean lots of changes in the way that area citizens "take out the garbage" and what they pay to have it taken away. Unlike many public services, most waste diversion and recycling programs depend on citizens and businesses to understand and directly cooperate with the new approach. Many programs will require new capital investments, which will cost citizens more and sometimes require their vote of support.

It is important to keep people informed and involved during the development of such changes so as to earn their support and cooperation during the plan's implementation. In such a context, public involvement programs become more than legally required meetings, they can be used as effective and essential planning tools to increase the potential for long-term success.

Though each district is already required to assemble a Solid Waste Advisory Committee and to hold two public meetings regarding the plan, the State recommends that you consider some of the following ideas to ensure the success of your program.

BASIC PROGRAM ELEMENTS

Target Audiences

Because everyone generates garbage, the whole community will be affected by the plan. But there are some audiences that have proven to be especially important in successful planning, including school students (especially grades 3-5 and 10-11), business organizations, community service organizations and consumer or environmental interest groups. As the plan proceeds, additional target groups may develop as the location of new facilities is discussed.

Basic Fact Sheet or Brochure

As the planning process proceeds, you can expect new faces to keep appearing at meetings or in the office of elected officials. It is very helpful to develop a simple fact sheet or fancy brochure that can get them up to speed quickly by explaining:

- What the new state law requires and why the plan is being developed;
- How the district will work and which communities are involved;
- What solid waste management options are being considered; and
- How citizens can get more information and register their opinion.

State Materials

As highlighted in the State's Action Plan, the State will continue to collect and develop a series of informational materials that will be made available to districts. See Volume I for more details or contact the IDEM Hotline: 1-800-451-6027.

PUBLIC INFORMATION PROGRAMS

Written Progress Update

Because the solid waste management plan will affect everyone in the district, it is recommended that a regular written progress report be published for distribution to the groups highlighted below and to citizens who have expressed interests and concerns.

Media

As with any large project involving public funds and changing services, it is important to keep local media representatives well informed. Given the complexity and novelty of these issues, it is recommended that the district hold a media orientation session early in the process and issue regular updates.

Community Presentations

Scheduling presentations to business and service groups can be especially important as the Plan begins to take shape to help explain the potential effects of the new programs, before all the decisions are final.

Presentations to Public Officials

Though the district has separate responsibilities, its success will always depend on the support and cooperation of the elected bodies whose constituents are affected by district actions. As such, it is highly recommended that district representatives make regular reports back to their community leaders and that each elected official in the district's jurisdiction receive a regular, written progress update.

School Presentations

Children are always an important way to notify parents that changes are coming. As described in Volume I, the State will be assembling a number of related materials for your use.

PUBLIC INVOLVEMENT

Citizens will always have opinions, the key is to help them have informed opinions and to give them a convenient, productive, meaningful way to express themselves, before all the decisions have been made.

Public Workshops, Meetings and Hearings

~~One mid-point meeting and one final draft hearing~~ are required under the law. Since the hearing is a formal, one-way discussion, it is highly recommended that the mid-point meeting be designed to help citizens make informed comments and give district representatives a chance to clarify citizen concerns. As such, it is recommended that the session open with a brief presentation on the project, the basic ways that solid waste can be managed and (most importantly) how the new changes will affect local residents and businesses. Further, it is recommended that, if the district is large, the mid-point meeting should be divided into a series of sessions, around the jurisdiction, to keep meetings small and effective.

Written Comments and Questions

In order to build the public trust that will be needed to successfully implement new solid waste management systems, it will be helpful for the district to demonstrate that it will listen to all interested parties. Because everyone who is interested in a project will not attend scheduled meetings, it is important to offer an alternative, such as a central contact who can receive and manage written comments and questions.

Please prepare a narrative describing the materials and programs that you would use to inform citizens and businesses and involve them during the planning process.

In developing your narrative for this component, please address the following items.

The programs and materials are designed to cover the following topics:

- State Law and the District Planning Process
- Solid Waste Management Options Being Considered
 - Source Reduction
 - Recycling
 - Composting
 - Special Waste Management
 - Incineration
- Planning Schedule
- How Citizens and Businesses Can Get Information
- How Citizens and Businesses Can Give Their Opinions

PUBLIC INFORMATION

- Information on the Plan is available to citizens through the following programs and materials.
- The following media receive information on the planning process on a regular basis.
- Following is a list of the program's target populations and the methods used to keep them informed.
- The programs and materials cost _____ and are funded by _____.

PUBLIC INVOLVEMENT

- Citizens can register their opinion on the Plan through these scheduled meetings.
- The meetings are advertised in the following ways.
- Citizens can also register their opinion in writing by addressing their comments to the SWAC through the following contact and address.
- The meetings, advertising and materials cost _____ and are funded by _____.

**SURVEILLANCE AND
ENFORCEMENT PROCEDURES**

5
SURVEILLANCE AND ENFORCEMENT PROCEDURES
Instructions

Provide a narrative description of the procedures you will use to assure compliance with the district solid waste management plan. Describe the process to be established: ordinances to be enacted, monitoring procedures, reporting requirements, and so on. Specify which agency or department will be vested with authority for enforcement. Finally, please describe the penalties to be imposed for noncompliance.

[Insert discussion here, adding
additional pages as necessary]

APPENDICES

APPENDIX A
PORTIONS OF HEA 1240 PERTAINING TO DISTRICT PLANS

Chapter 4. District Solid Waste Management Plan

Sec. 1. Each district shall adopt and submit to the commissioner for approval a district solid waste management plan that meets:

- (1) the requirements of this chapter; and**
- (2) the criteria and other elements set forth in the state plan.**

Sec. 2. (a) A district must conduct one (1) or more public meetings before the creation, amendment, or alteration of the district solid waste management plan. Public notice of each public meeting shall be given by the board.

(b) After considering public comment received during all public meetings held under subsection (a) and after holding a public hearing on the proposed plan, the board of directors shall adopt a district plan in final form. Public notice of the hearing held under this subsection shall be given by the board.

Sec. 5. A district plan must include the following:

(1) The results of a demographic study of the district predicting the population of the district five (5) years, ten (10) years, and twenty (20) years after the year the district plan is adopted.

(2) A description of the origin, content, and weight or volume of the solid waste to be generated in the district at the time of the development of the district plan, and a projection of the origin, content, and weight or volume of the solid waste to be generated in the district five (5) years, ten (10) years, and twenty (20) years after the year the district plan is adopted.

