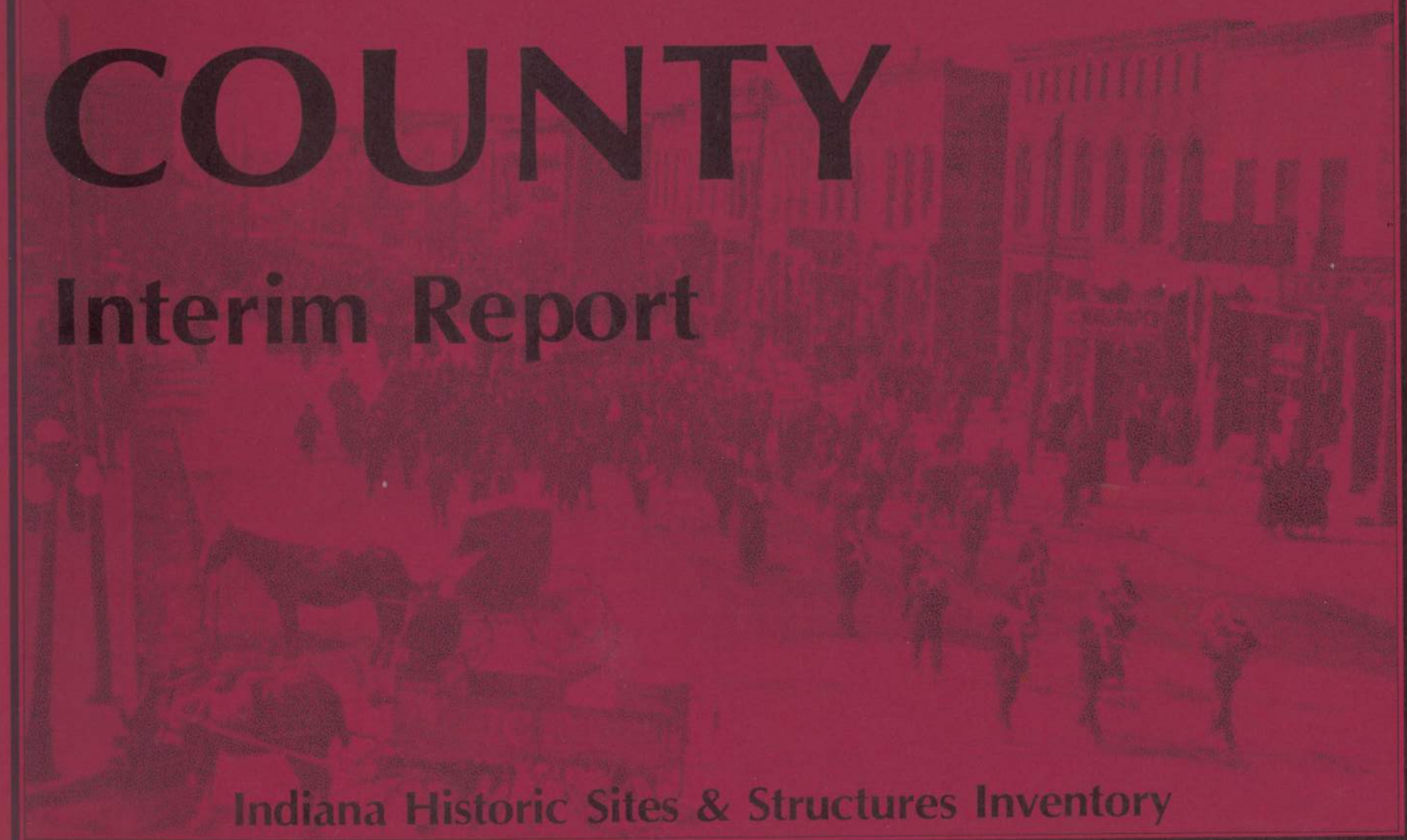
BOONE COUNTY

Interim Report



Indiana Historic Sites & Structures Inventory

BOONE COUNTY

Interim Report

This Interim Report is designed to be utilized as a working document by government agencies, local organizations, and private citizens as the basis for a wide variety of preservation projects.

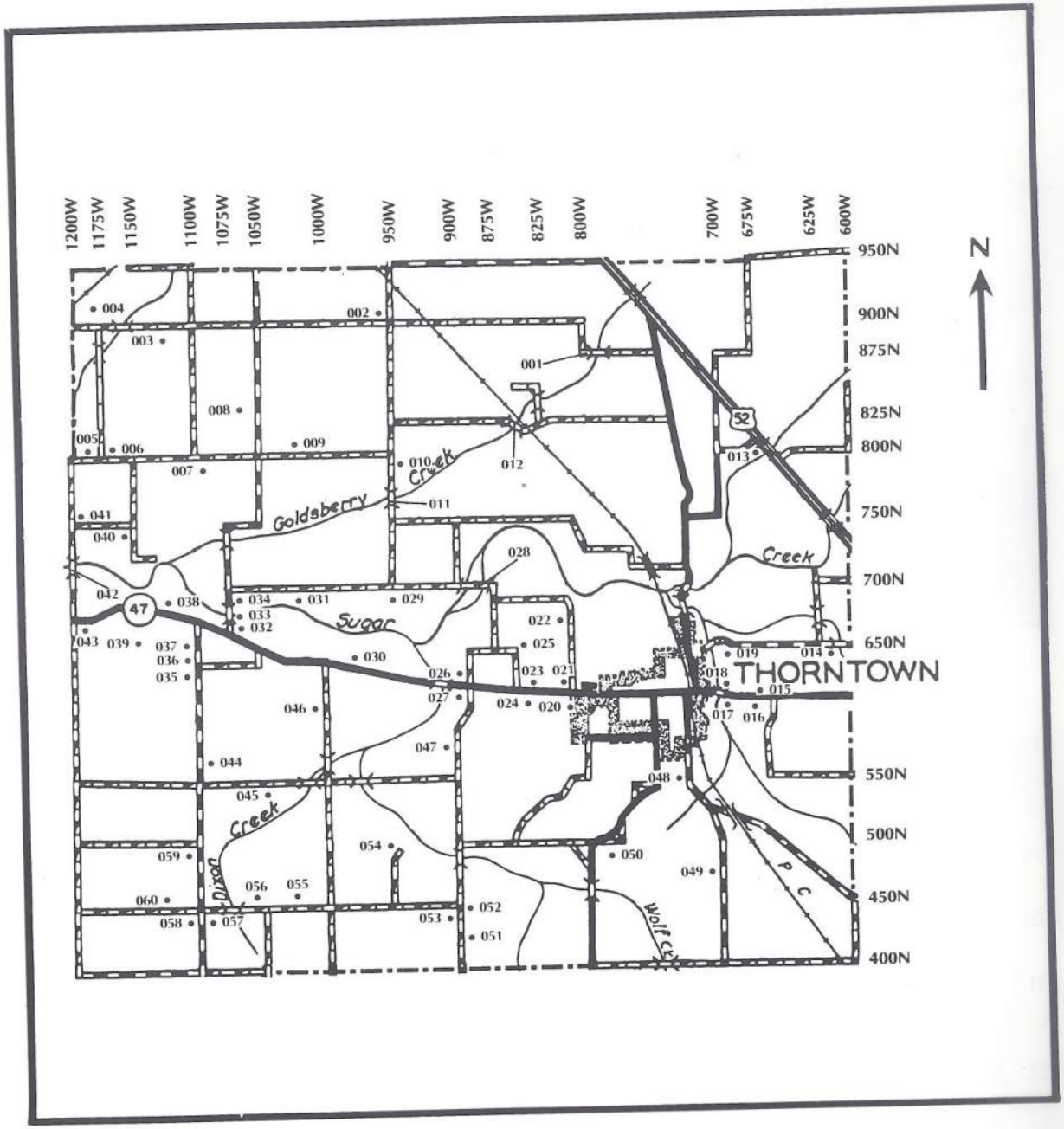
Published December 1982

SUGAR CREEK TOWNSHIP (15001-060)

No.	Rtg.	Description
001	C	**Bridge,** 875 N; Pony Truss, c.1920; Engineering, Transportation (629)
002	C	**House,** 950 W; Carpenter-Builder/Italianate, c.1880; Architecture (127)
003	C	**Farm,** 900 N; Carpenter-Builder, c.1890; Architecture (127)

004

004	O	**Davis Farm,** 900 N; Carpenter-Builder/Eastlake, 1907; Architecture (127)
005	C	**Farm,** 800 N; Bungalow, 1936; Architecture (127)
006	N	**Farm,** 800 N; Bungalow, c.1920; Architecture (127)
007	C	**Farm,** 800 N; Bungalow, c.1915; Architecture (127)
008	C	**Farm,** 1050 W; Carpenter-Builder, c.1890; Architecture (127)
009	C	**Farm,** 800 N; Carpenter-Builder/ Eastlake, c.1870/c.1890; Architecture (127)



014

010 C **House,** 950 W; Vernacular, c.1850; Architecture, Vernacular/ Construction (127)

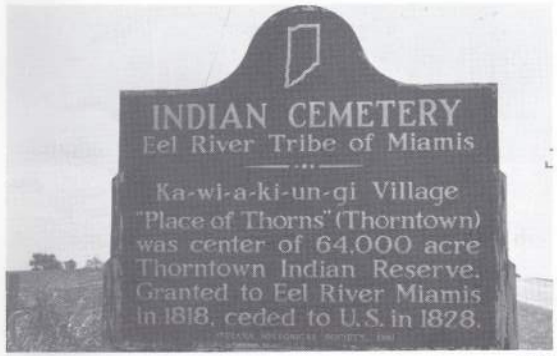
011 C **Bridge,** 950 W; Pratt Pony Truss, c.1910; Engineering, Transportation (127)

012 C **Bridge,** 825 N; Pratt Pony Truss, c.1900; Engineering, Transportation (127)

013 N **Gipson Cemetery,** 800 N; c.1835; Exploration/Settlement (629)

014 O **Farm,** 650 N; Greek Revival, 1865; Architecture (629)

015 O **Historical Marker,** State Road 47; Site of Indian Cemetery, 1818-1828; Indian (629)



015

017

016 C **House,** State Road 47; Carpenter-Builder, c.1870; Architecture (629)

017 O **Barn,** State Road 47; Gothic Revival, 1885; Architecture (629)

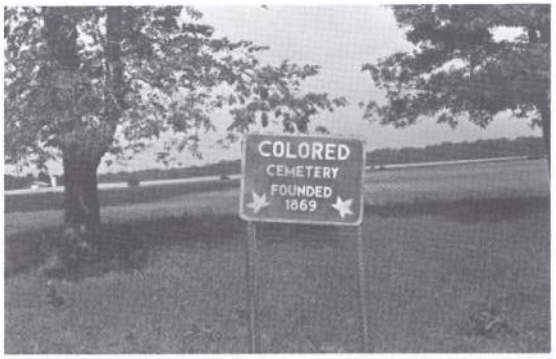
018 N **Farm,** State Road 47; Greek Revival/Italianate, c.1860; Architecture (629)

019 N **Sol Youkey House,** 650 N; Free Classic, c.1910; Architecture (629)

020 C **House,** State Road 47; Greek Revival/Italianate, c.1880; Architecture (629)

021 C **House,** State Road 47; Carpenter-Builder/Italianate, 1876/c.1890; Architecture (629)

022 O **Colored Cemetery,** 875 W; 1869; Social/Ethnicity (629)



022

026

023 N **E.J. Barker Farm,** State Road 47; Free Classic, 1909; Architecture (127)

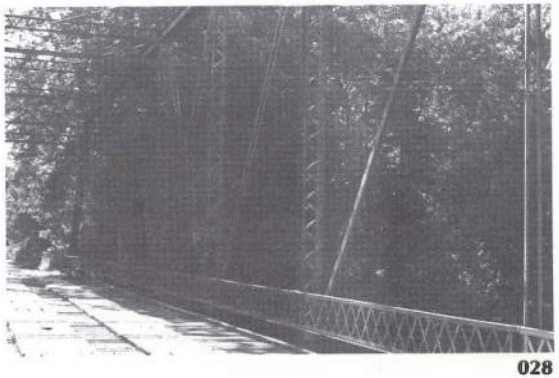
024 N **M.S. Barker Farm,** State Road 47; American Four-Square, c.1915; Architecture (127)

025 C **Farm,** 860 W; Carpenter-Builder/ Eastlake, c.1890; Architecture (127)

026 O **Sugar Plain Friends Church and Cemetery,** State Road 47; Carpenter-Builder, 1893; Architecture, Religion (127)

027 N **School No. 5,** State Road 47; Italianate, 1894; Architecture, Education (127)

028 O **Double-Span Bridge,** 700 N; Pratt Through Truss and Pratt Pony Truss, c.1900; Engineering, Transportation (127)



028

029 C **Farm,** 700 N; Greek Revival, c.1840/c.1900; Architecture (127)

030 N **Farm,** State Road 47; Queen Anne/Eastlake, c.1905; Architecture (127)

031 C **Farm,** 700 N; Carpenter-Builder, c.1920; Architecture (127)

032 N **Paul Hutchens House,** State Road 47; Carpenter-Builder, c.1940; (127)

033 C **Log Cabin,** 1075 W; Neo-Pioneer, c.1920; Environs/Neighborhoods, Vernacular/Construction (127)

034 C **Farm,** 1075 W; Carpenter-Builder, c.1870; Architecture (127)

035 N **Boyer Farm,** 1100 W; Italianate, c.1885; Architecture (127)

036 C **Precinct No. 9 School,** 1100 W; Italianate, c.1870; Architecture, Education (127)

037 N **Boyer House,** 1100 W; Dutch Colonial Revival, 1907; Architecture (127)

038 C **Farm,** State Road 47; Bungalow, c.1930; Architecture (127)

039 C **Farm,** State Road 47; Carpenter-Builder, c.1890; Architecture (127)

040 C **Farm,** 1150 W; Carpenter-Builder, c.1890; Architecture (127)

041 C **Farm,** 750 N; Bungalow, c.1915; Architecture (127)

042 O **Bridge,** 1200 W; Pratt Through Truss, c.1900; Engineering, Transportation (127)

043 C **Farm,** State Road 47; Pioneer/ Carpenter-Builder/Italianate, c.1820/c.1870/c.1880; Architecture (127)

044 C **Farm,** 1100 W; Carpenter-Builder, c.1905; Architecture (582)

042

046

045 N **Farm,** 550 N; Greek Revival/ Italianate, c.1860; Architecture (582)

046 O **Farm** 1000 W; Federal/Italianate, c.1860; Architecture (127)

047 N **Farm,** 900 W; Italianate, c.1870; Architecture (582)

048 O **House,** 725 W; Eastlake, c.1880; Architecture (269)

049 N **Farm,** 700 W; Carpenter-Builder/ Eastlake, c.1890; Architecture (269)

050 C **Farm,** 500 N; Carpenter-Builder, c.1910; Architecture (269)

051 C **Farm,** 900 W; Greek Revival, c.1850; Architecture (582)

048

052 C **Farm,** 900 W; Bungalow, c.1935; Architecture (582)

053 C **Farm,** 900 W; Carpenter-Builder, c.1890; Architecture (582)

054 N **Mills Farm,** 450 N; Federal/ Italianate, c.1860; Architecture (582)

055 N **Woody Farm,** 450 N; Federal, 1846; Architecture (582)

056

056 O **Beesley Farm,** 450 N; Italianate, 1880; J.W. Hammond, Architect; Architecture (582)

057 C **Kendall Farm,** 450 N; Carpenter-Builder, c.1900; Architecture (582)

058 N **Walnut Grove Church and Cemetery,** 450 N; Carpenter-Builder, 1872; Architecture, Religion (582)

059 C **Fitzpatrick House,** 1100 W; Free Classic/American Four-Square, 1906; Architecture (582)

060 N **Farm,** 450 N; Carpenter-Builder/ Eastlake, c.1890; Architecture (582)

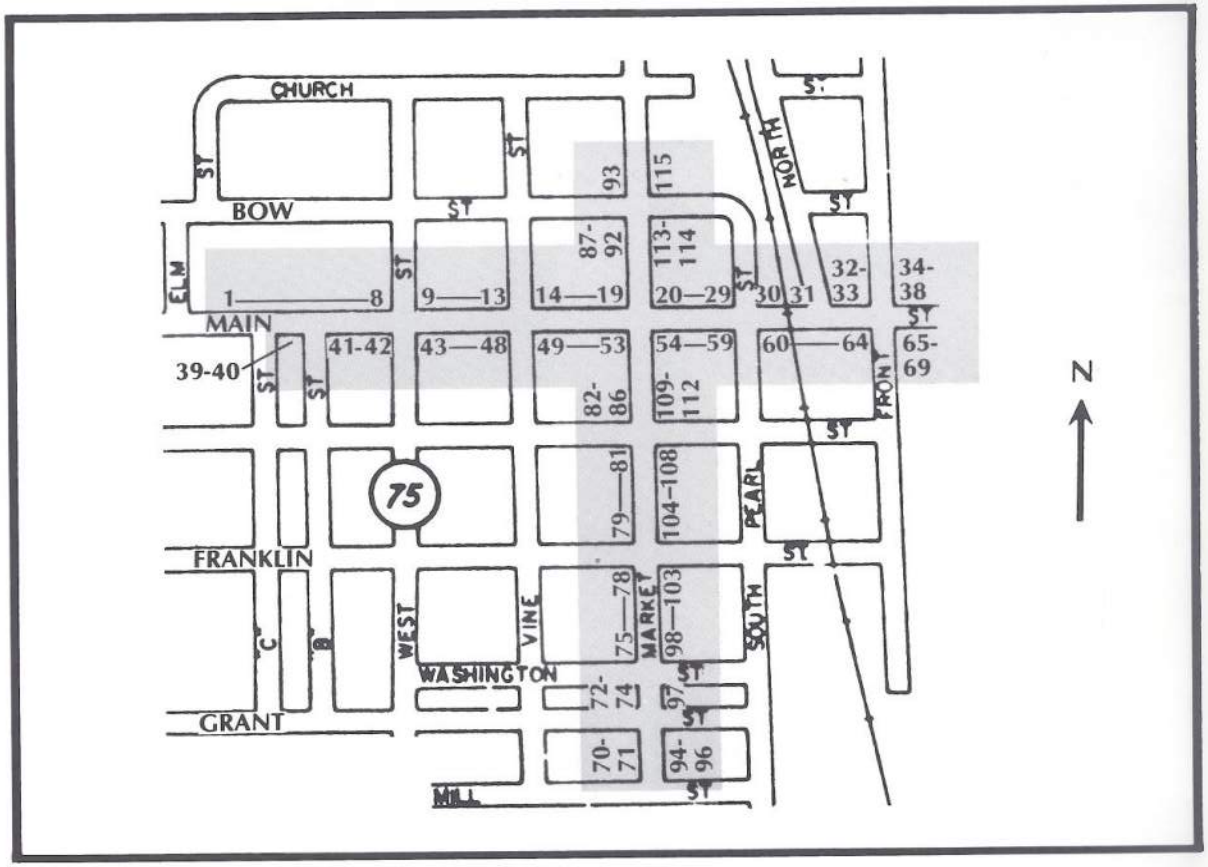
House, 419 W. North Street, Lebanon. Built by Joseph Preston Cloverdale, 1893. Razed. Source: Ralph W. Stark Heritage Collection, Lebanon Public Library.

THORNTOWN HISTORIC DISTRICT (16001-115)

The area around Thorntown was populated by the Eel River Indian Tribe of the Miami Nation. Until 1828 it was known as 'Thorntown Indian Reservation' and was an important trading post for the French and Indians. The principal commodities were furs, tobacco, powder and whiskey. It is reported that French explorers visited the vicinity of Thorntown and helped establish the French and Indian trade long before the territory of Indiana was established. After Thorntown was established as a town, many Indians of the Eel River Tribe remained in the area until approximately 1835, dealing with the new settlers and living in the territory which had, for generations, been their home.

In 1830, Cornelius Westfall platted Thorntown acreage into 94 lots. Hoping that Thorntown would become the county seat, Westfall instructed that two lots in the center of the plat be designated a public square. In addition, two lots were donated for places of worship and one lot was donated for a school. The first residence was constructed by Westfall in 1830 on a lot in the original plat.

The Thorntown post office is the oldest in Boone County and dates from May 17, 1830. The first permanent church organization was the Methodist Church in 1832, followed by the Presbyterian Church, the Quakers, the Christian Church, and the Baptist Church. The First National Bank of Thorntown was organized in February, 1856 by Samuel Cason. The first license issued to a Thorntown business was dated November 4, 1833, to McConnell, Hamill & Company to sell foreign and domestic goods and groceries.



No. Add. Description

MAIN STREET (North Side)

001 410 W **House;** Bungalow, c.1925 (N)

002 406 W **House;** Bungalow, c.1925 (C)

003 402 W **House;** Carpenter-Builder, c.1900 (NC)

004 400 W **House;** Carpenter-Builder/ Gothic Revival, c.1890 (N)

005 316 W **House;** Greek Revival/ Italianate, c.1860 (C)

006 310 W **House;** Carpenter-Builder, c.1900 (NC)

007 304 W **House;** Italianate, c.1880 (N)

008 300 W **House;** Greek Revival/Gothic Revival, c.1860 (C)

009 NA **Apartment Building;** Modern, c.1960 (NC)

010 216 W **House;** Bungalow, c.1920 (N)

011 214 W **House;** Italianate, c.1880 (N)

012

012 NA **House;** Greek Revival, c.1860 (O)

013 200 W **House;** Bungalow, c.1920 (C)

014 124 W **House;** Federal/Gothic Revival, c.1860 (C)

015 118 W **House;** Queen Anne, c.1900 (NC)

016 114 W **House;** Bungalow, c.1925 (C)

017 NA **Commercial Building;** Italianate, c.1880 (N)

018

018 104 W **I.O.O.F. Lodge;** Italianate, 1874 (O)

019 NA **Commercial Building;** Nineteenth Century Functional, c.1880 (C)

020 NA **Commercial Building;** Nineteenth Century Functional, c.1880 (N)

021 109 E **Commercial Building;** Nineteenth Century Functional, c.1890 (C)

022 NA **Commercial Building;** Nineteenth Century Functional, c.1890 (C)

023 NA **Commercial Building;** Nineteenth Century Functional, c.1900 (C)

024

024 115 E **Bank;** Beaux Arts, c.1900 (O)

025 NA **Bank;** Modern, c.1970 (NC)

026 NA **Commercial Building;** Modern, c.1960 (NC)

027 NA **Commercial Building;** Modern, c.1960 (NC)

028 NA **Commercial Building;** Nineteenth Century Functional, c.1880 (C)

029 NA **Knights of Pythias Building;** Nineteenth Century Functional, 1898 (N)

030 NA **Service Station;** (NC)

031 NA **Vacant Lot;** (NC)

032 217 E **House;** Bungalow, c.1920 (C)

033 225 E **House;** Gothic Revival, c.1870 (N)

034 310 E **House;** Bungalow, c.1910 (NC)

035 311 E **House;** Carpenter-Builder, c.1890 (C)

036 315 E **House;** Carpenter-Builder, c.1890 (C)

037 317 E **House;** Carpenter-Builder, c.1900 (NC)

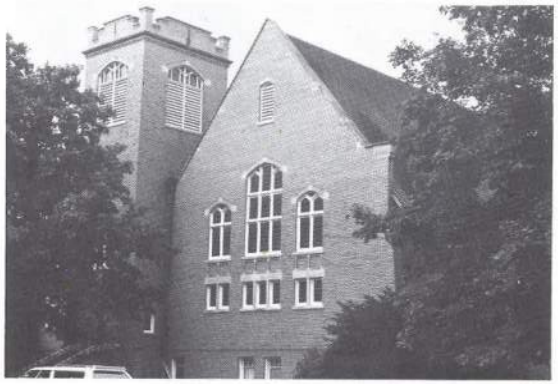
038 329 E **House;** Bungalow, c.1920 (C)

MAIN STREET (South Side)

039 411 W **House;** Carpenter-Builder, c.1915 (NC)

040 401 W **House;** Carpenter-Builder, c.1910 (NC)

041 317 W **House;** Italianate, c.1870 (NC)



042

042 NA **Thorntown Presbyterian Church;** Gothic Revival, 1924 (O)

043 NA **House;** Carpenter-Builder/ Eastlake, c.1890 (C)

044 223 W **House;** Carpenter-Builder/ Eastlake, c.1890 (C)

045 217 W **House;** Cape Cod, c.1945 (C)

046 211 W **House;** Bungalow, c.1920 (C)

047 205 W **House;** Indeterminate, c.1900 (C)

048 201 W **House;** Indeterminate, c.1910 (C)

049 125 W **Thorntown Christian Church;** Classical Revival, 1915 (N)

050 119 W **House;** Bungalow, c.1920 (N)

051 117 W **House;** Queen Anne, c.1910 (NC)

052 107-109 **Commercial Building;** Nineteenth Century Functional, c.1900 (C)

053

053 101 W **Grand Lodge;** Georgian Revival, c.1935 (O)

054 NA **Commercial Building;** Nineteenth Century Functional, c.1910 (C)

055 NA **Commercial Block;** Victorian Gothic, 1876 (O)

055

056 NA **Commercial Building;** Modern, c.1945 (NC)

057 NA **Commercial Building;** Modern, c.1950 (NC)

058 NA **Commercial Block;** Modern, c.1940/c.1960 (NC)

059 NA **Service Station;** (NC)

060 NA **Service Station;** (NC)

061 NA **Vacant Lot;** (NC)

062 NA **Office Building;** Modern, c.1945 (C)

063 220 E **House;** Prairie Style, c.1915 (NC)

064 224 E **House;** Carpenter-Builder/ Eastlake, c.1890 (C)

065

065 300 E **House;** Queen Anne, c.1910 (O)

066 310 E **House;** Queen Anne, c.1910 (NC)

067 318 E **House;** Carpenter-Builder, c.1890 (NC)

068 320 E **House;** Carpenter-Builder, c.1900 (NC)

069 324 E **House;** Carpenter-Builder, c.1890 (C)

MARKET STREET (West Side)

070 510 S **House;** Carpenter-Builder, c.1890 (NC)

071 508 S **House;** Modern, c.1950 (NC)

072 408 S **House;** Carpenter-Builder, c.1900 (NC)

073 404 S **House;** Carpenter-Builder/ Eastlake, c.1890 (C)

074 NA **Apartment Building;** Modern, c.1960 (NC)

075 324 S **House;** American Four-Square, c.1910 (NC)

076 318 S **House;** Carpenter-Builder, c.1890 (N)

077 312 S **House;** Greek Revival/Gothic Revival, c.1860/c.1880 (C)

078

078 300 S **House;** Italianate, c.1880 (O)

079 220 S **House;** Queen Anne, c.1890 (N)

080 210 S **House;** Carpenter-Builder, c.1900 (NC)

081 200 S **House;** Modern, c.1945 (C)

082 124 S **House;** Prairie Style, c.1910 (C)

083 120 S **House;** American Four-Square, c.1915 (C)

084 116 S **House;** Carpenter-Builder, c.1930 (C)

085 NA **House;** Neo-Federal Revival, c.1915 (C)

086 108, 106, 104 S **Apartment Building;** Modern, c.1940 (NC)

087 103 N **Commercial Building;** Twentieth Century Functional, c.1920 (NC)

088 107 N **Office Building;** Modern, c.1940 (NC)

089 NA **Garage;** Greek Revival, c.1860 (C)

090 NA **House;** Carpenter-Builder, c.1900 (NC)

091 121 N **House;** Italianate, c.1880 (C)

092 125 N **House;** American Four-Square, c.1915 (C)

093 NA **Thorntown United Methodist Church;** Gothic Revival, 1870/1913 (N)

MARKET STREET (East Side)

094 511 S **House;** Bungalow, c.1920 (NC)

095 507 S **House;** Modern, c.1940 (NC)

096 NA **Vacant Lot;** (NC)

097 409 S **House;** Carpenter-Builder, c.1900 (C)

098 401 S **House;** Free-Classic, c.1910 (C)

099 NA **House;** Bungalow, c.1920 (NC)

100 319 S **House;** Greek Revival/Eastlake, c.1850/c.1890 (N)

101 315 S **House;** Carpenter-Builder, c.1890 (C)

102 311-313 S **House;** Carpenter-Builder, c.1890 (C)

103 307 S **House;** Stick Style, c.1890 (C)

104 225 S **House;** Gothic Revival, c.1860 (NC)

105 217 S **House;** Modern, c.1950 (NC)

106 211 S **House;** Queen Anne, c.1910 (C)

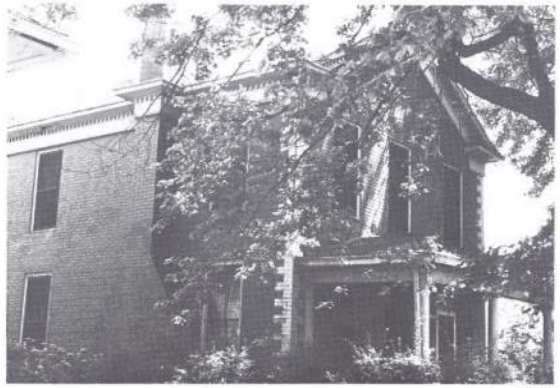
107 205 S **House;** Greek Revival, c.1870 (NC)

108 201 S **House;** Carpenter-Builder, c.1890 (NC)

109 123 S **House;** Carpenter-Builder/Eastlake, c.1880 (NC)

110 117 S **House;** Indeterminate, c.1910 (C)

111 111 S **House;** Carpenter-Builder, c.1890 (NC)



113

112 109 S **House;** Carpenter-Builder, c.1920 (NC)

113 NA **House;** Greek Revival, c.1860 (O)

114 NA **Carnegie Public Library;** Arts and Crafts, 1915 (O)

115 200 N **Post Office;** Modern, c.1960 (NC)

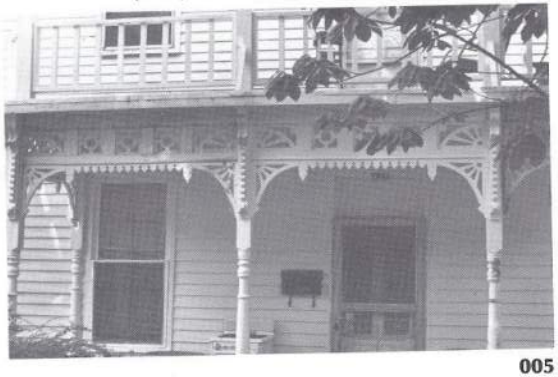
114

THORNTOWN SCATTERED SITES (17001-019)

No.	Rtg.	Description
001	N	**House,** 504 North Pearl Street; Carpenter-Builder/Eastlake, c.1910; Architecture (629)
002	N	**The Old Cemetery,** Bevel Rd.; c.1860; Environs/Neighborhoods (629)
003	C	**House,** 227 North Market Street; Greek Revival, c.1840/c.1910; Architecture (629)

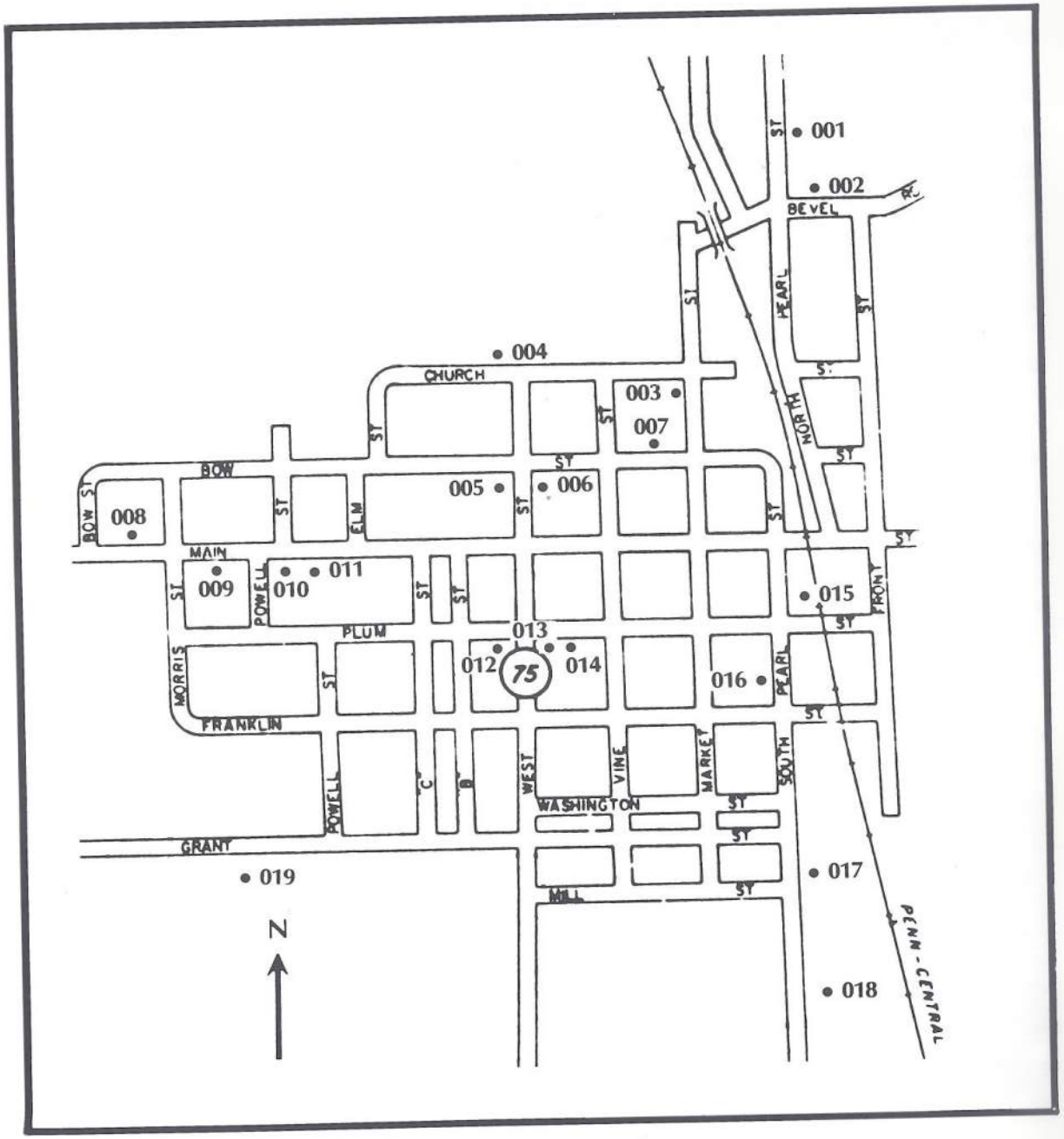
004

004	O	**House,** 304 Church Street; Italianate, c.1870; Architecture (629)



005

005	O	**House,** 125 North West Street; Italianate/Eastlake, c.1880; Architecture (629)



006

006 O **House,** 225 Bow Street; Greek Revival, 1861; Architecture (629)

007 N **House,** 111 Bow Street; Prairie Style, c.1910; Architecture (629)

008 N **House,** 710 Main Street; Gothic Revival/Eastlake, c.1880; Architecture (629)

009 C **House,** 719 Main Street; Italianate, c.1880; Architecture (629)

010 C **House,** Main Street; Italianate, c.1875; Architecture (629)

011 N **House,** Main Street; Greek Revival/Italianate, 1867; Architecture (629)

012 C **Church,** South West Street; Late Gothic Revival, c.1920; Architecture, Religion (629)

013

013 O **House,** 225 Plum Street; Eastern Stick Style, c.1900; Architecture (629)

014 N **House,** 217 Plum Street; Free Classic, c.1890; Architecture (629)

015

015 O **E.R. Jaques Co. Building,** 127 Plum Street; Victorian Functional, c.1885; Architecture, Commerce (629)

016

016 O **House,** 216 South Pearl Street; Colonial Revival, c.1920; Architecture (629)

017 N **Riley House,** 515 South Pearl Street; Free Classic, c.1900; Architecture (269)

018

018 O **Woody House and Barn,** South Pearl Street; Free Classic, 1903; Architecture (269)

019 C **Maple Lawn Cemetery,** Grant Street; 1921; Environs/ Neighborhoods (629/269)

ELECTRIC INTERURBAN MAP - DOWNSTATE INDIANA

Certain lesser or isolated lines are not shown.

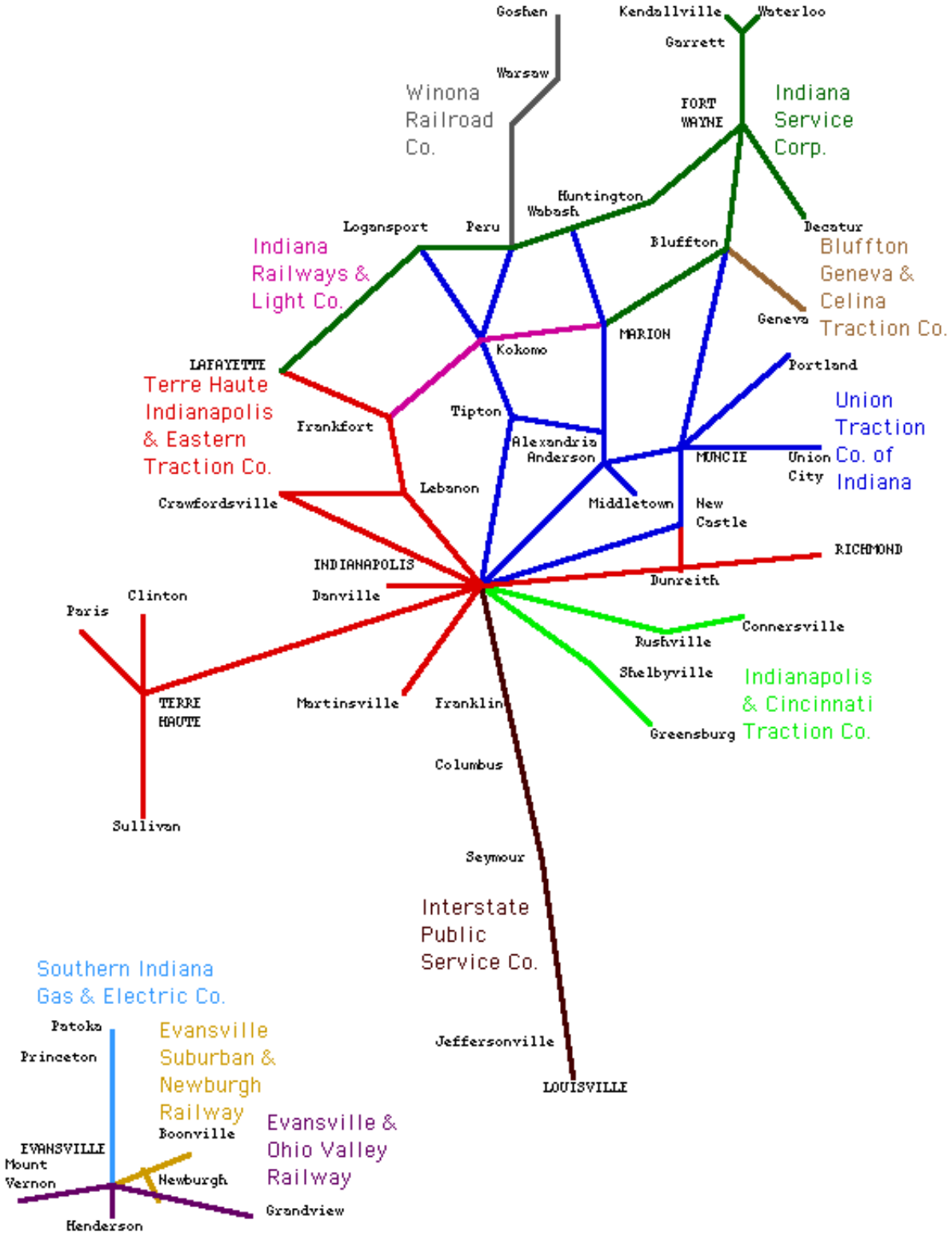


Table DP-1. Profile of General Demographic Characteristics: 2000

Geographic Area: Thorntown town, Indiana

[For information on confidentiality protection, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total population	**1,562**	**100.0**
SEX AND AGE		
Male	761	48.7
Female	801	51.3
Under 5 years	109	7.0
5 to 9 years	134	8.6
10 to 14 years	145	9.3
15 to 19 years	109	7.0
20 to 24 years	74	4.7
25 to 34 years	200	12.8
35 to 44 years	260	16.6
45 to 54 years	198	12.7
55 to 59 years	76	4.9
60 to 64 years	54	3.5
65 to 74 years	107	6.9
75 to 84 years	81	5.2
85 years and over	15	1.0
Median age (years)	35.5	(X)
18 years and over	1,104	70.7
Male	516	33.0
Female	588	37.6
21 years and over	1,047	67.0
62 years and over	235	15.0
65 years and over	203	13.0
Male	82	5.2
Female	121	7.7
RACE		
One race	1,549	99.2
White	1,524	97.6
Black or African American	-	-
American Indian and Alaska Native	-	-
Asian	2	0.1
Asian Indian	-	-
Chinese	-	-
Filipino	1	0.1
Japanese	-	-
Korean	-	-
Vietnamese	-	-
Other Asian [1]	1	0.1
Native Hawaiian and Other Pacific Islander	-	-
Native Hawaiian	-	-
Guamanian or Chamorro	-	-
Samoan	-	-
Other Pacific Islander [2]	-	-
Some other race	23	1.5
Two or more races	13	0.8
Race alone or in combination with one or more other races: [3]		
White	1,537	98.4
Black or African American	-	-
American Indian and Alaska Native	7	0.4
Asian	4	0.3
Native Hawaiian and Other Pacific Islander	-	-
Some other race	27	1.7

Subject	Number	Percent
HISPANIC OR LATINO AND RACE		
Total population	**1,562**	**100.0**
Hispanic or Latino (of any race)	31	2.0
Mexican	24	1.5
Puerto Rican	-	-
Cuban	-	-
Other Hispanic or Latino	7	0.4
Not Hispanic or Latino	1,531	98.0
White alone	1,520	97.3
RELATIONSHIP		
Total population	**1,562**	**100.0**
In households	1,562	100.0
Householder	589	37.7
Spouse	353	22.6
Child	500	32.0
Own child under 18 years	414	26.5
Other relatives	66	4.2
Under 18 years	34	2.2
Nonrelatives	54	3.5
Unmarried partner	24	1.5
In group quarters	-	-
Institutionalized population	-	-
Noninstitutionalized population	-	-
HOUSEHOLD BY TYPE		
Total households	**589**	**100.0**
Family households (families)	444	75.4
With own children under 18 years	220	37.4
Married-couple family	353	59.9
With own children under 18 years	159	27.0
Female householder, no husband present	65	11.0
With own children under 18 years	44	7.5
Nonfamily households	145	24.6
Householder living alone	131	22.2
Householder 65 years and over	61	10.4
Households with individuals under 18 years	238	40.4
Households with individuals 65 years and over	154	26.1
Average household size	2.65	(X)
Average family size	3.07	(X)
HOUSING OCCUPANCY		
Total housing units	**632**	**100.0**
Occupied housing units	589	93.2
Vacant housing units	43	6.8
For seasonal, recreational, or occasional use	4	0.6
Homeowner vacancy rate (percent)	1.5	(X)
Rental vacancy rate (percent)	8.1	(X)
HOUSING TENURE		
Occupied housing units	**589**	**100.0**
Owner-occupied housing units	453	76.9
Renter-occupied housing units	136	23.1
Average household size of owner-occupied units	2.65	(X)
Average household size of renter-occupied units	2.65	(X)

- Represents zero or rounds to zero. (X) Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] In combination with one or more of the other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000.