(3) An inventory and description of the facilities located within the district and of the solid waste management activities taking place within the district.

(4) A statement identifying and assessing solid waste problems that exist in the district at the time of the development of the district plan and solid waste problems that may exist in the district in the future.

(5) A projection of the need for, and a description of, facilities in the district five (5) years, ten (10) years, and twenty (20) years after the year the district plan is adopted.

Sec. 6. A district plan must establish a solid waste management policy for the district that reflects the needs of the district and provides an integrated approach to solid waste management that includes the following:

- (1) Source reduction.**
- (2) Alternatives to complete or partial dependence on final disposal facilities, including recycling and composting.**
- (3) Final disposal facilities.**

Sec. 7. A district plan must do the following:

- (1) Set forth goals and objectives for the district.**
- (2) Identify alternative means of achieving these goals and objectives based upon the problems and needs of the district.**
- (3) Set forth a description of the operational costs and capital costs of implementing the district plan and the proposed means of financing the implementation of the district plan.**
- (4) Set forth the basis for setting fees, rates, and charges for use of any facility.**
- (5) Designate a person to supervise the implementation of the district plan and describe the responsibilities and authority of that person.**
- (6) Describe the surveillance and enforcement procedures to be implemented to ensure compliance with the district plan.**

Sec. 8. A district plan may, to the extent it is constitutionally permissible, include provisions to restrict or prohibit the disposal within the district of solid waste originating from another state if the district reasonably considers the provisions necessary to accomplish the long range planning goals of the district.

Sec. 9. (a) A district plan must consider, in all circumstances, contracts with private persons.

(b) A district plan or amended plan must, where reasonably necessary to effectuate the efficient use of existing permitted final disposal facilities, take account of permitted final disposal facilities in the district that are in operation at the time the district plan is adopted. A district plan or amended plan must incorporate all recycling activities in progress in the district at the time the district plan is adopted or amended.

(c) A district plan may not impose operational requirements on a privately owned or operated facility that differ from operational requirements imposed on a public facility solely because the facility is privately owned or operated.

Sec. 10. If:

- (1) a district fails to submit a district plan to the commissioner under section 1 of this chapter; or
- (2) the commissioner disapproves a revised district plan submitted by the district under section 3(c) of this chapter;

the commissioner may adopt a solid waste management plan for the district.

Sec. 11. (a) A district shall reconsider and, if appropriate, amend its solid waste management plan at least once every five (5) years using the procedures set forth in sections 1, 2, and 3 of this chapter.

(b) A district may amend its plan at any time within the five (5) year period referred to in subsection (a). An amended plan prepared under this subsection shall be immediately filed with the commissioner and may be implemented within sixty (60) days after filing unless the commissioner notifies the district in writing within thirty (30) days after the filing that the amended plan fails to comply with the state plan. The written notice of the commissioner shall also provide written comments on changes that would make the amended plan acceptable.

Sec. 12. (a) A district may merge with one (1) or more other districts after the adoption of identical resolutions by the board of each district to be merged.

(b) Upon adoption of identical resolutions under subsection (a), a board for the resulting merged district shall be established using the procedures set forth in IC 13-9.5-2.

(c) A merged district must adopt its district plan within thirty (30) days after the merger is completed and file the district plan with the commissioner.

(d) A district plan adopted under this section is considered approved unless the commissioner notifies the district within thirty (30) days after the district plan is filed with the commissioner that the district plan fails to comply with the state plan.

Sec. 13. (a) Before the district plan of a joint district is approved under section 3 of this chapter, a county may by ordinance of its executive remove itself from the joint district and:

- (1) designate itself as a county district;
- (2) join into a joint district; or
- (3) join with one (1) or more other counties in establishing a new joint district.

(b) If a county designates itself as a county district under subsection (a)(1), the board appointed for the new county district under IC 13-9.5-2-4 must file a district plan with the commissioner within ten (10) days after the passage of the ordinance. If the district plan is not filed, the removal of the county from the joint district is not effective.

(c) If a county desires to join into a joint district under subsection (a)(2), the board of the other district must approve the addition of the county to the district, amend its district plan to include the additional county, and file the amended district plan with the commissioner within thirty (30) days after the addition of the county to the district. If the district plan is not filed, the removal of the county under subsection (a) is not effective.

(d) If a county desires to join in establishing a new joint district under subsection (a)(3), the board of the new joint district must, within thirty (30) days after the adoption of an ordinance establishing the joint district and approving an agreement governing the operation of the joint district, file a new district plan with the commissioner. If the district plan is not filed, the removal of the county under subsection (a) is not effective.

**APPENDIX B
POPULATION PROJECTIONS FOR INDIANA COUNTIES**

Indiana County Population Projections 1980-2020

Prepared by: Indiana Business Research Center School of Business, Indiana University 1988

Table with 17 columns (years 1980-1997) and 67 rows (county names). Each cell contains a population projection value. The table is organized into a grid with county names on the left and years as column headers.

Indiana County Population Projections 1980-2020

Prepared by: Indiana Business Research Center
School of Business, Indiana University
1988

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Martin	11,020	11,010	11,000	10,990	10,980	10,970	10,968	10,966	10,964	10,962	10,960	10,966	10,972	10,978	10,984	10,990	10,978	10,966
Miami	39,820	39,484	39,148	38,812	38,476	38,140	38,144	38,148	38,152	38,156	38,160	38,172	38,184	38,196	38,208	38,220	38,326	38,432
Monroe	98,810	99,226	99,642	100,058	100,474	100,890	101,334	101,778	102,222	102,666	103,110	103,612	104,114	104,616	105,118	105,620	106,022	106,424
Montgomery	35,530	35,588	35,646	35,704	35,762	35,820	35,902	35,984	36,066	36,148	36,230	36,322	36,414	36,506	36,598	36,690	36,762	36,834
Morgan	52,020	52,828	53,636	54,444	55,252	56,060	56,726	57,392	58,058	58,724	59,390	59,944	60,498	61,052	61,606	62,160	62,520	62,880
Newton	14,900	14,798	14,696	14,594	14,492	14,390	14,342	14,294	14,246	14,198	14,150	14,096	14,042	13,988	13,934	13,880	13,834	13,788
Noble	35,440	35,726	36,012	36,298	36,584	36,870	37,124	37,378	37,632	37,886	38,140	38,406	38,672	38,938	39,204	39,470	39,680	39,890
Ohio	5,140	5,202	5,264	5,326	5,388	5,450	5,514	5,578	5,642	5,706	5,770	5,832	5,894	5,956	6,018	6,080	6,126	6,172
Orange	18,680	18,740	18,800	18,860	18,920	18,980	19,010	19,040	19,070	19,100	19,130	19,166	19,162	19,178	19,194	19,210	19,220	19,230
Owen	15,850	16,004	16,158	16,312	16,466	16,620	16,762	16,904	17,046	17,188	17,330	17,438	17,546	17,654	17,762	17,870	17,936	18,002
Parke	16,390	16,354	16,318	16,282	16,246	16,210	16,166	16,122	16,078	16,034	15,990	15,964	15,938	15,912	15,886	15,860	15,820	15,780
Perry	19,380	19,332	19,284	19,236	19,188	19,140	19,086	19,032	18,978	18,924	18,870	18,818	18,766	18,714	18,662	18,610	18,564	18,518
Pike	13,480	13,460	13,440	13,420	13,400	13,380	13,338	13,296	13,254	13,212	13,170	13,126	13,082	13,038	12,994	12,950	12,894	12,838
Porter	119,870	120,706	121,542	122,378	123,214	124,050	124,810	125,570	126,330	127,090	127,850	128,522	129,194	129,866	130,538	131,210	131,710	132,210
Posey	26,450	26,518	26,586	26,654	26,722	26,790	26,844	26,898	26,952	27,006	27,060	27,110	27,160	27,210	27,260	27,310	27,354	27,398
Pulaski	13,290	13,350	13,410	13,470	13,530	13,590	13,680	13,770	13,860	13,950	14,040	14,114	14,188	14,262	14,336	14,410	14,472	14,534
Putnam	29,170	29,304	29,438	29,572	29,706	29,840	29,974	30,108	30,242	30,376	30,510	30,582	30,654	30,726	30,798	30,870	30,926	30,982
Randolph	30,020	29,758	29,496	29,234	28,972	28,710	28,588	28,466	28,344	28,222	28,100	28,044	27,988	27,932	27,876	27,820	27,748	27,676
Ripley	24,450	24,564	24,678	24,792	24,906	25,020	25,128	25,236	25,344	25,452	25,560	25,684	25,808	25,932	26,056	26,180	26,290	26,400
Rush	19,600	19,494	19,388	19,282	19,176	19,070	19,026	18,982	18,938	18,894	18,850	18,824	18,798	18,772	18,746	18,720	18,682	18,644
St. Joseph	241,610	241,612	241,614	241,616	241,618	241,620	241,524	241,428	241,332	241,236	241,140	241,098	241,056	241,014	240,972	240,930	241,250	241,570
Scott	20,440	20,508	20,576	20,644	20,712	20,780	20,850	20,920	20,990	21,060	21,130	21,182	21,234	21,286	21,338	21,390	21,450	21,510
Shelby	39,870	39,926	39,982	40,038	40,094	40,150	40,248	40,346	40,444	40,542	40,640	40,764	40,888	41,012	41,136	41,260	41,408	41,556
Spencer	19,370	19,538	19,706	19,874	20,042	20,210	20,326	20,442	20,558	20,674	20,790	20,892	20,994	21,096	21,198	21,300	21,368	21,436
Starke	22,020	21,924	21,828	21,732	21,636	21,540	21,528	21,516	21,504	21,492	21,480	21,448	21,416	21,384	21,352	21,320	21,304	21,288
Steuben	24,710	24,928	25,146	25,364	25,582	25,800	25,954	26,108	26,262	26,416	26,570	26,682	26,794	26,906	27,018	27,130	27,194	27,258
Sullivan	21,140	21,044	20,948	20,852	20,756	20,660	20,566	20,472	20,378	20,284	20,190	20,106	20,022	19,938	19,854	19,770	19,708	19,646
Switzerland	7,190	7,212	7,234	7,256	7,278	7,300	7,312	7,324	7,336	7,348	7,360	7,376	7,392	7,408	7,424	7,440	7,452	7,464
Tippecanoe	121,750	122,510	123,270	124,030	124,790	125,550	126,182	126,814	127,446	128,078	128,710	129,224	129,738	130,252	130,766	131,280	131,732	132,184
Tipton	16,840	16,748	16,656	16,564	16,472	16,380	16,312	16,244	16,176	16,108	16,040	15,978	15,916	15,854	15,792	15,730	15,676	15,622
Union	6,860	6,880	6,900	6,920	6,940	6,960	6,972	6,984	6,996	7,008	7,020	7,026	7,032	7,038	7,044	7,050	7,050	7,050
Vanderburgh	167,530	167,626	167,722	167,818	167,914	168,010	168,206	168,402	168,598	168,794	168,990	169,026	169,062	169,098	169,134	169,170	169,100	169,030
Vermillion	18,260	18,208	18,156	18,104	18,052	18,000	17,936	17,872	17,808	17,744	17,680	17,642	17,604	17,566	17,528	17,490	17,456	17,422
Vigo	112,420	111,980	111,540	111,100	110,660	110,220	109,926	109,632	109,338	109,044	108,750	108,376	108,002	107,628	107,254	106,880	106,850	106,820
Wabash	36,650	36,428	36,206	35,984	35,762	35,540	35,576	35,612	35,648	35,684	35,720	35,858	35,996	36,134	36,272	36,410	36,530	36,650
Warren	8,990	8,906	8,822	8,738	8,654	8,570	8,496	8,422	8,348	8,274	8,200	8,134	8,068	8,002	7,936	7,870	7,814	7,758
Warrick	41,500	42,314	43,128	43,942	44,756	45,570	46,384	47,126	47,904	48,682	49,460	50,152	50,844	51,536	52,228	52,920	53,504	54,084
Washington	21,940	22,074	22,208	22,342	22,476	22,610	22,736	22,862	22,988	23,114	23,240	23,342	23,444	23,546	23,648	23,750	23,840	23,930
Wayne	76,090	75,530	74,970	74,410	73,850	73,290	72,858	72,426	71,994	71,562	71,130	70,862	70,594	70,326	70,058	69,790	69,510	69,230
Wells	25,400	25,180	24,960	24,740	24,520	24,300	24,286	24,272	24,258	24,244	24,230	24,210	24,190	24,170	24,150	24,130	24,164	24,198
White	23,870	23,806	23,742	23,678	23,614	23,550	23,484	23,418	23,352	23,286	23,220	23,152	23,084	23,016	22,948	22,880	22,828	22,776
Whitley	26,210	26,372	26,534	26,696	26,858	27,020	27,134	27,248	27,362	27,476	27,590	27,708	27,826	27,944	28,062	28,180	28,274	28,368