Table DP-2. Profile of Selected Social Characteristics: 2000

Geographic area: Thorntown town, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	**387**	**100.0**
Nursery school, preschool	26	6.7
Kindergarten	27	7.0
Elementary school (grades 1-8)	225	58.1
High school (grades 9-12)	76	19.6
College or graduate school	33	8.5
EDUCATIONAL ATTAINMENT		
Population 25 years and over	**1,011**	**100.0**
Less than 9th grade	39	3.9
9th to 12th grade, no diploma	143	14.1
High school graduate (includes equivalency)	511	50.5
Some college, no degree	195	19.3
Associate degree	58	5.7
Bachelor's degree	44	4.4
Graduate or professional degree	21	2.1
Percent high school graduate or higher	82.0	(X)
Percent bachelor's degree or higher	6.4	(X)
MARITAL STATUS		
Population 15 years and over	**1,176**	**100.0**
Never married	204	17.3
Now married, except separated	702	59.7
Separated	18	1.5
Widowed	86	7.3
Female	72	6.1
Divorced	166	14.1
Female	85	7.2
GRANDPARENTS AS CAREGIVERS		
Grandparent living in household with one or more own grandchildren under 18 years	**22**	**100.0**
Grandparent responsible for grandchildren	2	9.1
VETERAN STATUS		
Civilian population 18 years and over	**1,111**	**100.0**
Civilian veterans	170	15.3
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION		
Population 5 to 20 years	**387**	**100.0**
With a disability	30	7.8
Population 21 to 64 years	**864**	**100.0**
With a disability	170	19.7
Percent employed	68.8	(X)
No disability	694	80.3
Percent employed	88.8	(X)
Population 65 years and over	**196**	**100.0**
With a disability	91	46.4
RESIDENCE IN 1995		
Population 5 years and over	**1,447**	**100.0**
Same house in 1995	930	64.3
Different house in the U.S. in 1995	515	35.6
Same county	322	22.3
Different county	193	13.3
Same state	157	10.9
Different state	36	2.5
Elsewhere in 1995	2	0.1

Subject	Number	Percent
NATIVITY AND PLACE OF BIRTH		
Total population	**1,538**	**100.0**
Native	1,531	99.5
Born in United States	1,529	99.4
State of residence	1,296	84.3
Different state	233	15.1
Born outside United States	2	0.1
Foreign born	7	0.5
Entered 1990 to March 2000	4	0.3
Naturalized citizen	3	0.2
Not a citizen	4	0.3
REGION OF BIRTH OF FOREIGN BORN		
Total (excluding born at sea)	**7**	**100.0**
Europe	-	-
Asia	3	42.9
Africa	-	-
Oceania	-	-
Latin America	-	-
Northern America	4	57.1
LANGUAGE SPOKEN AT HOME		
Population 5 years and over	**1,447**	**100.0**
English only	1,425	98.5
Language other than English	22	1.5
Speak English less than "very well"	3	0.2
Spanish	8	0.6
Speak English less than "very well"	3	0.2
Other Indo-European languages	9	0.6
Speak English less than "very well"	-	-
Asian and Pacific Island languages	5	0.3
Speak English less than "very well"	-	-
ANCESTRY (single or multiple)		
Total population	**1,538**	**100.0**
Total ancestries reported	*1,166*	*75.8*
Arab	-	-
Czech[1]	2	0.1
Danish	6	0.4
Dutch	57	3.7
English	131	8.5
French (except Basque)[1]	32	2.1
French Canadian[1]	6	0.4
German	262	17.0
Greek	-	-
Hungarian	-	-
Irish[1]	141	9.2
Italian	17	1.1
Lithuanian	2	0.1
Norwegian	-	-
Polish	3	0.2
Portuguese	-	-
Russian	-	-
Scotch-Irish	47	3.1
Scottish	31	2.0
Slovak	-	-
Subsaharan African	-	-
Swedish	8	0.5
Swiss	15	1.0
Ukrainian	-	-
United States or American	273	17.8
Welsh	4	0.3
West Indian (excluding Hispanic groups)	-	-
Other ancestries	129	8.4

-Represents zero or rounds to zero. (X) Not applicable.

[1]The data represent a combination of two ancestries shown separately in Summary File 3. Czech includes Czechoslovakian. French includes Alsatian. French Canadian includes Acadian/Cajun. Irish includes Celtic.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-3. Profile of Selected Economic Characteristics: 2000

Geographic area: Thorntown town, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	**1,157**	**100.0**
In labor force	856	74.0
Civilian labor force	856	74.0
Employed	824	71.2
Unemployed	32	2.8
Percent of civilian labor force	3.7	(X)
Armed Forces	-	-
Not in labor force	301	26.0
Females 16 years and over	**588**	**100.0**
In labor force	407	69.2
Civilian labor force	407	69.2
Employed	384	65.3
Own children under 6 years	**112**	**100.0**
All parents in family in labor force	90	80.4
COMMUTING TO WORK		
Workers 16 years and over	**804**	**100.0**
Car, truck, or van - - drove alone	642	79.9
Car, truck, or van - - carpooled	85	10.6
Public transportation (including taxicab)	3	0.4
Walked	37	4.6
Other means	15	1.9
Worked at home	22	2.7
Mean travel time to work (minutes)[1]	22.3	(X)
Employed civilian population 16 years and over	**824**	**100.0**
OCCUPATION		
Management, professional, and related occupations	118	14.3
Service occupations	164	19.9
Sales and office occupations	207	25.1
Farming, fishing, and forestry occupations	8	1.0
Construction, extraction, and maintenance occupations	127	15.4
Production, transportation, and material moving occupations	200	24.3
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	11	1.3
Construction	80	9.7
Manufacturing	177	21.5
Wholesale trade	51	6.2
Retail trade	102	12.4
Transportation and warehousing, and utilities	62	7.5
Information	26	3.2
Finance, insurance, real estate, and rental and leasing	42	5.1
Professional, scientific, management, administrative, and waste management services	38	4.6
Educational, health and social services	95	11.5
Arts, entertainment, recreation, accommodation and food services	82	10.0
Other services (except public administration)	46	5.6
Public administration	12	1.5
CLASS OF WORKER		
Private wage and salary workers	685	83.1
Government workers	83	10.1
Self-employed workers in own not incorporated business	53	6.4
Unpaid family workers	3	0.4

Subject	Number	Percent
INCOME IN 1999		
Households	**592**	**100.0**
Less than $10,000	44	7.4
$10,000 to $14,999	33	5.6
$15,000 to $24,999	93	15.7
$25,000 to $34,999	88	14.9
$35,000 to $49,999	118	19.9
$50,000 to $74,999	138	23.3
$75,000 to $99,999	49	8.3
$100,000 to $149,999	15	2.5
$150,000 to $199,999	4	0.7
$200,000 or more	10	1.7
Median household income (dollars)	38,289	(X)
With earnings	482	81.4
Mean earnings (dollars)[1]	48,064	(X)
With Social Security income	177	29.9
Mean Social Security income (dollars)[1]	11,132	(X)
With Supplemental Security Income	22	3.7
Mean Supplemental Security Income (dollars)[1]	5,300	(X)
With public assistance income	26	4.4
Mean public assistance income (dollars)[1]	1,615	(X)
With retirement income	92	15.5
Mean retirement income (dollars)[1]	8,602	(X)
Families	**429**	**100.0**
Less than $10,000	19	4.4
$10,000 to $14,999	11	2.6
$15,000 to $24,999	52	12.1
$25,000 to $34,999	69	16.1
$35,000 to $49,999	95	22.1
$50,000 to $74,999	116	27.0
$75,000 to $99,999	40	9.3
$100,000 to $149,999	15	3.5
$150,000 to $199,999	4	0.9
$200,000 or more	8	1.9
Median family income (dollars)	43,194	(X)
Per capita income (dollars)[1]	19,109	(X)
Median earnings (dollars):		
Male full-time, year-round workers	33,750	(X)
Female full-time, year-round workers	24,524	(X)

Subject	Number below poverty level	Percent below poverty level
POVERTY STATUS IN 1999		
Families	**23**	**5.4**
With related children under 18 years	17	7.7
With related children under 5 years	5	6.3
Families with female householder, no husband present	**9**	**14.3**
With related children under 18 years	9	20.0
With related children under 5 years	2	20.0
Individuals	**102**	**6.6**
18 years and over	70	6.3
65 years and over	21	10.7
Related children under 18 years	27	6.4
Related children 5 to 17 years	22	6.6
Unrelated individuals 15 years and over	35	15.5

-Represents zero or rounds to zero. (X) Not applicable.

[1]If the denominator of a mean value or per capita value is less than 30, then that value is calculated using a rounded aggregate in the numerator. See text.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-4. Profile of Selected Housing Characteristics: 2000

Geographic area: Thorntown town, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total housing units	**637**	**100.0**
UNITS IN STRUCTURE		
1-unit, detached	470	73.8
1-unit, attached	4	0.6
2 units	16	2.5
3 or 4 units	13	2.0
5 to 9 units	35	5.5
10 to 19 units	2	0.3
20 or more units	-	-
Mobile home	97	15.2
Boat, RV, van, etc	-	-
YEAR STRUCTURE BUILT		
1999 to March 2000	12	1.9
1995 to 1998	28	4.4
1990 to 1994	55	8.6
1980 to 1989	52	8.2
1970 to 1979	70	11.0
1960 to 1969	49	7.7
1940 to 1959	91	14.3
1939 or earlier	280	44.0
ROOMS		
1 room	-	-
2 rooms	3	0.5
3 rooms	38	6.0
4 rooms	80	12.6
5 rooms	176	27.6
6 rooms	156	24.5
7 rooms	102	16.0
8 rooms	52	8.2
9 or more rooms	30	4.7
Median (rooms)	5.6	(X)
Occupied housing units	**591**	**100.0**
YEAR HOUSEHOLDER MOVED INTO UNIT		
1999 to March 2000	84	14.2
1995 to 1998	136	23.0
1990 to 1994	118	20.0
1980 to 1989	110	18.6
1970 to 1979	69	11.7
1969 or earlier	74	12.5
VEHICLES AVAILABLE		
None	40	6.8
1	189	32.0
2	211	35.7
3 or more	151	25.5
HOUSE HEATING FUEL		
Utility gas	403	68.2
Bottled, tank, or LP gas	48	8.1
Electricity	109	18.4
Fuel oil, kerosene, etc	22	3.7
Coal or coke	-	-
Wood	7	1.2
Solar energy	-	-
Other fuel	2	0.3
No fuel used	-	-
SELECTED CHARACTERISTICS		
Lacking complete plumbing facilities	2	0.3
Lacking complete kitchen facilities	2	0.3
No telephone service	12	2.0

Subject	Number	Percent
OCCUPANTS PER ROOM		
Occupied housing units	**591**	**100.0**
1.00 or less	578	97.8
1.01 to 1.50	13	2.2
1.51 or more	-	-
Specified owner-occupied units	**361**	**100.0**
VALUE		
Less than $50,000	25	6.9
$50,000 to $99,999	218	60.4
$100,000 to $149,999	107	29.6
$150,000 to $199,999	9	2.5
$200,000 to $299,999	2	0.6
$300,000 to $499,999	-	-
$500,000 to $999,999	-	-
$1,000,000 or more	-	-
Median (dollars)	84,500	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	214	59.3
Less than $300	9	2.5
$300 to $499	35	9.7
$500 to $699	49	13.6
$700 to $999	89	24.7
$1,000 to $1,499	32	8.9
$1,500 to $1,999	-	-
$2,000 or more	-	-
Median (dollars)	735	(X)
Not mortgaged	147	40.7
Median (dollars)	236	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	174	48.2
15.0 to 19.9 percent	72	19.9
20.0 to 24.9 percent	42	11.6
25.0 to 29.9 percent	20	5.5
30.0 to 34.9 percent	14	3.9
35.0 percent or more	37	10.2
Not computed	2	0.6
Specified renter-occupied units	**151**	**100.0**
GROSS RENT		
Less than $200	-	-
$200 to $299	5	3.3
$300 to $499	69	45.7
$500 to $749	54	35.8
$750 to $999	7	4.6
$1,000 to $1,499	-	-
$1,500 or more	-	-
No cash rent	16	10.6
Median (dollars)	483	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	42	27.8
15.0 to 19.9 percent	31	20.5
20.0 to 24.9 percent	16	10.6
25.0 to 29.9 percent	19	12.6
30.0 to 34.9 percent	6	4.0
35.0 percent or more	21	13.9
Not computed	16	10.6

-Represents zero or rounds to zero. (X) Not applicable.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-1. Profile of General Demographic Characteristics: 2000

Geographic Area: Sugar Creek township, Boone County, Indiana

[For information on confidentiality protection, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total population	**2,268**	**100.0**
SEX AND AGE		
Male	1,119	49.3
Female	1,149	50.7
Under 5 years	145	6.4
5 to 9 years	192	8.5
10 to 14 years	203	9.0
15 to 19 years	170	7.5
20 to 24 years	94	4.1
25 to 34 years	270	11.9
35 to 44 years	394	17.4
45 to 54 years	315	13.9
55 to 59 years	119	5.2
60 to 64 years	95	4.2
65 to 74 years	147	6.5
75 to 84 years	104	4.6
85 years and over	20	0.9
Median age (years)	36.5	(X)
18 years and over	1,614	71.2
Male	772	34.0
Female	842	37.1
21 years and over	1,536	67.7
62 years and over	324	14.3
65 years and over	271	11.9
Male	115	5.1
Female	156	6.9
RACE		
One race	2,254	99.4
White	2,226	98.1
Black or African American	2	0.1
American Indian and Alaska Native	1	-
Asian	2	0.1
Asian Indian	-	-
Chinese	-	-
Filipino	1	-
Japanese	-	-
Korean	-	-
Vietnamese	-	-
Other Asian [1]	1	-
Native Hawaiian and Other Pacific Islander	-	-
Native Hawaiian	-	-
Guamanian or Chamorro	-	-
Samoan	-	-
Other Pacific Islander [2]	-	-
Some other race	23	1.0
Two or more races	14	0.6
Race alone or in combination with one or more other races: [3]		
White	2,240	98.8
Black or African American	2	0.1
American Indian and Alaska Native	8	0.4
Asian	5	0.2
Native Hawaiian and Other Pacific Islander	1	-
Some other race	27	1.2

Subject	Number	Percent
HISPANIC OR LATINO AND RACE		
Total population	**2,268**	**100.0**
Hispanic or Latino (of any race)	31	1.4
Mexican	24	1.1
Puerto Rican	-	-
Cuban	-	-
Other Hispanic or Latino	7	0.3
Not Hispanic or Latino	2,237	98.6
White alone	2,222	98.0
RELATIONSHIP		
Total population	**2,268**	**100.0**
In households	2,268	100.0
Householder	846	37.3
Spouse	544	24.0
Child	728	32.1
Own child under 18 years	601	26.5
Other relatives	85	3.7
Under 18 years	42	1.9
Nonrelatives	65	2.9
Unmarried partner	32	1.4
In group quarters	-	-
Institutionalized population	-	-
Noninstitutionalized population	-	-
HOUSEHOLD BY TYPE		
Total households	**846**	**100.0**
Family households (families)	655	77.4
With own children under 18 years	320	37.8
Married-couple family	544	64.3
With own children under 18 years	250	29.6
Female householder, no husband present	76	9.0
With own children under 18 years	47	5.6
Nonfamily households	191	22.6
Householder living alone	169	20.0
Householder 65 years and over	75	8.9
Households with individuals under 18 years	344	40.7
Households with individuals 65 years and over	202	23.9
Average household size	2.68	(X)
Average family size	3.07	(X)
HOUSING OCCUPANCY		
Total housing units	**906**	**100.0**
Occupied housing units	846	93.4
Vacant housing units	60	6.6
For seasonal, recreational, or occasional use	7	0.8
Homeowner vacancy rate (percent)	1.3	(X)
Rental vacancy rate (percent)	7.8	(X)
HOUSING TENURE		
Occupied housing units	**846**	**100.0**
Owner-occupied housing units	681	80.5
Renter-occupied housing units	165	19.5
Average household size of owner-occupied units	2.69	(X)
Average household size of renter-occupied units	2.63	(X)

- Represents zero or rounds to zero. (X) Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] In combination with one or more of the other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000.

Table DP-2. Profile of Selected Social Characteristics: 2000

Geographic area: Sugar Creek township, Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	**567**	**100.0**
Nursery school, preschool	35	6.2
Kindergarten	34	6.0
Elementary school (grades 1-8)	300	52.9
High school (grades 9-12)	149	26.3
College or graduate school	49	8.6
EDUCATIONAL ATTAINMENT		
Population 25 years and over	**1,492**	**100.0**
Less than 9th grade	57	3.8
9th to 12th grade, no diploma	176	11.8
High school graduate (includes equivalency)	790	52.9
Some college, no degree	285	19.1
Associate degree	101	6.8
Bachelor's degree	60	4.0
Graduate or professional degree	23	1.5
Percent high school graduate or higher	84.4	(X)
Percent bachelor's degree or higher	5.6	(X)
MARITAL STATUS		
Population 15 years and over	**1,745**	**100.0**
Never married	292	16.7
Now married, except separated	1,117	64.0
Separated	18	1.0
Widowed	116	6.6
Female	94	5.4
Divorced	202	11.6
Female	101	5.8
GRANDPARENTS AS CAREGIVERS		
Grandparent living in household with one or more own grandchildren under 18 years	**53**	**100.0**
Grandparent responsible for grandchildren	2	3.8
VETERAN STATUS		
Civilian population 18 years and over	**1,648**	**100.0**
Civilian veterans	203	12.3
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION		
Population 5 to 20 years	**545**	**100.0**
With a disability	30	5.5
Population 21 to 64 years	**1,302**	**100.0**
With a disability	246	18.9
Percent employed	77.2	(X)
No disability	1,056	81.1
Percent employed	86.8	(X)
Population 65 years and over	**269**	**100.0**
With a disability	137	50.9
RESIDENCE IN 1995		
Population 5 years and over	**2,116**	**100.0**
Same house in 1995	1,405	66.4
Different house in the U.S. in 1995	709	33.5
Same county	453	21.4
Different county	256	12.1
Same state	220	10.4
Different state	36	1.7
Elsewhere in 1995	2	0.1

Subject	Number	Percent
NATIVITY AND PLACE OF BIRTH		
Total population	**2,260**	**100.0**
Native	2,250	99.6
Born in United States	2,248	99.5
State of residence	1,941	85.9
Different state	307	13.6
Born outside United States	2	0.1
Foreign born	10	0.4
Entered 1990 to March 2000	7	0.3
Naturalized citizen	6	0.3
Not a citizen	4	0.2
REGION OF BIRTH OF FOREIGN BORN		
Total (excluding born at sea)	**10**	**100.0**
Europe	-	-
Asia	6	60.0
Africa	-	-
Oceania	-	-
Latin America	-	-
Northern America	4	40.0
LANGUAGE SPOKEN AT HOME		
Population 5 years and over	**2,116**	**100.0**
English only	2,094	99.0
Language other than English	22	1.0
Speak English less than "very well"	3	0.1
Spanish	8	0.4
Speak English less than "very well"	3	0.1
Other Indo-European languages	9	0.4
Speak English less than "very well"	-	-
Asian and Pacific Island languages	5	0.2
Speak English less than "very well"	-	-
ANCESTRY (single or multiple)		
Total population	**2,260**	**100.0**
Total ancestries reported	*1,569*	*69.4*
Arab	-	-
Czech[1]	2	0.1
Danish	6	0.3
Dutch	65	2.9
English	173	7.7
French (except Basque)[1]	50	2.2
French Canadian[1]	6	0.3
German	350	15.5
Greek	-	-
Hungarian	-	-
Irish[1]	202	8.9
Italian	17	0.8
Lithuanian	2	0.1
Norwegian	-	-
Polish	3	0.1
Portuguese	-	-
Russian	-	-
Scotch-Irish	47	2.1
Scottish	37	1.6
Slovak	-	-
Subsaharan African	-	-
Swedish	8	0.4
Swiss	15	0.7
Ukrainian	-	-
United States or American	420	18.6
Welsh	4	0.2
West Indian (excluding Hispanic groups)	-	-
Other ancestries	162	7.2

-Represents zero or rounds to zero. (X) Not applicable.

[1]The data represent a combination of two ancestries shown separately in Summary File 3. Czech includes Czechoslovakian. French includes Alsatian. French Canadian includes Acadian/Cajun. Irish includes Celtic.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-3. Profile of Selected Economic Characteristics: 2000

Geographic area: Sugar Creek township, Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	**1,708**	**100.0**
In labor force	1,261	73.8
Civilian labor force	1,261	73.8
Employed	1,229	72.0
Unemployed	32	1.9
Percent of civilian labor force	2.5	(X)
Armed Forces	-	-
Not in labor force	447	26.2
Females 16 years and over	**867**	**100.0**
In labor force	604	69.7
Civilian labor force	604	69.7
Employed	581	67.0
Own children under 6 years	**170**	**100.0**
All parents in family in labor force	130	76.5
COMMUTING TO WORK		
Workers 16 years and over	**1,203**	**100.0**
Car, truck, or van - - drove alone	978	81.3
Car, truck, or van - - carpooled	124	10.3
Public transportation (including taxicab)	5	0.4
Walked	40	3.3
Other means	25	2.1
Worked at home	31	2.6
Mean travel time to work (minutes)[1]	23.1	(X)
Employed civilian population 16 years and over	**1,229**	**100.0**
OCCUPATION		
Management, professional, and related occupations	210	17.1
Service occupations	201	16.4
Sales and office occupations	306	24.9
Farming, fishing, and forestry occupations	8	0.7
Construction, extraction, and maintenance occupations	225	18.3
Production, transportation, and material moving occupations	279	22.7
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	22	1.8
Construction	132	10.7
Manufacturing	267	21.7
Wholesale trade	76	6.2
Retail trade	153	12.4
Transportation and warehousing, and utilities	70	5.7
Information	26	2.1
Finance, insurance, real estate, and rental and leasing	72	5.9
Professional, scientific, management, administrative, and waste management services	53	4.3
Educational, health and social services	152	12.4
Arts, entertainment, recreation, accommodation and food services	100	8.1
Other services (except public administration)	75	6.1
Public administration	31	2.5
CLASS OF WORKER		
Private wage and salary workers	936	76.2
Government workers	160	13.0
Self-employed workers in own not incorporated business	121	9.8
Unpaid family workers	12	1.0

Subject	Number	Percent
INCOME IN 1999		
Households	**866**	**100.0**
Less than $10,000	51	5.9
$10,000 to $14,999	33	3.8
$15,000 to $24,999	126	14.5
$25,000 to $34,999	120	13.9
$35,000 to $49,999	197	22.7
$50,000 to $74,999	196	22.6
$75,000 to $99,999	91	10.5
$100,000 to $149,999	38	4.4
$150,000 to $199,999	4	0.5
$200,000 or more	10	1.2
Median household income (dollars)	40,643	(X)
With earnings	716	82.7
Mean earnings (dollars)[1]	51,025	(X)
With Social Security income	240	27.7
Mean Social Security income (dollars)[1]	11,570	(X)
With Supplemental Security Income	22	2.5
Mean Supplemental Security Income (dollars)[1]	5,300	(X)
With public assistance income	26	3.0
Mean public assistance income (dollars)[1]	1,615	(X)
With retirement income	148	17.1
Mean retirement income (dollars)[1]	9,481	(X)
Families	**634**	**100.0**
Less than $10,000	19	3.0
$10,000 to $14,999	11	1.7
$15,000 to $24,999	70	11.0
$25,000 to $34,999	93	14.7
$35,000 to $49,999	135	21.3
$50,000 to $74,999	174	27.4
$75,000 to $99,999	82	12.9
$100,000 to $149,999	38	6.0
$150,000 to $199,999	4	0.6
$200,000 or more	8	1.3
Median family income (dollars)	48,281	(X)
Per capita income (dollars)[1]	19,819	(X)
Median earnings (dollars):		
Male full-time, year-round workers	36,071	(X)
Female full-time, year-round workers	24,492	(X)

Subject	Number below poverty level	Percent below poverty level
POVERTY STATUS IN 1999		
Families	**30**	**4.7**
With related children under 18 years	24	7.1
With related children under 5 years	5	4.3
Families with female householder, no husband present	**9**	**14.3**
With related children under 18 years	9	20.0
With related children under 5 years	2	20.0
Individuals	**150**	**6.7**
18 years and over	110	6.7
65 years and over	28	10.4
Related children under 18 years	35	5.9
Related children 5 to 17 years	30	6.5
Unrelated individuals 15 years and over	50	16.5

-Represents zero or rounds to zero. (X) Not applicable.

[1]If the denominator of a mean value or per capita value is less than 30, then that value is calculated using a rounded aggregate in the numerator. See text.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-4. Profile of Selected Housing Characteristics: 2000

Geographic area: Sugar Creek township, Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total housing units	**905**	**100.0**
UNITS IN STRUCTURE		
1-unit, detached	727	80.3
1-unit, attached	4	0.4
2 units	16	1.8
3 or 4 units	13	1.4
5 to 9 units	35	3.9
10 to 19 units	2	0.2
20 or more units	-	-
Mobile home	104	11.5
Boat, RV, van, etc	4	0.4
YEAR STRUCTURE BUILT		
1999 to March 2000	30	3.3
1995 to 1998	61	6.7
1990 to 1994	65	7.2
1980 to 1989	75	8.3
1970 to 1979	108	11.9
1960 to 1969	80	8.8
1940 to 1959	112	12.4
1939 or earlier	374	41.3
ROOMS		
1 room	-	-
2 rooms	3	0.3
3 rooms	46	5.1
4 rooms	115	12.7
5 rooms	217	24.0
6 rooms	200	22.1
7 rooms	150	16.6
8 rooms	127	14.0
9 or more rooms	47	5.2
Median (rooms)	5.9	(X)
Occupied housing units	**843**	**100.0**
YEAR HOUSEHOLDER MOVED INTO UNIT		
1999 to March 2000	121	14.4
1995 to 1998	190	22.5
1990 to 1994	170	20.2
1980 to 1989	123	14.6
1970 to 1979	107	12.7
1969 or earlier	132	15.7
VEHICLES AVAILABLE		
None	40	4.7
1	221	26.2
2	320	38.0
3 or more	262	31.1
HOUSE HEATING FUEL		
Utility gas	420	49.8
Bottled, tank, or LP gas	209	24.8
Electricity	156	18.5
Fuel oil, kerosene, etc	32	3.8
Coal or coke	-	-
Wood	22	2.6
Solar energy	-	-
Other fuel	4	0.5
No fuel used	-	-
SELECTED CHARACTERISTICS		
Lacking complete plumbing facilities	2	0.2
Lacking complete kitchen facilities	2	0.2
No telephone service	12	1.4

Subject	Number	Percent
OCCUPANTS PER ROOM		
Occupied housing units	**843**	**100.0**
1.00 or less	830	98.5
1.01 to 1.50	13	1.5
1.51 or more	-	-
Specified owner-occupied units	**525**	**100.0**
VALUE		
Less than $50,000	33	6.3
$50,000 to $99,999	268	51.0
$100,000 to $149,999	172	32.8
$150,000 to $199,999	45	8.6
$200,000 to $299,999	2	0.4
$300,000 to $499,999	5	1.0
$500,000 to $999,999	-	-
$1,000,000 or more	-	-
Median (dollars)	92,700	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	327	62.3
Less than $300	9	1.7
$300 to $499	42	8.0
$500 to $699	74	14.1
$700 to $999	120	22.9
$1,000 to $1,499	74	14.1
$1,500 to $1,999	8	1.5
$2,000 or more	-	-
Median (dollars)	780	(X)
Not mortgaged	198	37.7
Median (dollars)	259	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	245	46.7
15.0 to 19.9 percent	124	23.6
20.0 to 24.9 percent	65	12.4
25.0 to 29.9 percent	22	4.2
30.0 to 34.9 percent	21	4.0
35.0 percent or more	46	8.8
Not computed	2	0.4
Specified renter-occupied units	**175**	**100.0**
GROSS RENT		
Less than $200	-	-
$200 to $299	5	2.9
$300 to $499	85	48.6
$500 to $749	54	30.9
$750 to $999	7	4.0
$1,000 to $1,499	-	-
$1,500 or more	-	-
No cash rent	24	13.7
Median (dollars)	462	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	42	24.0
15.0 to 19.9 percent	31	17.7
20.0 to 24.9 percent	16	9.1
25.0 to 29.9 percent	19	10.9
30.0 to 34.9 percent	14	8.0
35.0 percent or more	29	16.6
Not computed	24	13.7

-Represents zero or rounds to zero. (X) Not applicable.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-1. Profile of General Demographic Characteristics: 2000

Geographic Area: Boone County, Indiana

[For information on confidentiality protection, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total population	**46,107**	**100.0**
SEX AND AGE		
Male	22,506	48.8
Female	23,601	51.2
Under 5 years	3,354	7.3
5 to 9 years	3,763	8.2
10 to 14 years	3,773	8.2
15 to 19 years	3,126	6.8
20 to 24 years	1,957	4.2
25 to 34 years	5,597	12.1
35 to 44 years	8,310	18.0
45 to 54 years	6,671	14.5
55 to 59 years	2,318	5.0
60 to 64 years	1,788	3.9
65 to 74 years	2,695	5.8
75 to 84 years	1,909	4.1
85 years and over	846	1.8
Median age (years)	36.9	(X)
18 years and over	33,052	71.7
Male	15,736	34.1
Female	17,316	37.6
21 years and over	31,700	68.8
62 years and over	6,497	14.1
65 years and over	5,450	11.8
Male	2,169	4.7
Female	3,281	7.1
RACE		
One race	45,832	99.4
White	45,149	97.9
Black or African American	163	0.4
American Indian and Alaska Native	118	0.3
Asian	212	0.5
Asian Indian	34	0.1
Chinese	51	0.1
Filipino	41	0.1
Japanese	20	-
Korean	26	0.1
Vietnamese	17	-
Other Asian [1]	23	-
Native Hawaiian and Other Pacific Islander	5	-
Native Hawaiian	1	-
Guamanian or Chamorro	-	-
Samoan	3	-
Other Pacific Islander [2]	1	-
Some other race	185	0.4
Two or more races	275	0.6
Race alone or in combination with one or more other races: [3]		
White	45,416	98.5
Black or African American	219	0.5
American Indian and Alaska Native	223	0.5
Asian	281	0.6
Native Hawaiian and Other Pacific Islander	11	-
Some other race	246	0.5

Subject	Number	Percent
HISPANIC OR LATINO AND RACE		
Total population	**46,107**	**100.0**
Hispanic or Latino (of any race)	534	1.2
Mexican	342	0.7
Puerto Rican	45	0.1
Cuban	22	-
Other Hispanic or Latino	125	0.3
Not Hispanic or Latino	45,573	98.8
White alone	44,847	97.3
RELATIONSHIP		
Total population	**46,107**	**100.0**
In households	45,278	98.2
Householder	17,081	37.0
Spouse	11,008	23.9
Child	14,638	31.7
Own child under 18 years	12,320	26.7
Other relatives	1,149	2.5
Under 18 years	473	1.0
Nonrelatives	1,402	3.0
Unmarried partner	747	1.6
In group quarters	829	1.8
Institutionalized population	719	1.6
Noninstitutionalized population	110	0.2
HOUSEHOLD BY TYPE		
Total households	**17,081**	**100.0**
Family households (families)	12,810	75.0
With own children under 18 years	6,494	38.0
Married-couple family	11,008	64.4
With own children under 18 years	5,361	31.4
Female householder, no husband present	1,332	7.8
With own children under 18 years	824	4.8
Nonfamily households	4,271	25.0
Householder living alone	3,604	21.1
Householder 65 years and over	1,474	8.6
Households with individuals under 18 years	6,852	40.1
Households with individuals 65 years and over	3,567	20.9
Average household size	2.65	(X)
Average family size	3.09	(X)
HOUSING OCCUPANCY		
Total housing units	**17,929**	**100.0**
Occupied housing units	17,081	95.3
Vacant housing units	848	4.7
For seasonal, recreational, or occasional use	74	0.4
Homeowner vacancy rate (percent)	1.2	(X)
Rental vacancy rate (percent)	7.2	(X)
HOUSING TENURE		
Occupied housing units	**17,081**	**100.0**
Owner-occupied housing units	13,440	78.7
Renter-occupied housing units	3,641	21.3
Average household size of owner-occupied units	2.77	(X)
Average household size of renter-occupied units	2.22	(X)

- Represents zero or rounds to zero. (X) Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] In combination with one or more of the other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000.

Table DP-2. Profile of Selected Social Characteristics: 2000

Geographic area: Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	**11,649**	**100.0**
Nursery school, preschool	1,004	8.6
Kindergarten	768	6.6
Elementary school (grades 1-8)	5,877	50.5
High school (grades 9-12)	2,724	23.4
College or graduate school	1,276	11.0
EDUCATIONAL ATTAINMENT		
Population 25 years and over	**30,048**	**100.0**
Less than 9th grade	907	3.0
9th to 12th grade, no diploma	2,622	8.7
High school graduate (includes equivalency)	11,362	37.8
Some college, no degree	5,108	17.0
Associate degree	1,743	5.8
Bachelor's degree	5,293	17.6
Graduate or professional degree	3,013	10.0
Percent high school graduate or higher	88.3	(X)
Percent bachelor's degree or higher	27.6	(X)
MARITAL STATUS		
Population 15 years and over	**35,232**	**100.0**
Never married	6,536	18.6
Now married, except separated	22,828	64.8
Separated	281	0.8
Widowed	2,209	6.3
Female	1,796	5.1
Divorced	3,378	9.6
Female	1,805	5.1
GRANDPARENTS AS CAREGIVERS		
Grandparent living in household with one or more own grandchildren under 18 years	**431**	**100.0**
Grandparent responsible for grandchildren	223	51.7
VETERAN STATUS		
Civilian population 18 years and over	**33,028**	**100.0**
Civilian veterans	4,087	12.4
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION		
Population 5 to 20 years	**11,054**	**100.0**
With a disability	838	7.6
Population 21 to 64 years	**26,080**	**100.0**
With a disability	6,030	23.1
Percent employed	81.8	(X)
No disability	20,050	76.9
Percent employed	79.5	(X)
Population 65 years and over	**4,846**	**100.0**
With a disability	1,800	37.1
RESIDENCE IN 1995		
Population 5 years and over	**42,722**	**100.0**
Same house in 1995	24,411	57.1
Different house in the U.S. in 1995	18,055	42.3
Same county	8,064	18.9
Different county	9,991	23.4
Same state	6,775	15.9
Different state	3,216	7.5
Elsewhere in 1995	256	0.6

Subject	Number	Percent
NATIVITY AND PLACE OF BIRTH		
Total population	**46,107**	**100.0**
Native	45,424	98.5
Born in United States	45,297	98.2
State of residence	34,282	74.4
Different state	11,015	23.9
Born outside United States	127	0.3
Foreign born	683	1.5
Entered 1990 to March 2000	354	0.8
Naturalized citizen	269	0.6
Not a citizen	414	0.9
REGION OF BIRTH OF FOREIGN BORN		
Total (excluding born at sea)	**683**	**100.0**
Europe	366	53.6
Asia	214	31.3
Africa	-	-
Oceania	4	0.6
Latin America	82	12.0
Northern America	17	2.5
LANGUAGE SPOKEN AT HOME		
Population 5 years and over	**42,722**	**100.0**
English only	41,541	97.2
Language other than English	1,181	2.8
Speak English less than "very well"	243	0.6
Spanish	466	1.1
Speak English less than "very well"	98	0.2
Other Indo-European languages	555	1.3
Speak English less than "very well"	81	0.2
Asian and Pacific Island languages	147	0.3
Speak English less than "very well"	57	0.1
ANCESTRY (single or multiple)		
Total population	**46,107**	**100.0**
Total ancestries reported	*42,908*	*93.1*
Arab	39	0.1
Czech[1]	121	0.3
Danish	123	0.3
Dutch	1,306	2.8
English	5,768	12.5
French (except Basque)[1]	1,323	2.9
French Canadian[1]	44	0.1
German	11,419	24.8
Greek	111	0.2
Hungarian	95	0.2
Irish[1]	5,376	11.7
Italian	1,057	2.3
Lithuanian	89	0.2
Norwegian	164	0.4
Polish	847	1.8
Portuguese	9	-
Russian	142	0.3
Scotch-Irish	975	2.1
Scottish	1,389	3.0
Slovak	115	0.2
Subsaharan African	23	-
Swedish	514	1.1
Swiss	200	0.4
Ukrainian	44	0.1
United States or American	6,458	14.0
Welsh	456	1.0
West Indian (excluding Hispanic groups)	15	-
Other ancestries	4,686	10.2

-Represents zero or rounds to zero. (X) Not applicable.

[1]The data represent a combination of two ancestries shown separately in Summary File 3. Czech includes Czechoslovakian. French includes Alsatian. French Canadian includes Acadian/Cajun. Irish includes Celtic.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-3. Profile of Selected Economic Characteristics: 2000

Geographic area: Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	**34,387**	**100.0**
In labor force	23,820	69.3
Civilian labor force	23,780	69.2
Employed	23,059	67.1
Unemployed	721	2.1
Percent of civilian labor force	3.0	(X)
Armed Forces	40	0.1
Not in labor force	10,567	30.7
Females 16 years and over	**18,055**	**100.0**
In labor force	10,942	60.6
Civilian labor force	10,942	60.6
Employed	10,574	58.6
Own children under 6 years	**4,033**	**100.0**
All parents in family in labor force	2,517	62.4
COMMUTING TO WORK		
Workers 16 years and over	**22,679**	**100.0**
Car, truck, or van - - drove alone	19,036	83.9
Car, truck, or van - - carpooled	1,993	8.8
Public transportation (including taxicab)	18	0.1
Walked	316	1.4
Other means	189	0.8
Worked at home	1,127	5.0
Mean travel time to work (minutes)[1]	23.0	(X)
Employed civilian population 16 years and over	**23,059**	**100.0**
OCCUPATION		
Management, professional, and related occupations	7,956	34.5
Service occupations	3,082	13.4
Sales and office occupations	5,930	25.7
Farming, fishing, and forestry occupations	89	0.4
Construction, extraction, and maintenance occupations	2,477	10.7
Production, transportation, and material moving occupations	3,525	15.3
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	495	2.1
Construction	2,176	9.4
Manufacturing	3,897	16.9
Wholesale trade	1,158	5.0
Retail trade	2,325	10.1
Transportation and warehousing, and utilities	1,275	5.5
Information	609	2.6
Finance, insurance, real estate, and rental and leasing	1,798	7.8
Professional, scientific, management, administrative, and waste management services	1,806	7.8
Educational, health and social services	4,242	18.4
Arts, entertainment, recreation, accommodation and food services	1,395	6.0
Other services (except public administration)	1,130	4.9
Public administration	753	3.3
CLASS OF WORKER		
Private wage and salary workers	18,946	82.2
Government workers	2,349	10.2
Self-employed workers in own not incorporated business	1,708	7.4
Unpaid family workers	56	0.2

Subject	Number	Percent
INCOME IN 1999		
Households	**17,091**	**100.0**
Less than $10,000	1,029	6.0
$10,000 to $14,999	939	5.5
$15,000 to $24,999	1,759	10.3
$25,000 to $34,999	2,138	12.5
$35,000 to $49,999	2,725	15.9
$50,000 to $74,999	3,821	22.4
$75,000 to $99,999	1,901	11.1
$100,000 to $149,999	1,531	9.0
$150,000 to $199,999	621	3.6
$200,000 or more	627	3.7
Median household income (dollars)	49,632	(X)
With earnings	14,389	84.2
Mean earnings (dollars)[1]	67,609	(X)
With Social Security income	4,076	23.8
Mean Social Security income (dollars)[1]	11,716	(X)
With Supplemental Security Income	257	1.5
Mean Supplemental Security Income (dollars)[1]	5,680	(X)
With public assistance income	221	1.3
Mean public assistance income (dollars)[1]	2,045	(X)
With retirement income	2,162	12.6
Mean retirement income (dollars)[1]	11,945	(X)
Families	**12,703**	**100.0**
Less than $10,000	377	3.0
$10,000 to $14,999	262	2.1
$15,000 to $24,999	942	7.4
$25,000 to $34,999	1,353	10.7
$35,000 to $49,999	2,119	16.7
$50,000 to $74,999	3,276	25.8
$75,000 to $99,999	1,802	14.2
$100,000 to $149,999	1,359	10.7
$150,000 to $199,999	607	4.8
$200,000 or more	606	4.8
Median family income (dollars)	58,879	(X)
Per capita income (dollars)[1]	24,182	(X)
Median earnings (dollars):		
Male full-time, year-round workers	39,534	(X)
Female full-time, year-round workers	26,266	(X)

Subject	Number below poverty level	Percent below poverty level
POVERTY STATUS IN 1999		
Families	**489**	**3.8**
With related children under 18 years	291	4.3
With related children under 5 years	138	5.4
Families with female householder, no husband present	**179**	**12.8**
With related children under 18 years	158	17.1
With related children under 5 years	96	35.0
Individuals	**2,337**	**5.2**
18 years and over	1,620	5.0
65 years and over	436	9.0
Related children under 18 years	612	4.8
Related children 5 to 17 years	409	4.3
Unrelated individuals 15 years and over	894	15.2

-Represents zero or rounds to zero. (X) Not applicable.