Indiana County Population Projections 1980-2020

Prepared by: Indiana Business Research Center
 School of Business, Indiana University
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	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Adams	32,758	32,954	33,150	33,334	33,518	33,702	33,886	34,070	34,244	34,418	34,592	34,766	34,940	35,084	35,228	35,372	35,516	35,660
Allen	301,852	302,386	302,920	303,306	303,692	304,078	304,464	304,850	305,128	305,406	305,684	305,962	306,240	306,308	306,376	306,444	306,512	306,580
Bartholomew	66,270	66,330	66,390	66,468	66,546	66,624	66,702	66,780	66,804	66,828	66,852	66,876	66,900	66,862	66,824	66,786	66,748	66,710
Benton	10,048	10,024	10,000	9,972	9,944	9,916	9,888	9,860	9,854	9,848	9,842	9,836	9,830	9,860	9,890	9,920	9,950	9,980
Blackford	14,918	14,884	14,850	14,798	14,746	14,694	14,642	14,590	14,534	14,478	14,422	14,366	14,310	14,270	14,230	14,190	14,150	14,110
Boone	42,160	42,430	42,700	42,954	43,208	43,462	43,716	43,970	44,186	44,402	44,618	44,834	45,050	45,230	45,410	45,590	45,770	45,950
Brown	13,244	13,262	13,280	13,280	13,280	13,280	13,280	13,280	13,276	13,272	13,268	13,264	13,260	13,250	13,240	13,230	13,220	13,210
Carroll	18,266	18,188	18,110	18,032	17,954	17,876	17,798	17,720	17,656	17,592	17,528	17,464	17,400	17,318	17,236	17,154	17,072	16,990
Cass	38,320	38,160	38,000	37,888	37,776	37,664	37,552	37,440	37,376	37,312	37,248	37,184	37,120	37,060	37,000	36,940	36,880	36,820
Clark	92,288	92,434	92,580	92,696	92,812	92,928	93,044	93,160	93,218	93,276	93,334	93,392	93,450	93,436	93,422	93,408	93,394	93,380
Clay	23,954	23,882	23,810	23,750	23,690	23,630	23,570	23,510	23,464	23,418	23,372	23,326	23,280	23,244	23,208	23,172	23,136	23,100
Clinton	30,760	30,730	30,700	30,680	30,660	30,640	30,620	30,600	30,570	30,540	30,510	30,480	30,450	30,424	30,398	30,372	30,346	30,320
Crawford	10,308	10,314	10,320	10,322	10,324	10,326	10,328	10,330	10,344	10,358	10,372	10,386	10,400	10,402	10,404	10,406	10,408	10,410
Davless	30,868	30,994	31,120	31,234	31,348	31,462	31,576	31,690	31,824	31,958	32,092	32,226	32,360	32,496	32,632	32,768	32,904	33,040
Dearborn	40,360	40,580	40,800	40,978	41,156	41,334	41,512	41,690	41,816	41,942	42,068	42,194	42,320	42,444	42,568	42,692	42,816	42,940
Decatur	23,358	23,344	23,330	23,318	23,306	23,294	23,282	23,270	23,258	23,246	23,234	23,222	23,210	23,196	23,182	23,168	23,154	23,140
Dekalb	34,620	34,680	34,740	34,804	34,868	34,932	34,996	35,060	35,082	35,104	35,126	35,148	35,170	35,170	35,170	35,170	35,170	35,170
Delaware	120,722	120,756	120,790	121,172	121,554	121,936	122,318	122,700	122,974	123,248	123,522	123,796	124,070	124,304	124,538	124,772	125,006	125,240
Dubois	38,192	38,336	38,480	38,586	38,692	38,798	38,904	39,010	39,110	39,216	39,310	39,410	39,510	39,584	39,658	39,732	39,806	39,880
Elkhart	156,592	157,306	158,020	158,508	158,996	159,484	159,972	160,460	160,778	161,096	161,414	161,732	162,050	162,202	162,354	162,506	162,658	162,810
Fayette	27,612	27,596	27,580	27,558	27,536	27,514	27,492	27,470	27,444	27,418	27,392	27,366	27,340	27,302	27,264	27,226	27,188	27,150
Floyd	65,404	65,522	65,640	65,686	65,732	65,778	65,824	65,870	65,862	65,854	65,846	65,838	65,830	65,810	65,790	65,770	65,750	65,730
Fountain	18,568	18,524	18,480	18,426	18,372	18,318	18,264	18,210	18,154	18,098	18,042	17,986	17,930	17,874	17,818	17,762	17,706	17,650
Franklin	21,808	21,914	22,020	22,108	22,196	22,284	22,372	22,460	22,516	22,572	22,628	22,684	22,740	22,770	22,800	22,830	22,860	22,890
Fulton	18,084	18,022	17,960	17,916	17,872	17,828	17,784	17,740	17,708	17,676	17,644	17,612	17,580	17,548	17,516	17,484	17,452	17,420
Gibson	32,946	32,898	32,850	32,796	32,742	32,688	32,634	32,580	32,534	32,488	32,442	32,396	32,350	32,310	32,270	32,230	32,190	32,150
Grant	75,102	75,126	75,150	75,166	75,182	75,198	75,214	75,230	75,216	75,202	75,188	75,174	75,160	75,126	75,092	75,058	75,024	74,990
Greene	29,818	29,764	29,710	29,648	29,586	29,524	29,462	29,400	29,328	29,256	29,184	29,112	29,040	28,970	28,900	28,830	28,760	28,690
Hamilton	112,472	113,806	115,140	116,346	117,552	118,758	119,964	121,170	122,036	122,902	123,768	124,634	125,500	126,028	126,556	127,084	127,612	128,140
Hancock	47,102	47,266	47,430	47,554	47,678	47,802	47,926	48,050	48,096	48,142	48,188	48,234	48,280	48,292	48,304	48,316	48,328	48,340
Harrison	31,272	31,426	31,580	31,696	31,812	31,928	32,044	32,160	32,218	32,276	32,334	32,392	32,450	32,482	32,514	32,546	32,578	32,610
Hendricks	82,122	82,666	83,210	83,636	84,062	84,488	84,914	85,340	85,644	85,948	86,252	86,556	86,860	87,040	87,220	87,400	87,580	87,760
Henry	44,894	44,532	44,170	43,962	43,754	43,546	43,338	43,130	42,940	42,750	42,560	42,370	42,180	41,990	41,800	41,610	41,420	41,230
Howard	85,568	85,584	85,600	85,614	85,628	85,642	85,656	85,670	85,602	85,534	85,466	85,398	85,330	85,210	85,090	84,970	84,850	84,730
Huntington	36,324	36,352	36,380	36,416	36,452	36,488	36,524	36,560	36,578	36,596	36,614	36,632	36,650	36,664	36,678	36,692	36,706	36,720
Jackson	39,130	39,260	39,350	39,428	39,506	39,584	39,662	39,740	39,780	39,820	39,860	39,900	39,940	39,942	39,944	39,946	39,948	39,950
Jasper	27,564	27,612	27,660	27,688	27,716	27,744	27,772	27,800	27,834	27,868	27,902	27,936	27,970	27,992	28,014	28,036	28,058	28,080
Jay	20,266	20,168	20,070	19,960	19,850	19,740	19,630	19,520	19,452	19,384	19,316	19,248	19,180	19,106	19,032	18,958	18,884	18,810
Jefferson	29,524	29,552	29,580	29,616	29,652	29,688	29,724	29,760	29,792	29,824	29,856	29,888	29,920	29,936	29,952	29,968	29,984	30,000
Jennings	23,498	23,534	23,570	23,580	23,590	23,600	23,610	23,620	23,630	23,640	23,650	23,660	23,670	23,668	23,666	23,664	23,662	23,660
Johnson	95,682	96,526	97,370	98,112	98,854	99,596	100,338	101,080	101,712	102,344	102,976	103,608	104,240	104,658	105,076	105,494	105,912	106,330
Knox	42,132	42,176	42,220	42,278	42,336	42,394	42,452	42,510	42,574	42,638	42,702	42,766	42,830	42,916	43,002	43,088	43,174	43,260
Kosciusko	66,316	66,558	66,800	66,996	67,192	67,388	67,584	67,780	67,932	68,084	68,236	68,388	68,540	68,614	68,688	68,762	68,836	68,910
Lagrange	32,324	32,662	33,000	33,292	33,584	33,876	34,168	34,460	34,726	34,992	35,258	35,524	35,790	36,038	36,286	36,534	36,782	37,030
Lake	477,084	475,472	473,860	472,432	471,004	469,576	468,148	466,720	465,608	464,496	463,384	462,272	461,160	460,424	459,688	458,952	458,216	457,480
LaPorte	100,422	99,906	99,390	99,034	98,678	98,322	97,966	97,610	97,484	97,358	97,232	97,106	96,980	96,874	96,768	96,662	96,556	96,450
Lawrence	42,428	42,404	42,380	42,348	42,316	42,284	42,252	42,220	42,168	42,116	42,064	42,012	41,960	41,890	41,820	41,750	41,680	41,610
Madison	129,828	129,544	129,260	129,044	128,828	128,612	128,396	128,180	127,938	127,696	127,454	127,212	126,970	126,686	126,402	126,118	125,834	125,550
Marion	813,748	815,164	816,580	817,472	818,364	819,256	820,148	821,040	821,724	822,408	823,092	823,776	824,460	824,902	825,344	825,786	826,228	826,670
Marshall	43,572	43,726	43,880	44,010	44,140	44,270	44,400	44,530	44,636	44,742	44,848	44,954	45,060	45,122	45,184	45,246	45,308	45,370