[1]If the denominator of a mean value or per capita value is less than 30, then that value is calculated using a rounded aggregate in the numerator. See text.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-4. Profile of Selected Housing Characteristics: 2000

Geographic area: Boone County, Indiana

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total housing units	**17,929**	**100.0**
UNITS IN STRUCTURE		
1-unit, detached	14,439	80.5
1-unit, attached	410	2.3
2 units	399	2.2
3 or 4 units	634	3.5
5 to 9 units	657	3.7
10 to 19 units	363	2.0
20 or more units	246	1.4
Mobile home	777	4.3
Boat, RV, van, etc	4	-
YEAR STRUCTURE BUILT		
1999 to March 2000	876	4.9
1995 to 1998	1,653	9.2
1990 to 1994	1,769	9.9
1980 to 1989	2,001	11.2
1970 to 1979	3,110	17.3
1960 to 1969	1,691	9.4
1940 to 1959	2,312	12.9
1939 or earlier	4,517	25.2
ROOMS		
1 room	42	0.2
2 rooms	126	0.7
3 rooms	1,092	6.1
4 rooms	1,841	10.3
5 rooms	3,458	19.3
6 rooms	3,723	20.8
7 rooms	2,774	15.5
8 rooms	2,301	12.8
9 or more rooms	2,572	14.3
Median (rooms)	6.1	(X)
Occupied housing units	**17,081**	**100.0**
YEAR HOUSEHOLDER MOVED INTO UNIT		
1999 to March 2000	3,183	18.6
1995 to 1998	4,600	26.9
1990 to 1994	3,170	18.6
1980 to 1989	2,822	16.5
1970 to 1979	1,740	10.2
1969 or earlier	1,566	9.2
VEHICLES AVAILABLE		
None	583	3.4
1	4,449	26.0
2	7,713	45.2
3 or more	4,336	25.4
HOUSE HEATING FUEL		
Utility gas	8,927	52.3
Bottled, tank, or LP gas	3,323	19.5
Electricity	3,576	20.9
Fuel oil, kerosene, etc	976	5.7
Coal or coke	-	-
Wood	102	0.6
Solar energy	17	0.1
Other fuel	132	0.8
No fuel used	28	0.2
SELECTED CHARACTERISTICS		
Lacking complete plumbing facilities	62	0.4
Lacking complete kitchen facilities	56	0.3
No telephone service	255	1.5
OCCUPANTS PER ROOM		
Occupied housing units	**17,081**	**100.0**
1.00 or less	16,919	99.1
1.01 to 1.50	111	0.6
1.51 or more	51	0.3
Specified owner-occupied units	**11,246**	**100.0**
VALUE		
Less than $50,000	197	1.8
$50,000 to $99,999	3,416	30.4
$100,000 to $149,999	3,157	28.1
$150,000 to $199,999	1,750	15.6
$200,000 to $299,999	1,235	11.0
$300,000 to $499,999	1,057	9.4
$500,000 to $999,999	372	3.3
$1,000,000 or more	62	0.6
Median (dollars)	131,100	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	8,417	74.8
Less than $300	33	0.3
$300 to $499	425	3.8
$500 to $699	979	8.7
$700 to $999	2,277	20.2
$1,000 to $1,499	2,795	24.9
$1,500 to $1,999	998	8.9
$2,000 or more	910	8.1
Median (dollars)	1,076	(X)
Not mortgaged	2,829	25.2
Median (dollars)	292	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	4,242	37.7
15.0 to 19.9 percent	2,073	18.4
20.0 to 24.9 percent	1,575	14.0
25.0 to 29.9 percent	945	8.4
30.0 to 34.9 percent	653	5.8
35.0 percent or more	1,704	15.2
Not computed	54	0.5
Specified renter-occupied units	**3,485**	**100.0**
GROSS RENT		
Less than $200	138	4.0
$200 to $299	166	4.8
$300 to $499	1,066	30.6
$500 to $749	1,236	35.5
$750 to $999	447	12.8
$1,000 to $1,499	200	5.7
$1,500 or more	-	-
No cash rent	232	6.7
Median (dollars)	545	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	847	24.3
15.0 to 19.9 percent	526	15.1
20.0 to 24.9 percent	446	12.8
25.0 to 29.9 percent	373	10.7
30.0 to 34.9 percent	231	6.6
35.0 percent or more	817	23.4
Not computed	245	7.0

-Represents zero or rounds to zero. (X) Not applicable.

Source: U.S. Bureau of the Census, Census 2000.

Downtown Portland Historic District Design Guidelines

Prepared by the Portland Historic Preservation Commission
April 2009

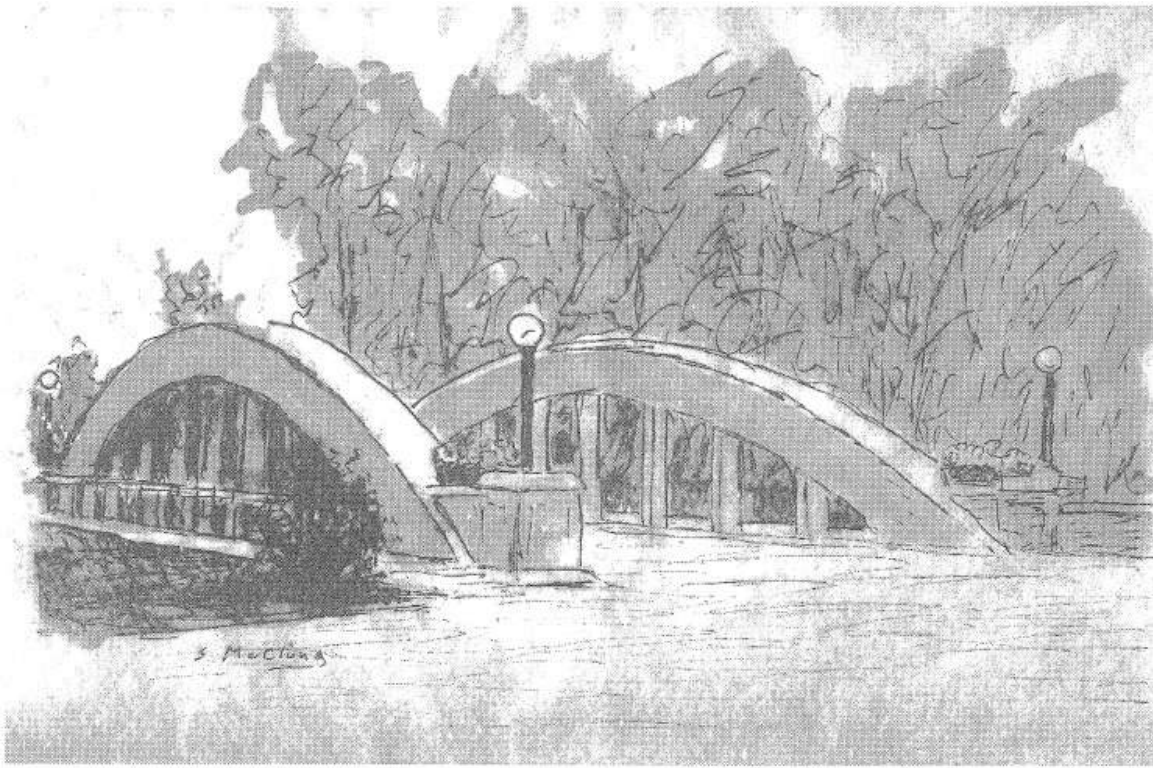
TABLE OF CONTENTS

HISTORY OVERVIEW

The commercial storefronts in Portland's Commercial District Main Street are an important part of the City's character and were built in the late 19th and early 20th centuries.

Historic commercial buildings in Portland are primarily of brick construction and are one to four stories in height. The buildings originally had storefronts constructed of wood, metal and plate glass. Many of the storefronts have been altered, replaced or covered but several fine original examples remain.

The City of Portland features a relatively intact traditional commercial storefront streetscape. This historic quality sets the City apart from other communities, and is the major character that residents and visitors alike experience. The design qualities of the properties should be retained, as this is part of Portland's identity. A well-kept historic downtown enhances quality of life for residents, and is an attraction for the thousands who travel through City every year.



THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property will be preserved.

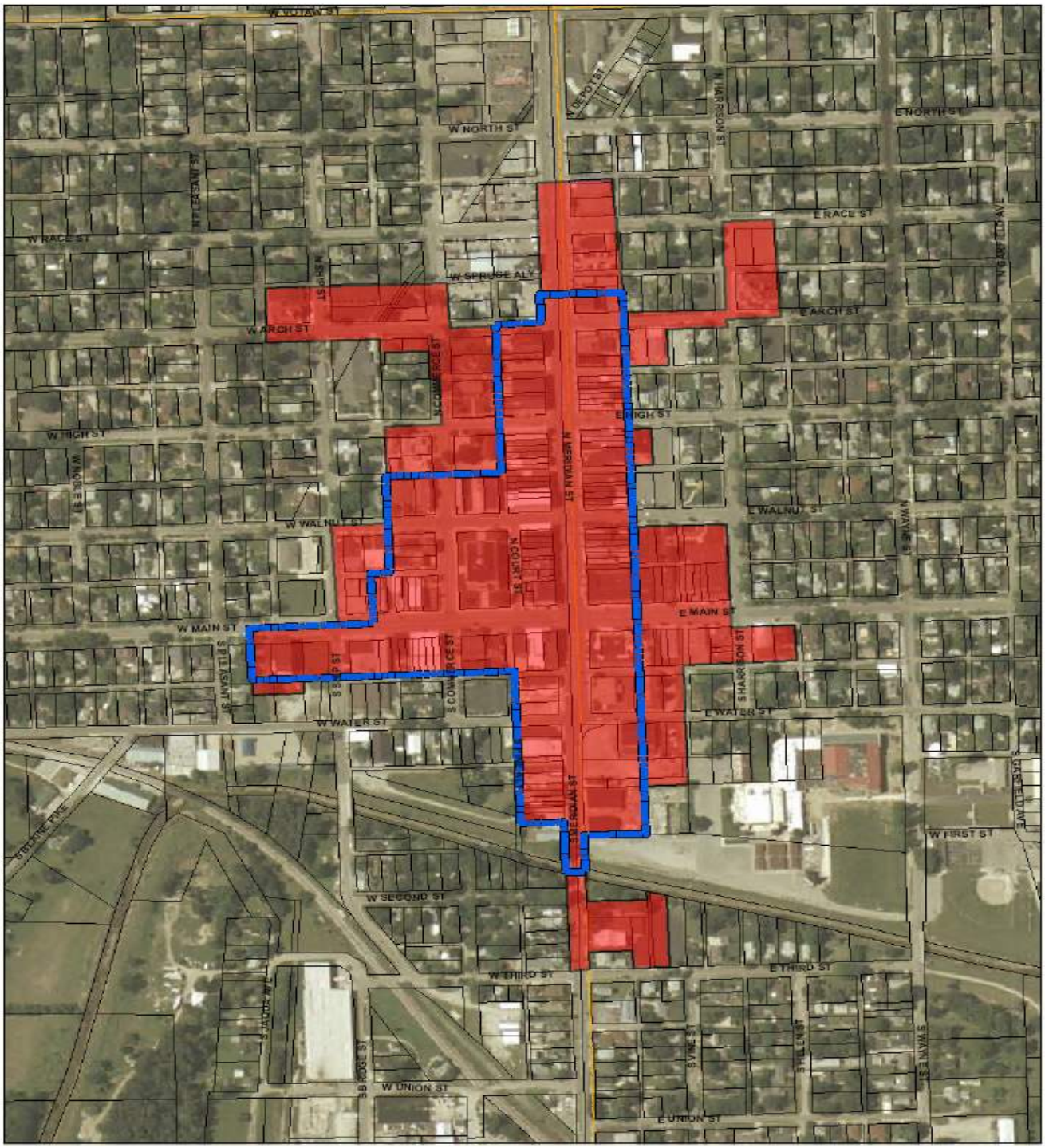
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.



Map Prepared for

SPMG

Sturtz Public Management Group, LLC

Map Printed by

Schneider

City of Portland Downtown Historic Preservation District

October 2nd, 2008

Portland Downtown National Register District and Downtown Protion of TIF District Allocation Area # 1

Proposed Historic Preservation District

0 150 300 600 900

Feet

GLOSSARY OF COMMON TERMS

Addition: New construction added to an existing building or structure.
Alteration: Work that impacts any exterior architectural feature including construction, reconstruction, or removal of any building or building element.
Baluster: A turned or rectangular upright member supporting a stair rail.
Balustrade: A hand railing of upright posts or balusters.
Bay: An outward projection of a wall with windows, or a division in a wall seen as space between piers or columns.
Bracket: An ornamental or structural member or both set under a projecting element, such as the eaves.
Canopy: A projection or hood over a door, window, niche, etc.
Capital: The head or crowning feature of a column.
Cladding: An external covering or skin applied to a structure for aesthetic or protective purposes.
Column: An upright member, designed to carry a load.
Concrete: Cement mixed with coarse and fine aggregate (such as pebbles, crushed stone, brick), sand and water in specific proportions.
Coping: A capping or covering to a wall, either flat or sloping to throw off water.
Corbel: In masonry, a projection, or one of a series of projections, each stepped progressively farther forward with height and articulating a cornice or supporting an overhanging member.
Cornice; Any projecting ornamental molding along the top of a building, wall, etc., finishing or crowning it.
Dentils: Small toothed decorative members found in classical or period architecture in cornices, or other horizontal bands on building façades.
Double Hung Window: A window with two sashes, one sliding vertically over the other.
Eaves: The under part of a sloping roof overhanging a wall.
Elevation: The external faces of a building.
Façade: The face of a building, especially the principal or front face showing its most prominent architectural features.
False Fronts: A vertical extension of a building facade above a roofline to add visual height.
Fascia: A plain horizontal band, which may consist of two or three fascia over sailing each other and sometimes separated by narrow
moldings.
Fenestration: The arrangement of windows and doors in a building.
Finial: A pointed ornament at a gable peak.
Fluting: Shallow, concave grooves running vertically on the shaft of a column, pilaster, or other surface.
Frieze Board: A flat board at the top of a wall directly beneath the cornice.
Gable: The triangular part of an exterior wall, created by the angle of a pitched roof with two sides.
Hipped Roof: A roof with pitched or sloped ends and sides, which rise from all four sides of a building.

Hood Mold: A projecting molding above an arch, doorway, or window.
Lintel: A horizontal beam or member above a door or window, which supports the wall above the facade opening.
Mullions: The vertical strip dividing the panes of a window.
Muntin: A secondary horizontal framing member to hold panes within a window or glazed door.
Parapet: A low wall, placed to protect any spot where there is a sudden drop, for example, a wall projecting above a roof plane.
Pier: A solid masonry support, as distinct from a column, the solid mass between doors, windows, and other openings in buildings.
Pilaster: A shallow pier or rectangular column projecting only slightly from a wall.
Pillar: A freestanding upright member, which, unlike a column, need not be cylindrical or conform to any of the orders.
Quoins: Stone blocks or bricks ornamenting the outside walls of a building.
Ridge: The horizontal line formed by the junction of two sloping surfaces of a roof.
Sash: The frame, which holds window panels, and forms the movable part of the window.
Shutter: A rectangular wood or cast iron piece set on hinges and used to cover a window or door. Historically used for security or to protect
window or door openings from natural elements.
Sill: The lower horizontal part of a window-frame.
String Course: A continuous projecting horizontal band on a building façade usually made of molding (wood or plaster) or masonry.
Transom: Horizontal window like element above the door.

DESIGN GUIDELINES

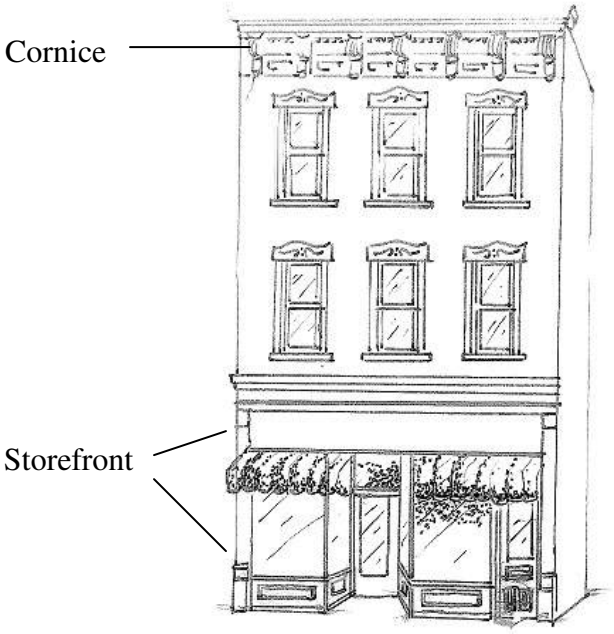
The overall approach in sound design guidelines is to respect the overall character of the historic district. This principle does not prevent changes to a historic building or neighborhood, but does require careful planning before making repairs and alterations, undertaking demolition, or designing new structures. The following design guidelines are written to provide owners with recommendations for restoration and remodeling which are in keeping with the Commercial District's architectural character and add to the economic value of the property and the district as a whole.

The basics of design guidelines are:

1. Original qualities and character of a building or structure shall not be destroyed.
2. Removal or alterations to historic materials shall be avoided.
3. Repair of historic fabric is preferable over replacement. Repair and replacement shall be based on duplication of features and materials.
4. New additions or alterations shall not detract from the overall architectural character of a property.
5. The cleaning of historic structures shall be undertaken with the gentlest means possible.
6. New design shall be compatible with historic structures.

The guidelines that follow are based on these important basic preservation principles and are specifically designed for the historic buildings and appearance of Portland's Main Street. These guidelines are also based on the Secretary of the Interior's Standards for Rehabilitation which are guidelines established by the U.S. Department of the Interior for historic buildings and areas. A copy of these guidelines are located at the beginning of this booklet.

TRADITIONAL FAÇADE & STOREFRONT DESIGN



A traditional downtown commercial façade

The basic traditional commercial façade consists of three parts: the storefront with an entrance and large display windows, an upper masonry façade and a decorative cornice. The basic storefront design includes large windows with thin framing members, a storefront cornice, transom, bulkheads and often a recessed entrance.

If planning improvements to a storefront, the original proportions should be carefully considered and respected. On occasion, one business utilizes more than one historic storefront. The individual identities of the original buildings should be retained, and the use of awnings, colors and signage should be used to unify the storefronts, rather than removing original materials and creating one new, modern storefront out of several buildings.

TRADITIONAL MATERIALS

Typical examples of materials found in Portland and their location:

Storefront Frame – wood, cast iron
Display Windows – clear glass
Transom Windows – Clear, tinted, leaded or prismatic glass.
Entrance Door – wood with a large glass panel.
Bulkheads – wood panels, tile
Storefront Cornice – wood, cast iron, sheet metal

STOREFRONT FEATURES

Existing historic storefronts date from the late 19th and early 20th centuries and are designs typical of commercial architecture of the period. Storefronts generally had five main characteristics:

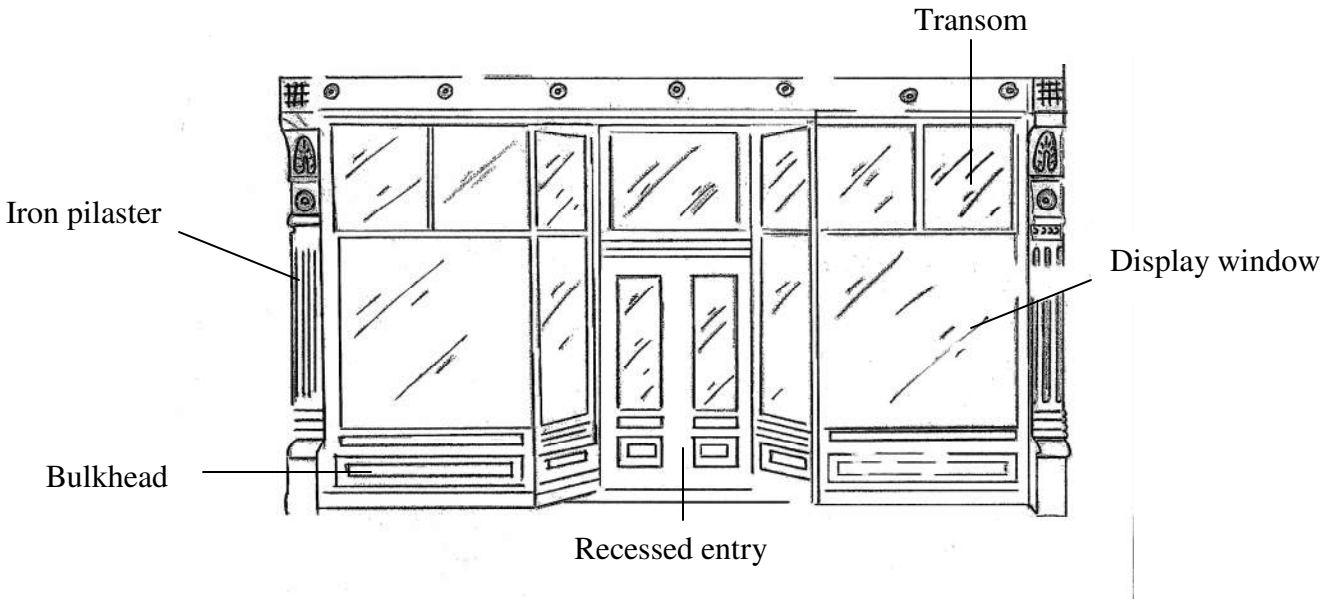
Lower panels or bulkheads: The large plate glass windows for the display of goods rested on lower panels called bulkheads. These were primarily rectangular in design, of frame or brick construction and often had raised patterns.

Display windows: Merchants in the early 20th century relied on extensive window displays to advertise their goods. High visibility was a priority for these merchants, and the installation of large sheets of plate glass provided maximum exposure of wares.

Cast iron pilasters: To support the weight of the brick masonry above the storefront, cast iron columns or brick piers were often added. The cast iron was shaped into decorative forms that supported the load of the brick upper facade allowing large display areas. Brick piers were also used to support the weight of the upper facade brick.

Large central or corner entrances: Many commercial buildings originally had large central or corner entrances of single or double doors.

Transoms: Over the display windows and entrances were usually transom bars and transoms. Transoms allowed light into the building and were used for additional areas of signage and display. Transoms utilized clear, textured, leaded or stained glass.



STOREFRONT GUIDELINES

1. Original storefronts or historic storefronts that are more than fifty years old should not be altered but repaired and retained.

2. Future storefront remodeling or renovation should follow historic guidelines such as retaining historic features, reconstruction based on historic photos or illustrations, or renovation based on typical storefront designs of the period.

3. All decorative metals or glass on historic storefronts should be retained and maintained.

4. If an original storefront has been removed, a new storefront design should take the original proportions and materials into account. Modern materials are acceptable so long as they are in proportion to traditional design. Shiny, brushed aluminum is not appropriate. Original materials or aluminum with a baked enamel finish are more appropriate.

5. A storefront should be composed almost entirely of clear glass. Tinted or reflective glass is inappropriate. Should privacy be desired, interior window treatments or movable barriers should be considered.

6. Transoms over doors or display areas should not be enclosed or painted out.

7. Designs and materials such as sloping mansard roofs, metal siding, vertical siding, stucco/EIFS, wood shingles, imitation brick, imitation stone, vinyl and aluminum siding are not appropriate and should not be added to storefronts or upper stories.

8. Avoid concealing original façade materials. If original material must be replaced, duplicate the element utilizing the original material. Avoid the use of shiny, reflective materials such as mirror glass and plastic panels as façade materials. New materials should be similar in texture and pattern to those found historically.

9. Cast iron should be painted to prevent rust and corrosion. Rust or paint build-up may be removed by chemical treatment or low-pressure dry grit blasting (80-100 psi), taking care to protect any adjacent building materials that might be damaged.

STOREFRONT ENTRIES

Traditionally, entrance doors were made of wood with a large pane of glass. Standard aluminum and glass commercial doors have replaced many original doors. Aluminum can be made more compatible by being painted a dark color, and by selecting a design in the proportions of the original. The rhythm of entries is important in the downtown. Retention of the historic entry system, whether recessed or flush with the public walk, is encouraged. The retention and maintenance of original doors is encouraged.

STOREFRONT ENTRY GUIDELINES

1. Original entry doors should be retained and restored in their original location and configuration when appropriate. If modifications have been made, a new entry should be designed based upon the traditional design elements.

2. Use doors with large areas of glass and a painted or baked enamel frame.

3. Avoid unfinished bright aluminum or stainless steel frames.

4. Avoid residential style doors, including those from historic residences.

5. Finished frames may be varnished or painted wood or metal with anodized or painted finish. Wider metal frames are generally encouraged over narrow frames.

STOREFRONT WINDOWS

For most Main Street buildings, large windowpanes at the first floor level are advisable for both retail and office use. Avoid multi-pane designs that divide the storefront window into small components. This look is not typical of most downtown buildings, and is therefore inappropriate. Tinted glass is generally discouraged except for decorative transoms. Awnings and interior window treatments can protect from the sun, but allow its warmth to enter in colder seasons while retaining the traditional appearance.

STOREFRONT WINDOW GUIDELINES

1. Original storefront window configuration should be maintained.

2. Tinted and/or reflective glass is inappropriate.

3. Avoid multi-pane designs.

4. Preserve existing transoms. Leaded and prismatic decorative transoms should be preserved in place. For other transoms, clear glass is generally preferable.

5. Use the transom as a place for a sign or decorative panel if the use of glass is not feasible, but retain the original proportions of the opening.

BULKHEAD GUIDELINES

1. Existing storefront bulkheads should be retained and repaired as needed. If bulkheads have been removed, appropriate bulkheads should be installed, based upon the historic elements.

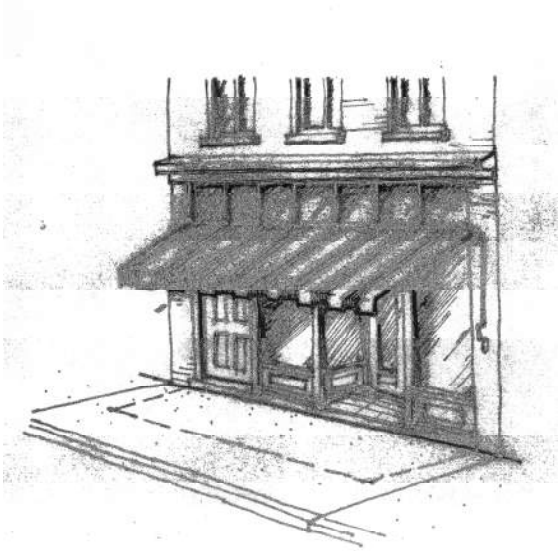
2. If the original design is missing, use historic documentation to duplicate an appropriate design. If original information is not available, develop a new simplified design that retains the original character.

3. For renovations where there is no physical or documentary evidence, appropriate bulkhead materials are painted wood, brick, stone or painted metal. Plywood may also be acceptable when no original material exists. Artificial siding, plywood and EIFS are not appropriate if replacing original material.

AWNINGS

A canvas awning can be an important element in providing color and shade. If properly cared for, a fabric awning can last many years. An awning can be attached above the display windows and below the cornice or sign panel. A 12-inch valance flap is usually attached and can serve as a sign panel. Utilizing the main awning for a logo, and placing some signage on the valance is encouraged if additional signage is desired. Sometimes an awning is mounted between the transom and the display windows, allowing light into the store while shading the merchandise and pedestrians from the sun.

An awning should not cover the piers or the space between the second story windowsills and the storefront cornice. Metal, wood, plastic and vinyl awnings detract from the historic character of the street and should not be installed.



Traditional crank canvas awning.

Align awnings with others in the block where appropriate. Coordinate the color of the awning with the color scheme of the entire building.

AWNING GUIDELINES

1. Awnings, canopies and marquees consistent with local character and building type are encouraged. Domes and other modern shapes are not appropriate.

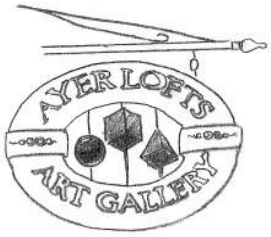
2. Awnings should be at a 45-degree angle to the building and be of a canvas material.

3. Use of retractable awnings is permitted and encouraged. Fixed metal, wood or plastic awnings are inappropriate.

4. Awnings should generally fit within window or door recesses. Significant architectural details shall not be hidden.

5. Awnings on a multiple-storefront building should be consistent in character, scale, and location, but need not be identical.

SIGNS



Signs throughout Portland are regulated through the existing zoning ordinance. These regulations detail the appropriate types, sizes, and locations for signs and must be followed in order to receive a sign permit.

The importance of good signage for a commercial enterprise cannot be overestimated. However, an unobtrusive, attractive sign can be just as effective, if not more effective, than an overly large or bright sign.

The design of a building façade will usually present obvious clues for the best location of a sign. These locations include:

- The area between the storefront windows and overhanging cornice
- The area immediately above the cornice
- The surface of the piers that frame the storefront and the display and transom windows.

In some cases, placing the sign higher on the façade may be appropriate, but, in general, placing it below the second story windows will ensure pedestrians and motorists can easily read it.

Signs with too much information can be confusing. Keep the message clear and direct so that it is easy to read. Secondary information can be placed on signs on doors, awning valances, and inside display windows.

Covering up decorative details such as trim, transoms, windows and doors undermines the attractive features that give the building's architecture its charm. If no suitable flat surface is available, a projecting sign may be appropriate. Hand-painted signs, non-internally lit signs are preferred.

TYPES OF SIGNS

1. Wall signs: any sign affixed in such a way that its exposed face and sign area is parallel to the plane of the building to which it is attached. Wall signs should be placed where they best complement the building, for example, on blank expanses of wall or building areas clearly designed as potential sign locations, covered transoms, or broad plain fascias in the cornices. Such areas vary depending on the building's architectural style and/or date of construction.

2. Projecting signs: any sign affixed in such a way that its exposed face and sign area is perpendicular to the plane of the building to which it is attached. Projecting signs

should be placed where they best complement the building. Guy wires should be as unobtrusive as possible.

3. Window Signs: signs painted on or attached to, or suspended behind any window or door that serves as an identification of a business.

SIGN GUIDELINES

1. Signs should be of an appropriate size. They should not overwhelm a building or storefront or obscure architectural details. They should fit into spaces suitable for signage.

2. Inappropriate materials and finishes generally include interior grade wood, unfaced plywood, plastic substrates, and unfinished wood.

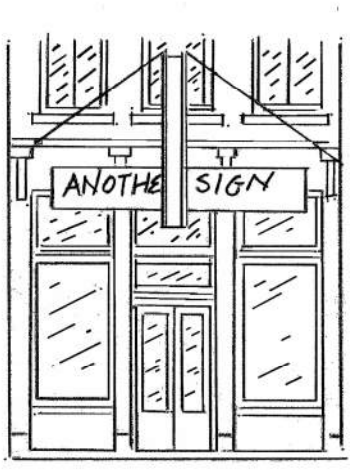
3. Shielded, incandescent external lights, or concealed incandescent lighting are appropriate. Sodium vapor, mercury vapor or other metal halide light sources are not well suited for illuminating signs as they distort the color of both the building and the sign.

4. Sign brackets should be constructed of painted wood or pre-finished, pre-painted metal. Guy wires, if needed, should be as inconspicuous as possible.

5. Signs should be mounted in such a way so as to be reversible and to minimize damage to historic materials. (For example, bolts should extend through mortar joints and not through masonry units.)

6. Signs that are simple and externally lit are encouraged. Internally lit plastic signs are discouraged.

Appropriate storefront signage.
The use of the windows and lintel is uncluttered.



Inappropriate signage.
The signs are obtrusive and cover architectural details.

ARTIFICIAL SIDING

"Updating" a historic façade with artificial materials, such as vinyl or metal siding, EIFS or other covers, is inappropriate and should be avoided. Many owners utilize such sidings to cover up or avoid maintenance issues. These issues can be exacerbated by the installation of sidings, but then will be hidden. The appearance of artificial sidings is never convincing and looks out of place on historic structures. Often times, significant ornamental detailing is covered or removed in the application process.

PAINT

Many buildings on Main Street are unpainted brick masonry. Such buildings should remain unpainted. It preserves the appearance of the façade, and reduces maintenance. Most trim is painted, however, and can be an easy way of sprucing up a façade. Nearly all paint companies carry a historic color palette. Utilize these to get an idea of appropriate color schemes. However, most colors are acceptable, except for the use of bright and arresting colors such as fluorescents and bright primary colors. It is important to appropriately and gently clean and prepare the substrate for new paint, to ensure a lasting and appealing job.

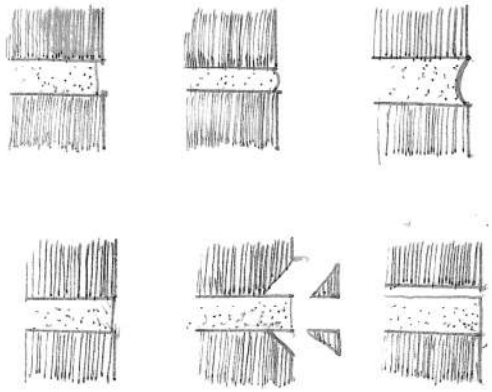
MASONRY

The vast majority of buildings on Main Street are of brick construction. Appropriate maintenance and cleaning procedures should be used to prevent harm and deterioration.

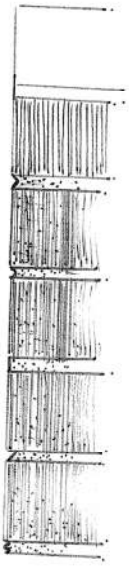
Masonry Repair

Deterioration of masonry is most frequently caused by moisture infiltration. This is usually due to faulty gutters, downspouts, leaky roofs, or other structural problems. Cracks in brick may also exist due to settled foundations, insufficient support over doors and windows, or mortar failure. With the exception of severe cases of deterioration, most typical masonry siding and ornamentation can be repaired or replaced by professional bricklayers and masons.

Historic mortar is generally a soft composition of lime and sand. This mortar allows for the expansion and contraction of masonry during warm and cold months. Joints are recessed behind the face of the brick. Hard or premixed mortars are not appropriate. The use of hard mortars will not allow old brick to expand and contract and results in brick deterioration. Most buildings have concave or flush joints and repointing shall follow these profiles. Mortar shall not be applied to cover the face of masonry or obscure detailing.



Characteristics of mortar in expansion and contraction cycles.



Mortar joint examples.

Masonry Cleaning

A century old building should not look brand new. This is important to remember when considering the cleaning of historic masonry. Over time staining will appear, and may not entirely disappear. There are several different types of cleaning. The gentlest method should always be approached first.

Water Cleaning
Main Street's buildings are over 100 years old, and will not look brand new. A gentle water and detergent wash should adequately clean surface dirt. Steam cleaning may also be acceptable.

Chemical Cleaners
There are acceptable chemical cleaners available if absolutely needed. However, utmost precaution should be taken with their use, and always test a small inconspicuous area to check for damage. Always follow the directions and clean up appropriately. Historic brick buildings are particularly susceptible to damage from hydrochloric (muriatic) acid, so these solvents are to be avoided.

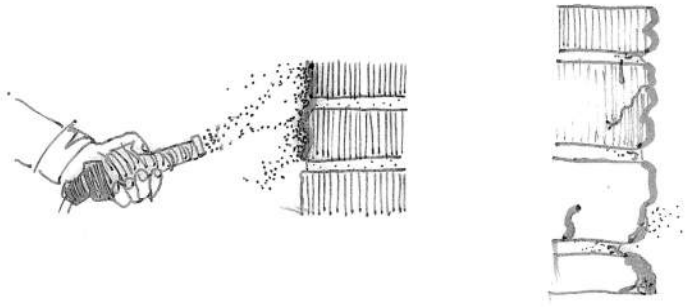
Abrasive methods

Abrasive cleaning methods, such as sandblasting or high-pressure water should ***never*** be used under any condition, as it will cause irreversible damage such as mortar deterioration and removal of the brick's hard exterior. Brick's skin is its durable, protective coating. Abrasive cleaning removes this skin, and leaves the softer interior brick exposed. Popular several decades ago, the negative long-lasting effects of abrasive cleaning have been well documented since that time.

MASONRY GUIDELINES

1. Use the gentlest means possible for cleaning masonry. Water and detergents are the least harmful to brick and stone surfaces.

2. Masonry repair, replacement or repointing should match the original brick in color, texture and character.



Negative impacts of abrasive cleaning.

3. Masonry repointing shall be undertaken using a soft mortar composition, and hard mortars such as Portland Cement should not be used.

4. Masonry walls should not be covered with any type of applied siding, including, but not limited to, artificial stone surfaces, stucco, concrete, vinyl, and metal siding.

5. Previously unpainted masonry should not be painted.

6. Masonry details and ornamentation should not be removed or obscured.

UPPER FACADES AND WINDOWS

Upper facades of the City's commercial buildings display a variety of architectural details and styles. While the storefronts tend to be more open glass areas, upper floors are more residential in nature. Decorative lintels often top double-hung windows, and most of the buildings have strong cornice lines with brackets or other decoration. Some buildings feature decorative glass and original windows. All efforts to maintain these should be made. Lintels, sills and decorative brackets should not be removed or covered over. Decorative elements such as belt courses, pilasters, window arches, lintels and frames should also be respected and maintained.

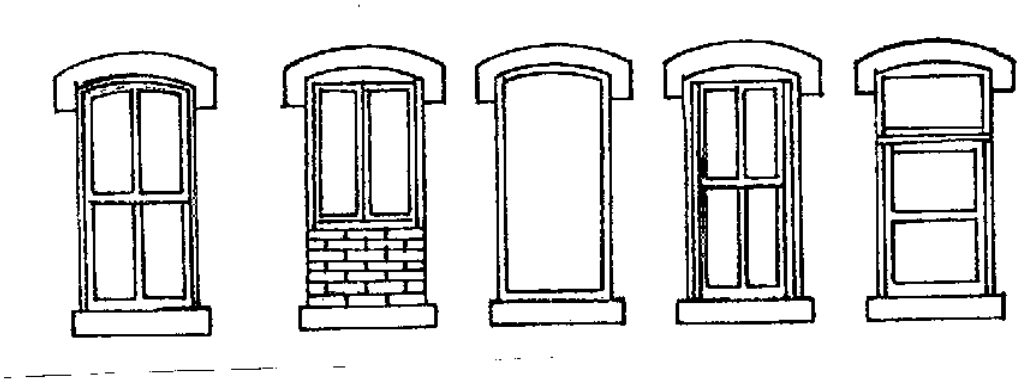
If upper story windows are blocked, consider reopening them. Even if the upper floors are not utilized, blocked windows create an appearance of vacancy and neglect. Compatible use for these spaces is encouraged.

Until a upper story window can be rehabilitated, the window maybe temporarily covered with plywood, but the owner should supply a restoration plan and schedule for rehabilitation before the cover is applied. Window openings may also be covered with plywood temporarily with a restoration plan and schedule as described above.

Preserve the size and shape of upper story windows. Do not use windows that do not fit the openings.

Original windows should be retained and restored. Historic windows contain wooden sill and muntins (glazing bars), and are naturally prone to damage from the elements, as well as time. Often the repairs that would have preserved these wooden windows were neglected, leading to their replacement with modern materials, most commonly vinyl windows. Such replacement is one of the most serious compromises to the integrity of a historic building. Also note that it is not necessary to remove existing glass to install thermopane for energy savings. Often, reglazing of existing windows and the addition of weather stripping and storm windows is sufficient for improving energy efficiency.

Original windows should be retained on the front façade. Secondary façades may allow for alternate materials such as aluminum wood-clad windows that are paintable, but restoration should be a first option that is considered.



Original window.

Examples of inappropriate window alterations.

UPPER FAÇADE GUIDELINES

1. Retain and maintain all architectural ornamentation. If deteriorated, replacement should match the size, material and design of the original.

2. Artificial sidings, including vinyl, metal, EIFS, and simulated masonry are not appropriate.

3. Retain and maintain windows. Decorative and distinctive windows should never be removed or replaced.

4. Do not enlarge, diminish, or block up upper façade windows, even if the space is not utilized.

5. Storm windows should be made of wood or baked enamel aluminum that is paintable. Storm windows should fit within the window opening therefore retaining the original size. Two-track storm windows are appropriate.

6. Wood-clad aluminum windows may be considered if the original windows cannot be rehabilitated with proof of their foregone condition. Vinyl windows are not acceptable.

ROOFS

The majority of roofs in the Historic District have low-pitched, "flat" roofs, often hidden behind parapets. Some structures have more complex roof massing. The roof pitch and details such as intersecting gables, raised platforms, and dormers with vented openings help define a building's character. Alterations to roof forms and detailing on the main facade and side facades should not occur if these alterations will be visible from the major street facade(s).

The raising of a roof to accommodate additional space, enlargement of attic areas, or the addition of skylights may be allowable depending on visibility from the street facade(s). In no instance should these additions exceed one additional story.

Many roofs in the district are, by their nature, not particularly visible. This should be retained, and roof additions or changes in the front 1/3 – ½ of the building should not occur.

Some buildings have roof ornamentation. These elements are important decorative features and should not be removed. Deteriorated sections should be repaired and retained where possible and removal should only be allowed where these features can be demonstrated to be beyond repair or pose a safety hazard.

Some buildings do not have visible gutter systems, while others are of boxed design. Boxed gutter are sunken behind the eaves and are not readily visible. These are important architectural elements that shall be maintained. All gutters and downspouts should be painted to blend with the surface colors of the building and be as unobtrusive as possible.

ROOF GUIDELINES

1. Roof forms and pitch shall not be altered on the main facade. Alterations shall not occur on side facades where such alterations would be visible from the street. Alterations in the rear one-half to one-third of a building may be allowable if not readily visible from the major street facade(s). In no instance should more than one-story be added to any existing building.

2. Roof ornamentation such as finials and balustrades shall not be altered or removed.

3. Original box gutters shall be retained and maintained. When relining box gutters metal shall be used. If soffits are damaged, they shall be repaired or replaced with wood to match the original materials.

4. Skylights should be located in the rear one-third to one-half of a building depending on visibility from the street facade(s). They are not appropriate on the front elevation.

NEW CONSTRUCTION

New, or infill, construction describes any new buildings or additions in an historic area. In order to be compatible with historic buildings new construction must follow certain guidelines, but flexibility in design review is also important.