Indiana County Population Projections 1980-2020

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	1988	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Martin	10,954	10,942	10,930	10,920	10,910	10,900	10,890	10,880	10,842	10,804	10,766	10,728	10,690	10,650	10,610	10,570	10,530	10,490
Miami	38,538	38,644	38,750	38,818	38,886	38,954	39,022	39,090	39,136	39,182	39,228	39,274	39,320	39,340	39,360	39,380	39,400	39,420
Monroe	106,826	107,228	107,630	107,882	108,134	108,386	108,638	108,890	109,012	109,134	109,256	109,378	109,500	109,530	109,560	109,590	109,620	109,650
Montgomery	36,906	36,978	37,050	37,130	37,210	37,290	37,370	37,450	37,488	37,526	37,564	37,602	37,640	37,666	37,692	37,718	37,744	37,770
Morgan	63,240	63,600	63,960	64,228	64,496	64,764	65,032	65,300	65,480	65,660	65,840	66,020	66,200	66,314	66,428	66,542	66,656	66,770
Newton	13,742	13,696	13,650	13,608	13,566	13,524	13,482	13,440	13,376	13,312	13,248	13,184	13,120	13,058	12,996	12,934	12,872	12,810
Noble	40,100	40,310	40,520	40,672	40,824	40,976	41,128	41,280	41,382	41,484	41,586	41,688	41,790	41,858	41,926	41,994	42,062	42,130
Ohio	6,218	6,264	6,310	6,316	6,322	6,328	6,334	6,340	6,342	6,344	6,346	6,348	6,350	6,358	6,366	6,374	6,382	6,390
Orange	19,240	19,250	19,260	19,262	19,264	19,266	19,268	19,270	19,254	19,238	19,222	19,206	19,190	19,170	19,150	19,130	19,110	19,090
Owen	18,068	18,134	18,200	18,224	18,248	18,272	18,296	18,320	18,322	18,324	18,326	18,328	18,330	18,336	18,342	18,348	18,354	18,360
Parke	15,740	15,700	15,660	15,634	15,608	15,582	15,556	15,530	15,492	15,454	15,416	15,378	15,340	15,320	15,300	15,280	15,260	15,240
Perry	18,472	18,426	18,380	18,336	18,292	18,248	18,204	18,160	18,140	18,120	18,100	18,080	18,060	18,036	18,012	17,988	17,964	17,940
Pike	12,782	12,726	12,670	12,596	12,522	12,448	12,374	12,300	12,254	12,208	12,162	12,116	12,070	12,032	11,994	11,956	11,918	11,880
Porter	132,710	133,210	133,710	134,136	134,562	134,988	135,414	135,840	136,168	136,496	136,824	137,152	137,480	137,668	137,856	138,044	138,232	138,420
Posey	27,442	27,486	27,530	27,572	27,614	27,656	27,698	27,740	27,784	27,828	27,872	27,916	27,960	27,974	27,988	28,002	28,016	28,030
Pulaski	14,596	14,658	14,720	14,772	14,824	14,876	14,928	14,980	15,028	15,076	15,124	15,172	15,220	15,264	15,308	15,352	15,396	15,440
Putnam	31,038	31,094	31,150	31,184	31,218	31,252	31,286	31,320	31,342	31,364	31,386	31,408	31,430	31,420	31,410	31,400	31,390	31,380
Randolph	27,604	27,532	27,460	27,376	27,292	27,208	27,124	27,040	26,950	26,860	26,770	26,680	26,590	26,488	26,386	26,284	26,182	26,080
Ripley	26,510	26,620	26,730	26,806	26,882	26,958	27,034	27,110	27,158	27,206	27,254	27,302	27,350	27,386	27,422	27,458	27,494	27,530
Rush	18,606	18,568	18,530	18,494	18,458	18,422	18,386	18,350	18,300	18,250	18,200	18,150	18,100	18,056	18,012	17,968	17,924	17,880
St. Joseph	241,890	242,210	242,530	242,776	243,022	243,268	243,514	243,760	244,298	244,836	245,374	245,912	246,450	246,956	247,462	247,968	248,474	248,980
Scott	21,570	21,630	21,690	21,720	21,750	21,780	21,810	21,840	21,858	21,876	21,894	21,912	21,930	21,948	21,966	21,984	22,002	22,020
Shelby	41,704	41,852	42,000	42,094	42,188	42,282	42,376	42,470	42,524	42,578	42,632	42,686	42,740	42,772	42,804	42,836	42,868	42,900
Spencer	21,504	21,572	21,640	21,680	21,720	21,760	21,800	21,840	21,862	21,884	21,906	21,928	21,950	21,970	21,990	22,010	22,030	22,050
Starke	21,272	21,256	21,240	21,230	21,220	21,210	21,200	21,190	21,192	21,194	21,196	21,198	21,200	21,198	21,196	21,194	21,192	21,190
Steuben	27,322	27,386	27,450	27,490	27,530	27,570	27,610	27,650	27,680	27,710	27,740	27,770	27,800	27,806	27,812	27,818	27,824	27,830
Sullivan	19,584	19,522	19,460	19,384	19,308	19,232	19,156	19,080	19,012	18,944	18,876	18,808	18,740	18,694	18,648	18,602	18,556	18,510
Switzerland	7,476	7,488	7,500	7,508	7,516	7,524	7,532	7,540	7,542	7,544	7,546	7,548	7,550	7,546	7,542	7,538	7,534	7,530
Tippecanoe	132,636	133,088	133,540	133,922	134,304	134,686	135,068	135,450	135,708	135,966	136,224	136,482	136,740	136,868	136,996	137,124	137,252	137,380
Tipton	15,568	15,514	15,460	15,394	15,328	15,262	15,196	15,130	15,074	15,018	14,962	14,906	14,850	14,802	14,754	14,706	14,658	14,610
Union	7,050	7,050	7,050	7,046	7,042	7,038	7,034	7,030	7,014	6,998	6,982	6,966	6,950	6,936	6,922	6,908	6,894	6,880
Vanderburgh	168,960	168,890	168,820	168,746	168,672	168,598	168,524	168,450	168,448	168,446	168,444	168,442	168,440	168,436	168,432	168,428	168,424	168,420
Vermillion	17,388	17,354	17,320	17,296	17,272	17,248	17,224	17,200	17,196	17,192	17,188	17,184	17,180	17,168	17,156	17,144	17,132	17,120
Vigo	106,790	106,760	106,730	106,692	106,654	106,616	106,578	106,540	106,576	106,612	106,648	106,684	106,720	106,852	106,984	107,116	107,248	107,380
Wabash	36,770	36,890	37,010	37,134	37,258	37,382	37,506	37,630	37,748	37,866	37,984	38,102	38,220	38,320	38,420	38,520	38,620	38,720
Warren	7,702	7,646	7,590	7,532	7,474	7,416	7,358	7,300	7,258	7,216	7,174	7,132	7,090	7,062	7,034	7,006	6,978	6,950
Warrick	54,666	55,248	55,830	56,294	56,758	57,222	57,686	58,150	58,454	58,758	59,062	59,366	59,670	59,834	59,998	60,162	60,326	60,490
Washington	24,020	24,110	24,200	24,264	24,328	24,392	24,456	24,520	24,556	24,592	24,628	24,664	24,700	24,720	24,740	24,760	24,780	24,800
Wayne	68,950	68,670	68,390	68,192	67,994	67,796	67,598	67,400	67,204	67,008	66,812	66,616	66,420	66,220	66,020	65,820	65,620	65,420
Wells	24,232	24,266	24,300	24,336	24,372	24,408	24,444	24,480	24,510	24,540	24,570	24,600	24,630	24,634	24,638	24,642	24,646	24,650
White	22,724	22,672	22,620	22,578	22,536	22,494	22,452	22,410	22,372	22,334	22,296	22,258	22,220	22,198	22,176	22,154	22,132	22,110
Whitley	28,462	28,556	28,650	28,718	28,786	28,854	28,922	28,990	29,034	29,078	29,122	29,166	29,210	29,224	29,238	29,252	29,266	29,280

Indiana County Population Projections 1980-2020

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	2016	2017	2018	2019	2020
Adams	35,830	36,000	36,170	36,340	36,510
Allen	306,416	306,252	306,088	305,924	305,760
Bartholomew	66,640	66,570	66,500	66,430	66,360
Benton	9,998	10,016	10,034	10,052	10,070
Blackford	14,100	14,090	14,080	14,070	14,060
Boone	45,930	45,910	45,890	45,870	45,850
Brown	13,196	13,182	13,168	13,154	13,140
Carroll	16,948	16,906	16,864	16,822	16,780
Cass	36,764	36,708	36,652	36,596	36,540
Clark	93,338	93,296	93,254	93,212	93,170
Clay	23,066	23,032	22,998	22,964	22,930
Clinton	30,286	30,252	30,218	30,184	30,150
Crawford	10,412	10,414	10,416	10,418	10,420
Davless	33,178	33,316	33,454	33,592	33,730
Dearborn	42,932	42,924	42,916	42,908	42,900
Decatur	23,134	23,128	23,122	23,116	23,110
Dekalb	35,156	35,142	35,128	35,114	35,100
Delaware	125,492	125,744	125,996	126,248	126,500
Dubois	39,912	39,944	39,976	40,008	40,040
Elkhart	162,790	162,770	162,750	162,730	162,710
Fayette	27,114	27,078	27,042	27,006	26,970
Floyd	65,700	65,670	65,640	65,610	65,580
Fountain	17,616	17,582	17,548	17,514	17,480
Franklin	22,910	22,930	22,950	22,970	22,990
Fulton	17,400	17,380	17,360	17,340	17,320
Gibson	32,116	32,082	32,048	32,014	31,980
Grant	74,902	74,814	74,726	74,638	74,550
Greene	28,646	28,602	28,558	28,514	28,470
Hamilton	128,132	128,124	128,116	128,108	128,100
Hancock	48,318	48,296	48,274	48,252	48,230
Harrison	32,610	32,610	32,610	32,610	32,610
Hendricks	87,694	87,628	87,562	87,496	87,430
Henry	41,118	41,006	40,894	40,782	40,670
Howard	84,616	84,502	84,388	84,274	84,160
Huntington	36,722	36,724	36,726	36,728	36,730
Jackson	39,958	39,966	39,974	39,982	39,990
Jasper	28,098	28,116	28,134	28,152	28,170
Jay	18,774	18,738	18,702	18,666	18,630
Jefferson	30,006	30,012	30,018	30,024	30,030
Jennings	23,652	23,644	23,636	23,628	23,620
Johnson	106,350	106,370	106,390	106,410	106,430
Knox	43,336	43,412	43,488	43,564	43,640
Kosciusko	68,934	68,958	68,982	69,006	69,030
Lagrange	37,272	37,514	37,756	37,998	38,240
Lake	456,760	456,040	455,320	454,600	453,880
LaPorte	96,422	96,394	96,366	96,338	96,310
Lawrence	41,566	41,522	41,478	41,434	41,390
Madison	125,328	125,106	124,884	124,662	124,440
Marion	826,834	826,998	827,162	827,326	827,490
Marshall	45,384	45,398	45,412	45,426	45,440

Indiana County Population Projections 1980-2020

Prepared by: Indiana Business Research Center
 School of Business, Indiana University
 1988

	2016	2017	2018	2019	2020
Martin	10,474	10,458	10,442	10,426	10,410
Miami	39,388	39,356	39,324	39,292	39,260
Monroe	109,620	109,590	109,560	109,530	109,500
Montgomery	37,784	37,798	37,812	37,826	37,840
Morgan	66,762	66,754	66,746	66,738	66,730
Newton	12,792	12,774	12,756	12,738	12,720
Noble	42,154	42,178	42,202	42,226	42,250
Ohio	6,388	6,386	6,384	6,382	6,380
Orange	19,064	19,038	19,012	18,986	18,960
Owen	18,362	18,364	18,366	18,368	18,370
Parke	15,216	15,192	15,168	15,144	15,120
Perry	17,928	17,916	17,904	17,892	17,880
Pike	11,858	11,836	11,814	11,792	11,770
Porter	138,484	138,548	138,612	138,676	138,740
Posey	28,022	28,014	28,006	27,998	27,990
Pulaski	15,490	15,540	15,590	15,640	15,690
Putnam	31,350	31,320	31,290	31,260	31,230
Randolph	26,032	25,984	25,936	25,888	25,840
Ripley	27,558	27,586	27,614	27,642	27,670
Rush	17,866	17,852	17,838	17,824	17,810
St. Joseph	249,360	249,740	250,120	250,500	250,880
Scott	22,012	22,004	21,996	21,988	21,980
Shelby	42,888	42,876	42,864	42,852	42,840
Spencer	22,044	22,038	22,032	22,026	22,020
Starke	21,184	21,178	21,172	21,166	21,160
Steuben	27,822	27,814	27,806	27,798	27,790
Sullivan	18,468	18,426	18,384	18,342	18,300
Switzerland	7,524	7,518	7,512	7,506	7,500
Tippicanoe	137,388	137,396	137,404	137,412	137,420
Tipton	14,574	14,538	14,502	14,466	14,430
Union	6,874	6,868	6,862	6,856	6,850
Vanderburgh	168,448	168,476	168,504	168,532	168,560
Vermillion	17,100	17,080	17,060	17,040	17,020
Vigo	107,534	107,688	107,842	107,996	108,150
Wabash	38,812	38,904	38,996	39,088	39,180
Warren	6,922	6,894	6,866	6,838	6,810
Warrick	60,492	60,494	60,496	60,498	60,500
Washington	24,806	24,812	24,818	24,824	24,830
Wayne	65,288	65,156	65,024	64,892	64,760
Wells	24,634	24,618	24,602	24,586	24,570
White	22,074	22,038	22,002	21,966	21,930
Whitley	29,274	29,268	29,262	29,256	29,250

**APPENDIX C
COST FACTORS**

APPENDIX C

SANITARY LANDFILLS, RESOURCE RECOVERY FACILITIES, INCINERATORS, AND ASH MONOFILLS

Site Selection Costs

Feasibility study including preliminary engineering, public affairs, hydrogeological study, and testing

Total Site Selection Costs

Planning Costs

Legal and accounting costs
Detailed hydrogeologic site study
Detailed engineering design plan
Extensive review of past usage and potential liability of site
Engineering fees
Permit application fee

Total Planning Costs

Capital Costs

Land (acres)
Building(s)
Construction labor costs
Site improvements
Including roads, drainage, landscaping, fencing, gate, and sign(s)
Incinerator and related equipment
Instrument and controls
Permit fees
For solid waste, water and air
Stationary equipment
Including pumps and scale
Vehicles
Compactor, scraper, loader and bulldozer
Leachate collection systems and provisions for treatment
Synthetic liner
Explosive gas control system
Ground water monitoring wells
Clay liner
Topsoil excavation
Surface water diversion structures and sedimentation basins

Initial excavation

Contingencies

Other costs

Including air pollution equipment, resource recovery system, etc.

Total Capital Costs

Annual Operating Costs

Operational and management

Labor costs

Including manager, operator laborer, bookkeeper

Vehicle and stationary operation and maintenance (O&M)

Includes maintenance, fuel, oil, repair parts, consumables, replacement costs

Leachate control and treatment O&M

Ground water system monitoring O&M

Explosive gas control

System monitoring O&M

Surface water diversion structures and sedimentation basins O&M

Annual license fee

State and local disposal fees

Utilities

Electricity, natural gas, water, wastewater, residue disposal, non-processable disposal

Other costs

Including administration, taxes, telephone, insurance, etc.