Infill construction should clearly be contemporary and not be exact historic reproductions that could confuse an observer. The most successful new construction combines contemporary design with sensitivity to adjacent structures in the following areas:

1. **Height & Width**
2. **Proportion**
3. **Rhythm of Openings**
4. **Rhythm of Spacing and Setback**
5. **Consistent Materials and Texture**
6. **Roof Shapes**

Construction on vacant lots is appropriate and infill design guidelines are to guide new construction to be in keeping with adjacent structures. Insensitive new construction could result in lowered property values and compromises the aesthetic qualities of the district.

NEW CONSTRUCTION GUIDELINES

1. Height & Width

Buildings in the Historic District tend to share a similar height. Infill construction should respect this, and be neither too tall nor too short.

2. Proportion

The proportion between width and height should be respected.

3. Rhythm of Openings

Rhythms, such as size, shape and placement of windows that carry throughout the block should be continued on new construction.

4. Rhythm of Spacing and Setback

A new façade should be consistent with that of neighboring buildings. Nearly all historic commercial properties have a 0' setback from the sidewalk, and continuation of this is appropriate. Parking is more appropriate in the rear. The entry should face the street. Buildings should be spaced in accordance to surrounding structures.

5. Consistent Materials and Texture

New construction should be compatible with adjacent buildings on the block. While many properties are masonry construction, others are frame, and new materials, while possibly not all brick or stone, should complement historic materials.

7. Relationship of Roof Shapes

Roofs for new construction should be consistent with adjacent structures. The majority of blocks have flat roofs hidden behind the cornice. Do not introduce roof shapes or pitches that are not found in the area.

MAINTENANCE

Maintenance is the most important aspect of building ownership. Small steps on a quarterly or annual basis can save you from spending money on unnecessary repairs or replacement in the long run.

PARKING LOTS/SITE IMPROVEMENTS

Site improvements should be in character with the district, responding to the colors, textures, materials and sense of scale found in the area. Contemporary design is encouraged. The design should be compatible with district buildings and not detract from them. The design of the site improvements should capitalize on the unique character of the area but should not attempt to create a "false history" by incorporating elements which appear from an earlier time period.

The character of the district can be strengthened by screening parking lots. This is critical where parking lots abut sidewalks.

The environment off parking lots can be improved through landscaping. Trees on planting islands within the lot can provide shade and break up large areas of paving.

Paving materials, screen walls, landscaping, lighting, seating, and other "street furnishings" have an impact on district character. The design and placement of these elements should respond to the historic and architectural character of the district.

PARKING LOT/SITE IMPROVEMENT GUIDELINES

1. Cars should be screened from public view. Appropriate screening methods include masonry screen walls or iron fencing in character with the district and landscaping. Chain link fencing along sidewalks is inappropriate.

2. Parking lots with capacity of ten or more should contain trees within the lots as well as around the perimeter of the lots. Smaller lots should have trees and smaller bushes on them.

3. Paving materials should have the appearance of individual units to give the surface scale. Appropriate materials include brick, scored concrete, and unit pavers. The pattern of the paving should respond to the architectural setting by relating to elements of abutting buildings such as entrances and columns. The furnishings in these spaces should relate to the character of the district.

RELOCATION

Relocation or moving a historic building should also be avoided. Moving a historic structure always negates its integrity of site and setting and could also result in the loss of the ability to use the historic tax credit. Moving a building which retains its architectural and historical integrity and which contributes to the district is inappropriate.

Moving a building which does not contribute to the historical and architectural integrity of the district or which has lost architectural integrity due to deterioration and neglect is appropriate if its removal or the proposed replacement will result in a more positive visual effect on the district.

A building may be moved into the neighborhood if it maintains a sense of architectural unity in terms of style, height, scale, massing, materials, texture and setback with existing buildings along the street.

A building may be moved from one site to another in the neighborhood if the integrity of location and setting of the building in its original location is seriously threatened; if the new location will be similar in setting and siting; if the building will be compatible with the buildings adjacent to the new location in style, height, scale, materials and setback; and if the relocation will not result in a negative visual impact on the site and surrounding buildings from which it will be removed.

DEMOLITION

Demolition of buildings within the Downtown Portland Historic District must be approved by the Historic Preservation Commission except in cases where there is a threat to the public safety. The purpose of the historic district is to protect historic properties and the demolition of a building which contributes historically or architecturally to the character of the district is inappropriate and shall be avoided. Demolition shall only occur where it has been demonstrated that public safety is threatened; if economic hardship has been determined and the demolition is approved by the Historic Preservation Commission; or for buildings or additions which are of a later time period and non-contributing to the Historic District, have lost their original architectural integrity, or do not contribute to the neighborhood's streetscape as determined by the Historic Preservation Commission.

Demolition of existing buildings shall be permitted if one of the following conditions exist:

a. Demolition has been ordered by the Building Inspector for the public safety because of an unsafe or dangerous condition which constitutes an emergency.
b. The owner can demonstrate to the satisfaction of the Historic Preservation Commission that the structure cannot reused nor can a resasonable economic return be gained from the use of all or part of the building proposed for demolition.
c. The demolition request is for an inappropriate addition, or an incompatible building, and the demolition of said structure will not adversely affect the streetscape as determined by the Historic Preservation Commission.
d. The demolition reques is for a non-contributing portion of a building and the demolition will not adversely affect those parts of the building, which are significant as determined by the Historic Preservation Commision.

See staff for additional information required for demolition requests.

CERTIFICATE OF APPROPRIATENESS PROCESS
PORTLAND HISTORIC PRESERVATION COMMISSION

Any exterior alterations, new construction, or demolition in the Downtown Portland Historic District or at a landmark site must first be approved by the Portland Historic Preservation Commission or its staff. The proposed plans will receive a detailed review to ensure the changes are in compliance with the *Downtown Portland Historic District Design Review Guidelines* prior to issuance of a Certificate of Appropriateness (COA). There is no charge to obtain a COA.

You will need to provide the following information when you submit your application:

NEW CONSTRUCTION
Scaled Drawings
Site Plan
Photographs
Material List

ADDITIONS/ALTERATIONS
Photographs
Scaled Drawings
Material List

SIGNS
Scaled Drawings
Location of Sign on Property
Photographs
Width of Building
Lot Frontage

DEMOLITION
See Preservation Specialist for list of required documentation

The COA application will be reviewed by the Portland Historic Preservation Commission (PHPC) or its staff. If the application is in compliance with the *Downtown Portland Historic District Design Review Guidelines*, then staff can approve the application. Staff approves most applications within a few working days.

If the application is not in compliance with the *Downtown Portland Historic District Design Review Guidelines*, the application will be referred to the PHPC for a hearing.

The PHPC is made up of seven residents of Portland who have a strong interest in historic preservation, and a non-voting Advisory committee including a contracted consultant through Historic Landmarks Foundation of Indiana to serve as staff for the PHPC. The PHPC generally meets on the third Wednesday of the month at 5:30 p.m. in the John Jay Learning Center/Weiler Building, Second Floor Conference Room, Room 106, 101 South Meridian Street, Portland. The completed application must be submitted no later than fourteen (14) days prior to the scheduled meeting.

It may also be necessary to apply for a Certificate of Compliance or Building Permit. The *Downtown Portland Historic District Design Review Guidelines*, as well as copies of this application, are available at the Portland City Hall, or online at http://www.thecityofportland.net/.

City of Portland
321 North Meridian Street
Portland, Indiana
260.726.9395
260.726.9395 (fax)

Historic Landmarks Foundation of Indiana
P.O. Box 284
Cambridge City, Indiana
765.478.3172
765.478.3410 (fax)
inra@historiclandmarks.org

APPLICATION
CERTIFICATE OF APPROPRIATENESS PERMIT
PORTLAND HISTORIC PRESERVATION COMMISSION

Property Address

Owner Address (include zip code) Daytime Phone

Applicant (if not owner) Address (include zip code) Daytime Phone

Contractor Address/Office Phone

If you intend to make any changes to the following items, please mark each applicable category below. Give a detailed written description of those changes in the space provided. Include photographs, material samples, drawings, etc. as necessary to describe the proposed work.

Failure to supply adequate documentation could result in delays in processing the application and/or denial of the application.

Architectural Ornamentation _____
Awnings _____
Box Gutters _____
Chimneys _____
Cornice _____ _
Decks _____
Doors _____
Exterior Lighting ____
Fencing – Front Yard ____ Rear Yard ____
Landscaping ___
Masonry Cleaning/Repointing*____
Painting _____
Porch _____
Roof ____
Siding ____
Skylights ____
Storefronts ____
Utilities & Accessory Structures ____
Windows – Wood ____ Vinyl ____ Glass Block ____
Window Shutters ____
New Construction ____
Demolition ____
Other (specify) _____
Approximate cost of work to be done $_____

*If repointing, or any other masonry work is to be undertaken, historic mortar recipe must be used. Please describe the recipe in the scope of work to be done below.

Description of work to be done (attach additional information if needed):

The owner of this building and undersigned do hereby certify that the information and statements given on this application, drawings and specifications are, to the best of their knowledge, true and correct. The owner and undersigned further understand that no work can begin until this application has been reviewed and approved. Any work done that has not been approved will be in violation of the City of Portland's Historic Preservation Code. In signing this application, I understand that I am providing authorization for the posting of a public hearing notice on the subject property. I hereby certify that the owner of record authorizes the proposed work and I have been authorized by the owner to make this application.

_____ _____
Signature of Owner or Authorized Agent Date

FOR OFFICE USE ONLY:
APP # _____
COA # _____

For this project, have you:
Filled out a Building Permit Application? Y ___ N___
Filled out a Zoning Application? Y ___ N___

CERTIFICATE OF APPROPRIATENESS

PORTLAND HISTORIC PRESERVATION COMMISSION

Application #_____ **Date Issued:**_____ **COA#**_____

Property Address _____

Applicant: _____ **Owner/Resident:**_____
Address: _____ **Address:** _____
_____ _____

DECISION BY: **Staff** _____ **Date:** _____
PHPC _____ **Date:** _____

FINAL ACTION:

Approve: __ **Approve with condition:** _____ **Disapprove:** _____

WORK APPROVED, CONDITIONS, OR REASON FOR DISAPPROVAL:

_____ _____
PHPC/Secretary Date

Certificate: 1) mailed - 2) Left for pick up - 3) Sent to Building Inspection: _____
Date

This Certificate of Appropriateness approves only the work described. Any additional work or changes in the work described above must be approved by the Portland Historic Preservation Commission. This document certifies that the proposal meets design requirements only. A Certificate of Compliance or Building Permit must be obtained where required. Applicant is responsible for securing all appropriate permits.

Historic Landmarks Foundation of Indiana
P.O. Box 284
Cambridge City, Indiana
765.478.3172
765.478.3410 (fax)
inra@historiclandmarks.org

3 copies **#1 - COA file** **#2 - Property file** **#3 - Community Development**

CERTIFICATE OF APPROPRIATENESS

PERMIT

LOCATION: _____ PERMIT No:_____

FOR:

DATE : _____ _____
Historic Preservation Specialist

Portland, Indiana

This Certificate of Appropriateness approves only the work described. A Certificate of Compliance or Buidling Permit must be obtained where required. A condition of this Certificate is that this work be completed within 365 calendar days.

CREDITS

These guidelines were compiled by considering the following existing Design Guidelines:

1. Main Street Portland, Inc.; Portland, Indiana; *Downtown Design Guidelines*; 2008.

2. City of Cincinnati, Ohio; *Conservation Guidelines: Main Street Historic District*.

3. City of Newport, Kentucky; *East Row Local Historic District*; 1990.

4. City of Richmond, Virginia; *Design Guidelines for Commercial Buildings in the Richmond Historic District*; 2001.

CITY OF PORTLAND
Downtown Facade Funding Program
Program Guidelines

Program Overview

The City of Portland's Downtown Façade Funding Program is aimed at "strengthening the heart" of the Portland community by providing façade funding to businesses and property owners within the Downtown Historic District. The program has been funded and will be administered by the City of Portland. All funds awarded require a matching dollar for dollar expenditure by the owner or tenant. The 2010 program total is $50,000 for the year with a funding award cap per project of $10,000.

A Downtown Façade Funding Committee consisting of two members of the Portland Redevelopment Commission, two members of the Portland Historic Preservation Commission, and the Mayor will review each application. All projects must adhere to the Portland Downtown Historic District Design Guidelines. The Downtown Façade Funding Committee reserves the right to grant funds above the project cap to targeted projects that they believe will have a significant impact on the area.

Program Objectives

The primary objectives of the Downtown Façade Funding Program are to:

• Maintain vibrancy of the "core" of the Portland community – the downtown. This program will encourage investment that enhances the visual aesthetics of downtown properties and lead to increased property values.

• Stimulate economic development by providing incentives to increase existing business investment, ensure business sustainability, and create aesthetically pleasing areas that attract new businesses and consumers.

• Complement other revitalization efforts to ensure the maximum leverage of resources.

Program Criteria

• The eligible property must be located within the City of Portland Downtown Historic District Boundary (Attachment A, page 6).

• The funding program is a fifty percent matching funding program. Awards are available up to a maximum amount of $10,000 ($20,000 or more total project cost). The City may consider

larger award amounts in consideration of the size of project and level of private investment, and proximity or adjacency to other existing or proposed catalyst development projects.

• Applicants must provide proof that qualifying investment match has been paid before reimbursement of awarded funds.

• Applicants must have a signed funding agreement with the City of Portland prior to commencement of improvements. Other than for architectural design, project expenditures made before approval do not qualify as matching funds and are not eligible for reimbursement.

• If award recipients decide to change the project after approval, they must immediately contact the Program Coordinator for additional project review.

• If the applicant is not the owner of the building, written consent detailing the intended improvements must be obtained from the legal owner and be submitted with the application.

• Applicants must obtain one to two cost estimates for all eligible improvements for which funding is being requested, depending on the type of project. All improvements that are not eligible for City funding should be bid separately or itemized so that specific project costs can be easily determined. Bids must be made from the same scope of work by each contractor. Projects that are approved for funding will be based on the lowest and most qualified bids; however, applicants may select any of the submitted bidders to construct eligible improvements if the applicants choose to pay 100% of costs above 50% of the lowest qualified bid.

• Applicants may not be delinquent in property taxes.

• Applicants are responsible for obtaining any local and/or state permits.

• All projects receiving a grant award must comply with City of Portland Downtown Historic District Design Guidelines.

• All projects must follow the Secretary of Interior's Standards for Rehabilitation. Construction documents shall be prepared by an architect, design consultant, or contractor, preferably with experience in the building restoration field.

• Recipients of City funds must retain ownership of the building for five full years. In order to enforce this provision, the City of Portland will record a five-year forgivable mortgage (secured by a promissory note) against the property in the amount of the City's share of the total project cost. Five year forgivable loans will be forgiven at a rate of twenty percent of the mortgage value per year. If the ownership of the property voluntarily ceases within 5 years from the date of this agreement, by reason other than death of the recipient of the grant which would not be considered as a voluntary transfer, the entire grant or a percentage thereof shall be repaid to the City of Portland, Indiana.

Eligible Expenses

- Exterior building improvements
- Exterior lighting
- New or renovated signs
- Awnings
- Minor roof repairs (up to $5,000)
- Architectural design work (up to $2,000 in conjunction with another eligible expense)

Ineligible Expenses

- New construction
- Interior renovations
- Structural reinforcement of other parts of the building not listed above
- Costs associated with security systems, solar systems, satellites and other special needs
- Decorative fencing
- Landscaping
- Sidewalks on private property
- Project improvements commenced prior to the receipt of a signed funding agreement from the City of Portland (other than architectural design).

Application Process

A property owner or tenant interested in participating in the Downtown Façade Funding Program must submit a completed, signed application, along with required submissions to the attention of the Program Coordinator - Kristi Sturtz, Community Planner, Mayor's Office, City of Portland, 321 N. Meridian Street, Portland, IN 47371. If you have any questions specific to the program you can contact Ms. Sturtz at (260) 490-9739 or Kristi@sturtzpmg.com or leave a message with the Mayor's Office at (260) 726-9395. Personal appointments can be made upon your request. The application deadline is February 15, 2010.

Application Submission

The following items must be submitted as part of the application package.

a. Completed and signed application form (Attachment B, pages 7-9)

b. Support data checklist (Attachment C, pages 10)

c. Current photography of property to be improved (1 hard copy and 1 digital)

d. Written description of project improvements including material list and color selections

e. Construction drawings of proposed improvements (if applicable)

f. One to two bids/estimates to complete the project (depending on the project-see support data checklist)

g. Tenants must provide written documentation verifying the property owner approves the proposed enhancements.

h. Tenants must submit a copy of their lease agreement.

Preliminary Approval

Applications will be forwarded by the Project Coordinator to the Portland Historic Preservation Commission (PHPC) to ensure that applications meet Historic District Guidelines and a Certificate of Appropriateness (COA) is obtained. The PHPC will review applications as part of a special meeting to be held on March 3, 2010 at 5:30 P.M. in the Weiler Building (John Jay Center for Learning) Community Room on the Second Floor, 101 South Meridian Street, Portland, Indiana 47371. The meeting is open to the public. Applicants must attend, be prepared to present their application, and answer any questions Commission members may have. An onsite inspection of the property with the applicant by members of the PHPC may be required depending on scope of work. Any unresolved questions regarding applications will be addressed at the regularly scheduled Historic Preservation Commission meeting scheduled on March 17, 2010 at 5:30 P.M. in the Weiler Building Community Room.

Notification of Award

If proposed work is approved by the PHPC and a Certificate of Appropriateness (COA) is issued, the application will be forwarded to the Façade Funding Committee for funding consideration. The Committee will rate the applications based upon several factors including building location, extent of rehabilitation work, impact of the project to the downtown, additional investment,

current and proposed uses, and historic rating. An example rating sheet has been provided as Attachment D, on pages 11-12.

The Façade Funding Committee will notify applicants regarding award approximately 30 to 60 days from the application deadline date. No work for which funding or local match is sought should begin until a Certificate of Appropriateness has been secured, funding is authorized by the Façade Committee and a Notice to Proceed is issued.

Agreement

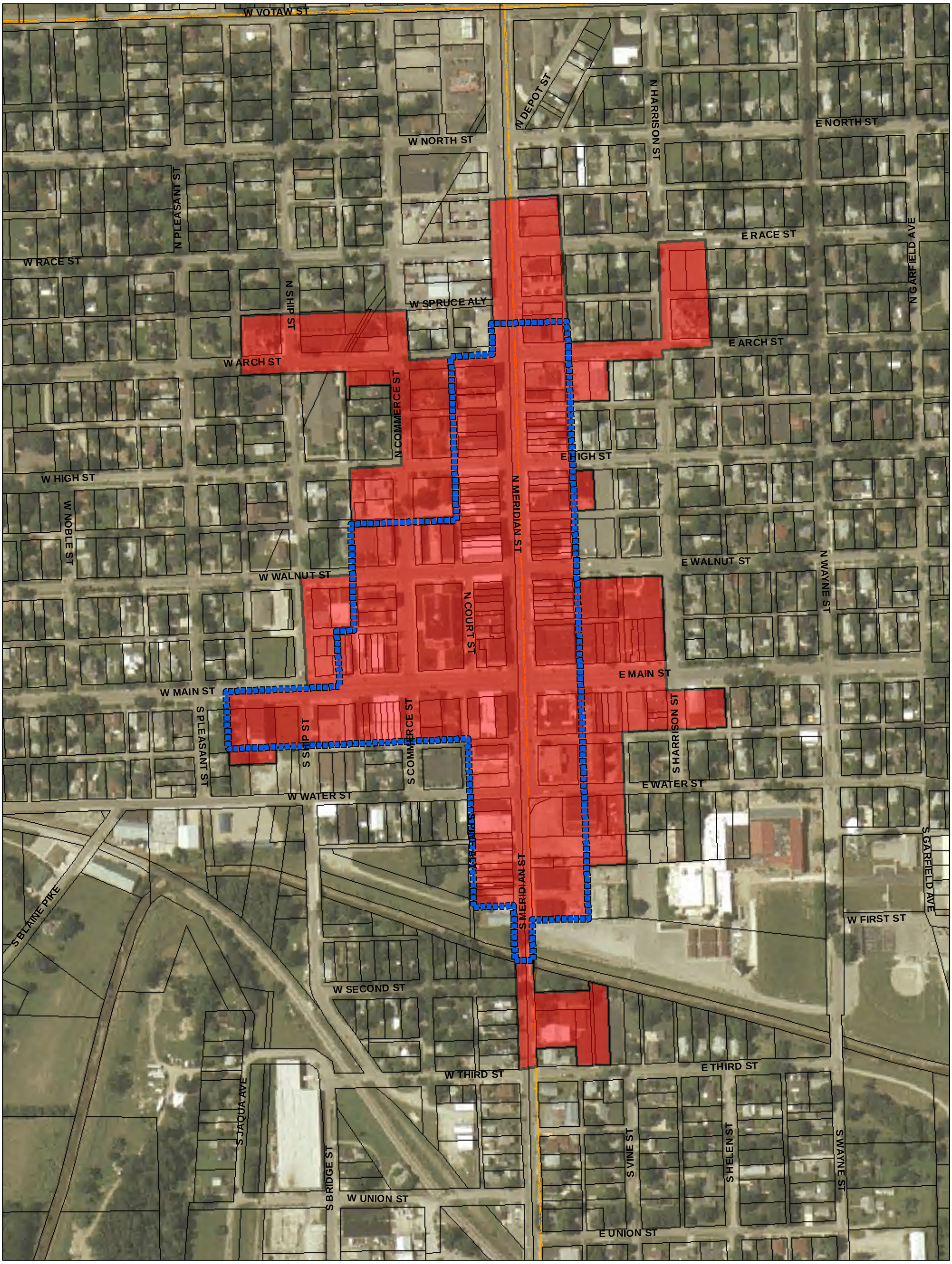
A signed Funding Agreement, Mortgage and Promissory Agreement will be required by the City of Portland before construction can begin. The grantee is responsible for obtaining any permits required to do the project. Permit fees are not included as part of the funding. Once construction begins, if the Grantee decides to change the project after the issuance of a Certificate of Appropriateness, they must contact the Program Coordinator. ***Any unapproved changes may void the funding.***

Payment

Payment will be made as reimbursement to the awardee upon verification that qualifying investment match has been paid and that work has been completed according to the application and in adherence to the Portland Downtown Historic District Design Guidelines. Drawdown requests including copies of invoices and proof of local match payment such as a cancelled check should be submitted to the attention of the Program Coordinator. Upon verification of work and local match payment, drawdown requests will be presented to the Clerk Treasurer for payment. Payment will typically occur within two weeks of the submission of a drawdown request. General Contractor's Affidavit, Warranty & Lien Waiver, and Release of Liens and Warranty Forms should be submitted to the Program Coordinator upon completion of work. All façade improvements, for grant awards of $10,000 or less, must be completed within 6 months of project approval. Extensions may be granted on a case by case basis.

Questions

For more information about Portland's Downtown Facade Funding Program, please contact the Program Coordinator, Kristi Sturtz, Sturtz Public Management Group, LLC, kristi@sturtzpmg.com, (260) 490-9739 or leave a message for Ms. Sturtz at the Mayor's Office at (260) 726-9395.



Map Prepared for

SPMG

Sturtz Public Management Group, LLC

Map Printed by

Schneider

October 2nd, 2008

City of Portland Downtown Historic Preservation District

Portland Downtown National Register District and Downtown Protion of TIF District Allocation Area # 1

Proposed Historic Preservation District

0 150 300 600 900 Feet

ATTACHMENT B

CITY OF PORTLAND
Downtown Facade Funding Program
Application

Application Date: _____

Building Address: _____

Date of Construction: _____

Building Owner: _____

Address:_____

City:_____State:_____Zip: _____

Phone:(H)_____(W)_____(email)_____

Legal Description: _____

Current Use of Building Including an Explanation of Business Operations:

_____

_____

Use Following Rehabilitation: _____

_____

_____

ATTACHMENT B

Type of façade improvement planned. Please note all that apply and attach the Supporting Data Checklist.

Signage: Removal_____ New_____ Altered_____ Repaired_____

Awning: Removal _____ New _____ Altered _____ Repaired _____

Painting (approximate sq. ft. area):_____

Structural Alterations:_____

_____

Cosmetic Alterations: (molding, windows, storefronts, etc.)_____

_____

Masonry Repairs:
Other (Please specify): _____

_____

Project Costs: (contractor or architect estimates must be attached)

1. Estimated Construction Costs: $_____

2. Estimated Design Fees: $_____

(Must include preparation of construction drawing and specifications, construction supervision and payment approval.)

3. Total Project Costs (Construction Costs plus Design Fees): $_____

4. Request for Funds: _____% $_____

* This is a 50% grant program; therefore no more than 50% of the total project cost up to $10,000 may be requested.

ATTACHMENT B

I hereby submit this application, support data checklist and supportive documents for the proposed project. I understand that in order for project costs to be eligible for grant reimbursement, no work shall begin until I have received a Certificate of Appropriateness from the City of Portland Historic Preservation Commission and all other necessary building permits, and a signed grant agreement with the City of Portland. I further understand that the project must be complete. I also agree to leave the complete project in its approved design and colors for a period of five (5) years from the date of completion.

Property Owner's
Signature_____Date_____

Tenant's
Signature (if applicable)_____ Date_____

ATTACHMENT C

CITY OF PORTLAND
Downtown Façade Funding Program
Support Data Checklist

Please submit this checklist as part of your application.

General:

_____ Application
_____ Current photograph of property to be improved
_____ Written description of proposed improvements, including all material and colors

Signs:

_____ Provide a color rendering of the design chosen
_____ Include specifications as to the size and width of the sign
_____ Note how and where the sign will be hung on the building
_____ Submit a written estimate from the sign company

Paint:

_____ Provide samples of the colors chosen and mark which color will be the body color and which will be the accent colors
_____ Note where each color will be used
_____ Submit written estimates from a minimum of two painters

Awnings:

_____ Provide information about the color and style of awning chosen
_____ Note where the awnings will be placed on the building
_____ Submit written estimate

Major Façade Alterations:

_____ Provide a rendering of major changes, including paint and awning colors, where applicable
_____ Submit written estimates from a minimum of two contractors

All Projects Proposed by Tenants:

_____ To be eligible for the grant, tenants need to provide written authorization for the work from the property owner and a copy of a lease agreement

ATTACHMENT D

CITY OF PORTLAND
Downtown Façade Funding Program
Program Rating System

BUILDING LOCATION (15 point max.)

On Meridian Street (10 points) _____
On Courthouse Square (8 points) _____
On a corner (5 points) _____
Interior of block (4 points) _____

EXTENT OF REHABILITATION WORK (25 point max.)

Assign points in ONE category

A. Exterior is completely covered with inappropriate material, all of which will be stripped. The building will be returned to its original condition. (25 points)

_____

B. Exterior is partially or completely covered with inappropriate material, a portion of which will be restored to its original condition. (up to 20 points)

_____

C. The applicant proposes to restore a basically unchanged exterior (windows, doors, cornice, detailing, etc.) (up to 15 points)

_____

IMPACT OF PROJECT ON DOWNTOWN PORTLAND (25 point max.)

Add points for overall impact of the project on downtown. Consider visual impact, project completes a block, etc. (up to 15 points)

_____

Consider economic impact only (up to 10 points) _____

ADDITIONAL INVESTMENT (15 point max.)

Add points for additional work to be completed but NOT funded by this grant _____

ATTACHMENT D

CURRENT/PROPOSED USE (20 point max.)

A. Commercial Space (10 point max.)
Currently occupied commercial space will remain occupied _____
Currently unoccupied commercial space will become occupied _____

B. Residential Space (10 point max.)
Add one point for each residential unit currently occupied which will remain occupied. _____

Add one point for each new unit that will be developed or rehabilitated _____

HISTORIC RATING (20 point max.)

A. Outstanding/Notable (20 points) _____
B. Contributing (15 points) _____
C. Non-Contributing (10 points) _____

PREVIOUS AWARDS (10 point max.)

A. No previous awards received (10 points) _____
B. Previous award received over 2 years ago (5 points) _____
C. Previous award received in the past 2 years (0 points) _____

TOTAL POINTS _____

The Review Process for the Certificate of Appropriateness

Property Owner has a Project

All property owners within the district are required to obtain a COA before beginning any work.

Property Owner contacts Commission Staff

Commission Staff will provide guidance and recommendations to ensure that the project is within the Design Guidelines.

Property Owner submits COA Application

Application includes the application form and supporting materials: drawings, photographs, details on proposed materials, dimensions, colors, etc. as appropriate. This should be completed 14 business days before the Commission's meeting in order to be heard that month.

Staff sends project to Commission

If project is larger in scope, the Commission will review and received Staff recommendation. The Commission meets the third Wednesday of every month.

Staff approves project

If Project is within the Guidelines or is a basic maintenance issue, the project is issued a COA and may proceed with the work after also obtaining the required zoning compliance and/or building permit.

Commission approves project

If project is within the Guidelines or issues are resolved, the project is issued a COA and may proceed with the work after also obtaining the required zoning compliance and/or building permit.

Commission does not approve project

If Project is not approved, the property owner must return to the Commission with revised plans in order to proceed. The Commission will provide guidance to how the project may be improved.

Property Owner returns with revised plans

Above steps are repeated. If project is approved, then the project may proceed. If project is not approved, then the property owner must continue to improve the plans for the project. If the property owner feels the Commission is making an arbitrary and capricious decision, they have the option to appeal the decision to the court system.

City of Portland, Indiana

Downtown Historic District

The Review Process Overview and FAQs

City Of Portland
EST. 1836
Indiana

compiled by joseph jarzen, historic landmarks foundation of indiana, april 2009

Frequently Asked Questions

Will inclusion in a Local Historic District restrict how I may use my property?

No. A local historic district is generally "overlaid" on the existing zoning classifications in a community. Therefore, a local district commission deals only with the appearance of the district, not with the uses of those properties.

Will inclusion prevent me from making changes to my property?

Designation does not prevent owners from making changes to their properties, nor does it require them to restore or even fix-up their property (unless they are allowing it to deteriorate and collapse). Designation ensures that alterations, additions or demolitions are in keeping with special character of the area. This happens through a process called design review, whereby the Historic Preservation Commission approves major changes that are planned for the district and issues Certificates of Appropriateness (COAs). Local designation encourages sensitive development in the district and discourages unsympathetic changes from occurring.

What is a Certificate of Appropriateness (COA)?

A COA is an official City document required before any permit can be issued for demolition, new construction, moving a building or any proposed exterior alteration according to the Downtown Portland Historic District Guidelines. The COA affirms that in the opinion of the Portland Historic Preservation Commission, the proposed activity is consistent with historic preservation standards and will not have a negative effect on any significant historic resource. Any work being completed without a COA will be required to stop work until the COA and a Certificate of Compliance or Building Permit from the City Planning office are acquired.

What sorts of changes require a COA?

Minor repairs and ordinary maintenance, such as repainting and repairing a roof with the same materials, does not require a COA. A COA would be required for work that physically alters the appearance of the property, such as replacing windows and doors, installing artificial siding, enclosing a porch, adding a fence or demolishing all or part of a structure. Interior changes that do not affect the outside appearance are not reviewed.

Are all buildings in Local Historic Districts necessarily historic?

No. A major goal of local historic districts is maintaining the overall character of the area. When the boundaries are drawn for a local historic district, it will often include non-historic properties and vacant lots. Projects to non-historic properties will not be reviewed, however, it is appropriate that the basic guidelines are used to be consistent and have as little negative impact on the area or on adjoining buildings as possible.

What information do I need to provide?

A complete application must contain the following information:

- Photographs of the property to document existing conditions
- Samples of any new materials to be introduced
- Drawings of your project, showing dimensions, details and materials.

How do I obtain a Certificate of Appropriateness?

Once you submit your application, the Historic Preservation Commission Staff will review the proposed work, consult the design guidelines and determine if the Commission needs to review the matter. The time line for approval depends on the nature and scope of the proposed work. The Commission Staff may approve simple, routine improvements. In general, larger or more complex projects require a hearing before the Commission, which meets the 3rd Wednesday of each month. The deadline for submitting material for consideration is 14 business days prior to the meeting.

When can I begin work on my project?

The applicant is responsible for meeting all provisions of the city's building and zoning codes prior to beginning work.

NOTE:
You must post your Certificate of Appropriateness, along with all other required permits, in a publicly visible location on your property. The Certificate must remain posted for the duration of your project.

If I disagree with a decision made by the Commission concerning my Certificate of Appropriateness application, may I appeal?

Yes. Appeals may be made to the Circuit Court, who will determine if the HPC abused its discretion – not following the standards in the ordinance or the design guidelines – in reaching their decision. A property owner has 30 days to appeal a decision.

What might happen to the value of my property if it is included in a Local Historic District?

Designation of an area as a historic district will not directly affect property values. Because Local Historic District properties are protected from insensitive development, owners may be more inclined to make improvements to their properties, and this may increase the value of all property in a given district.

National and statewide economic studies show that historic district designation first stabilizes property values, and then slowly values begin to rise. In most cases properties in local historic districts appreciate at rates greater than: (a) the local market as a whole, and (b) similar neighborhoods that are not designated. This is akin to the principal behind subdivision covenants, which are put in place by a homeowners association to ensure quality improvements and to enhance property owners' investments (though private covenants are often more restrictive than public ordinances). Remember that *if* property taxes go up, it means the value of your investment in the property is going up.

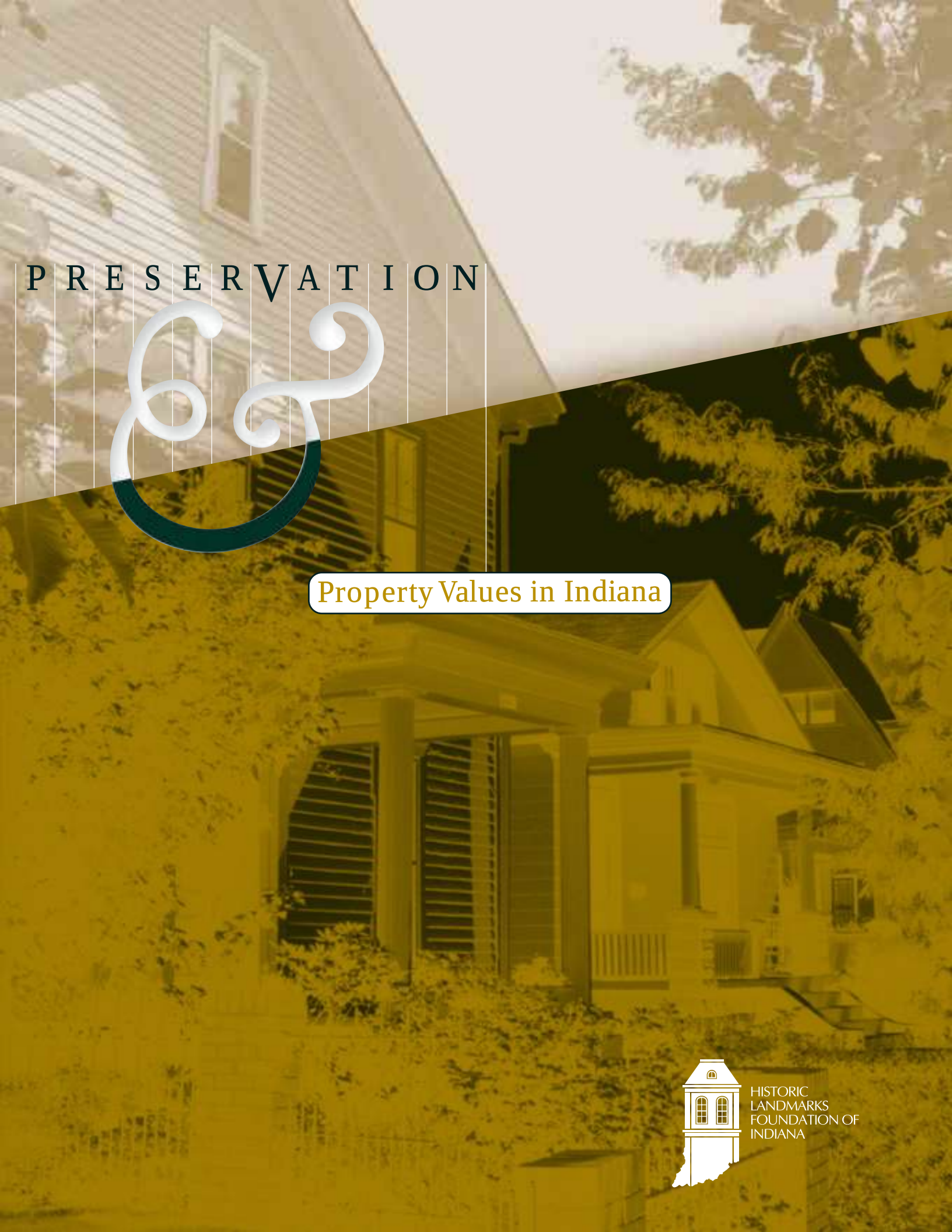
Who may I contact for more information or to begin the COA process?

The City of Portland is contracted with Historic Landmarks Foundation of Indiana to provide staffing assistance and guidance to the Preservation Commission and public. Commission staff shall provide recommendation to the Commission for all project reviews. Information and applications for a COA should be directed to:

Joseph Jarzen
Historic Landmarks Foundation of Indiana
P.O. Box 284
Cambridge City, IN 47327
765.478.3172
765.478.3410 (fax)
inra@historiclandmarks.org

For general questions about the Design Guidelines, the public may also contact any one of the five (5) Preservation Commission Members or Jane Spencer, President of the Commission. For additional assistance, the public may also contact:

Ami M. Huffman, Director
Jay County Community Development
118 South Meridian Street
Portland, Indiana
260.726.3497
260.726.4477 (fax)
jccd@omnicityusa.com



PRESERVATION &

Property Values in Indiana

HISTORIC LANDMARKS FOUNDATION OF INDIANA

PRESERVATION &

Property Values in Indiana

Donovan D. Rypkema

Historic Landmarks Foundation of Indiana
Indianapolis

PREFACE

Historic Landmarks Foundation of Indiana has advocated local historic districts as a method of revitalizing and protecting landmark neighborhoods for more than 30 years. Time enough to develop a measurable track record, and to evaluate the bottom line.

We believed local district designation was making a difference because we could see the positive changes. Take Lockerbie Square in Indianapolis, for example. In 1974, boarded and dilapidated houses and unsightly vacant lots dominated the area around the preserved museum home of James Whitcomb Riley. Today, Lockerbie is a charming restored neighborhood and a highly desirable downtown address where property owners must receive prior approval from the Indianapolis Historic Preservation Commission for exterior rehabilitation, new construction, and demolition. Virtually every house has been restored, and nearly every vacant lot filled by a new home.

We concede that Lockerbie had some early advantages, not least of which was Historic Landmarks' dramatic transformation of a key property and a revolving fund we operated there which caused the timely restoration of many houses. In an average district, we wondered, what hath local designation wrought? Does the visual and economic improvement exist only in the eyes and minds of preservationists?

Historic Landmarks Foundation decided property values provided one concrete measure of the effect of local historic districts. To quantify the impact of local districts on property values, we commissioned Donovan Rypkema, a Washington, DC real estate expert. We collaboratively selected representative districts in Anderson, Elkhart, Evansville, Indianapolis and Vincennes for the study. Rypkema's study methodology, detailed on the next page, centered on Multiple Listings Service and U.S. census data.

I'm pleased to report that our instincts are solidly verified by the numbers. As this study shows, property values rise with local historic district designation, equaling if not outpacing similar, undesignated areas and often the performance of the city as a whole. In addition to documenting the positive economic effect of such protective regulation, the study reveals other benefits—we call them "historic district bonuses"—both for the residents and the community as a whole.

We hope Preservation & Property Values is useful to communities throughout Indiana as they weigh the benefits of creating preservation commissions and designating older neighborhoods as historic districts.

J. Reid Williamson, Jr.
President
Historic Landmarks Foundation of Indiana

September 1997

INTRODUCTION

The question was straightforward—"What is the impact on property values of local historic districts in Indiana?" Historic Landmarks Foundation of Indiana commissioned me to answer that basic question, and to analyze the data for other effects.

I collaborated with Historic Landmarks in the selection of local historic districts in five cities, guided by the desire to represent the geography of the entire state and communities of various sizes. We chose districts in Anderson, Elkhart, Evansville, Indianapolis and Vincennes; these districts also represent variety in terms of building size, age, price, architectural quality and demographic characteristics. Four districts in the study are residential; in one case, the study focused on the predominantly commercial area of a district. Finally, we chose local historic districts which have been in place long enough for the impact on property values to be measurable.

These findings reveal that local historic districts in Indiana not only provide valuable protection for each community's historical resources but protect and enhance individuals' financial resources as well. In looking at local historic districts in five Indiana communities we learned that:

- In Anderson the values of properties in the study areas steadily appreciated after the creation of the historic districts.
- In Elkhart the rate of appreciation of properties in the historic district, a particularly depressed area, mirrored the rate of appreciation of the entire Elkhart market.
- In Evansville the appreciation of properties within the local historic district outpaced both the surrounding historic properties not included in the local district and the overall Evansville market.
- In Indianapolis the property values in the local historic district increased at a rate consistent with the metropolitan Indianapolis overall market and exceeded the rate of both the adjacent and highly similar neighborhood and the larger area of Indianapolis within which it sits.
- In Vincennes, while the amount of appreciation over the fifteen-year period was modest for both commercial and residential properties, commercial properties in the downtown historic district maintained a pattern of appreciation similar to both the rest of the commercial properties and the overall Vincennes real estate market.

The cities within which the districts were located varied widely in size, location within the state, and health of the local real estate market. In spite of these variations the results were remarkably consistent: regardless of the historic district, the community,

the type of property, or the condition of the local real estate economy, no evidence was found to suggest that a local historic district adversely affected property values.

The Multiple Listings Service and U.S. Census data that was analyzed also showed several other substantial benefits of local district status:

- Historic districts often mirror the entire community in terms of their economic, educational and racial diversity.

- Historic districts promote increased levels of home ownership.

- People moving into historic districts aren't just passing through but tend to be home owners for extended periods, adding stability to the neighborhood.

- Buyers who choose historic districts often have wider choices and get more house, dollar for dollar, for their money.

- Historic downtown still effectively serves its traditional multifunctional role in a community.

When the subject of historic district status is raised in a city or neighborhood, Historic Landmarks Foundation reports that the most common, anxiously posed question is "Won't my property values go down if I have to submit to whatever requirements the preservation commission decides to impose?" In addition to providing an authoritative answer—"No, your property values will not decline; in fact, they will probably rise."—this investigation of years' worth of historic preservation commission records suggests that commissions neither prevent investment in new construction nor routinely say "no" to the proposals before them.

These findings should encourage communities to create local historic districts. In neighborhoods designated and regulated by historic preservation commissions, property values are generally positively affected; change that is positive for the district is not only allowed but actively encouraged; and investment often takes place when a neighborhood's assets are protected. The mathematically demonstrable evidence shows such districts to be valuable tools for safeguarding and strengthening the physical, economic and social fabric of Indiana's neighborhoods and cities.

Donovan D. Rypkema
Real Estate Services Group
Washington, DC

STUDY METHODOLOGY

The criteria used to determine the cities and districts included in the Preservation & Property Values study were outlined in the introduction. After jointly selecting the geography to be studied, a variety of methodological approaches was used in order to learn as much as possible within the budgetary scope of the project. Multiple Listing Services (MLS) data maintained by the local Boards of Realtors provided the base data for all property value comparisons. However, also evaluated were census data, records of local preservation commissions, City Directories, and other public records.

Every sale reported in the subject districts was included for evaluation, and contributed to the calculations and graphs of the average yearly sales price for the fifteen-year period from 1980 to 1995. Because of the relatively small number of sales in any year in a given district (sometimes as few as four or five) the unadjusted sales data do not provide an accurate reflection of changes taking place over time. Therefore the graphs in this report depict the trend line, superimposed over the raw data represented in the columns shown behind the trend lines. The trend lines were created mathematically by Microsoft Excel™ using the formula y = ce ^bx.

Where trend lines and narrative show property value comparisons to the city as a whole, they are based on a comparison of MLS data for every sale (residential sales in four cities and commercial sales in Vincennes) recorded during the study period. In the case of Vincennes, MLS data was examined for every commercial sale within the downtown Vincennes historic district between 1982 and the first quarter of 1996. These figures were then compared with all of the commercial sales outside of the downtown over the same period, as well as the average MLS sales price of all properties sold during the period.

Anderson

Anderson, (pop. 60,000) in east central Indiana has two historic districts—the West 8th Street Historic District (WESHD) and the West Central Historic District (WCHD)—both created in 1985 and viewed with pride by the community. In fact, *Community Profile: A Vision for the Future 20/20 Foresight* proclaimed "the need to preserve and protect the distinctive qualities of historical, architectural and culturally significant buildings of the districts is essential in enhancing the quality of life in our City." The Anderson Historic and Cultural Preservation Commission carries out local design review in the districts, including approval of proposed exterior renovation and new construction. Both districts also are listed in the National Register of Historic Places.

WHAT HAPPENED TO PROPERTY VALUES?

From 1980 to 1995, both the West Eighth Street Historic District and the West Central Historic District experienced property value appreciation. The trend of appreciation accelerated slightly after the creation of the historic districts in 1985.

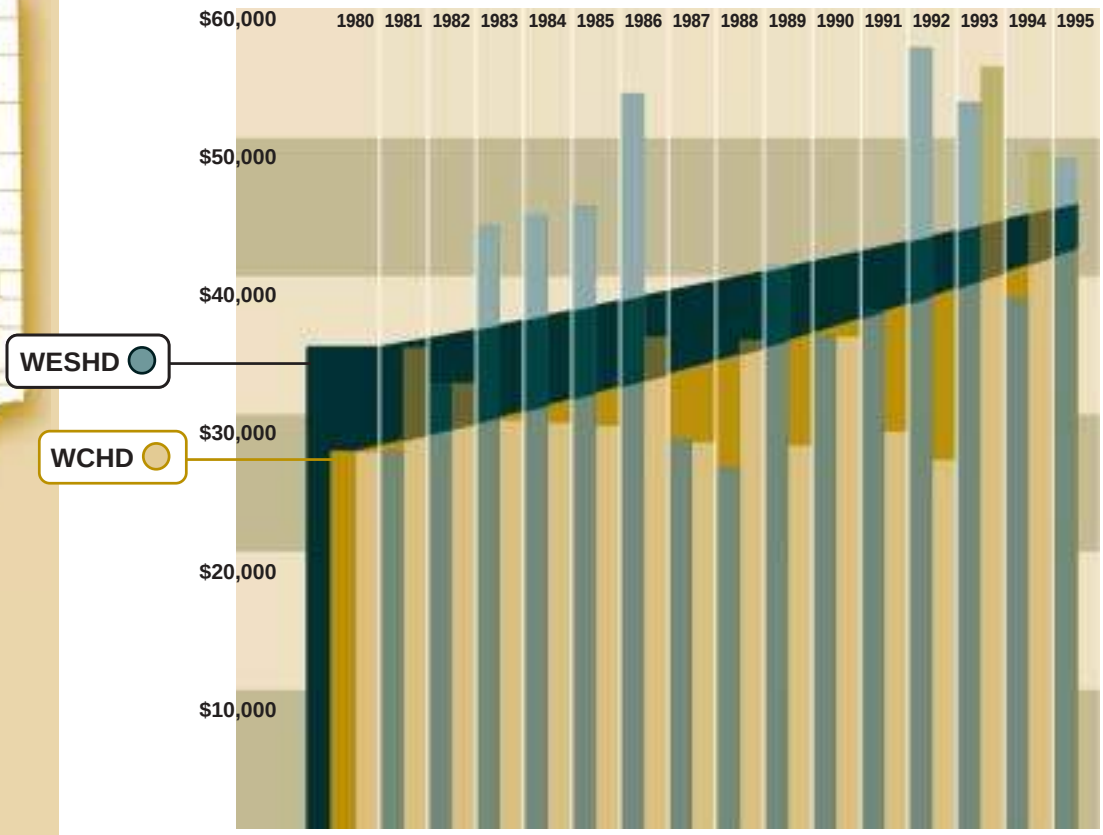
HISTORIC DISTRICT BONUS

Buyers who decide on houses in historic districts often have wider choices and get more for their money.

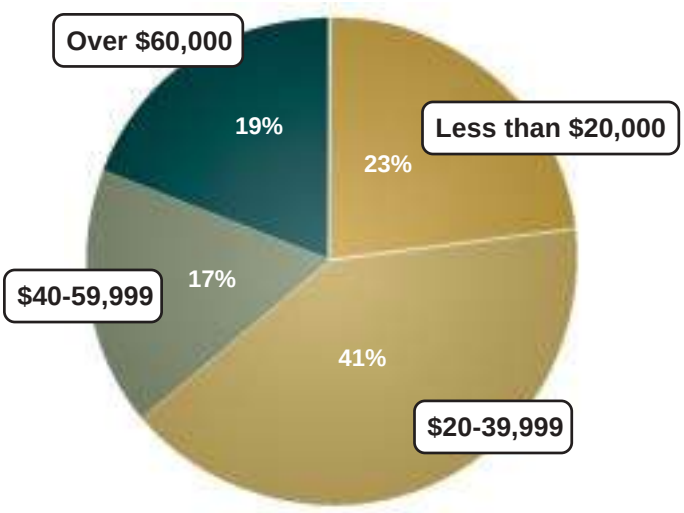
In Anderson, real estate professionals identified five neighborhoods that offered choices for first-time home buyers and those looking for housing in the more affordable range: the two historic districts and three newer subdivisions (Hilltop, South View and Meadowbrook). While houses in the historic districts fell in the middle of the range of average selling prices—from $52,853 in Hilltop to $32,171 in Meadowbrook—the homes are 79% larger on average than homes in the subdivisions. Historic district buyers therefore got much more house for their money: $14.70/square foot in West Central and $21.50/square foot in West Eighth Street versus $32-37.80/square foot in the newer neighborhoods.

The Anderson historic districts offered another advantage over the other neighborhoods (see charts at right). Buyers could choose from a substantial number of houses at several price points: they could easily find a home for less than $20,000 (23%) or over $60,000 (19%), or somewhere in between—$20,000-39,000 (41%) and $40,000-59,000 (17%). The range of housing options was much narrower in the three competing neighborhoods, where only 5% of homes sold for less than $20,000 and just 8% could be purchased for over $60,000.

Property Values: Anderson Historic Districts



Housing Options – Historic Districts



S N A P S H O T S

Building accelerated in both areas following the 1887 discovery of natural gas, when Anderson promoted itself as the "Queen City of the Gas Belt."

West 8th Street Historic District

Boundaries: 7th, 9th, Jackson and Henry streets

Period of significant architecture: 1860-1890

Number of buildings: 271 structures

Predominant architectural styles: Gothic, Greek Revival, Italianate, Free Classic, Colonial Revival

West Central Historic District

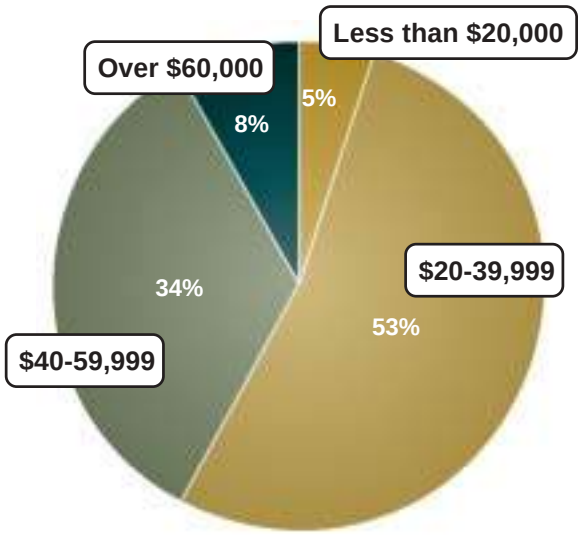
Boundaries: Brown-Delaware, 10th, John and 13th streets

Period of significant architecture: 1885-1910

Number of buildings: 192 structures

Predominant architectural styles: Italianate, Queen Anne, Bungalow

Housing Options – Newer Subdivisions



Buyers in Anderson's historic districts—West 8th Street (above) and West Central (left)—get more space and architectural detail for their money than buyers in recently developed neighborhoods.

Elkhart

The State-Division Street Historic District ranks as the "first fashionable subdivision" in the northern Indiana city of Elkhart (pop. 45,000). First developed in the 1860s and 1870s following the arrival of the Lake Shore and Michigan Southern Railroad shops, the area housed an economically diverse population from its earliest days; while single-family homes predominate, the area also contains row-houses, flats, and duplexes. The Elkhart Historic & Cultural Preservation Commission locally designated the near-downtown district in 1984 and exercises review over renovation, demolition and new construction in the district. A nomination currently is being prepared to list the district in the National Register of Historic Places.

WHAT HAPPENED TO PROPERTY VALUES?

The study produced two conclusions: first, the rate of appreciation within the historic district paralleled the appreciation rate in the city of Elkhart as a whole over the period from 1980 through 1995; and second, the average values of housing in the historic district were significantly below average values in the city. The latter finding suggests that the historic district provides affordable housing—and appreciating assets—to people of modest means.

HISTORIC DISTRICT BONUS

The historic district reflects the breadth of the community's diversity.

Many neighborhoods, particularly newer subdivisions, house narrow slices of a community's population. Few neighborhoods reflect the economic, social, racial, and educational diversity of the entire community. This is true in small and large cities alike, not only in Indiana but throughout America. However, every residential historic district included in this study

Property Values: Elkhart Market & Historic District

S N A P S H O T

State-Division Street Historic District

Boundaries: Midpoint of lots facing Marion St. (N), NYC Railroad (S), Monroe and Waterfall streets (E), midpoint of lots facing Main Street (W)

Period of significant architecture: 1860s-1920s

Number of buildings: 127 structures

Predominant architectural styles: Italianate, Queen Anne, Neoclassical, Stick Style, Four Square, Bungalow

Research in Elkhart shows that historic districts like State-Division Street offer appreciating property values, stability, and socio-economic diversity.

displayed a greater range of the community's entire population among its residents than other areas, whether newer subdivisions or older neighborhoods not recognized as historic districts (see chart on page 13).

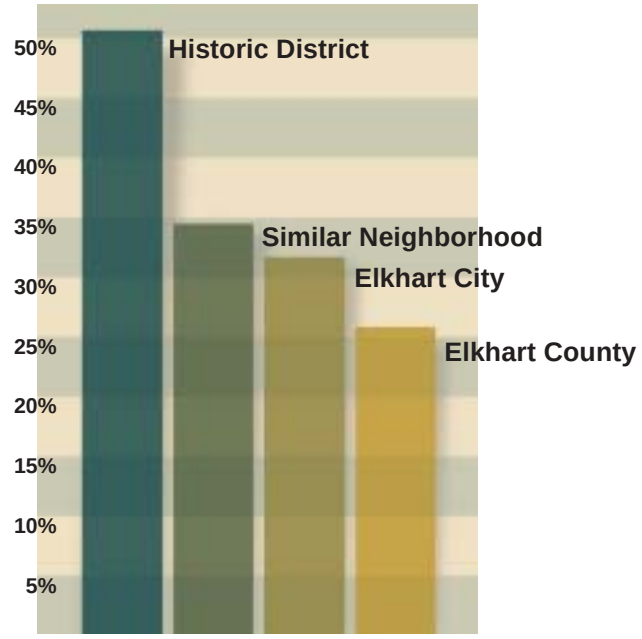
Elkhart's State-Division Street Historic District serves as a useful example. In three demographic categories—race, occupation and education—residents of the historic district closely reflect the entire community. No other neighborhoods in the city came close to mirroring the community as a whole.

The Elkhart historic district is less reflective, however, in one important area —income. The district encompasses a greater percentage of both Elkhart's high- and low-income families (with the spectrum in between also represented) in a single neighborhood. While there are a variety of perspectives on urban problems in America, there is an almost universal agreement that isolating less well-to-do citizens in exclusively poor neighborhoods serves no one well. That Elkhart's historic district—and every other one in this study—provides an economically integrated neighborhood is one of the most significant contributions it makes in its community.

People moving into historic districts aren't just passing through but tend to be home owners for extended periods, adding stability to the neighborhood.

The study compared the State-Division Street Historic District with the city as a whole. Slightly more than 50% of the homeowners in the historic district had been in the neighborhood for twenty years or longer; in the city, only 31% of owners had a comparable stable tenure.

Long-Term Home Ownership - Owned 20+ Years



Evansville

Evansville, (pop. 130,000), an Ohio River city in the southwest corner of the state, claims one of Indiana's first local historic districts—the Old Evansville Preservation Area (OEPA), created in 1974. In 1978, a larger area—including Old Evansville—was listed in the National Register of Historic Places as the Riverside Historic District.

The area developed primarily between 1836 and 1920; early residents included many of Evansville's most prominent citizens, who built imposing houses that expressed the wealth of their owners, but it also sheltered clerks, shopkeepers, and craftsmen in more modest homes. As is not uncommon in older neighborhoods, economic and social changes brought adverse conditions to the area. The National Register nomination notes, "In time, and particularly during the period between the two World Wars, the descendants of the original families began to move out, and the area deteriorated as more and more of these substantial houses were divided into smaller rental units or converted to other uses."

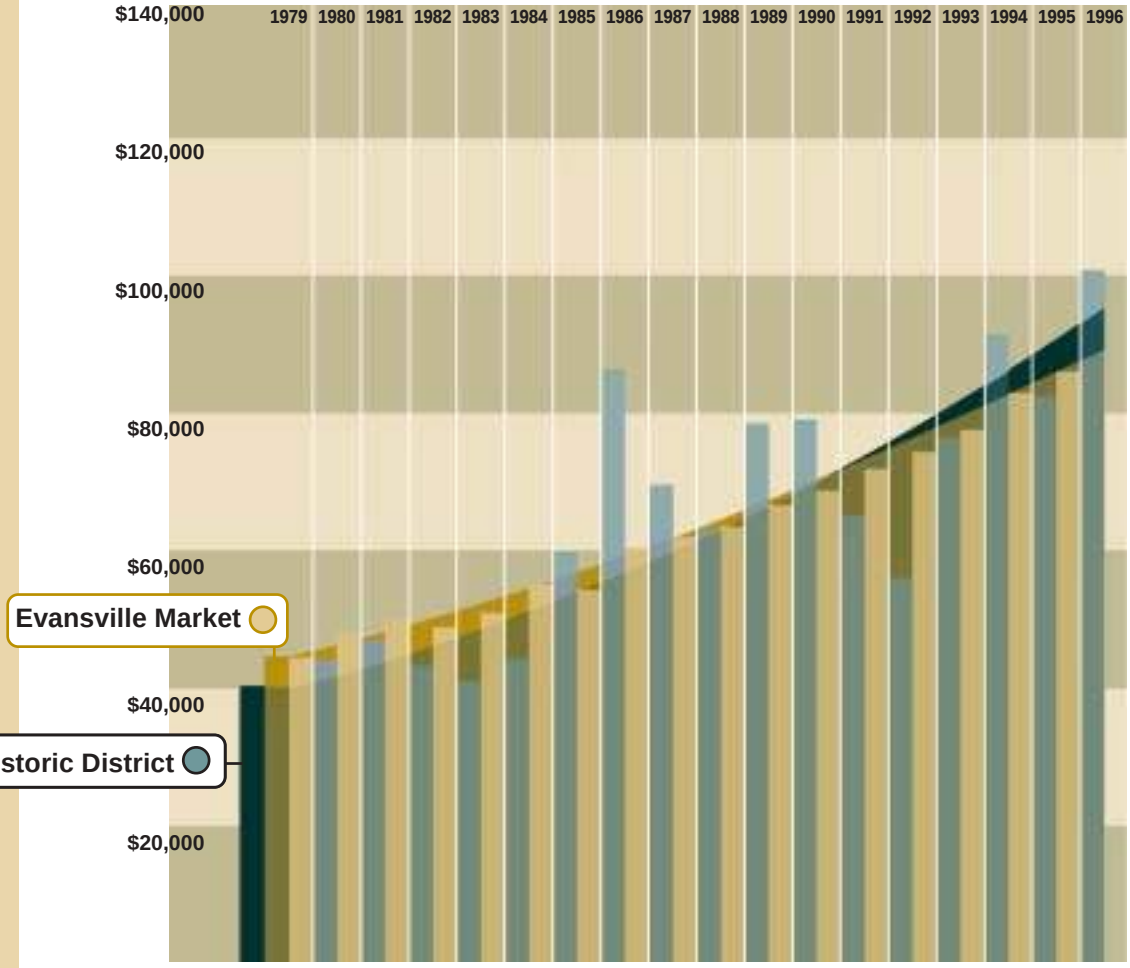
The Original Evansville Preservation Commission oversees Old Evansville, which encompasses approximately 60% of the larger Riverside district. It is important to note that there are neither protections nor regulations in National Register districts. Therefore, only the properties in the Riverside Historic District that are also within the boundaries of the locally designated Old Evansville Preservation Area are protected by design review, demolition limitation and other controls.

WHAT HAPPENED TO PROPERTY VALUES?

Old Evansville is unique among the districts in the study in two important ways: first, the Old Evansville Preservation Area (OEPA) was the only one of the districts evaluated where the average housing values were significantly greater than the market as a whole; and second, the local historic district is part of a larger National Register Historic District. This situation allowed a revealing analysis.

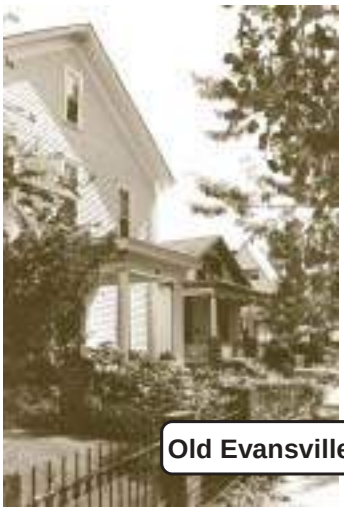
Values in the entire Riverside Historic District appreciated at a rate faster than the Evansville market as a whole from 1979 through June 1996. When the two components of the Riverside Historic District—the locally protected Old Evansville Preservation Area and the unregulated balance of the district—are compared, a more refined picture emerges. Data showed that the rate of appreciation is significantly greater for those properties within the OEPA, the locally designated and controlled portion of the district.

Property Values: Evansville Market & Riverside Historic District



Property Values: Riverside Historic District & Old Evansville Preservation Area

Like many historic districts, Riverside includes large homes restored by affluent residents as well as small cottages and multi-family buildings housing people of modest means.



S N A P S H O T S

Riverside Historic District

Boundaries: Roughly bounded by SE Third and Fourth streets, Parrett, Riverside Drive and Veteran's Parkway, and Walnut Street

Period of significant architecture: 1836-1920

Number of buildings: 413 structures

Predominant architectural styles: Federal, Greek Revival, Shotgun, Gothic, Italianate, Second Empire, Queen Anne, Prairie, Four Square, Mission, Craftsman, Renaissance Revival, Colonial Revival, Tudor Revival, Free Classic

Old Evansville Preservation Area

Boundaries: Roughly bounded by SE Second and Third streets, Blackford Avenue, Shawnee Drive, Riverside Drive and Veteran's Parkway, Walnut and Oak streets

Period of significant architecture: 1836-1920

Number of buildings: 223 structures

Predominant architectural styles: Federal, Greek Revival, Italianate, Second Empire, Queen Anne, Prairie, Four Square, Renaissance Revival, Colonial Revival, Tudor Revival, Free Classic

While property values in the Riverside Historic District appreciated at a faster rate than the Evansville market as a whole, the locally regulated Old Evansville portion of the district saw an even steeper increase.

Indianapolis

In Indiana's capital city, the study looked at property values in adjacent neighborhoods—Fletcher Place and Holy Rosary-Danish Church—both listed in the National Register, and one locally designated.

The Fletcher Place Historic District is one of ten historic districts under the jurisdiction of the Indianapolis Historic Preservation Commission. Located a half-mile southeast of Monument Circle, Fletcher Place won local historic district status in 1980 and was listed in the National Register of Historic Places in 1982. The boundaries of the local and national districts are virtually the same.

Much of the area was platted in 1855, and by 1872 the subdivision was known as Fletcher Place. Worker's cottages for Irish and German immigrants dominated the neighborhood, although successful local entrepreneurs built larger homes along Fletcher Avenue. Near the end of the nineteenth century, Italian and central European immigrants began purchasing existing houses and building new modest-sized dwellings in a variety of architectural styles.

With significant movement to the suburbs following World War II, the near-downtown neighborhood declined and suffered encroachment by industrial uses. Recent history has been kinder: for nearly two decades, Fletcher Place has been experiencing incremental revitalization.

The Holy Rosary-Danish Church neighborhood lies adjacent to and has an early history that strongly parallels Fletcher Place. Platted in 1854, the area was initially occupied by German, Irish, Scottish and Welsh laborers in rental cottages. By the 1880s Danes had become a significant ethnic population in the neighborhood, but by 1910 they largely had been replaced by Italian immigrants. Holy Rosary-Danish Church became a National Register Historic District in 1986.

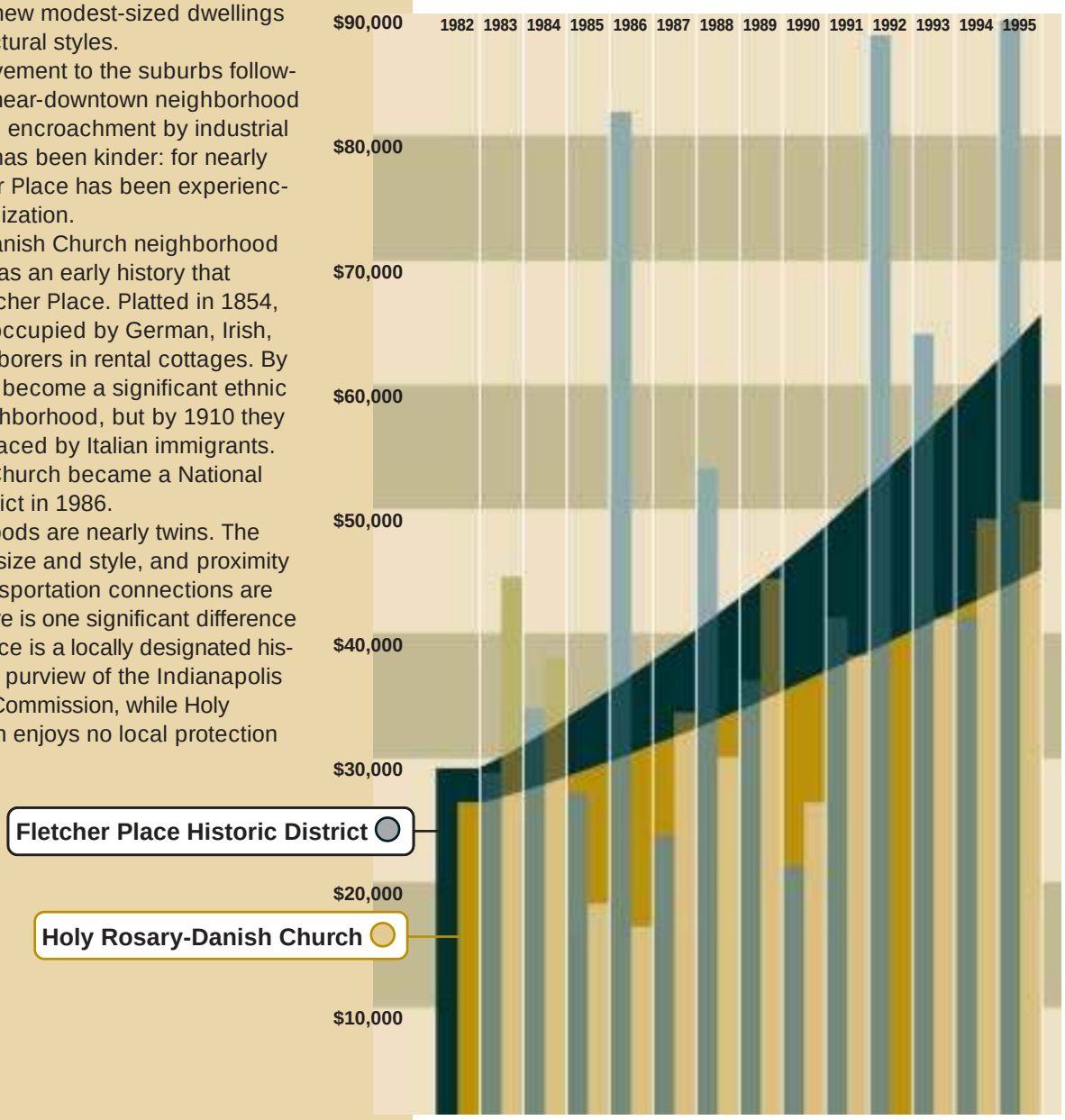
The two neighborhoods are nearly twins. The age, history, housing size and style, and proximity to downtown and transportation connections are virtually identical. There is one significant difference however: Fletcher Place is a locally designated historic district under the purview of the Indianapolis Historic Preservation Commission, while Holy Rosary-Danish Church enjoys no local protection or regulation.

WHAT HAPPENED TO PROPERTY VALUES?

While both neighborhoods appreciated over the period 1982-1995, Fletcher Place—the locally designated historic district—appreciated at a significantly greater rate. Data available from the Indianapolis Metropolitan Area Board of Realtors includes the average selling prices of all houses in the Indianapolis metropolitan area and a smaller area representing the southeast quadrant of central Indianapolis where both Fletcher Place and Holy Rosary-Danish Church are located.

The data shows that the rate of appreciation in the Holy Rosary-Danish Church neighborhood mirrored the rate in southeast quadrant of the city, while Fletcher Place not only significantly out-performed the southeast

Property Values: Two Historic Districts



quadrant but largely paralleled the rate of value growth for the entire metropolitan region—including Indianapolis's booming suburbs. As in Elkhart, the statistics prove that both historic neighborhoods are providing quality housing across a broad range of price levels and attracting a more economically, socially and educationally diverse population than is typically found in neighborhoods and subdivisions in the Indianapolis marketplace.

HISTORIC DISTRICT BONUS

Historic districts promote increased levels of home ownership.

The investment protection provided by a local historic district may well be an overlooked catalyst for home ownership, an aspect of the American dream that has been a long-standing public policy priority of local, state and national governments for decades. In these side-by-side and almost identical Indianapolis neighborhoods, the 1980 ratio of home owners to renters was close—34% of the residents in Fletcher Place were owners and 29% in Holy Rosary-Danish Church. By 1990, while home ownership increased to 38% in Holy Rosary-Danish Church, the ratio of owners to renters had virtually reversed in Fletcher Place, moving to 66%.

While Holy Rosary-Danish Church (below) saw an impressive increase in home ownership, the rise was much more dramatic in the locally designated Fletcher Place historic district, where rehabilitation of multi-family structures (right), also increased the number of rental units for low- and moderate-income residents.

S N A P S H O T S

Fletcher Place

Boundaries: roughly I-65/70, Penn Central railroad tracks, Virginia Avenue, and East Street

Period of significant architecture: 1855-1924

Number of buildings: approx. 150 structures

Predominant architectural styles: Vernacular and Queen Anne cottages, Italianate

Holy Rosary-Danish Church

Boundaries: roughly Virginia Avenue, I-65/70, and East Street

Period of significant architecture: 1859-1930

Number of buildings: approx. 230 structures

Predominant architectural styles: Vernacular and Queen Anne cottages

Lest this be interpreted as more affluent home buyers chasing out renters, however, three additional observations are significant:

- There were **more** households renting in Fletcher Place in 1990 than in 1980.
- The percentage of long-term renters and owners in Fletcher Place was significantly greater than for Indianapolis in general.
- Fletcher Place continues to be an affordable neighborhood for both renters and owners as compared to the overall Indianapolis market.

How could there be both a greater percentage of home ownership and more units of rental housing? Fletcher Place experienced a combination of new construction, reinvestment in formerly vacant structures, and conversion of non-residential properties into residential use. Such investment is often attracted to historic districts.

Vincennes

In Vincennes, a portion of the historic district is commercial in nature, encompassing downtown Vincennes. Situated on the Wabash River in southwestern Indiana, Vincennes (pop. 20,000) was established as a French fort in 1732 and ranks as Indiana's oldest city. During the Revolutionary War the fort was occupied for a time by the British before being taken by George Rogers Clark and his followers. When Indiana became a Territory, Vincennes was its first capital.

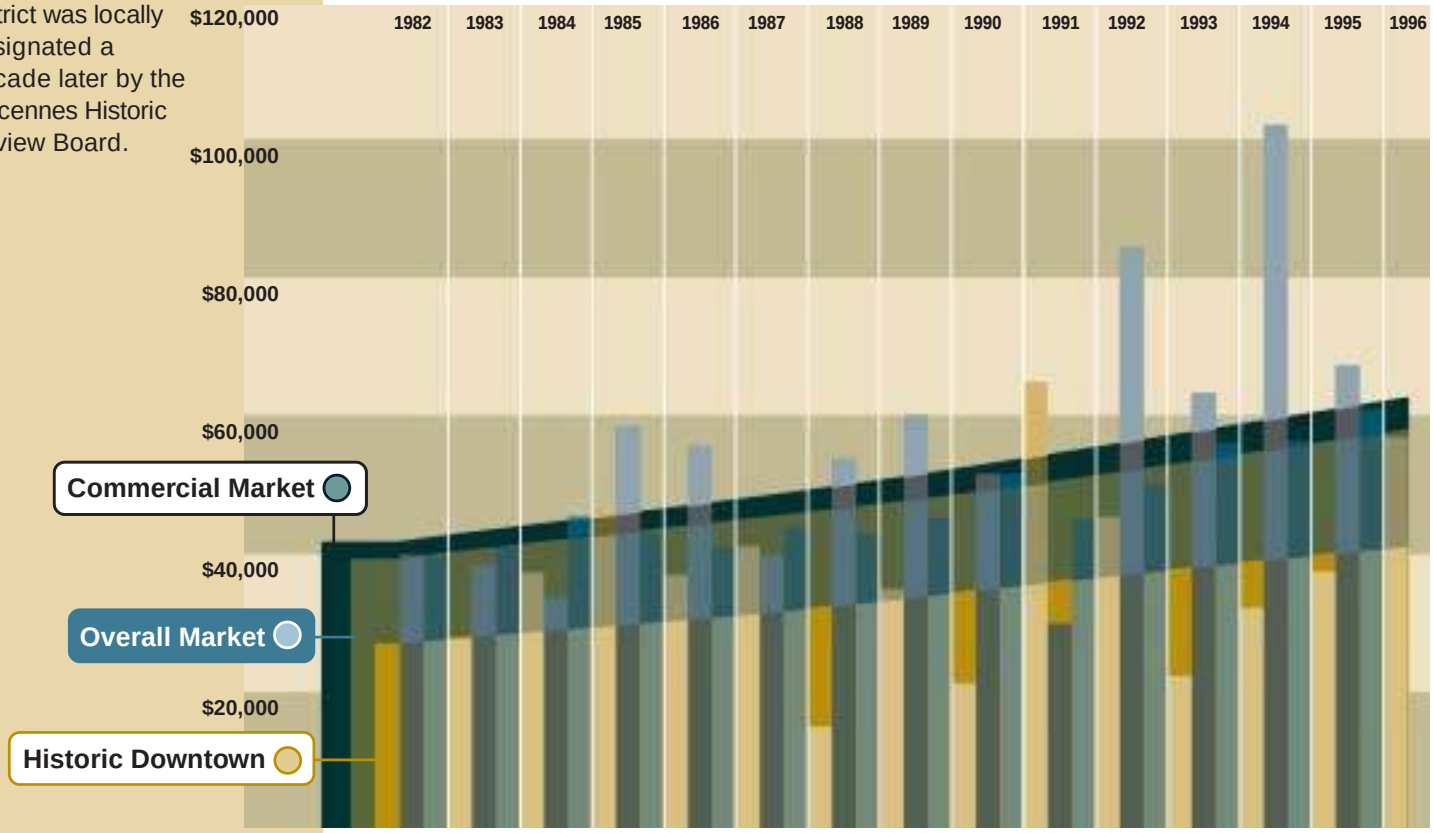
The Vincennes Historic District includes the majority of downtown and extends into abutting residential areas where the earliest structures date from as early as 1806. The study investigated only the commercial portion of the district. Listed in the National Register of Historic Places in 1974, the district was locally designated a decade later by the Vincennes Historic Review Board.

WHAT HAPPENED TO PROPERTY VALUES?

Three challenges became apparent in the Vincennes data collected for the fifteen-year study period: first, commercial sales are far fewer than residential sales, which makes statistical analysis more difficult; second, the real estate market in Vincennes was much more volatile than in the other four cities; and third, the appreciation of Vincennes real estate was modest.

In spite of these difficulties, however, a surprisingly consistent pattern emerges. While the value of downtown commercial properties on average was less than that of commercial properties in other parts of Vincennes, the trend line of value movement was essentially parallel. Furthermore, the modest rate of appreciation over the decade and a half for commercial properties corresponded with the overall Vincennes market, which saw significant development along the highway that skirts the edges of the city. While downtowns in general are often dismissed as being obsolete as business centers and no longer appealing as investments, historic downtown Vincennes more than held its own in relation to the overall market.

Property Values: Historic Downtown, Commercial Market & Overall Market



HISTORIC DISTRICT BONUS

Historic downtown still effectively serves its traditional role in a community.

Some think that downtown has been economically, physically and socially replaced by the shopping mall, the office park, and the discount center. Property values in the historic district covering downtown Vincennes suggest otherwise. Downtowns traditionally have served three important economic roles in a community: 1) as a geographically defined, multifunctional setting for a variety of economic activities; 2) as an informal incubator for new businesses which need both affordable space and the interaction with a number of other types of activities; and 3) as the permanent home of institutions and long-term businesses.

Historic downtown Vincennes continues to serve all three functions. In addition to MLS data, the study employed the *Vincennes City Directory* to make a comparison of downtown Vincennes in 1980 and 1995, with the following key findings:

- Nearly thirty percent of the non-residential activities in downtown Vincennes had been in their current location for fifteen years or longer.
- Over the last decade, an average of twenty new businesses a year chose to locate in downtown Vincennes.
- The data showed a consistent pattern of downtown businesses expanding to additional space or relocating to a larger space within the downtown as they became more successful.

S N A P S H O T

Vincennes Historic District Boundaries: Wabash River, College, 9th and Willow streets

Period of significant architecture: 1733-1920

Number of buildings: 1,878 structures (87% residential, 13% commercial/office)

Predominant architectural styles: in the commercial portion of the district covered by the study, styles range from Federal to Italianate

Commercial property in Vincennes' historic downtown held its own, even while rival development sprouted along the highway on the outskirts of town.

Historic preservation commissions are sometimes viewed—usually by people who do not live in historic districts—as bureaucratic naysayers, spoolers of red tape and hassling regulation that's not worth the difficulty. Resoundingly not true, according to this study. Investigation of case files for the five cities covered in the study show that the historic preservation commissions approved the applications that came before them more than 90% of the time.

Couple this finding with the evidence showing that property appreciates more rapidly in local historic districts controlled by preservation commissions, and the certificate of appropriateness process followed by most commissions begins to look like a benign process that puts money in the bank. The buyer of property in a local district trades total freedom to do as he pleases with the exterior of his property for the comforting assurance that property around him will be renovated and maintained in a manner that is likely to enhance the value of his own property.

A handful of other lessons learned while undertaking this analysis were less easy to quantify and represent in charts and graphs but are important nonetheless:

- Historic districts seem to have the greatest positive impact on property values when the preservation commissions in control have effective communication of their rules and clear guidelines, firmly and consistently applied.

- The existence of a strong neighborhood organization, whether created before or after the establishment of the historic district, has a positive impact—socially **and** economically—on the district.

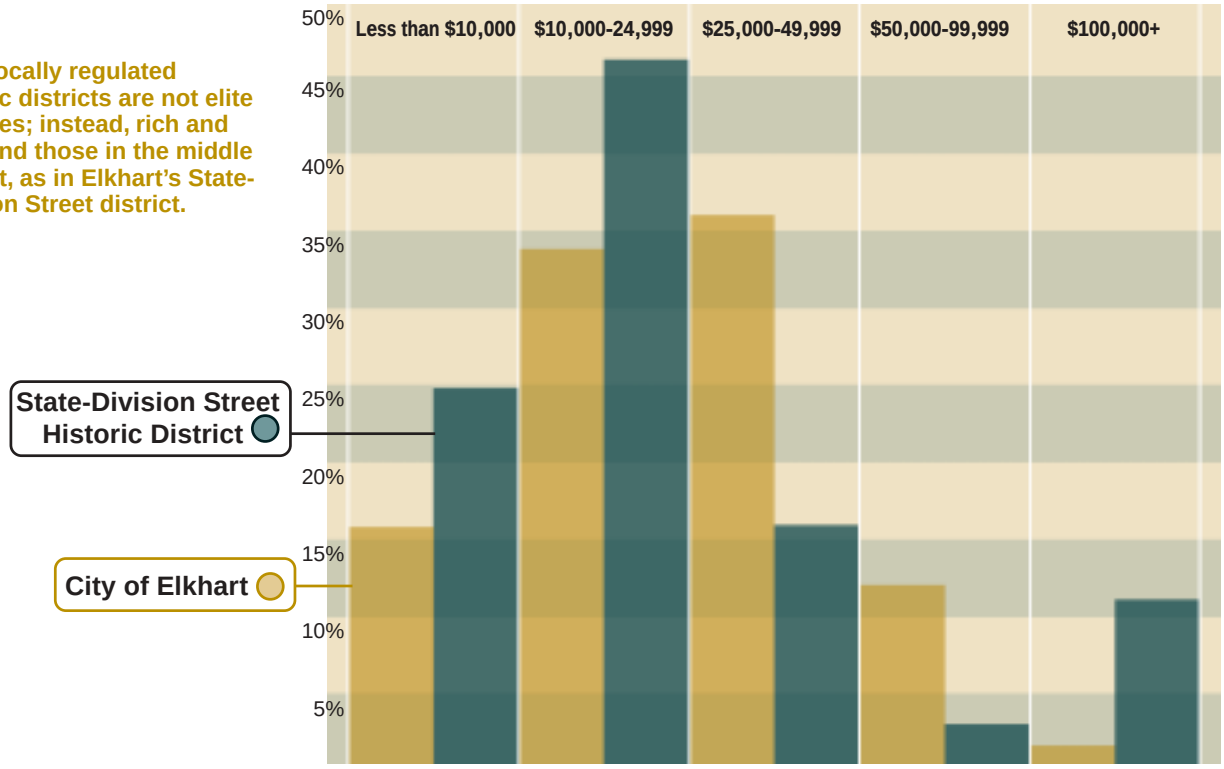
- Investment will be attracted sooner and more consistently if there is a package of incentives—"carrots" such as design assistance, low-interest loan programs and the like—to accompany the regulations or "sticks" of the historic district commission.

- The image of historic district residents being rich home owners displacing poor renters was not found to be true in any of the districts studied. In fact the reverse was often the case—historic districts effectively provide quality housing for citizens of every economic level.

Indiana has a wealth of historic residential and commercial historic districts that are not only providing a good investment for this generation, but conserving man-made cultural and physical resources for the next generation. Cities and towns in Indiana would do well—for current citizens and posterity—to create preservation commissions where they do not exist and designate eligible areas as local historic districts.

Household Income - Elkhart & Historic District

Most locally regulated historic districts are not elite enclaves; instead, rich and poor and those in the middle coexist, as in Elkhart's State-Division Street district.



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Eastern Regional Office, Cambridge City 765-478-3172
Western Regional Office, Terre Haute 812-232-4534

Historic Landmarks Foundation of Indiana, a private not-for-profit organization, is the largest statewide preservation group in the U.S. Historic Landmarks saves and protects buildings and places of architectural and historical significance. From its network of regional offices, Historic Landmarks leads and assists individuals, organizations and communities in preserving and revitalizing endangered landmarks through education, advocacy, and financial support. A membership organization, Historic Landmarks seeks to enrich contemporary life and leave a legacy of landmarks.

For information about becoming a member, call or write:

HISTORIC LANDMARKS FOUNDATION OF INDIANA

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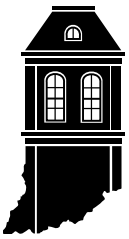
TAX BENEFITS
for Owners of HISTORIC BUILDINGS



HISTORIC LANDMARKS FOUNDATION OF INDIANA

Since 1976, federal and state governments have encouraged people to re-use historic structures by offering tax credits as incentives. Tax credits work like this: 20 percent of what a property owner spends to rehabilitate a historic, income-producing property comes off the bottom line of the taxes paid to the state and federal governments.