Quality control/quality assurance

Program costs

Closure Costs

Closure construction labor costs

Cover material

Clay cover

Vegetative solid cover

Seed, fertilizer, mulch or straw

Drainage material

Drainage layer material

Drainage letdowns

Drainage pipe

Explosive gas control

Vents (passive)

Blower system (active)

Monitoring probes

Flares

Administrative

Engineering

Closure certification (ensuring compliance)

Quality control/quality assurance
Program costs

Total Closure Costs

Post-Closure Costs**

Monitoring and system O&M
Explosive gas monitoring wells
Groundwater monitoring wells
Leachate collection and storage system
Surface water management system
Vegetative cover
Soil cover
Leachate treatment
On-site plant operation
On-site transport/treatment/disposal
Contingencies
Unexpected costs (as a percentage of total cost estimate)
Administrative
Inspections
Reports

Financial Assurance for Closure and Post-Closures

Final closure trust fund
Surety bond guaranteeing payment into a final closure trust fund
Surety bond guaranteeing performance of final closure
Final closure letter of credit
Final closure insurance
Financial test and corporate guarantee

Revenues

Tipping fees
Sale of compost

RECYCLING, REUSE AND REDUCTION ACTIVITIES

Site Selection Costs

Feasibility study
Including analysis of recyclable materials in the waste stream

Total Site Selection Costs

** Closure and post-closure costs for ash monofills and waste tire monofills will be affected by rules drafted by June 1990.

Planning Costs

Legal and accounting
Site planning

Capital Costs

Land
Site improvement
Collection equipment
Including trucks, drop-off containers
Processing equipment
Including sorters, balers, crushers
Pollution prevention equipment

Total Capital Costs

Interest Rates

Interest on loans
Annual amortized cost for capital, planning, and site selection

Annual Operating Costs

Labor
Including a manager, operator, laborer, bookkeeper
Vehicle and equipment maintenance or replacement
Rent or ownership costs of equipment, facilities and land
Other costs
Including utilities, taxes, insurance, educational materials

Total Annual Operating Costs

Interest Rates

Interest on operating loans

Revenues

Recyclable materials revenue

COMPOSTING FACILITIES

Site Selection Costs

Feasibility study
Including analysis of recyclable materials in the waste stream

Planning Costs

Legal and accounting
Site planning

Capital Costs

Land
Site improvement
Collection equipment
Including trucks, drop-off containers
Leachate collection and treatment system
Processing equipment
Including sorters, balers

Total Capital Costs

Interest Rates

Interest on loans
Annual amortized cost for capital planning and site selection

Annual Operating Costs

Labor
Including a manager, operator, laborer, bookkeeper
Vehicle and equipment O&M
Residual disposal cost (for out of district disposal)
Other costs
Including utilities, taxes, telephone, equipment replacement

Financial Assurance for Closure and Post-Closure

Revenues

Sale of compost

TRANSFER FACILITIES

Site Selection

Feasibility study

Total Site Selection Costs

Planning Costs

Legal and accounting
Site planning
Engineering fees
Permit application fee

Total Planning Costs

Capital Costs

Land
Site improvement
Collection equipment
Including trucks, containers
Other equipment
Including balers, shredders

Total Capital Costs

Interest Rates

Interest on loans
Annual amortized cost for capital, planning and site selection

Annual Operating Costs

Labor
Including a manager, operator, laborer, bookkeeper
Vehicle and equipment O&M or replacement
Rent or ownership costs of equipment, facilities and land
Disposal fees
Other costs
Including utilities, taxes, insurance
Annual license fee

Total Annual Operating Costs

Financial Assurance for Closure and Post-Closure

Revenues

Sale or recyclables
Tipping fees

APPENDIX D
MODEL INDUSTRIAL SURVEY

APPENDIX D

INDUSTRIAL SOLID WASTE INFORMATION

Firm name _____

Facility name _____

Address _____

Mailing address _____

City _____

County _____

Zip _____

Contact person _____

Title _____

Telephone _____

Primary SIC code _____

Secondary SIC code _____

Secondary SIC code _____

Secondary SIC code _____

Number of employees _____

Operating days/yr _____

Operating hrs/wk _____

Should the information you provide for this survey be treated as confidential?

Yes _____ or No _____

How is your solid waste handled?

Baled _____

Compacted _____

Loose in Dumpster _____

Other - please describe _____

Is your waste hauled away by:

Municipal collection service _____

Name? _____

Private Hauler _____

Name? _____

Self hauled by you _____

Where is it taken for disposal? _____

Name of facility? _____

How many tons of solid waste do you dispose of per year? _____

Is any of your solid waste disposed of at your own exclusive on-site disposal facility?

Yes _____ or No _____

If yes, what is the facility? _____

Landfill, incinerator, other

If yes, how many tons per year of waste? _____

How many tons per year of your solid waste is process waste? _____

What is your cost per year for solid waste disposal? _____

How much do you expect the amount of waste you generate to increase or decrease in the next five years? _____

Please indicate (+) or (-) % per year

Please estimate the composition of your waste and the amount you recycle according to the following categories:

Waste Generated
(Tons per Year)

Waste Recycled
(Tons per Year)

1. Metals

- A. Aluminum _____
- B. Ferrous _____
- C. Nickel _____
- D. Copper _____
- E. Oxides _____
- F. Hydroxides _____
- G. Other - please specify _____

2. Fibers

- A. Wood _____
- B. Fabric/Cloth _____
- C. Paper _____
 - 1. Office Grade _____
 - 2. Ledger _____
 - 3. Mixed paper _____
 - 4. Newsprint _____
- D. Cardboard/corrugated _____

3. Glass

4. Polymers/plastic

- A. PVC _____
- B. HDPE _____
- C. PET _____
- D. LDPE _____
- E. Other (please specify) _____

	<u>Waste Generated</u> (Tons per Year)	<u>Waste Recycled</u> (Tons per Year)
5. Oils and coolants		
A. Hydraulic oil	_____	_____
B. Motor oil	_____	_____
C. Emulsified oil	_____	_____
D. Gear oil	_____	_____
E. Other (please specify)	_____	_____
6. Other	_____	_____
A. Rubber	_____	_____
B. Glass	_____	_____
C. Food products	_____	_____
D. Sludge - please specify	_____	_____
E. Concrete	_____	_____
F. Barrels	_____	_____
G. Palettes	_____	_____
H. (Specify)	_____	_____
I. (Specify)	_____	_____
TOTAL WASTE GENERATED AND WASTE RECYCLED	_____	_____

How much money do you recover each year through your recycling program?

\$ _____

Please name any recyclers, buyers, recycling centers, etc., you currently use

Thank you for your cooperation!

Please return this information to:

If you have any questions please call _____