If an owner has spent $100,000 to restore an old hotel, for example, he pays $20,000 less in federal tax and $20,000 less in state tax. Rules govern what types of buildings and what kind of work qualifies. Indiana's rules differ slightly from those set by the federal government, so it's best to seek the advice of a tax attorney and preservation experts before moving forward with a project. The following general information shows that rehabbing historic buildings can result in significant tax savings.

TWO TYPES OF TAX BREAKS BENEFIT OWNERS OF HISTORIC PROPERTIES:

HISTORIC REHABILITATION INVESTMENT TAX CREDITS

are for people who own and renovate qualified historic commercial or residential properties. These credits apply to federal and state taxes.

To qualify for the Rehabilitation Investment Tax Credit (RITC), a building must be listed in or eligible for the National Register of Historic Places, either individually or as a contributing structure in a designated historic district. The property can be a commercial building, a factory, or even an old house—but it must be income-producing, not a private residence.

To qualify for the credit, the renovation work must qualify as a "certified rehabilitation," meaning that it complies with the Secretary of the Interior's Standards for Rehabilitation. These guidelines are available from the National Park Service or in Historic Landmarks Foundation's library (see "Resources"). In a nutshell, the Secretary's Standards say:

- Don't change anything you don't have to change.
- If you have to change something, make sure it doesn't alter the significance of the property.
- Don't do anything that can't be reversed.

Following the Secretary's Standards alone is not enough to qualify your project for the RITC, however. Before any demolition or renovation work begins, the federal and state programs both recommend that property owners submit plans to ensure that proposed work will be approved. For both the federal and state tax credits, plans must be submitted to the Indiana Division of Historic Preservation and Archaeology (DHPA).

Qualifying for the RITC also requires "substantial rehabilitation," which means spending more than $10,000 or the property's adjusted basis—whichever is greater—over a specified period, typically 24 to 60 months, depending on the complexity of the project. While most applicants for tax credits reap the financial rewards themselves, some developers sell the tax credits to raise money to fund rehabilitation projects.

DHPA encourages applicants to apply as early as possible in the process of planning a building's rehabilitation. The DHPA also recommends consulting your accountant or tax attorney before you embark on a tax credit project.

A note of caution: Because there is currently an annual limit on the total amount of Indiana state tax credits available for income-producing properties, a years-long backlog has accumulated of owners waiting to secure their credits. (The federal tax credit has no annual limit or waiting list.) Historic Landmarks Foundation of Indiana is appealing to the legislature to make the state credit a useful tool by raising the limit and eliminating the backlog.

A property owner who rehabs a primary residence may qualify for the Indiana Residential Historic Rehabilitation Credit if the house is at least 50 years old and listed in the Indiana Register of Historic Places either individually or as part of a district.

The program allows an owner-occupant to take a credit against state income tax liability equal to 20 percent of "qualified" preservation or rehab expenses. The amount spent must exceed $10,000 and can't include such items as the cost of enlarging an existing structure, paving, or landscaping.

To determine just what expenses qualify, property owners must submit a preservation or rehabilitation plan to the Indiana Division of Historic Preservation and Archaeology (DHPA) for approval prior to beginning

work. If approved rehabilitation expenses total $20,000, for example, a homeowner would qualify for a $4,000 tax credit. Work must be completed within a specified period, ranging from two to five years.

If the credit exceeds a homeowner's state tax liability, the remainder may be carried over for up to 15 years. (While the state also limits the total amount of tax credits available in a given year, there is presently no waiting list as there is to claim the credits for income-producing properties.) The residential credit is subject to recapture by the state within five years of the work's completion—triggered if the homeowner sells the property or completes any additional work that doesn't meet the DHPA's standards. With this credit, too, it pays to contact the DHPA—and your accountant or tax attorney—well in advance.

2 REHABILITATION PROPERTY TAX DEDUCTIONS

Deductions available to owners who restore historic commercial and residential buildings in Indiana.

When a building's assessed value rises, Indiana property taxes usually increase. But when the structure is certified as historic, and the increase in assessed value is due to qualified renovation work, the building's owner can deduct 50 percent of the increase from his or her property tax bill.

Indiana taxpayers who rehabilitate historic structures—commercial properties as well as private homes—can take the deduction annually for each of the first five years after the assessment increases. For example, if a building owner's usual property tax bill is $10,000 annually, and rehabilitation work raises the bill to $15,000 annually, the property owner can deduct half the increase—$2,500 in this example—from his property tax bill every year for the next five years. The deduction is limited to $20,000 for the owner of a single-family home, and to $100,000 for owners of other types of historic properties.

To qualify for the deduction:

- The property must be 50 years old or older
- The rehabilitation work must have cost at least $10,000
- The work must have been done to remodel, repair or enlarge the existing structure. However, the deduction for an addition is limited to the square footage of the historic portion of the building. For example, if the original structure is 2,000 square feet, and the addition is 3,000 square feet, the deduction only applies to 2,000 square feet of the addition.
- Taxpayers must file an Application for Deduction from Assessed Valuation of Rehabilitated Property (State Tax Board Form 322 or 322a) with the county auditor.

For more details and to request the state tax form, call your county auditor's office.

OTHER TAX INCENTIVES

The Low Income Housing Tax Credit is another potent incentive for the rehabilitation of historic buildings. It can be combined with the RITC to accomplish two good deeds at once—producing housing for low-income people while renovating historic structures. The federal government also provides certain tax incentives for the creation of rural housing. A tax expert can outline your options for combining various tax incentives.

Donating a preservation easement on a historic property or donating a building to Historic Landmarks Foundation of Indiana provides tax benefits similar to any other charitable donation, and offers the added advantage of protecting the property from inappropriate changes in perpetuity. For more information on either option, call 317-639-4534 or 800-450-4534 to consult with Historic Landmarks' Director of Development.

RESOURCES

Historic Landmarks Foundation of Indiana, a private non-profit preservation organization, saves, restores, and protects places of architectural and historical significance. To enlist our help, contact the regional office nearest you or our **state headquarters**:

340 West Michigan Street
Indianapolis, IN 46202
317-639-4534 or 800-450-4534
www.historiclandmarks.org

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Calumet Region Office
Hobart
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calumet@historiclandmarks.org

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You'll find a wealth of helpful information on our website:
www.historiclandmarks.org

For information about requirements of the Rehabilitation Investment Tax Credit, the Indiana Residential Historic Rehabilitation Credit, or nominating a property to the National Register of Historic Places, contact:

Indiana Division of Historic Preservation and Archaeology
402 West Washington Street, Room 274
Indianapolis, IN 46204
317-232-1646

www.in.gov/dnr/historic

View the **National Park Service** catalog to order the ***Secretary of the Interior's Standards for Rehabilitation*** and other publications on historic preservation:

www.nps.gov/history/hps/tps/tpscat.htm

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HISTORIC LANDMARKS FOUNDATION OF INDIANA

ORDINANCE FOR HISTORIC PRESERVATION

State of Indiana
Adapted from: I.C. 36-7-11. Historic Preservation

CITY OF LEBANON, INDIANA
Historic Preservation Commission Ordinance

WHEREAS, the City Council of the City of Lebanon, Indiana, declares that the research, protection, maintenance, restoration, rehabilitation, reconstruction, or development of historic districts is in the public interest; and,

WHEREAS, it is the intent of this ordinance to provide a means to promote the cultural, economic, and general welfare of the public through the preservation and protection of structures and areas of historic and cultural interest within the City of Lebanon; and,

WHEREAS, it is the intent of this ordinance to implement a comprehensive program of historic preservation by the appointment of a Historic Preservation Commission and by the establishment of a historic preservation district or districts in accordance with the provisions set forth below, now therefore;

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEBANON, INDIANA:

Section 1. Purpose and Definitions

(a) Purpose of historic preservation and protection: in order to promote the educational, cultural and general welfare of the citizens of Lebanon and to insure the harmonious and orderly growth and development of the municipality; to maintain established residential neighborhoods in danger of having their distinctiveness destroyed; to enhance property values and attract new residents; to ensure the viability of the traditional Downtown area and to enhance tourism within the City of Lebanon; it is deemed essential by the City of Lebanon that qualities relating to its history and harmonious outward appearance of its structures be preserved. This purpose is advanced through the restoration and preservation of historic areas and buildings, the construction of compatible new buildings where appropriate, and the maintenance and insurance of compatibility in regards to style, form, proportion, texture, and material between historic buildings and those of contemporary design. It is the intention of the City of Lebanon through this ordinance to preserve and protect historic and architecturally worthy buildings, structures, sites, monuments, streetscapes, and neighborhoods which impart a distinct aesthetic quality to the City and serve as visible reminders of its historic heritage.

(b) Definitions: the following terms shall have the following meaning unless a contrary meaning is required by the context or is specifically prescribed. Words in the present tense include the future tense. The singular number includes the plural, and the plural, the singular. The word "shall" is always mandatory. The word "person" includes a firm, a partnership, a limited liability company, or a corporation, as well as an individual. Terms not defined in this section shall have the meanings customarily assigned to them.

"Alteration:" a material or color change in the external architectural features of any building, structure, or site within a historic district.

"City:" the City of Lebanon, Indiana.

"Classifications:"
(1) Outstanding: the "O" classification means that the property has sufficient historic or architectural significance that is listed, or is eligible for individual listing, in the National Register of Historic Places. Outstanding resources can be of local, state, or national importance.
(2) Notable: a classification of "N" means that the property does not merit the outstanding rating, but it is still above average in its importance. A notable structure may be eligible for the National Register.
(3) Contributing: a "C" classification means the property is at least 40 years old, but does not meet the criteria for an "O" or "N" classification. Such resources are important to the density or continuity of the area's historic fabric. Contributing structures can be listed in the National Register only as part of a historic district.
(4) Non-Contributing: property classified as "NC" is not included in an inventory unless it is located within the boundaries of a historic district. Such properties may be less than 50 years old, or they may be older structures that have been altered in such a way that they have lost their historic character, or they may be otherwise incompatible with their historic surroundings. These properties are not eligible for listing in the National Register.

"Demolition:" the complete or substantial removal of any building, structure, or site located in a historic district.

"Historic District:" a single building, structure, object, or site or a concentration of buildings, structures, objects, spaces, or sites, the boundaries of which are described or delineated on a map approved in an ordinance adopted under this title.

"Interested Party:" means one of the following:
(1) the Mayor.
(2) the City Council.
(3) the City plan commission.
(4) a neighborhood association, whether incorporated or unincorporated, a majority of whose members are residents of a historic district designated by an ordinance adopted under this title.
(5) an owner or occupant of property located in a historic district established by an ordinance adopted under this title.
(6) Historic Landmarks Foundation of Indiana, Inc., or any of its successors.
(7) the state historic preservation officer designated under I.C. 14-3-3.4-10.

"Preservation Guidelines:" criteria, locally developed, which identify local design concerns in an effort to assist property owners in maintaining the character of the designated district or buildings during the process of rehabilitation or new construction.

"Primary Area:" the principal area of historic and / or architectural significance within a historic district as delineated on the map establishing the boundaries of the historic district.

"Routine Maintenance:" work for which no certificate of appropriateness is required.

"Secondary Area:" an area in a historic district delineated on the map establishing the boundaries of the historic district that is adjacent to a primary area and which has a visual relationship to the primary area and could affect the preservation of the primary area. The purpose of designating a secondary area is to assure its compatibility and harmony with an adjacent, primary area.

"Streetscape:" appearance from a public way, the distinguishing characteristics of which are created by the width of the street and sidewalks, their paving materials and color, the design of the street furniture (e. g., street lights, trash receptacles, benches, etc.) use of plant materials such as trees and shrubs, and the setback, mass, and proportion of those buildings which enclose the street.

"Visual Compatibility:" those elements of design that meet the guidelines set out in Section 8 of this title.

Section 2. Historic Preservation Commission Establishment and Organization

(a) Creation: there is hereby established the Historic Preservation Commission of the City of Lebanon, Indiana (hereinafter referred to as the "Commission").

(b) Composition: the Commission shall consist of not less than three (3) nor more than nine (9) voting members. The voting members shall be appointed by the Mayor subject to the approval of the City and shall be residents of the City who are interested in the preservation and development of historic areas. The members of the Commission should include professionals in the disciplines of architectural history, planning, and other disciplines related to historic preservation, to the extent that those professionals are available in the community. Nonvoting, advisory member(s) may be appointed to the Commission by the Mayor with approval by the City Council. Commission members shall serve without compensation, except for reasonable expenses incurred in the performance of their duties.

(c) Term: voting members shall serve for a term of three (3) years; however, the initial terms of members shall be for one (1) year, two (2) years, and three (3) years in order for the terms to be staggered. The term for nonvoting, advisory members shall be for three (3) years. A vacancy shall be filled within ninety (90) days for the duration of the term.

(d) Commission Administrator: a City administrator designated by the Mayor shall serve as the ex-officio administrator of the Commission. The administrator shall provide staff assistance to the Commission, act as the Commission's secretary, and issue Certificates of Appropriateness as directed by the Commission.

(e) Officers: the Commission shall elect from its membership a Chairperson, Vice-Chairperson, and Treasurer who shall serve for one (1) year and who may be reelected.

(f) Rules: the Commission shall adopt rules consistent with this title for the transaction of its business. The rules must include the time and place of regular meetings and a procedure for the calling of special meetings.

(g) Meetings: Commission meetings must be open to the public in accordance with Indiana's Open Door Law and a public record shall be kept of the Commission's resolutions, proceedings, and actions. The Commission shall hold regular meetings, at least monthly, except when it has no business pending. Special meetings may be called in a manner determined by the Commission and its rules.

Section 3. Powers and Duties of the Commission

a. The Commission shall be concerned with those elements of development, redevelopment, rehabilitation, and preservation that affect visual quality in a historic district, which include but are not limited to view-sheds, landscapes, and streetscapes of historic importance. The Commission may not consider details of design, interior arrangements, or building features, if those details, arrangements, or features are not subject to public view, and may not make any requirement except for the purpose of preventing development, alteration, or demolition in the historic district obviously incongruous with the historic district.

(b) The Commission shall conduct surveys and establish historic districts in accordance with the provisions of Section 4 of this title.

(c) The Commission may adopt preservation guidelines for architectural review. If adopted, preservation guidelines shall be published and made readily accessible to the general public.

(d) The Commission has the authority to receive funds in order to promote its stated purpose

(e) The Commission shall promote public interest in historic preservation by initiating and carrying on a public relations and community education program.

(f) The Commission, through this ordinance, may:
  (1) acquire by purchase, gift, grant, bequest, devise, or lease any real or personal property, including easements, that is appropriate for carrying out the purposes of the Commission;
  (2) hold title to real and personal property; and,
  (3) sell, lease, rent, or otherwise dispose of real and personal property at a public or private sale on the terms and conditions that the Commission considers best.

(g) The Commission shall establish procedures that the Commission must follow in acquiring and disposing of property.

Section 4. Historic Districts, Conservation Districts and Guidelines

(a) All recommendations for the establishment of a historic district shall be in the form of a written report and must be based on the criteria outlined in this section. A recommendation for establishing a historic district may be initiated from either of the following two (2) sources:

(1) Based on its survey, the Commission may draw and submit historic district maps for City Council approval.
(2) Owners of property in fee simple wishing to establish a historic district which includes their property may petition the Commission to consider drawing and submitting a map or maps of said property to the City Council for its approval. The Commission may establish in its rules criteria to be met before it considers a petition.

(b) Conservation Districts: the Commission may recommend, and the City Council may provide that the establishment of a historic district shall occur in two (2) phases. During the first phase, which continues for a period of three (3) years from the date the ordinance is adopted, a certificate of appropriateness is required for the following activities: the demolition of any building; the moving of any building; and any new construction of a principal building or accessory building or structure subject to view from a public way.

(1) At the expiration of the initial three (3) year period, the first phase of a conservation district continues and the second phase does not become effective if a majority of the property owners in the district object to the Commission, in writing, to the requirement that Certificates of Appropriateness be issued for the following activities:

(a) a conspicuous change in the exterior appearance of historic buildings by additions, construction, alteration, or maintenance involving exterior color changes;
(b) a change in walls and fences or construction of walls and fences, if along public ways;
(c) a conspicuous change in the exterior appearance of non-historic buildings subject to view from a public way by additions, reconstruction, alteration, or maintenance involving exterior color change.

(2) The objections of a majority of the property owners must be received by the Commission not earlier than one hundred eighty (180) days or later than sixty (60) days before the third anniversary of the adoption of the ordinance.

(c) Commission preparation of historic district maps: in order to establish a historic district, the Commission shall first prepare a map describing the district in accordance with the following:
(1) The map shall be based on a survey conducted by the Commission which identifies historic buildings, structures, and sites located within the City.
(2) A district may be limited to the boundaries of a property containing a single building, structure, or site.
(3) The map may divide the district into primary and secondary areas as follows:
(a) Primary Area: the principal area of historic and architectural significance.
(b) Secondary Area: an area adjacent to a primary area which has a visual relationship to the primary area and could affect the preservation of the primary area. The purpose of designating a secondary area is to assure its compatibility and harmony with an adjacent primary area.

(d) The Commission shall classify and designate on the map all buildings, structures, and sites within each historic district described on the map. Buildings, structures, and sites shall be classified as historic or non-historic. Historic buildings, structures, and sites must possess identified historic or architectural merit of a degree

warranting their preservation. The Commission shall further classify and designate all buildings and structures within a proposed historic district as follows:
(a) Outstanding
(b) Notable; or
(c) Contributing.

Non-historic buildings, structures, and sites are those not classified on the map as historic. In lieu of other classifications, the Commission may devise its own system of further classification of historic buildings, structures, and sites.

(e) City Council approval of maps of historic districts: before a historic district is established and the building classifications take effect, the map setting forth the district's boundaries and building classifications must be submitted to, and approved in an ordinance by, the City Council.

(f) Recording the fact of designation: the map establishing boundaries of a historic district may be recorded in the Office of the Boone County Recorder.

Section 5. Interim Protection

(a) When submitting a map to the City Council under Section 4 of this title, the Commission may declare one (1) or more buildings or structures that are classified and designated as historic on the map to be under interim protection.

(b) Not more than two (2) working days after declaring a building, structure, or site to be under interim protection under this section, the Commission shall, by personal delivery or first class mail, provide the owner or occupant of the building, structure or site with a written notice of the declaration. The written notice must:

(1) Cite the authority of the Commission to put the building, structure, or site under interim protection under this section;
(2) Explain the effect of putting the building, structure, or site under interim protection; and,
(3) Indicate that the interim protection is temporary.

(c) A building or structure put under interim protection under subsection (a) remains under interim protection until the map is:

(1) Submitted to; and
(2) Approved in an ordinance or rejected by the City Council.

(d) While a building, structure, or site is under interim protection under this section:
(1) The building, structure, or site may not be demolished or moved; and,
(2) The exterior appearance of the building, structure, or site may not be conspicuously changed by:
(a) Addition;
(b) Reconstruction; or
(c) Alteration.

(e) The Commission may approve a Certificate of Appropriateness at any time during the period of interim protection, provided the proposed change meets the criteria for considering effect of actions on historic buildings in section 6 (d) of this ordinance and any proposed preservation guidelines prepared for the building, structure, or site, but

the Certificate of Appropriateness shall have no effect, and no action may be taken pursuant thereto, unless the map including the building, structure or site is approved by the City Council.

Section 6. Certificates of Appropriateness (COA)

(a) Certificates of Appropriateness (COA) required: a Certificate of Appropriateness must be issued by the Commission before a permit is issued for, or work is begun on, any of the following:

(1) Within all areas of a historic district:
  (a) The demolition of any building or structure;
  (b) The moving of any building or structure;
  (c) A conspicuous change in the exterior appearance of any historic building or any part of or appurtenance to such a building, including walls, fences, light fixtures, steps, paving, and signs by additions, reconstruction, alteration, or maintenance involving exterior color change if cited by individual ordinance; or
  (d) Any new construction of a principal building or accessory building or structure subject to view from a public way.

(2) Within a primary area of a historic district:
  (a) A change in walls and fences, or the construction of walls and fences along public ways;
  (b) A conspicuous change in the exterior appearance of non-historic buildings subject to view from a public way by additions, reconstruction, alteration and/or maintenance involving exterior color change.

(3) Within a conservation district:
  (a) The moving of any building;
  (b) The demolition of any building; or
  (c) Any new construction of a principal building or accessory building or structure subject to view from a public way.

(b) Application for Certificates of Appropriateness: an application for a Certificate of Appropriateness shall be made in the office of the Commission or its designee on forms provided by that office. All applications shall be subject to the rules and requirements established by the Commission. Rules may include, but are not limited to, filing deadlines and application requirements such as sketches, drawings, photographs, descriptions, or other information which the Commission requires to make a decision.

(c) Approval or denial of Certificates of Appropriateness: the Commission may approve or deny Certificates of Appropriateness for any actions covered by this title. If an application for a Certificate of Appropriateness is approved by the Commission, or is not acted on by the Commission within sixty (60) days after it is filed, a Certificate of Appropriateness shall be issued. The Commission may grant an extension of the thirty-day limit if the applicant agrees to it. The Commission must report its findings and the reasons for its decision in written form, and supply the applicant with a copy of its report. A copy of the Certificate of Appropriateness must be submitted with the application for a building or demolition permit; no building or demolition permit shall be issued unless a copy of the Certificate of Appropriateness is provided by the applicant with the application.

(d) Criteria for considering effect of actions on historic buildings: the Commission, in considering the appropriateness of any reconstruction, alteration, maintenance, or moving of a historic building, structure, site or any part of or appurtenance to such building or structure, including walls, fences, light fixtures, steps, paving, and signs shall require that such work be done in a manner that will preserve the historical and architectural character of the building, structure, or appurtenance. In considering historic and architectural character, the Commission shall consider, among other things, the following:

(1) Purposes of this title;
(2) Historical and architectural value and significance of the building, structure, site or appurtenance;
(3) Compatibility and significance of additions, alterations, details, materials, or other non-original elements which may be of a different style and construction date than the original;
(4) The texture, material, color, style, and detailing of the building, structure, site or appurtenance;
(5) The continued preservation and protection of original or otherwise significant structure, material, and ornamentation;
(6) The relationship of buildings, structures, appurtenances, or architectural features similar to one within the same historic district, including for primary areas, visual compatibility as defined in Section 8(b); and,
(7) The position of the building or structure in relation to the street, public right-of-way and to other buildings and structures.

Section 7. Staff Approvals

(a) The Commission may authorize the staff of the Commission, on behalf of the Commission, to grant or deny an application for a Certificate of Appropriateness.

(b) The Commission shall specify by rule the types of applications for Certificates of Appropriateness that the staff of the Commission is authorized to grant or deny. The staff may not be authorized to grant or deny an application for a Certificate of Appropriateness for the following:

(1) The demolition of a building, structure, or site.
(2) The moving of a building or structure.
(3) The construction of an addition to a building or structure.
(4) The construction of a new building or structure.

Section 8. Visual Compatibility

(a) For new construction, contemporary design, and non-historic buildings: to preserve and encourage the integrity of historic buildings, structures, sites, monuments, streetscapes, and neighborhoods and to ensure their compatibility with any new work, the construction of a new building or structure, and the moving, reconstruction, alteration, color change, major maintenance, or repair conspicuously affecting the external appearance of any non-historic building, structure, or appurtenance within the primary area must be generally of a design, form, proportion, mass, configuration, building material, texture, color, and location on a lot compatible with other buildings in the historic district and with places to which it is visually related.

(b) Criteria for considering visual compatibility within historic primary areas: within the primary area of a historic district, new buildings, structures, as well as buildings, structures, and appurtenances that are moved, reconstructed, materially altered, repaired, or changed in color, must be visually compatible with buildings and places to which they are visually related generally in terms of the following visual compatibility factors:

(1) Height: the height of proposed buildings must be visually compatible with adjacent buildings.
(2) Proportion of building's front facade: the relationship of the width of a building to the height of the front elevation must be visually compatible with buildings, squares, and places to which it is visually related.
(3) Proportion of openings within the facility: the relationship of the width of the windows to the height of windows in a building must be visually compatible with buildings, squares, and places to which it is visually related.
(4) Relationship of solids to voids in front facades: the relationship of solids to voids in the front facade of a building must be visually compatible with buildings, squares, and places to which it is visually related.
(5) Rhythm of spacing of buildings on streets: the relationship of a building to the open space between it and adjoining buildings must be visually compatible with buildings, squares, and places to which it is visually related.
(6) Rhythm of entrances and porch projections: the relationship of entrances and porch projections of a building to sidewalks must be visually compatible with buildings, squares, and places to which it is visually related.
(7) Relationship of materials, texture, and color: the relationship of the materials, texture, and color of the facade of a building must be visually compatible with buildings, squares, and places to which it is visually related.
(8) Roof shapes: the roof shape of a building must be visually compatible with buildings, squares, and places to which it is visually related.
(9) Wall of continuity: appurtenances of a building or site, such as walls, wrought iron fences, evergreen landscape masses, and building facades, must form cohesive walls of enclosure along the street, if necessary to ensure visual compatibility of the building to the buildings and places to which it is visually related.
(10) Scale of the building: the size of a building and the building mass of a building in relation to open spaces, windows, door openings, porches, and balconies must be visually compatible with the buildings and places to which it is visually related.
(11) Directional expression of front elevation: a building must be visually compatible with buildings, squares, and places to which it is visually related in its directional character, including vertical character, horizontal character, or non-directional character.

Section 9. Preservation of Historical and Architectural Character Upon Alteration or Relocation Mandated

(a) A historic building or structure or any part of or appurtenance to such a building or structure, including stone walls, fences, light fixtures, steps, paving, and signs may be moved, reconstructed, altered, or maintained only in a manner that will preserve the historical and architectural character of the building, structure, or appurtenance.

(b) A historic building may be relocated to another site only if it is shown that preservation on its current site is inconsistent with subsection (a).

Section 10. Appeal Provisions

(a) The purpose of this section is to preserve historic buildings that are important to the education, culture, traditions, and economic values of the City and to afford the City, historical organizations, property owners, and other interested persons the opportunity to acquire or to arrange for the preservation of these buildings.

(b) If the Commission denies the issuance of a Certificate of Appropriateness for the demolition of a building, structure, or site, a demolition permit may be issued by other agencies and a building, structure, or site may be demolished, but only after the property owner has demonstrated to the Commission that the historic building, structure, or site is incapable of earning an economic return on its value, as appraised by a licensed real estate appraiser.

(c) Notice of the proposed demolition must be given for a period fixed by the Commission, based on the Commission's classification on the approved map, but not less than sixty (60) days nor more than one (1) year. Notice must be posted on the premises of the building or structure proposed for demolition in a location clearly visible from the street. In addition, notice must be published in a newspaper of general local circulation at least three (3) times before demolition, with the first publication not more than fifteen (15) days after the application for a permit to demolish is filed, and the final publication at least fifteen (15) days before the date of the permit.

(d) The Commission may approve a Certificate of Appropriateness at any time during the notice period under subsection (c). If the Certificate of Appropriateness is approved, a demolition permit shall be issued without further delay, and demolition may proceed.

Section 11. Maintenance

(a) Historic buildings, structures, and sites shall be maintained to meet the applicable requirements established under state statute for buildings generally so as to prevent the loss of historic material and the deterioration of important character defining details and features.

(b) Ordinary repairs and maintenance: nothing in this section shall be construed so as to prevent the ordinary repairs and maintenance of any building, structure, or site, provided that such repairs or maintenance do not result in a conspicuous change in the design, form, proportion, mass, configuration, building material, texture, color, location, or external visual appearance of any structure, or part thereof.

Section 12. Relationship with Zoning Districts

(a) Zoning districts lying within the boundaries of the historic district are subject to regulations for both the zoning district and the historic district. If there is a conflict between the requirements of the zoning district and the requirements of the historic district, the more restrictive requirements shall apply.

Section 13. Paint Colors

(a) In an ordinance approving the establishment of a historic district, the City may exclude changes in paint colors from the activities requiring the issuance of a

Certificate of Appropriateness under Section 6 of this ordinance before a permit may be issued or work begun.

Section 14. Interested Parties

(a) An interested party (as defined in Section 1 (b) has a private right of action to enforce and prevent violation of provisions of this Ordinance or an ordinance adopted by the city under this Ordinance, and with respect to any building, structure, or site within a historic district, and has the right to restrain, enjoin, or enforce by restraining order or injunction, temporarily or permanently, any person from violating a provision of this ordinance or an ordinance adopted under this ordinance.

(b) The interested party does not have to allege or prove irreparable harm or injury to any person or property to obtain relief under this section.

(c) The interested party bringing an action under this section does not have to post a bond unless the court, after a hearing, determines that a bond should be required in the interest of justice.

(d) The interested party that brings an action under this section is not liable to any person for damages resulting from bringing or prosecuting the action unless the action was brought without good faith or without a reasonable belief that a provision of this ordinance, or an ordinance adopted by a unit under this ordinance, had been, or was about to be violated.

(e) An interested party who obtains a favorable judgment in an action under this section may recover reasonable attorney fees and court costs from the person against whom judgment was rendered.

(f) An action arising under this section must be brought in the circuit or superior court of the county in which the historic district lies and no change of venue from the county shall be allowed in the action.

(g) The remedy provided in this section is in addition to other remedies that may be available at law or in equity.

Section 15. Enforcement, Penalties, and Judicial Review

(a) Any person, whether as principal, agent, owner, lessee, tenant, contractor, builder, architect, engineer, or otherwise, who violates any provision of this ordinance shall be subject to a fine as follows, for each offense:

(1) not less than ten dollars ($10.00) nor more than twenty-five hundred dollars ($2,500.00) for demolition; and,
(2) not less than ten dollars ($10.00) nor more than three hundred dollars ($300.00) for all other offenses.

(b) Each day of the existence of any violation of this ordinance shall be a separate offense.

(c) The erection, construction, enlargement, alteration, repair, demolition, color change, moving, or maintenance of any building, structure, or appurtenance which is begun, continued, or maintained contrary to any provisions of this

ordinance is hereby declared to be a nuisance and in violation of this ordinance and unlawful. The City may institute a suit for injunction in the Circuit Court or Superior Court of Boone County to restrain any person or government unit from violating any provision of this ordinance and to cause such violation to be prevented, abated, or removed. Such action may also be instituted by any property owner who is adversely affected by the violation of any provision of this chapter.

(d) The remedies provided for in this section shall be cumulative and not exclusive and shall be in addition to any other remedies provided by law.

(e) Any person or party aggrieved by a decision or action taken by the Commission shall be entitled to a judicial review hereof in accordance with I.C. 4-22-1.

Section 16. Severability

(a) If any section, clause, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected thereby.

Central Indiana Development Ordinance Review Checklist

Introduction

The Central Indiana Development Ordinance Review Checklist was created as part of an effort to assist the City of Indianapolis and other nearby communities evaluate existing development codes, regulations and ordinances to identify potential regulatory or planning process impediments that affect the use of or successful implementation of low impact development practices in new development as well as in infill or redevelopment.

This checklist is a tool that land use planners, transportation planners, public works personnel, city engineers, building code enforcement officers, development site plan reviewers, and others can use to evaluate the state of existing codes, regulations, ordinances and practices. Once topics or issues that may hinder use of LID practices are identified, personnel from these entities can work together to modify codes to enable/encourage/promote the use of LID practices by the city departments, builders, developers and property owners to apply low impact techniques while also ensuring high quality development ,adequate access and public safety.

Instructions

The Development Ordinance Review Checklist consists of 45 main topic questions and is divided into five main categories:

1. Residential Streets, Parking Lots and Other Transportation Infrastructure
2. Lot Development Principles
3. Conservation of Natural Areas
4. Comprehensive Planning, Zoning and Other Regulatory Considerations
5. Stormwater Planning and Practices

This checklist is to be completed by one or more city/community representative that utilizes the codes, ordinances, or regulations listed below. Following completion of each main section, the reviewer(s) should make note of: the ordinance reviewed, his/her name, title, and the date of review to enable identification of possible ordinance sections to target in future updates.

- Zoning Ordinance
- Subdivision Codes
- Street Standards or Road Design Manual, Parking Requirements
- Building and Fire Regulations/Standards
- Stormwater Management or Drainage Criteria
- Buffer or Floodplain Regulations
- Environmental Regulations
- Tree Protection and/or Landscaping Ordinance
- Erosion and Sediment Control Ordinances (Indianapolis Code Ch. 561-Drainage and Sediment Control)
- Public Fire Defense Master Plans
- Grading Ordinance
- Stormwater Management Plan

Residential Streets, Parking Lots and Other Transportation Infrastructure

Development Feature or Element	*Local Criteria*
1. Street Width What is the minimum pavement width allowed for streets in low density residential developments that have less than 500 average daily trips (ADT)?	_____ feet
*If your answer is **between 18-22 feet**, 1 point* ⇨	
At higher densities are parking lanes allowed to also serve as traffic lanes (i.e., queuing streets)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
2. Street Length Do street standards promote the most efficient street layouts that reduce overall street length and minimize total paved area?	YES / NO
*If your answer is **YES**, 1point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
3. Right-of-Way Width What is the minimum right-of-way (ROW) width for a residential street?	_____ feet
*If your answer is **less than 45 feet**, 1 point* ⇨	
Does the code allow utilities to be placed under the paved section of the ROW (or immediately adjacent to the road edge permitting use of swales on adjacent land)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Are other LID stormwater management practices permitted in transportation ROW (i.e., protect site hydrology, limit clearing/grubbing, reduce cut & fill, protect natural features)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
4. Cul-de-Sacs What is the minimum radius allowed for cul-de-sacs?	_____ feet
*If your answer is **less than 35 feet**, 1 point* ⇨	
*OR, If your answer is **between 36 to 45 feet**, 1 point* ⇨	
Can a landscaped island (bioretention cells) be created within the cul-de-sac?	YES / NO
*If your answer is **YES**, 1point* ⇨	
SUBTOTAL PAGE 2	

Development Feature or Element	*Local Criteria*
Are alternative turn-arounds such as "hammerheads" on short streets or one-way loop streets allowed in low density residential developments	YES / NO
*If your answer is **YES** 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
5. Pavement Are pervious road surfaces or alternative road surfaces and design permitted (road, shoulder, parking lanes) in residential areas?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there guidelines for types and use of acceptable alternative paving materials and design?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
6. Parking Ratios What is the minimum parking ratio for a professional office building (per 1,000 ft^2 of gross floor area)?	_____ spaces
*If your answer is **less than 3.0 spaces**, 1 point* ⇒	
What is the minimum required parking ratio for shopping centers (per 1,000 ft^2 gross floor area)?	_____ spaces
*If your answer is **4.5 spaces or less**, 1 point* ⇒	
What is the minimum required parking ratio for single family homes (per home)?	_____ spaces
*If your answer is **less than or equal to 2.0 spaces**, 1 point* ⇒	
Are your parking requirements set as maximum or median (rather than minimum) requirements?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
7. Parking Codes Is the use of shared parking arrangements promoted (e.g., sharing by mixed use occupancy land uses with different peak period parking demands– weekday, evening, weekend allowing for a reduction in total spaces)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are model shared parking agreements provided?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are parking ratios reduced if shared parking arrangements are in place?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
If mass transit is provided nearby, is the parking ratio reduced?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 3	

Development Feature or Element	*Local Criteria*
8. Parking Lots	
What is the minimum stall width for a standard parking space?	_____ feet
*If your answer is **9 feet or less**, 1 point* ⇒	
What is the minimum stall length for a standard parking space?	_____ feet
*If your answer is **18 feet or less**, 1 point* ⇒	
Are at least 30% of the spaces at larger commercial parking lots required to have smaller dimensions for compact cars?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Can pervious materials be used for spillover parking areas?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
9. Structured Parking	
Are there any incentives to developers to provide parking within garages rather than surface parking lots?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
10. Parking Lot Runoff	
Is a minimum percentage of a parking lot required to be landscaped?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is there an incentive to use sustainable landscape design that further prioritizes the percentage of parking lot required to be landscaped (e.g., native species, bioretention islands, etc.)	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is the use of bioretention islands and other stormwater practices within landscaped areas or setbacks allowed?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
11. Curb Design	
Do regulations permit curbless parking lot design?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do regulations permit curb cuts in parking lot design?	YES / NO
*If your answer is **YES**, 1 points* ⇒	
Is there a design standard for parking lot curb cuts provided?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 4	

Development Feature or Element	*Local Criteria*
12. Road Construction, Maintenance and Repair Are there public works maintenance or repair regulations limiting use of alternative road surfaces and alternative design?	YES / NO
*If your answer is **NO**, 1 point* ⇨	
Are there standard LID practices that are implemented during roadway construction, maintenance, or reconstruction (repair)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 5	

Residential Streets, Parking Lots, and Other Transportation Infrastructure

The questions in the previous section focused on codes, ordinances, and standards that determine the size, shape, and construction of roadways, parking lots, and other transportation infrastructure in a community. There were a total of *31* points available. Tally your score:

Subtotals: Page 2_____ + Page 3_____ + Page 4_____+ Page 5 _____ =

Ordinance(s) Reviewed: _____

Name & Title of Reviewer: _____

Date: _____

Lot Development (Sustainable Site Design)

Development Feature or Element	*Local Criteria*
13. Setbacks and Frontages Are irregular lot shapes (e.g., pie-shaped, flag lots) allowed in the community?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
What is the minimum requirement for front setbacks for a **one-half (1/2) acre** residential lot?	_____ feet
*If your answer is **20 feet or less**, 1 point* ⇒	
What is the minimum requirement for rear setbacks for a **one-half (1/2) acre** residential lot?	_____ feet
*If your answer is **25 feet or less**, 1 point* ⇒	
What is the minimum requirement for side setbacks for a **one-half (1/2) acre** residential lot?	_____ feet
*If your answer is **8 feet or less**, 1 point* ⇒	
What is the minimum frontage distance for a **one-half (1/2) acre** residential lot?	_____ feet
*If your answer is **less than 80 feet**, 1 point* ⇒	
Do regulations permit use of bioretention, rain gardens, filter strips, swales or wetlands in setback or buffer strip areas?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
14. Sidewalks What is the minimum sidewalk width allowed in the community?	_____ feet
*If your answer is **less than 4 feet**, 1 point* ⇒	
Are sidewalks always required on both sides of residential streets?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Are sidewalks generally sloped so they drain to the front yard rather than the street?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Can alternate pedestrian networks be substituted for sidewalks (e.g., trails through common areas)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
SUBTOTAL PAGE 6	

Development Feature or Element	*Local Criteria*
Do regulations permit use of permeable paving for sidewalks?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Can stormwater runoff be stored under sidewalks?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
15. Driveways What is the minimum driveway width specified in the community?	_____ feet
If your answer is ***9 feet or less (one lane) or 18 feet or less (2 lanes)***, 1 point ⇨	
Can pervious materials be used for single family home driveways (e.g., grass, gravel, porous pavers, etc.)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Can a "two track" design be used at single family driveways?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Are shared driveways permitted in residential developments?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Can pervious materials be used for driveways at commercial, industrial, or institutional land uses (e.g., grass, gravel, porous pavers, etc.)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
16. Curb Design Do regulations permit curbless roadside design?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Do regulations permit curb cuts in design along roadsides?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Is there a design standard for roadside curb cuts provided?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
17. Open Space Design Are open space or cluster development designs allowed in the community?	YES / NO
*If your answer is **YES**, 1 point* ⇨ ***If your answer is NO, skip to Question 19.***	

SUBTOTAL PAGE 7

Development Feature or Element	*Local Criteria*
Is land conservation a major goal or objective of the open space design ordinance?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is impervious cover reduction a major goal or objective of the open space design ordinance?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is open space or cluster design a by-right form of development (i.e., does not require conditional use permit, variance, etc.)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are flexible site design criteria available for developers that utilize open space or cluster design options (e.g., setbacks, road widths, lot sizes)	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
18. Open Space Management ***Skip to Question 19 if open space, cluster, or conservation developments are not allowed in the community.***	
Does the community have enforceable requirements to establish associations that can effectively manage open space, including maintenance of any LID features?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are open space areas required to be consolidated into larger units?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does a minimum percentage of open space have to be managed in natural condition?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are allowable and unallowable uses for open space in residential developments defined?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Can open space be managed by a third party using land trusts or conservation easements?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there mechanisms in place to encourage open space protection?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is open space encouraged in redevelopment projects and/or is a percent of open space required for a development permit?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
SUBTOTAL PAGE 8	

Development Feature or Element	*Local Criteria*
Do regulations permit bioretention areas, filter strips, swales, and constructed wetlands to count towards fulfillment of site landscaping/open space requirements?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do regulations establish limits on the extend of lawn area on residential lots, either area or percentage of lot (reducing the amount of lawn watering by residents)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
19. Rooftop Runoff Can rooftop runoff be discharged to yard areas?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do current grading or drainage requirements allow for temporary ponding of stormwater on front yards or rooftops?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do building codes allow temporary storage of stormwater on rooftops or on sides of buildings (e.g., planter boxes, siding material)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do codes encourage sites to drain to existing natural drainage pattern?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do regulations permit disconnect of gutters/downspouts (not require connect to stormwater sewer system)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 9	

Lot Development (Sustainable Site Design)

The questions in the previous section focused on codes, ordinances, and standards related to open space design and management, and elements that relate to the design and appearance of neighborhoods, including driveways, sidewalks, lot shapes, setbacks/frontages, and rooftop characteristics. There were a total of *39* points available. Tally your score:

Subtotals: Page 6_____ + Page 7 _____ + Page 8 _____ + Page 9 _____ =

Ordinance(s) Reviewed: _____

Name & Title of Reviewer: _____

Date: _____

Conservation of Natural Areas

Development Feature or Element	*Local Criteria*
20. Buffer Systems Is there a stream buffer ordinance in the community?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
If so, what is the minimum buffer width?	_____ feet
*If your answer is **75 feet or more**, 1 point* ⇨	☐
Is the expansion of the buffer width to include wetlands, steep slopes or the 100-year floodplain required?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Are there requirements for property owners to protect natural resources including: soils, slopes, wetlands, recharge areas, buffers and/or waterways?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Is the use of low impact stormwater structures (bioretention, infiltration trenches, or grass swales) permitted in buffer zone of wetland areas?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
21. Buffer Maintenance and Management ***If there are no stream buffer requirements in the community, skip to Question 22.***	
Does the stream buffer ordinance specify that at least part of the stream buffer be maintained with native vegetation and/or provide guidance regarding the use of natives, other species-specific requirements or restrict riparian buffer plantings to ensure promotion of LID features?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Does the stream buffer ordinance outline allowable uses?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Does the stream buffer ordinance specify enforcement mechanisms?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Does the stream buffer ordinance specify education mechanisms (e.g., provide training opportunities for staff or the public in management practices and/or LID workshops)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	☐
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 10	☐

Development Feature or Element	*Local Criteria*
22. Clearing and Grading Is there any ordinance that requires or encourages the preservation of natural vegetation at residential development sites (e.g., permits retention of some trees or woody vegetation as part of site preparation)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Do reserve septic field areas need to be cleared of trees at the time of development?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
23. Tree Conservation If forests or specimen trees are present at residential development sites, does some of the stand have to be preserved?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are the limits of disturbance shown on construction plans adequate for preventing clearing of natural vegetative cover during construction?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
24. Land Conservation Incentives Are there any incentives to developers or landowners to conserve non-regulated land (open space design, density bonuses, stormwater credits or lower property tax rates)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is there flexibility to meet regulatory or conservation restrictions (density compensation, buffer averaging, transferable development rights, off-site mitigation) offered to developers?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 11	

Conservation of Natural Areas

The previous section focused on codes, ordinances, and standards that promote protection of existing natural areas and incorporation of open spaces into new development. There were a total of *15* points available. Tally your score:

Subtotals: Page 10 _____ + Page 11 _____ =

Ordinance(s) Reviewed: _____

Name & Title of Reviewer: _____

Date: _____

Comprehensive Planning, Zoning and Other Regulatory Considerations

Development Feature or Element	*Local Criteria*
25. Explicit Restriction or Promotion of LID Practices Do any codes or regulations explicitly restrict core LID principles and practices (infiltration, exfiltration, vegetation controls, open drainage, temporary surface storage)?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Are there official model designs, standards or guidance documents that encourage development and site design that incorporates LID (e.g., LID techniques in the Stormwater Manual)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
26. CSO LTCP and Stormwater Management Plan Are the CSO LTCP and Stormwater Management Plan integrated?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
27. Plumbing Codes Do the plumbing codes permit water conservation (allow use of harvested rainwater for interior non-potable uses such as toilet flushing)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
28. Zoning Are there environmental districts or zoning layers (overlays) to protect environmentally sensitive land/natural resources?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does zoning allow uses incompatible with special watershed districts or other environmentally sensitive land?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Is an environmental site assessment (to identify high water table, soil conditions, other features that might restrict infiltration or other LID practices) required to be submitted as part of site plan review process?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 12	

Development Feature or Element	*Local Criteria*
29. Planning Does the master planning process consider drainage, CSO, and source water protections?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does site plan review include stormwater management and incorporation of LID early in the process?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does transportation planning consider water quality drainage, development patterns, and pollution prevention?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Is there planning guidance for sites of environmental concern (infill, brownfields, gas stations, etc.) to address stormwater/drainage?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
30. Standing Water Do any codes or regulations prohibit intentional ponding of water on yards and landscape areas?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
31. Open Drainage Do any building, development, or public health and safety codes or regulations prohibit or otherwise limit the use of open drainage channels, swales, ditches, or other conveyances for stormwater?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
32. Noxious Weeds and Weed Control Are there weed control regulations that limit or impede the use of vegetated channels, bioretention areas, swales, tree planter boxes, or other LID practices that incorporate vegetation on public or private property?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Are there weed control regulations that limit or impede the use of certain LID practices on private property?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 13	

Development Feature or Element	*Local Criteria*
33. Pest Control (mosquitoes, vermin) Are there pest control regulations that limit or impede the use of vegetated channels, bioretention areas, tree planter boxes, or other LID practices that incorporate vegetation on public and private property and ROW?	YES / NO
*If your answer is **NO**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
34. Agency Coordination Is there a framework for fostering multi-agency cooperation, coordination, and planning?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Is LID incorporated into other activities related to water quality (TMDLs, SDWA, wetlands, CWA 404, dredging, construction and demolition (C&D) regulations, NPDES regulations)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Do you coordinate planning efforts with neighboring communities?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 14	

Comprehensive Planning, Zoning and Other Regulatory Considerations

The questions in the previous section focused on comprehensive planning, zoning and other regulatory considerations that can affect stormwater management in your community. There were a total of *20* points available. Tally your score:

Subtotals: Page 12 _____ + Page 13 _____ + Page 14_____ =

Ordinance(s) Reviewed: _____

Name & Title of Reviewer: _____

Date: _____

Stormwater Planning and Practices

Development Feature or Element	*Local Criteria*
35. Stormwater Planning – Alternative Paving Practices Does your design code allow for alternative paving materials without underdrains (given proper site conditions)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does your design code allow for alternative paving materials to function as a detention?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does your design code allow for alternative paving materials to function as a water quality stormwater device?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Does your design code allow for alternative paving material/surfaces to be eliminated from the water quality volume sizing equation?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there official model designs, standards or guidance documents that encourage development and site design that incorporates LID (e.g., LID techniques in the Stormwater Manual)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
36. Vegetated Open Channels Are there established design criteria for swales that can provide stormwater quality treatment and conveyance capacity (i.e., dry swales, biofilters, swales)	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
37. Tree/Vegetation Planter Boxes (Streetscapes, Medians) Do regulations permit use of tree or vegetation planter boxes in certain streets?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there municipal regulations requiring tree planter boxes be raised above grade?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Are there requirements that limit the maximum width of medians and their use for treating runoff?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 15	

Development Feature or Element	*Local Criteria*
38. Yards and Landscape Infiltration Practices/Drainage Do any codes or regulations prohibit infiltration of water on yards and landscape areas?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Do any codes or regulations require the use of underdrains on yards and landscape areas?	YES / NO
*If your answer is **NO**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
39. Stormwater Maintenance Funding Is there funding for the Department of Public Works to perform maintenance of stormwater facilities?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
40. Green Roof/Roof Garden Practices Do codes or regulations permit the use of green roofs/roof gardens (including weight bearing requirements that permit their use)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there guidelines for types and use of acceptable green roof/ roof garden materials, design, and long term maintenance and operation?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are water quality and quantity design criteria established for the use of green roof/roof garden practices?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there incentives currently in place for the use of green roofs/roof gardens?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
41. Rainwater Harvesting Practices Do codes or regulations permit the use rainwater harvesting practices (e.g., grey water reuse, irrigation, etc.)?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are there guidelines for types and use of acceptable rainwater harvesting materials, design, and long-term maintenance and operations?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
Are water quality and quantity design criteria established for rainwater harvesting practices?	YES / NO
*If your answer is **YES**, 1 point* ⇒	
SUBTOTAL PAGE 16	

Development Feature or Element	*Local Criteria*
Are there incentives currently in place for the use of rainwater harvesting?	
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
42. Erosion and Sediment Control Stormwater Protection Does the Erosion and Sediment Control (ESC) or other ordinances, encourage phasing and scheduling of site clearing activities?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Does the ESC (or other ordinances) limit the size or extent of material storage areas/stockpiles exposed to precipitation and runoff?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Are contractors required to re-establish permeability of soils compacted by construction vehicles (e.g., rototill lawn areas prior to seeding)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Are there technical specifications for handling stormwater from areas of environmental concern (infill, brownfields, gas stations, etc.)?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
43. Stormwater Outfalls Is stormwater required to be treated for quality before it is discharged?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Is the stormwater requirement based on volume or rate control?	*Volume / Rate*
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
44. Stormwater Guidelines Do the stormwater guidelines have geotechnical, infiltration, and hotspot location documentation established?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
45. Floodplain Management Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist?	YES / NO
*If your answer is **YES**, 1 point* ⇨	
Indicate administrative difficulty to change the above requirements/practices	Easy 1 2 3 4 5 Hard
SUBTOTAL PAGE 17	

Stormwater Planning and Practices

The questions in the previous section focused on codes, ordinances, and standards relevant to stormwater planning and practices, including erosion and sediment controls and post-construction measures. There were a total of 27 points available. Tally your score:

Subtotals: Page 15 _____ + Page 16 _____ + Page 17 _____ =

Ordinance(s) Reviewed: _____

Name & Title of Reviewer: _____

Date: _____

Overall Assessment

Residential Streets, Parking Lots and Other Transportation Infrastructure	_____ points
Lot Development (Sustainable Site Design)	_____ points
Conservation of Natural Areas	_____ points
Comprehensive Planning, Zoning and Other Regulatory Considerations	_____ points
Stormwater Planning and Practices	_____ points
Total Assessment Points	_____ ***points***

Scoring:

132 points possible: [(your score/132)* 100] **= your score**

90 – 100	Excellent! Your community has regulations in place to protect streams, lakes and other aquatic resources in your watershed. Keep up the Great Work!
80 – 89	Good! Your development rules are pretty good, but could use some "tweaking" in some areas. Review your results to see where to prioritize change.
79 – 70	Fair – but there are significant opportunities to improve your communities' development rules. Review your results to see where to prioritize. Determine what other entities/individuals to involve in a development regulations planning roundtable.
60 – 69	Not so good – your development rules are inadequate to protect your local aquatic resources. A comprehensive development regulations planning effort should be undertaken.
Less than 60	Poor - your development rules are not environmentally friendly and definitely need serious attention and/or an overhaul.

MODEL CONSERVATION EASEMENT

Natural Lands Trust

(610) 353 - 5587

Source:
Diehl, J. and T. Barrrett. "The Conservation Easement Handbook". For: theTrust for Public Land and the Land Trust Alliance. Washington, DC.

Model Conservation Easement

Note: The boxed numbers inserted in the text of the easement correspond with the subheading numbers in the commentary that follows.

DEED OF CONSERVATION EASEMENT [1]

THIS GRANT DEED OF CONSERVATION EASEMENT is made this ____day of _____, 19___, by _____ and _____, husband and wife, having an address at _____ ("Grantors"), in favor of _____ a non profit __[state of incorporation]__ corporation [qualified to do business in ____(state where property is located)]____, having an address at _____ _____("Grantee"). [2]

WITNESSETH:

WHEREAS, [3] grantors are the sole owners in fee simple of certain real property in _____ County, _____[state]_____, more particularly described in Exhibit A attached hereto and incorporated by this reference (the "Property"); [4] and

WHEREAS, the property possesses __[e.g., natural, scenic, open space, historical, educational, and/or recreational]__ values (collectively, "conservation values") of great importance to Grantors, the people of _____[county, locale, or region]___ And the people of the State of _____; [5] and

WHEREAS, in particular, _____[describe specific conservation values]_____ ; [6] and

WHEREAS, the specific conservation values of the Property are documented in an inventory of relevant features of the Property, dated _____ _____ , 19_____ , _____[on file at the offices of Grantee–or– __attached hereto as Exhibit B]__ and incorporated by this reference ("Baseline Documentation"), which consists of reports, maps, photographs, and other documentation that the parties agree provide, collectively, an accurate representation of the Property at the time of this grant and which is intended to serve as an objective information baseline for monitoring compliance with the terms of this grant; and [7]

WHEREAS, Grantors intend that the conservation values of the Property be preserved and maintained by the continuation of land use patterns, including, without limitation, those relating to _____[e.g., farming, ranching, or __timber production]_____ Existing at the time of this grant, that do not significantly impair or interfere with those values; and [8]

WHEREAS, Grantors further intend, as owners of the Property, to convey to Grantee the right to preserve and protect the conservation values of the Property in Perpetuity; and [9]

WHEREAS, Grantee is a publicly supported, tax-exempt nonprofit organization, qualified under Section 501(c)(3) and 170(h) of the Internal Revenue Code, whose primary purpose is [e.g., the preservation, protection, or enhancement of land in its natural, scenic, historical, agricultural, forested, and/or open space condition] ; and [10]

WHEREAS, grantee agrees by accepting this grant to honor the intentions of Grantors stated herein and to preserve and protect in perpetuity the conservation values of the Property for the benefit of this generation and the generations to come; [11]

NOW, THEREFORE, in consideration of the above and the mutual covenants, terms, conditions, and restrictions contained herein, and pursuant to the lows of [state where property is located] and in particular [specific state statutory authority] , Grantors hereby voluntarily grant and convey to Grantee a conservation easement in perpetuity over the Property of the nature and character and to the extent hereinafter set forth ("Easement"). [12]

1. Purpose. It is the purpose of this Easement to assure that the Property will be retained forever [predominantly] in its [e.g., natural, scenic, historic, agricultural, forested, and/or open space] condition and to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property. Grantors intend that this Easement will confine the use of the Property to such activities, including, without limitation, those involving [e.g., farming, ranching, timber production, public recreation, or education] , as are consistent with the purpose of this Easement. [13]

2. Rights of Grantee. To accomplish the purpose of this Easement the following rights are conveyed to Grantee by this Easement:

a. To preserve and protect the conservation values of the Property;

b. To enter upon the Property at reasonable times in order to monitor Grantors' compliance with and otherwise enforce the terms of this Easement; provided that such entry shall be upon prior reasonable notice to Grantors, and Grantee shall not unreasonable interfere with Grantors' use and quiet enjoyment of the Property; and

c. To prevent any activity on or use of the Property that is inconsistent with the purpose of this Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use, pursuant to paragraph 6. [14]

3. Prohibited Uses. Any activity on or use of the Property inconsistent with the purpose of this Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited: [15]

[Insert Express Restrictions] [16]

4. Reserved Rights. Grantors reserve to themselves, and to their per-

sonal representatives, heirs, successors, and assigns, all rights accruing from their ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement. [Without limiting the generality of the foregoing, the following rights are expressly reserved:] [17]

[Insert Express Reservations, if desired] [18]

5. Notice of Intention to Undertake Certain Permitted Actions. The purpose of requiring Grantors to notify Grantee prior to undertaking certain permitted activities, as provided in paragraphs _____ , is to afford Grantee an opportunity to ensure that the activities in question are designed and carried out in a manner consistent with the purpose of this Easement. Whenever notice is required Grantors shall notify Grantee in writing not less than [e.g., sixty (60)] days prior to the date Grantors intend to undertake the activity in question. The notice shall describe the nature, scope, design, location, timetable, and any other material aspect of the proposed activity in sufficient detail to permit Grantee to make an informed judgement as to its consistency with the purpose of this Easement.

5.1 Grantee's Approval. Where Grantee's approval is required, as set forth in paragraphs _____ , Grantee shall grant or withhold its approval in writing within [e.g., sixty (60)] Days of receipt of Grantors' written request therefor. Grantee's approval may be withheld only upon a reasonable determination by Grantee that the action as proposed would be inconsistent with the purpose of this Easement. [19]

6. Grantee's Remedies. If Grantee determines that Grantors are in violation of the terms of this Easement or that a violation is threatened, Grantee shall give written notice to Grantors of such violation and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Property resulting from any use or activity inconsistent with the purpose of this Easement, to restore the portion of the Property so injured. If Grantors fail to cure the violation within [e.g., thirty (30)] Days after receipt of notice thereof from Grantee, or under circumstances where the violation cannot reasonably be cured within a [thirty (30)] Day period, fail to begin curing such violation within the [thirty (30)] Day period, or fail to continue diligently to cure such violation until finally cured, Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Easement, to enjoin the violation, *ex parte* as necessary, by temporary or permanent injunction, to recover any damages to which it may be entitled for violation of the terms of this Easement of injury to any conservation values protected by this Easement, including damages for the loss of scenic, aesthetic, or environmental

values, and to require the restoration of the Property to the condition that existed prior to any such injury. Without limiting Grantors' liability therefor, Grantee, in its sole discretion, may apply any damages recovered to the cost of under-

taking any corrective action on the Property. If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the Property, Grantee may pursue its remedies under this paragraph without prior notice to Grantors or without waiting for the period provided for cure to expire. Grantee's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this Easement, and Grantors agree that Grantee's remedies at law for any violation of the terms of this Easement are inadequate and that Grantee shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other terms of this Easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Grantee's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity. [20]

6.1 Costs of Enforcement. Any costs incurred by Grantee in enforcing the terms of this Easement against Grantors, including, without limitation, costs of suit and attorneys' fees, and any costs of restoration necessitated by Grantors' violation of the terms of this Easement shall be borne by Grantors. If Grantors prevail in any action to enforce the terms of this Easement, Grantors' costs of suit, including, without limitation, attorneys' fees, shall be borne by Grantee. [21]

6.2 Grantee's Discretion. Enforcement of the terms of this Easement shall be at the discretion of Grantee, and any forbearance by Grantee to exercise its rights under this Easement in the event of any breach of any term of this Easement by Grantors shall not be deemed or construed to be a waiver by Grantee of such term or of any subsequent breach of the same or any other term of this Easement or of any of Grantee's rights under this Easement. No delay or omission by Grantee in the exercise of any right or remedy upon any breach by Grantors shall impair such right or remedy or be construed as a waiver.

6.3 Waiver of Certain Defenses. Grantors hereby waive any defense of laches, estoppel, or prescription. [22]

6.4 Acts Beyond Grantors' Control. Nothing contained in this Easement shall be construed to entitle Grantee to bring any action against Grantors for any injury to or change in the Property resulting from causes beyond Grantors' control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken by Grantors under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes. [23]

7. Access. No right of access by the general public to any portion of the Property is conveyed by this Easement. [24]

8. Costs and Liabilities. Grantors retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property, including the maintenance of adequate comprehensive general liability insurance coverage. Grantors shall keep the

Property free of any liens arising out of any work performed for, materials furnished to, or obligations incurred by Grantors. [25]

8.1 Taxes. Grantors shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Property by competent authority (collectively "taxes"), including any taxes imposed upon, or incurred as a result of, this Easement, and shall furnish Grantee with satisfactory evidence of payment upon request. [Grantee is authorized but in no event obligated to make or advance any payment of taxes, upon [e.g., three (3)] Days prior written notice to Grantors, in accordance with any bill, statement, or estimate procured from the appropriate authority, without inquiry into the validity of the taxes or the accuracy of the bill, statement, or estimate, and the obligation created by such payment shall bear interest until paid by Grantors at the lesser of ____ percentage points over the prime rate of interest from time to time charged by [designated bank] or the maximum rate allowed by law.]

8.2 Hold Harmless. Grantors shall hold harmless, indemnify, and defend Grantee and its members, directors, officers, employees, agents, and contractors and the heirs, personal representatives, successors, and assigns of each of them (collectively "Indemnified Parties") from and against all liabilities, penalties, costs, losses, damages, expenses, causes of action, claims, demands, or judgments, including, without limitation, reasonable attorneys' fees, arising from or in any way connected with: (1) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, regardless of cause, unless due solely to the negligence of any of the Indemnified Parties; (2) the obligations specified in paragraphs 8 and 8.1; and (3) the existence or administration of this Easement. [27]

9. Extinguishment. If circumstances arise in the future such as render the purpose of this Easement impossible to accomplish, this Easement can only be terminated tr extinguished, whether in whole or in part, by judicial proceedings in a court of competent jurisdiction, and the amount of the proceeds to which Grantee shall be entitled, after the satisfaction of prior claims, from any sale, exchange, or involuntary conversion of all or any portion of the Property subsequent to such termination or extinguishment, shall be determined, unless otherwise provided by [state] law at the time, in accordance with paragraph 9.1. Grantee shall use all such proceeds in a manner consistent with the conservation purposes of this grant. [28]

9.1 Proceeds. This Easement constitutes a real property interest immediately vested in Grantee, which, for the purposes of paragraph 9, the parties stipulate to have a fair market value determined by multiplying the fair market value of the Property unencumbered by the Easement (minus any increase in value after the date of this grant attributable to improvements) by the ratio of the

value of the Easement at the time of this grant to the value of the Property, without deduction for the value of the Easement, at the time of this grant. The values at the time of this grant shall be those values used to calculate the deduction for federal income tax purposes allowable by reason of this grant, pursuant to Section 170(h) of the Internal Revenue Code of 1954, as amended. For the purposes of this paragraph, the ratio of the value of the Easement to the value of the Property unencumbered by the Easement shall remain constant. [29]

9.2 Condemnation. If the Easement is taken, in whole or in part, by exercise of the power of eminent domain, Grantee shall be entitled to compensation in accordance with applicable law. [30]

10. Assignment. This Easement is transferable, but Grantee may assign its rights and obligations under this Easement only to an organization that is a qualified organization at the time of transfer under Section 170(h) of the Internal Revenue Code of 1954, as amended (or any successor provision then applicable), and the applicable regulations promulgated thereunder, and authorized to acquire and hold conservation easements under [state statute] (or any successor provision then applicable). As a condition of such transfer, Grantee shall require that the conservation purposes that this grant is intended to advance continue to be carried out. [31]

11. Subsequent Transfers. Grantors agree to incorporate the terms of this Easement in any deed or other legal instrument by which they divest themselves of any interest in all or a portion of the Property, including, without limitation, a leasehold interest. Grantors further agree to give written notice to Grantee of the transfer of any interest at least [e.g., twenty (20)] days prior to the date of such transfer. The failure of Grantors to perform any act required by this paragraph shall not impair the validity of this Easement or limit its enforceability in any way. [32]

12. Estoppel Certificates. Upon request by Grantors, Grantee shall within [e.g., twenty (20)] days execute and deliver to grantors any document, including an estoppel certificate, which certifies Grantors' compliance with any obligation of Grantors contained in this Easement and otherwise evidences the status of this Easement as may be requested by Grantors. [33]

13. Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and either served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantors: _____
_____
_____

To Grantee: _____
_____
_____

or to such other address as either party from tie to time shall designate by written notice to the other. [34]

14. Recordation. Grantee shall record this instrument in timely fashion in the official records of _____ County, __[state]__ And may re-record it at any time as may be required to preserve its rights in this Easement. [35]

15. General Provisions.

a. Controlling Law. The interpretation and performance of this Easement shall be governed by the laws of the State of __[state]__ .

b. Liberal Construction. Any general rule of construction to the contrary notwithstanding, this Easement shall be liberally construed in favor of the grant to effect the purpose of this Easement and the policy and purpose of, _[state statute]_ . If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purpose of this Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.

c. Severability. If any provision of this Easement, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Easement, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

d. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement, all of which are merged herein. [No alteration or variation of this instrument shall be valid or binding unless contained in an amendment that complies with paragraph ____ (see supplementary provisions re: Amendment.)]

e. No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

f. Joint Obligation. The obligations imposed by this Easement upon Grantors shall be joint and several.

g. Successors. The covenants, terms, conditions, and restrictions of this Easement shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Property.

h. Termination of Rights and Obligations. A party's rights and obligations under this Easement terminate upon transfer of the party's interest in the Easement or Property, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

i. Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall

have no effect upon construction or interpretation.

j. Counterparts. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling. [36]

TO HAVE AND TO HOLD unto Grantee, its successors, and assigns forever. [37]

IN WITNESS WHEREOF Grantors and Grantee have set their hands on the day and year first above written.

_____

_____
Grantors

_____
Grantee

By _____

its [Official Capacity] [38]

[Acknowledgments]

SCHEDULE OF EXHIBITS

A. Legal Description of Property Subject to Easement
[B. Baseline Documentation]
B. or C. Site Descriptions/Map
[C. or D. Identification of Prior Mortgage

Supplementary Provisions [39]

(Paragraph numbers indicate relative position in model.)

[5.2] Arbitration. If a dispute arises between the parties concerning the consistency of any proposed use or activity with the purpose of this Easement,

and Grantors agree not to proceed with the use or activity pending resolution of the dispute, either party may refer the dispute to arbitration by request made in writing upon the other. Within [e.g., thirty (30)] days of the receipt of such a request, the parties shall select a single arbitrator to hear the matter. If the parties are unable to agree on the selection of a single arbitrator, then each party shall name one arbitrator and the two arbitrators thus selected shall select a third arbitrator; provided, however, if either party fails to select an arbitrator, or if the two arbitrators selected by the parties fail to select the third arbitrator within [e.g., fourteen (14)] days after the appointment of the second arbitrator, then in each such instance a proper court, on petition of a party, shall appoint the second or third arbitrator or both, as the case may be, in accordance with [state arbitration statute] , or any successor statute then in effect. The matter shall be settled in accordance with the [state arbitration statute or other appropriate body of rules] then in effect, and a judgment on the arbitration award may be entered in any court having jurisdiction thereof. The prevailing party shall be entitled, in addition to such other relief as may be granted, to a reasonable sum as and for all its costs and expenses related to such arbitration, including, without limitation, the fees and expenses of the arbitrators and attorneys' fees, which shall be determined by the arbitrator(s) and any court of competent jurisdiction that may be called upon to enforce or review the award. [40]

[Between 9 and 10] Amendment. If circumstances arise under which an amendment to or modification of this Easement would be appropriate, Grantors and Grantee are free to jointly amend this Easement; provided that no amendment shall be allowed that will affect the qualification of this Easement or the status of Grantee under any applicable laws, including [state statute] or Section 170(h) of the Internal Revenue Code of 1954, as amended, and any amendment shall be consistent with the purpose of this Easement, and shall not affect its perpetual duration. Any such amendment shall be recorded in the official records of _____ County, [state] . [41]

[10.1] Executory Limitation. If Grantee shall cease to exist or to be a qualified organization under Section 170(h) of the Internal Revenue Code of 1954, as amended, or to be authorized to acquire and hold conservation easements under [state statute] , and a prior assignment is not made pursuant to paragraph 10, then Grantee's rights and obligations under this Easement shall become immediately vested in [designated back-up grantee] . If [designated back-up grantee] is no longer in existence at the time the rights and obligations under this Easement would otherwise vest in it, or if [designated back-up grantee] is not qualified or authorized to hold conservation easements as provided for an assignment pursuant to paragraph 10, or if it shall refuse such

rights and obligations, then the rights and obligations under this Easement shall

vest in such organization as a court of competent jurisdiction shall direct pursuant to the applicable [state] law and with due regard to the requirements for an assignment pursuant to paragraph 10. [42]

[Between 10 and 11] Subordination. At the time of conveyance of this Easement, the Property is subject to the mortgage identified in Exhibit [C or D] attached hereto and incorporated by this reference, the holder of which has agreed by separate instrument, which will be recorded immediately after this Easement, to subordinate its rights in the Property to this Easement to the extent necessary to permit the Grantee to enforce the purpose of the Easement in perpetuity and to prevent any modification or extinguishment of this Easement by the exercise of any rights of the mortgage holder. The priority of the existing mortgage with respect to any valid claim on the part of the existing mortgage holder to the proceeds of any sale, condemnation proceedings, or insurance or to the leases, rents, and profits of the Property shall not be affected thereby, and any lien that may be created by Grantee's exercise of any of its rights under this Easement shall be junior to the existing mortgage. Upon request, Grantee agrees to subordinate its rights under this Easement to the rights of any future mortgage holders or beneficiaries of deeds of trust to the proceeds, leases, rents, and profits described above and likewise to subordinate its rights under any lien and to execute any documents required with respect to such subordination, except that the priority of any lien created by Grantee's exercise of any of its rights under this Easement prior to the creation of a mortgage or deed of trust shall not be affected thereby, nor shall this Easement be subordinated in any other respect. [43]

Minnesota Department of Natural Resource - Natural Resource Guidance Checklist

Natural Environmental Areas Overlay District Ordinance

NAOD

Why Use An Overlay District & This Checklist?

This checklist is for an overlay district which could be part of a local unit's zoning code. A Natural Environmental Areas Overlay District would identify all the lands that a community wishes to protect or conserve from development impacts. When creating such an overlay district, the community typically starts with the premise that they have natural areas (called here "Significant Natural Environment Areas") in which development should not take place. Enforceable by ordinance, development is guided toward those areas that do not fall within the overlay district. In this way, communities can grow while still enjoying the benefits supplied by local natural resources.

NR Checklist Series

This is one of a series of "checklists" produced for local units of government (LUG) by the Minnesota Department of Natural Resources, Metro Region. Each checklist is intended to help the community integrate natural resources into a particular type of local policy or plan. Each checklist is an outline of key components of a typical LUG planning document with important natural resource-related questions to consider and some examples, definitions, and references.

I. Statutory Authorization, Intent, and Purpose

A. Statutory Authorization

- Does the ordinance include language that clarifies the authority, such as, "This ordinance is adopted pursuant to the authorization and policies contained in Minnesota Statutes Chapters and Minnesota Rules Chapters ____."?

B. Intent

- Does the ordinance clearly establish the intent, such as "the protection and rehabilitation of the 'significant environmental natural areas' identified on a series of overlay district maps"?
- Are the reasons for conserving these areas also itemized within the ordinance?

C. Purpose

- Does the ordinance clearly state its basis in the local Comprehensive Plan, and State and Federal policies and statutes?
- Does the ordinance include a definition of "significant environmental natural areas" (SNEAs) and other terms critical to this document?
- Does the ordinance specify its purposes such as the following?
  - to identify and prioritize areas of SNEAs
  - to control natural environmental areas of ecological value in order to preserve and/or restore ecological functions to the maximum extent possible
  - to regulate the use and subdivision of land based upon criteria necessary for the long term sustainability of SNEAs
  - to promote innovative development techniques such as cluster development and open space subdivisions

Definitions

natural area
a site largely unaltered by modern human activity, where vegetation is distributed in naturally occurring patterns.

significant environmental natural areas (SNEAs)
natural areas designated by a city that are (1) preserved and minimally managed and (2) those needing more management to maintain and enhance their natural integrity

- to aid developers in their creation of development plans
- for foster the protection and creation of natural resource corridor connections between SNEAs
- to encourage cost effective site development through open space design practices that efficiently use land and resources
- to encourage sound natural resource management

II. General Provisions

A. Identification of SNEAs

- What are the types, characteristics and qualities of natural areas that the city wants to designate as SNEAs? For example, does it include resources such as the following?
  - rare, threatened or endangered species
  - high quality native plant communities (such as identified by the Minnesota County Biological Survey)
  - buffer areas along water bodies and protected wetlands
  - working forest lands (commercial forests and plantations)
- Has the city used a natural resource inventory and analysis to identify and prioritize its SNEAs?
- Have SNEAs been identified within an overall network of natural resource corridors (greenways)?
- Are these factors (above) specified in the ordinance?

B. Criteria for Designating SNEAs

- Does the ordinance specify criteria for designating lands whose use will be regulated as SNEAs?
- Does the community want to designate different types and levels of SNEA's? For example, a community could chose to have both Natural Resource Protection Zones (NRPZs) and Natural Resource Conservation Zones (NRCZs). (For further explanation of this see the model ordinance referenced at the end of this checklist.)
- Are the specific characteristics for NRPZs and NRCZs defined in the ordinance?

C. Establishment of SNEA's

Preliminary SNEA determination

- Has the natural resource inventory been used to identify the locations of the SNEAs (and categorized them as NRPZs or NRCZs if applicable)?
- Has the community identified what land uses are compatible with any designated NRCZs?

See Another Checklist

natural resource inventory

A natural resource inventory will help communities identify those areas that will constitute the overlay district. See the "**Natural Resource Inventory Analysis for City or County" Checklist..**

Definitions

natural resource protection zone (NRPZ) - natural areas extremely sensitive to development that are community priorities for protection from development; e.g., sites with 1+ of the following characteristic:
- a high degree of biodiversity and few exotics
- low edge:interior ratio (relatively large in size and not too narrow)
- intact area of pre-European settlement native plant community
- rare, endangered or endangered species
- sensitive geological and hydrological features

natural resource conservation zone (NRCZ) - areas needing conservation and management of natural resources while permitting some land uses allowed in the underlying zoning; e.g., sites with 1+ of the following characteristic:
- contains or adjoins water bodies and is critical to maintaining water quality and rare species habitat
- acts as a buffer to a NRPZ
- has natural resources managed for commercial value, e.g. orchards, managed forestland, Christmas tree plantations, etc.
-offers high quality recreation or tourism amenity opportunities that would be degraded by other forms of development

Relationship to Other Environmental Regulations

- What is the relationship between these overlay provisions and other ordinance provisions?
- Does this or other local ordinances, or state or federal regulations adequately identify (map), designate, and regulate uses related to natural resources such as the following?
    - rare, threatened, and endangered species
    - woodland/forest areas of significance
    - plant communities of significance
    - wetlands
    - water quality (watersheds and imperviousness)
    - water bodies/shoreland
    - flood plains
    - natural resource corridors (greenways)
    - steep slopes and bluffs
    - geological features

III. Application of Natural Resource Protection Standards for SNEAs

A. When These Regulations Apply

- Does the ordinance specify the conditions where regulations are applied except in special cases? For example, do these regulations apply during activities such as the following?
    - development
    - land divisions
    - alterations (e.g. removing, cutting, clearing, etc) of vegetation, except as specified in a management plan
    - changes in topography and grading
    - resource enhancement
    - dedications/expansions of rights-of-way

B. Items Exempt from Regulations

- Are exemptions and related conditions specified, such are for the following?
    - temporary emergency procedures
    - change of ownership
    - existing developments
    - farming practices
    - operation and repair of irrigation, drainage, erosion control, and pollution reduction systems
    - improvements such as native planting, streets, sidewalks, utilities, trails, etc.

C. Development Standards

Purpose

- Are the purpose and provision of development standards

clearly described? For example, does it include standards such as the following?

- encourages sensitive development that minimizes impact on SNEAs
- provides clear limitations on disturbance within SNEAs
- provides tree protection, planting, and erosion control
- buffers NRPZ's
- does not detrimentally affect water quality
- limits public access to NRPZ's to minimize impact on resources

Procedures

- What types of permits or applications trigger review for compliance with these standards?
- What are the procedures for determining if a permit application complies with these standards?

Boundary Delineation

- Are the boundaries of the designated SNEAs (e.g. the NRPZs and the NRCZs) officially mapped?
- Who maintains and updates those maps?
- Are those boundaries incorporated with any related zoning maps?
- Is a process provided for appealing the mapping and designation?

Permit Application Requirements

- What do applicants for permits within the designated SNEAs need to submit in order for their proposal to be reviewed for compliance with the standards? For example, should the applicant be required to submit information such as the following?
  - a site-specific natural resource inventory and existing conditions map drawn to scale, including:
    - 2-foot contour intervals
    - location of all SNEAs (NPRZs and NCRZs) on site and within 50 feet of the site
    - location and identification of any existing and proposed disturbance areas
    - location and identification of any existing trees or native plant communities within 50 feet of a disturbance area
    - local watershed divides and drainageways
    - photographs of site
  - proposed development plan, including:
    - location of proposed disturbance area(s), including all utility work

Definition

native plant community

A group of native plants (plants indigenous to the site) that interact with each other and their abiotic environment in ways not greatly altered by modern human activity or by introduced organisms.

- S erosion and sediment control plan
- S stormwater management plan
- S landscape plan
- S natural area management plan

D. Performance Standards

- What are the specific performance standards that apply to any development in a designated SNEA?
- If NRPZ's are designated do standards such as the following apply?
  - the NRPZ is to be 100% undisturbed open space
  - NRPZ's with rare, threatened, and endangered species are buffered sufficiently to protect these species from degradation
  - all structures are setback at least 50 feet from an NRPZ and no disturbance may take place in first 20 feet of this setback
  - the NRPZ is protected from adjoining development by an approved best management practices plan
  - no native vegetation may be removed, except as provided for in an approved management plan
- If NRCZ's are designated do standards such as the following apply?
  - impervious surfaces may not exceed 10% in NRCZ's within sensitive watersheds
  - slopes exceeding 25% are to be preserved in their natural state and maintained as permanent open space
  - no woodlands greater than __ acres may be cleared, regraded nor used for wetland mitigation unless specifically provided in an approved management plan
  - development must be set back at least 50 feet from the delineated edge of any wetland
  - disturbance to natural plant communities is to be avoided and if any area is disturbed it must be restored
- Are the designated SNEA's sufficiently protected by provisions in local stormwater management, floodplain, shoreland, and/or tree protection ordinances?

IV. Administrative Regulations

- What provisions are needed regarding the following?
  - administration
  - appeals
  - amendments to the ordinance
  - violation - penal offense
  - interpretation
  - severability

See Another Checklist

natural area management plan

Any area designated as a SNEA should have an approved management plan establishing the process and responsible parties to keep the natural resource protection zone lands healthy. For an outline of the key components of such a plan, see the **"Natural Area Management Plan" checklist.**

Reference

model ordinance

This checklist is adapted from the Natural Environmental Areas Overlay District Ordinance in "From Policy to Reality: Model Ordinances for Sustainable Development" Minnesota Planning. 2000. (prepared by Biko Associates, Inc., Desotelle Consulting, and BRW, Inc.). For the full model ordinance go to www.mnplan.state.mn.us/SDI/ordinances.html

RAIN GARDENS

A how-to manual
for homeowners

RAIN GARDENS

Your personal contribution to cleaner water

Homeowners in many parts of the country are catching on to rain gardens – landscaped areas planted to wild flowers and other native vegetation that soak up rain water, mainly from the roof of a house or other building. The rain garden fills with a few inches of water after a storm and the water slowly filters into the ground rather than running off to a storm drain. Compared to a conventional patch of lawn, a rain garden allows about 30% more water to soak into the ground.

Why are rain gardens important? As cities and suburbs grow and replace forests and agricultural land, increased stormwater runoff from impervious surfaces becomes a problem. Stormwater runoff from developed areas increases flooding; carries pollutants from streets, parking lots and even lawns into local streams and lakes; and leads to costly municipal improvements in stormwater treatment structures.

By reducing stormwater runoff, rain gardens can be a valuable part of changing these trends. While an individual rain garden may seem like a small thing, collectively they produce substantial neighborhood and community environmental benefits. Rain gardens work for us in several ways:

- Increasing the amount of water that filters into the ground, which recharges local and regional aquifers;
- Helping protect communities from flooding and drainage problems;
- Helping protect streams and lakes from pollutants carried by urban stormwater – lawn fertilizers and pesticides, oil and other fluids that leak from cars, and numerous harmful substances that wash off roofs and paved areas;
- Enhancing the beauty of yards and neighborhoods;
- Providing valuable habitat for birds, butterflies and many beneficial insects.

Who should use this manual?

This manual provides homeowners and landscape professionals with the information needed to design and build rain gardens on residential lots. Guidelines presented in this manual can also be used to treat roof runoff at commercial and institutional sites. However, the manual should not be used to design rain gardens for parking lots, busy streets and other heavily used paved areas where stormwater would require pretreatment before entering a rain garden.

Frequently asked questions

Does a rain garden form a pond?

No. The rain water will soak in so the rain garden is dry between rainfalls. (Note: some rain gardens can be designed to include a permanent pond, but that type of rain garden is not addressed in this publication).

Are they a breeding ground for mosquitoes?

No. Mosquitoes need 7 to 12 days to lay and hatch eggs, and standing water in the rain garden will last for a few hours after most storms. Mosquitoes are more likely to lay eggs in bird baths, storm sewers, and lawns than in a sunny rain garden. Also rain gardens attract dragonflies, which eat mosquitoes!

Do they require a lot of maintenance?

Rain gardens can be maintained with little effort after the plants are established. Some weeding and watering will be needed in the first two years, and perhaps some thinning in later years as the plants mature.

Is a rain garden expensive?

It doesn't have to be. A family and a few friends can provide the labor. The main cost will be purchasing the plants, and even this cost can be minimized by using some native plants that might already exist in the yard or in a neighbor's yard.

Step 1 Sizing and Siting the Rain Garden

This section of the manual covers rain garden basics – where to put the rain garden, how big to make it, how deep to dig it, and what kind of soils and slope are best. Following the instructions in this section is the best way to ensure a successful rain garden project.

An extension of PVC pipe helps direct downspout water to this rain garden.

If you already know the size you want your rain garden to be, then skip ahead to the section about building the rain garden. However, take time read the pointers about location, and do find the slope of the lawn. If the location has a slope more than about 12%, it's best to pick a different location because of the effort it will take to create a level rain garden.

Where should the rain garden go?

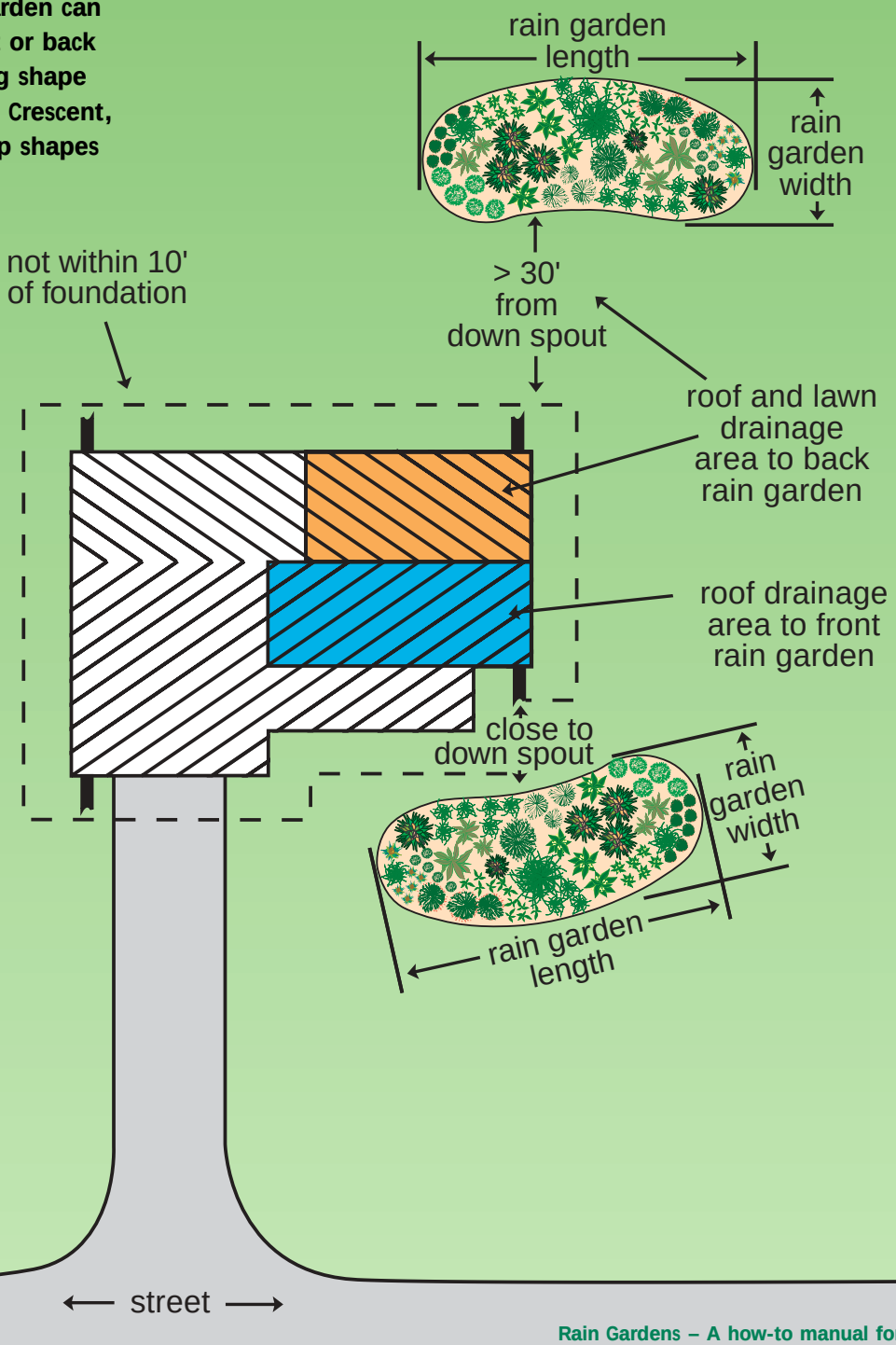
Home rain gardens can be in one of two places – near the house to catch only roof runoff or farther out on the lawn to collect water from the lawn and roof. (Figure 1 shows the possible locations on a residential lot.) To help decide where to put a rain garden, consider these points:

- The rain garden should be at least 10 feet from the house so infiltrating water doesn't seep into the foundation.
- Do not place the rain garden directly over a septic system.
- It may be tempting to put the rain garden in a part of the yard where water already ponds. Don't! The goal of a rain garden is to encourage infiltration, and your yard's wet patches show where infiltration is slow.
- It is better to build the rain garden in full or partial sun, not directly under a big tree.
- Putting the rain garden in a flatter part of the yard will make digging much easier. For example, a rain garden 10 feet wide on a 10% slope must be 12 inches deep to be level, unless you import topsoil or use cut and fill.

Consider your overall landscape

When considering placement of your rain garden, design with the end in mind. Carefully consider how the rain garden can be integrated into existing and future landscaping. Also, pay attention to views from inside the house as well as those throughout the landscape. Determine how far or how close you want your rain garden to outdoor gathering spaces or other play areas. Why not locate it near a patio where you can take advantage of the colors and fragrances for hours on end!

Figure 1 **A rain garden can be built in the front or back yard. Pick a pleasing shape for the rain garden. Crescent, kidney, and teardrop shapes seem to work well.**



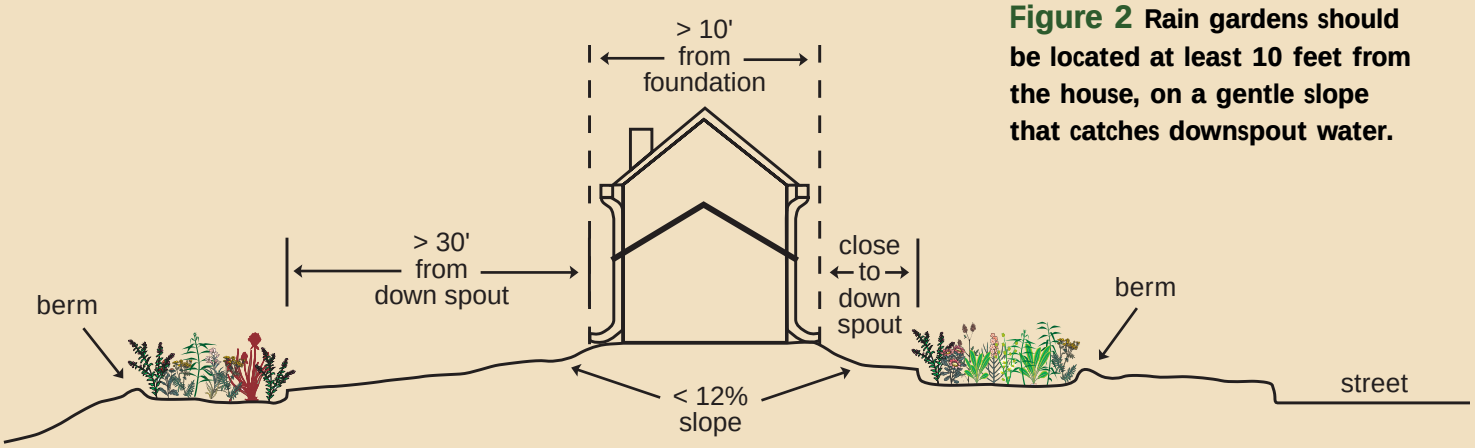


Figure 2 **Rain gardens should be located at least 10 feet from the house, on a gentle slope that catches downspout water.**

How big should the rain garden be?

The surface area of the rain garden can be almost any size, but time and cost will always be important considerations in sizing decisions. Any reasonably sized rain garden will provide some stormwater runoff control. A typical residential rain garden ranges from 100 to 300 square feet. Rain gardens can be smaller than 100 square feet, but very small gardens have little plant variety. If a rain garden is larger than 300 square feet it takes a lot more time to dig, is more difficult to make level, and could be hard on your budget.

The size of the rain garden will depend on

- how deep the garden will be,
- what type of soils the garden will be planted in, and
- how much roof and/or lawn will drain to the garden.

This information, along with the sizing factor from the tables on page 9, will determine the surface area of the rain garden.

Digging with a rented backhoe.

Guidelines are not rules...

The sizing guidelines described in this manual are based on a goal of controlling 100% of the runoff for the average rainfall year while keeping the size of the rain garden reasonable. Establishing a 100% runoff goal helps compensate for some of the errors that creep into the design and construction of any rain garden.

If you follow the guidelines in the manual and decide the calculated surface area is just too large for your goals, it is perfectly acceptable to make the rain garden smaller. The rain garden can be up to 30% smaller and still control almost 90% of the annual runoff. On the other hand, it is fine to make the rain garden bigger than the guidelines indicate.

How Deep Should the Rain Garden Be?

A typical rain garden is between four and eight inches deep. A rain garden more than eight inches deep might pond water too long, look like a hole in the ground, and present a tripping hazard for somebody stepping into it. A rain garden much less than four inches deep will need an excessive amount of surface area to provide enough water storage to infiltrate the larger storms.

No matter what the depth of the rain garden, the goal is to keep the garden level. Digging a very shallow rain garden on a steep lawn will require bringing in extra topsoil to bring the downslope part of the garden up to the same height as the up-slope part of the garden. As the slope gets steeper, it is easier to dig the rain garden a little deeper to make it level.

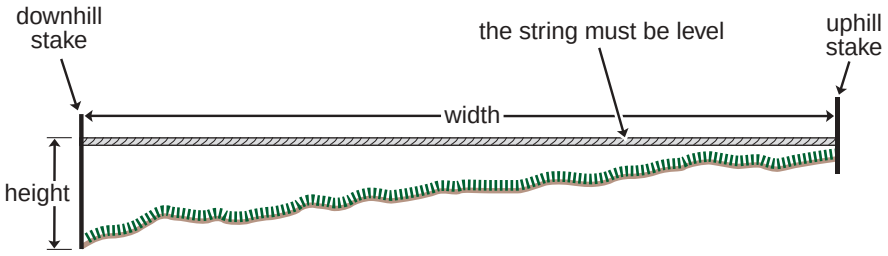


Figure 3 The string should be tied to the base of the uphill stake, then tied to the downhill stake at the same level.

The slope of the lawn should determine the depth of the rain garden. Find the slope of your lawn by following these steps. (Figure 3 shows how the stakes and string should look.)

1. Pound one stake in at the uphill end of your rain garden site and pound the other stake in at the downhill end. The stakes should be about 15 feet apart.
2. Tie a string to the bottom of the uphill stake and run the string to the downhill stake.
3. Using a string level or the carpenter's level, make the string horizontal and tie the string to the downhill stake at that height.
4. Measure the width (in inches) between the two stakes.
5. Now measure the height (in inches) on the downhill stake between the ground and string.
6. Divide the height by the width and multiply the result by 100 to find the lawn's percent slope. If the slope is more than 12%, it's best to find another site or talk to a professional landscaper.

Using the slope of the lawn, select the depth of the rain garden from the following options:

- If the slope is less than 4%, it is easiest to build a 3 to 5-inch deep rain garden.
- If the slope is between 5 and 7%, it is easiest to build one 6 to 7 inches deep.
- If the slope is between 8 and 12%, it is easiest to build one about 8 inches deep.

EXAMPLE

Todd measures the length of the string between the stakes; it is 180 inches long. The height is 9 inches. He divides the height by the width to find his lawn's percent slope.

$$\frac{\text{height}}{\text{width}} \times 100 = \%\ \text{slope} \qquad \frac{9\ \text{inches}}{180\ \text{inches}} \times 100 = 5\%\ \text{slope}$$

With a 5% slope, Todd should build a 6 inch deep rain garden.

What type of soils are on the rain garden site?

After choosing a rain garden depth, identify the lawn's soil type as sandy, silty, or clayey. Sandy soils have the fastest infiltration; clayey soils have the slowest. Since clayey soils take longer to absorb water, rain gardens in clayey soil must be bigger than rain gardens in sandy or silty soil. If the soil feels very gritty and coarse, you probably have sandy soil. If your soil is smooth but not sticky, you have silty soil. If it is very sticky and clumpy, you probably have clayey soil.

How big is the area draining to the rain garden?

The next step in choosing your rain garden size is to find the area that will drain to the rain garden. As the size of the drainage area increases so should the size of the rain garden. There is some guesswork in determining the size of a drainage area, especially if a large part of the lawn is up-slope from the proposed garden site. Use the suggestions below to estimate the drainage area without spending a lot of time.

Rain gardens less than 30 feet from the downspout

1. In this case, where the rain garden is close to the house, almost all water will come from the roof downspout. Walk around the house and estimate what percent of the roof feeds to that downspout. Many houses have four downspouts, each taking about 25% of the roof's runoff.
2. Next find your home's footprint, the area of the first floor. If you don't already know it, use a tape measure to find your house's length and width. Multiply the two together to find the approximate area of your roof.
3. Finally, multiply the roof area by the percent of the roof that feeds to the rain garden downspout. This is the roof drainage area.

If the rain garden is far from the house, and you don't want a swale or downspout cutting across the lawn, run a PVC pipe underground from the downspout to the rain garden. In this case do calculations as for a rain garden less than 30 feet from the house.

Rain gardens more than 30 feet from the downspout

1. If there is a significant area of lawn uphill that will also drain to the rain garden, add this lawn area to the roof drainage area. First find the roof drainage area using the steps above for a rain garden less than 30' from the downspout.
2. Next find the area of the lawn that will drain to the rain garden. Stand where your rain garden will be and look up toward the house. Identify the part of the lawn sloping into the rain garden.
3. Measure the length and width of the uphill lawn, and multiply them to find the lawn area.
4. Add the lawn area to the roof drainage area to find the total drainage area.

EXAMPLE

Todd's house is 60 feet by 40 feet, so the roof area is 2400 square feet. He estimates that the downspout collects water from 25% of the roof, so he multiplies 2400 by 0.25 to get a downspout drainage area of 600 square feet.

Roof Area: 60 ft by 40 ft = 2400 square ft.

Drainage Area: 2400 square ft. x 0.25 = 600 square ft.

Simple soil tests

Two small tests can ensure your soil can handle a rain garden:

- **Dig a hole about 6 inches deep where the rain garden is to go and fill the hole with water. If the water takes more than 24 hours to soak in, the soil is not suitable for a rain garden.**
- **Take a handful of soil and dampen it with a few drops of water. After kneading the soil in your fingers, squeeze the soil into a ball. If it remains in a ball, then work the soil between your forefinger and thumb, squeezing it upward into a ribbon of uniform thickness. Allow the ribbon to emerge and extend over the forefinger until it breaks from its own weight. If the soil forms a ribbon more than an inch long before it breaks, and it also feels more smooth than gritty, the soil is not suitable for a rain garden.**

The map is a starting point for assessing what type of soils you might find in your yard. However, the soil on a small plot of a yard can be very different from the soils indicated on the map. Use the simple soil test described here for a more accurate representation of the soils in the possible rain garden location. More information about sampling and testing lawn and garden soils can be obtained at county UW-Extension offices.

Using the Rain Garden Size Factors

Having estimated the drainage area, soil type, and depth for your rain garden, use Table 1 or Table 2 to determine the rain garden's surface area. Use Table 1 if the rain garden is less than 30 feet from the downspout, and use Table 2 if it is more than 30 feet from the downspout.

Table 1 Rain gardens less than 30 feet from downspout.

	3-5 in. deep	6-7 in. deep	8 in. deep
Sandy soil	0.19	0.15	0.08
Silty soil	0.34	0.25	0.16
Clayey soil	0.43	0.32	0.20

Table 2 Rain gardens more than 30 feet from downspout.

	Size Factor, for all depths
Sandy soil	0.03
Silty soil	0.06
Clayey soil	0.10

1. Find the size factor for the soil type and rain garden depth.
2. Multiply the size factor by the drainage area. This number is the recommended rain garden area.
3. If the recommended rain garden area is much more than 300 square feet, divide it into smaller rain gardens.

EXAMPLE

Todd's rain garden is less than 30 feet from the downspout, and his lawn has a 5% slope, so he will have a 6-inch deep rain garden. His lawn is silty, so Table 1 recommends a size factor of 0.25. He multiplies the downspout drainage area, 600 square feet, by 0.25 to find the recommended rain garden area, 150 square feet.

600 square ft. by 0.25 = 150 square ft.

Runoff flows into a new rain garden (shown before plants are fully grown).

How long and how wide should the rain garden be?

Before building the rain garden, think about how it will catch water. Runoff will flow out of a downspout and should spread evenly across the entire length of the rain garden. The rain garden must be as level as possible so water doesn't pool at one end and spill over before it has a chance to infiltrate.

Choose a size that is best for your yard

Remember that these are only guidelines. The size of the rain garden also depends on how much money you want to spend, how much room you have in your yard, and how much runoff you want to control. Again, you can reduce the size of your rain garden by as much as 30% and still control almost 90% of the runoff. If the sizing table suggests that the rain garden be 200 square feet, but there is only enough room for a 140-square-foot rain garden, that's fine. A smaller rain garden will usually work to control most stormwater runoff, although some bigger storms might over-top the berm.

The longer side of the rain garden should face upslope; that is, the length of the rain garden should be perpendicular to the slope and the downspout. This way the garden catches as much water as possible. However, the rain garden should still be wide enough for the water to spread evenly over the whole bottom and to provide the space to plant a variety of plants. A good rule of thumb is that the rain garden should be about twice as long (perpendicular to the slope) as it is wide.

When choosing the width of the garden, think about the slope of the lawn. Wide rain gardens and rain gardens on steep slopes will need to be dug very deep at one end in order to be level. If the rain garden is too wide, it may be necessary to bring in additional soil to fill up the downhill half. Experience shows that making a rain garden about 10 feet wide is a good compromise between the effect of slope and how deep the rain garden should be. A rain garden should have a maximum width of about 15 feet, especially for lawns with more than about an 8 percent slope.

To determine the length of the rain garden:

1. Pick the best rain garden width for your lawn and landscaping.
2. Divide the size of your rain garden by the width to find your rain garden's length.

EXAMPLE

Todd wants a 10-foot wide rain garden, so he divides 150 by 10 to find the rain garden length, 15 feet.

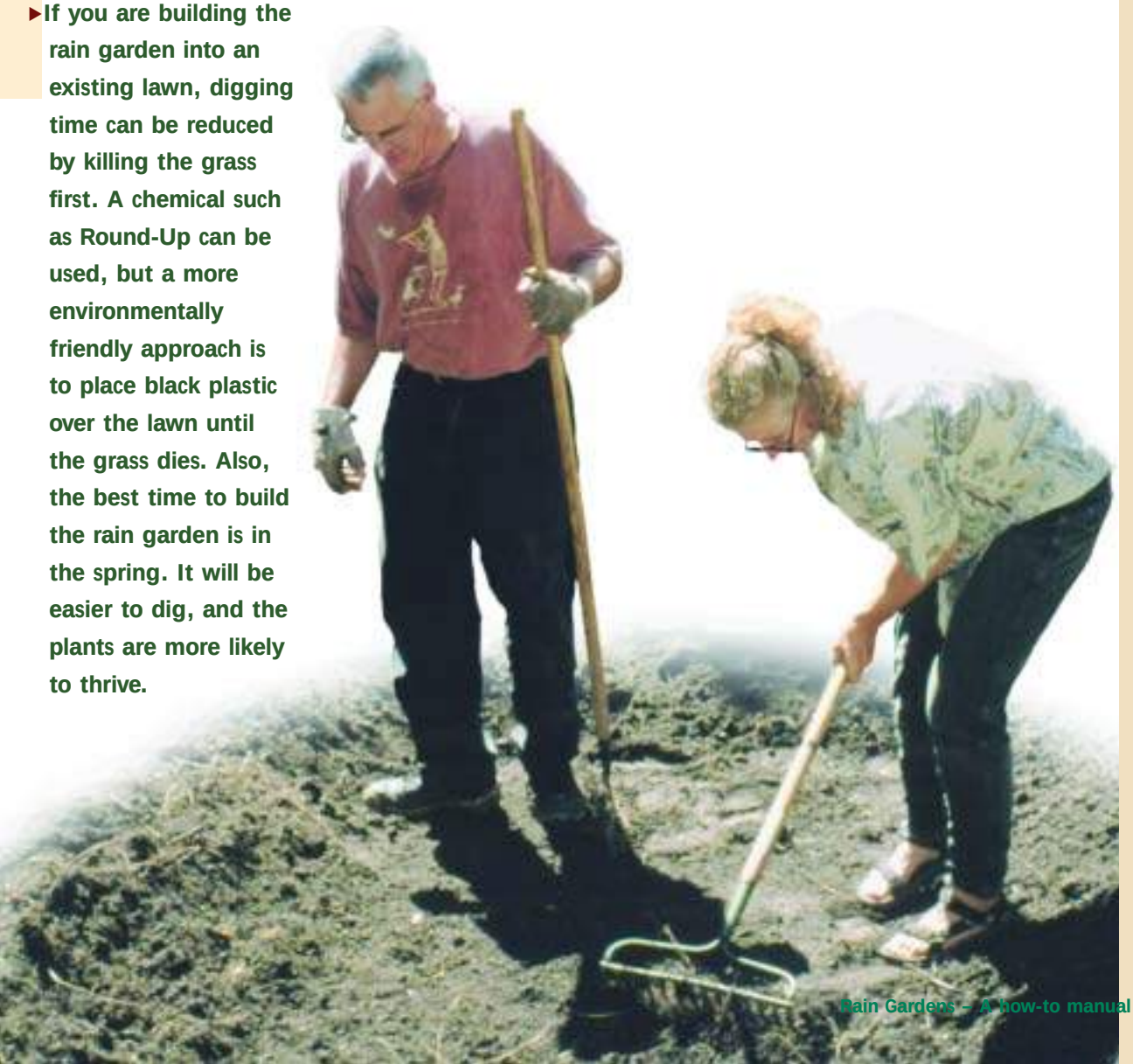
$$\frac{\text{rain garden area}}{\text{width}} = \text{length} \qquad \frac{150\ \text{ft}^2}{10\ \text{ft}} = 15\ \text{ft}$$

Step 2 Building the Rain Garden

Now that the size and place for the rain garden are set, it's time to get a shovel and start digging. Working alone, it will take about six hours to dig an average-size rain garden. If friends help it will go much faster, possibly only an hour or two.

Before you start digging, call Digger's Hotline at 1-800-242-8511.

If you are building the rain garden into an existing lawn, digging time can be reduced by killing the grass first. A chemical such as Round-Up can be used, but a more environmentally friendly approach is to place black plastic over the lawn until the grass dies. Also, the best time to build the rain garden is in the spring. It will be easier to dig, and the plants are more likely to thrive.



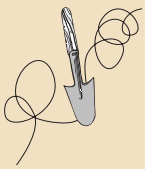
A note on tools

The following tools will help in building the rain garden. Some of the tools are optional.

- **Tape measure**

- **Shovels**
- **Rakes**
- **Trowels**
- **Carpenter's level**

- **Wood stakes, at least 2 ft long**



- **String**
- **2x4 board, at least 6 ft long (optional)**
- **Small backhoe with caterpillar treads (optional)**

Leveling the rain garden

One way to check the level of the rain garden is to just "eyeball" it. To do it more accurately follow these steps:

- **When the whole area has been dug out to about the right depth, lay the 2x4 board in the rain garden with the carpenter's level sitting on it. Find the spots that aren't flat. Fill in the low places and dig out the high places.**
- **Move the board to different places and different directions, filling and digging as necessary to make the surface level.**
- **When the rain garden is as level as you can get it, rake the soil smooth.**

The perimeter of a rain garden is defined with string before digging.

Digging the rain garden

While digging the rain garden to the correct depth, heap the soil around the edge where the berm will be. (The berm is a low "wall" around three sides of the rain garden that holds the water in during a storm.) On a steeper lawn the lower part of the rain garden can be filled in with soil from the uphill half, and extra soil might need to be brought in for the berm.

Start by laying string around the perimeter of your rain garden. Remember that the berm will go outside the string. Next, put stakes along the uphill and downhill sides, lining them up so that each uphill stake has a stake directly downhill. Place one stake every 5 feet along the length of the rain garden.

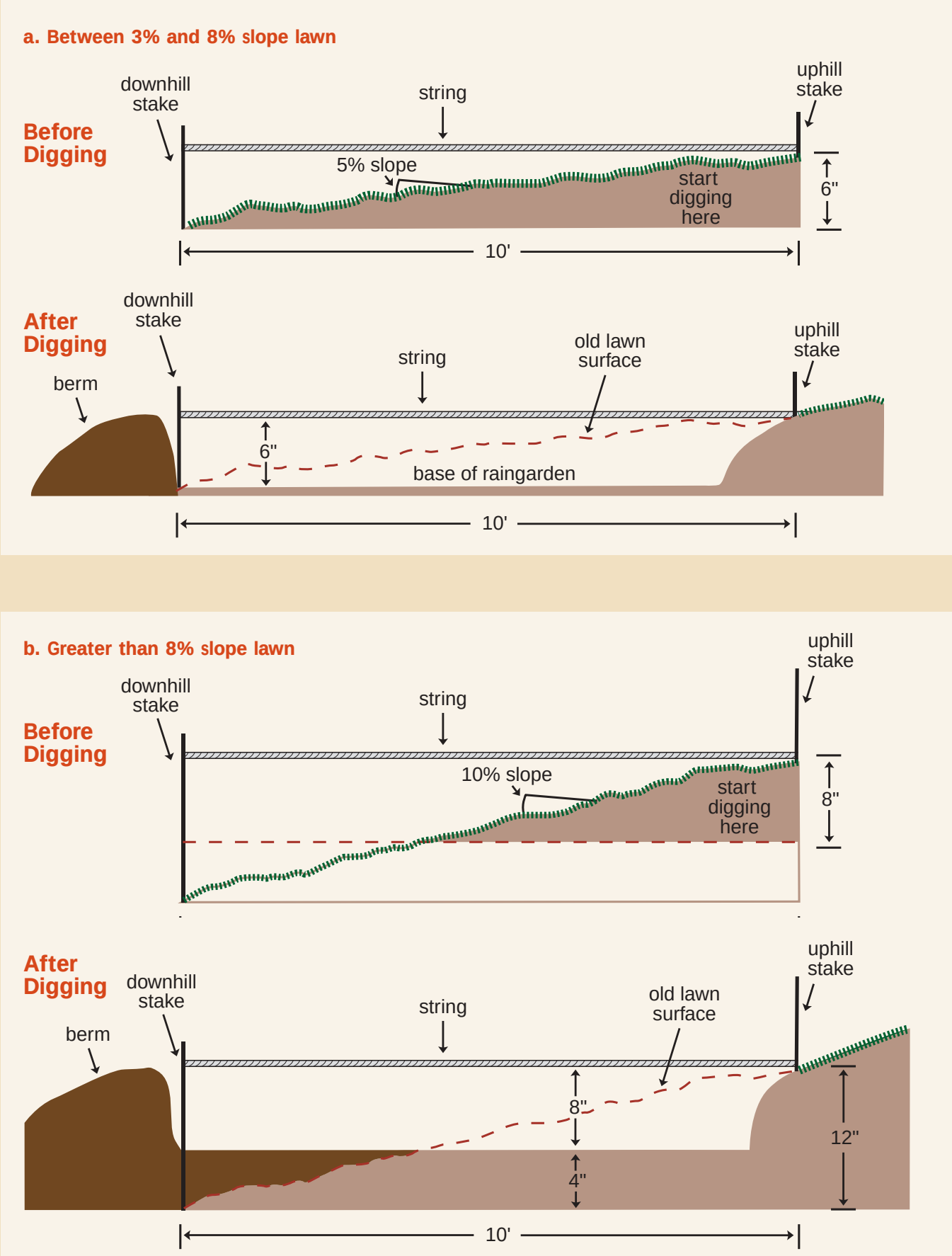
Start at one end of the rain garden and tie a string to the uphill stake at ground level. Tie it to the stake directly downhill so that the string is level. Work in 5-foot-wide sections, with only one string at a time. Otherwise the strings will become an obstacle.

Start digging at the uphill side of the string. Measure down from the string and dig until you reach the depth you want the rain garden to be. If the rain garden will be four inches deep, then dig four inches down from the string. Figure 4 shows how.

If the lawn is almost flat, you will be digging at the same depth throughout the rain garden and using the soil for the berm. If the lawn is steeper, the high end of the rain garden will need to be dug out noticeably more than the low end, and some of the soil from the upper end can be used in the lower end to make the rain garden level. Continue digging and filling one section at a time across the length of your rain garden until it is as level as possible.

In any garden, compost will help the plants become established and now is the time to mix in compost if needed. Using a roto-tiller can make mixing much easier, but isn't necessary. If you do add compost, dig the rain garden a bit deeper. To add two inches of compost, dig the rain garden one to two inches deeper than planned.

Figure 4 **Where to dig and where to put the soil you've dug.**



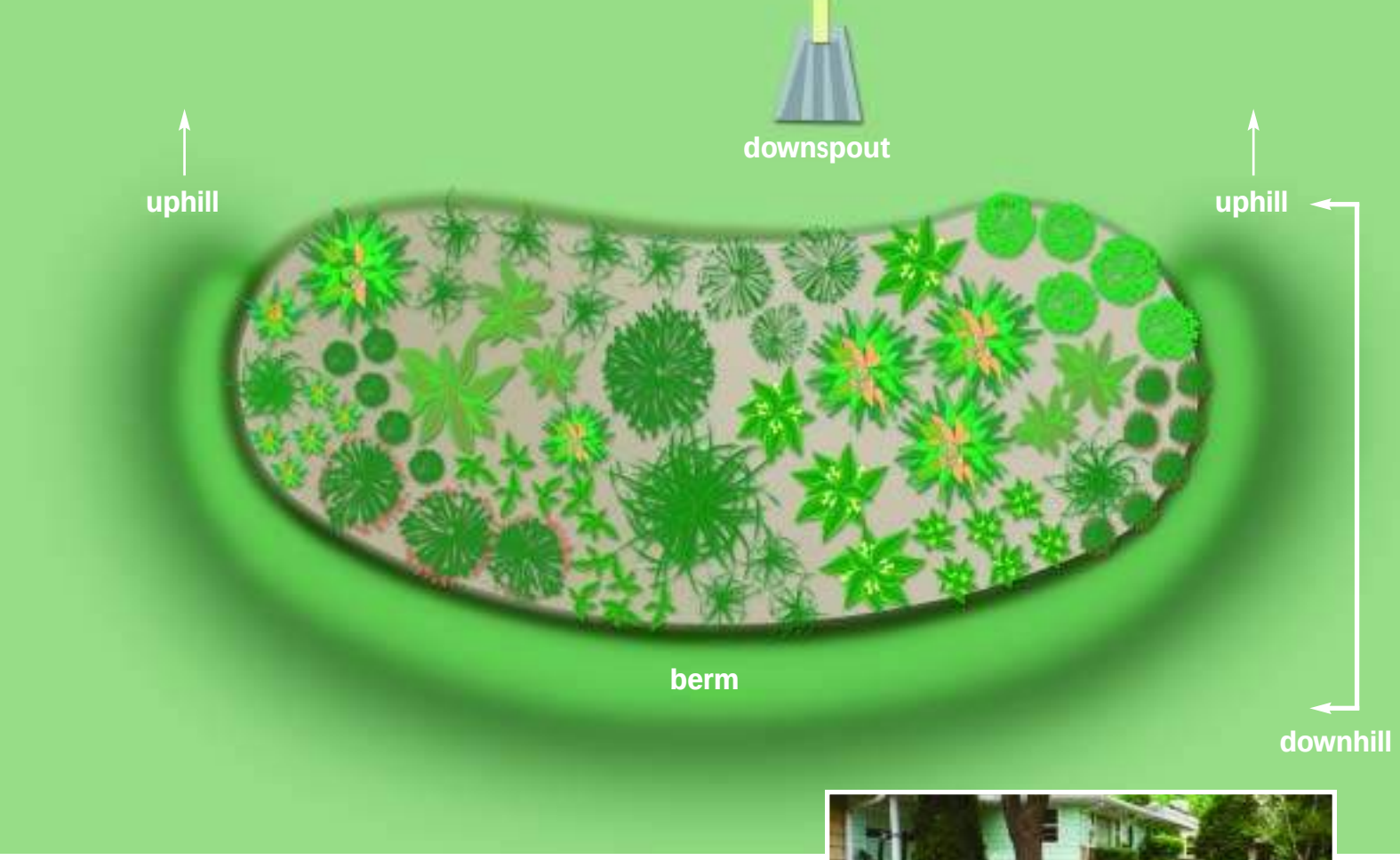


Figure 5 **The top of the downhill part of the berm should come up to the same elevation as the entry to the rain garden at the uphill end.**

On a gentle slope, soil from digging out the garden can be used to create the berm. This rain garden is 4 inches deep.

Making the Berm

Water flowing intro the rain garden will naturally try to run off the downhill edge. A berm is needed to keep the water in the garden, The berm is a "wall" across the bottom and up the sides of the rain garden. The berm will need to be highest at the downhill side. Up the sides of the rain garden, the berm will become lower and gradually taper off by the time it reaches the top of the rain garden. Figure 5 shows how the berm should look.

On a flat slope there should be plenty of soil from digging out the rain garden to use for a berm. On a steeper slope, most of the soil from the uphill part of the rain garden was probably used to fill in the downhill half, and soil will have to be brought in from somewhere else. After shaping the berm into a smooth ridge about a foot across, stomp on it. It is very important to have a well-compacted berm, so stomp hard. The berm should have very gently sloping sides; this helps smoothly integrate the rain garden with the surrounding lawn and also makes the berm less susceptible to erosion.

To prevent erosion, cover the berm with mulch or plant grass. Use straw or erosion-control mat to protect the berm from erosion while the grass is taking root.

If you don't want to plant grass or mulch over the outside of the berm, you can also plant dry-tolerant prairie species. Some potential berm species are prairie dropseed, little bluestem, prairie smoke, blue-eyed grass, prairie phlox, and shooting star.

Note: If the downspout is a few feet from the entry to the rain garden, make sure the water runs into the garden by either digging a shallow grass swale or attaching an extension to the downspout.

Tips for designing an attractive rain garden

While rain gardens are a highly functional way to help protect water quality, they are also gardens and should be an attractive part of your yard and neighborhood. Think of the rain garden in the context of your home's overall landscape design. Here are a few tips:

When choosing native plants for the garden, it is important to consider the height of each plant, bloom time and color, and its overall texture. Use plants that bloom at different times to create a long flowering season. Mix heights, shapes, and textures to give the garden depth and dimension. This will keep the rain garden looking interesting even when few wildflowers are in bloom.

When laying plants out, randomly clump individual species in groups of 3 to 7 plants to provide a bolder statement of color. Make sure to repeat these individual groupings to create repetition and cohesion in a planting. This will provide a more traditional formal look to the planting.

Try incorporating a diverse mixture of sedges, rushes, and grasses with your flowering species (forbs). This creates necessary root competition that will allow plants to follow their normal growth patterns and not outgrow or out-compete other species. In natural areas, a diversity of plant types not only adds beauty but also create a thick underground root matrix that keeps the entire plant community in balance. In fact, 80% of the plant mass in native prairie communities is underground. Once the rain garden has matured and your sedges, rushes and grasses have established a deep, thick root system, there will be less change in species location from year to year, and weeds will naturally decline.

Finally, consider enhancing the rain garden by using local or existing stone, ornamental fences, trails, garden benches, or additional wildflower plantings. This will help give the new garden an intentional and cohesive look and provide a feeling of neatness that the neighbors will appreciate.

Step 3 Planting and Maintaining the Rain Garden

Planting the rain garden is the fun part! A number of planting designs and lists of suggested plants are included at the end of this publication. Use these for ideas, but don't be afraid to be creative – there's no single best way to plant a rain garden. Anyone who has ever done any gardening will have no problem planting a rain garden, but a few basic reminders are listed below.

Planting the rain garden

Select plants that have a well established root system. Usually one or two-year-old plants will have root systems that are beginning to circle or get matted. (Note: use only nursery-propagated plants; do not collect plants from the wild).

Make sure to have at least a rough plan for which plants will be planted where. Lay out the plants as planned one foot apart in a grid pattern, keeping them in containers if possible until they are actually planted to prevent drying out before they get in the ground.

Dig each hole twice as wide as the plant plug and deep enough to keep the crown of the young plant level with the existing grade (just as it was growing in the cell pack or container). Make sure the crown is level and then fill the hole and firmly tamp around the roots to avoid air pockets.

Apply double-shredded mulch evenly over the bed approximately two inches thick, but avoid burying the crowns of the new transplants. Mulching is usually not necessary after the second growing season unless the "mulched look" is desired.

Stick plant labels next to each individual grouping. This will help identify the young native plants from non-desirable species (weeds) as you weed the garden.

As a general rule plants need one inch of water per week. Water immediately after planting and continue to water twice a week (unless rain does the job) until the plugs are established. You should not have to water your rain garden once the plants are established. Plugs can be planted anytime during the growing season as long as they get adequate water.

Fire safety

Make sure burning is allowed in your locale. If so, be sure to notify the local fire department and obtain a burn permit if needed. It's also wise – not to mention neighborly – to make sure the neighbors know that you're burning and that all safety precautions are being taken. Basic fire precautions include:

- **Make sure there is a fire-break (non-burnable area, such as turf-grass) at least 10-feet wide surrounding the area to be burned.**
- **Never burn on windy days.**
- **Never leave an actively burning fire unattended.**
- **Keep a garden hose handy in case fire strays where it is not wanted. Also have a metal leaf rake in hand to beat out flames that creep beyond the burn zone.**

Maintaining the rain garden

Weeding will be needed the first couple of years. Remove by hand only those plants you are certain are weeds. Try to get out all the roots of the weedy plants. Weeds may not be a problem in the second season, depending on the variety and tenacity of weeds present. In the third year and beyond, the native grasses, sedges, rushes, and wildflowers will begin to mature and will out-compete the weeds. Weeding isolated patches might still be needed on occasion.

After each growing season, the stems and seedheads can be left for winter interest, wildlife cover and bird food. Once spring arrives and new growth is 4-6-inches tall, cut all tattered plants back. If the growth is really thick, hand-cut the largest plants and then use a string trimmer to mow the planting back to a height of six to eight inches. Dead plant material can also be removed with a string trimmer or weed whacker (scythe) and composted or disposed of as appropriate.

The best way to knock back weeds and stimulate native plant growth is to burn off the dead plant material in the rain garden. However, burning is banned in most municipalities. Another option is to mow the dead plant material. If the mowing deck of your lawn mower can be raised to a height of six inches or so, go ahead and simply mow your rain garden. Then, rake up and compost or properly dispose of the dead plant material.

If the mower deck won't raise that high, use a string trimmer or weed-eater to cut the stems at a height of 6-8 inches. On thicker stems, such as cup plant, goldenrods and some asters, a string trimmer may not be strong enough. For these, use hand clippers or pruning shears to cut the individual stems.

What does a rain garden cost?

The cost of a rain garden will vary depending on who does the work and where the plants come from. If you grow your own plants or borrow plants from neighbors there can be very little or no cost at all. If you do all the work but use purchased prairie plants, a rain garden will cost approximately $3 to $5 per square foot. If a landscaper does everything, it will cost approximately $10 to $12 per square foot.

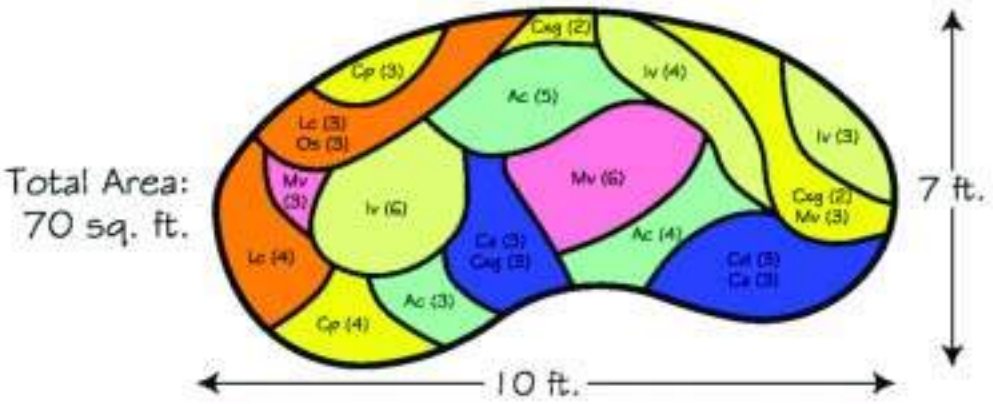
It might seem easiest to sow native wildflower seed over the garden, but experience shows that seeding a rain garden has its problems. Protecting the seeds from wind, flooding, weeds, and garden pests is very difficult, and the rain garden will be mostly weeds for the first two years. Growing plugs from seed indoors or dividing a friend's plants is much better. If you grow plugs, start them about four months before moving them to the rain garden. When the roots have filled the pot and the plants are healthy, they may be planted in the rain garden

Rain Garden Designs and Plant Lists

The following pages contain conceptual planting designs and plant lists for rain gardens with varying sun and soil conditions. Keep in mind that design possibilities for rain gardens are almost limitless. Many landscape nurseries, particularly those specializing in native plants and landscaping, can provide other ideas, designs and suggested plants.

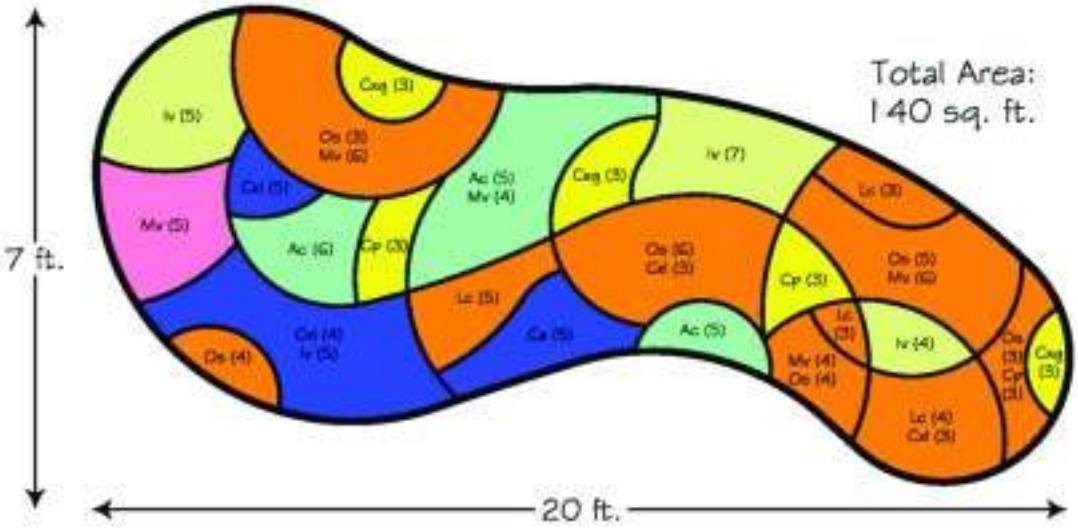
The following eight designs and plant lists have been provided by Applied Ecological Services, Inc., Brodhead, WI.

10 feet wide; full to partial shade with clay soils



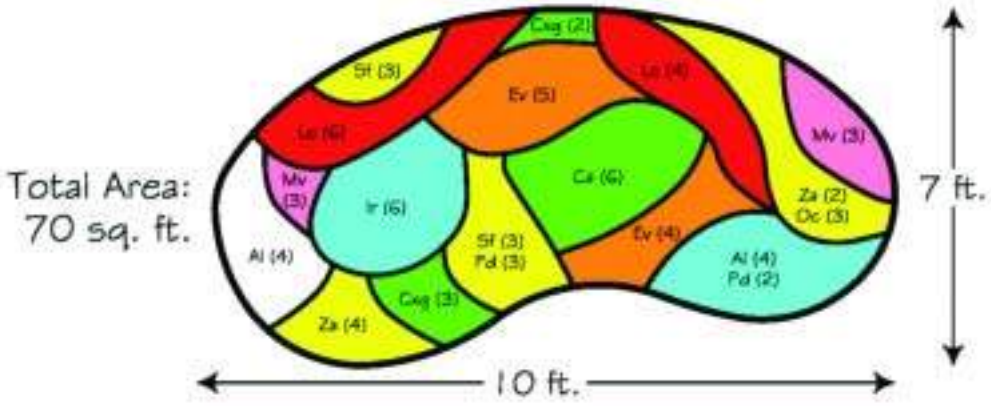
Symbol	Species Name	Common Name	No. of Plants
Ac	Acorus calamus	Sweet flag	12
Ca	Campanula americana	Tall bellflower	6
Cp	Caltha palustris	Marsh marigold	7
Cxg	Carex Grayi	Bur sedge	7
Cxl	Carex lupulina	Hop sedge	3
Iv	Iris virginica-shreveri	Wild blue flag iris	13
Lc	Lobelia cardinalis	Cardinal flower	7
Mv	Mertensia virginica	Virginia bluebells	12
Os	Onoclea sensibilis	Sensitive fern	3
		Total Plants Needed	70

20 feet wide; full to partial shade with clay soils



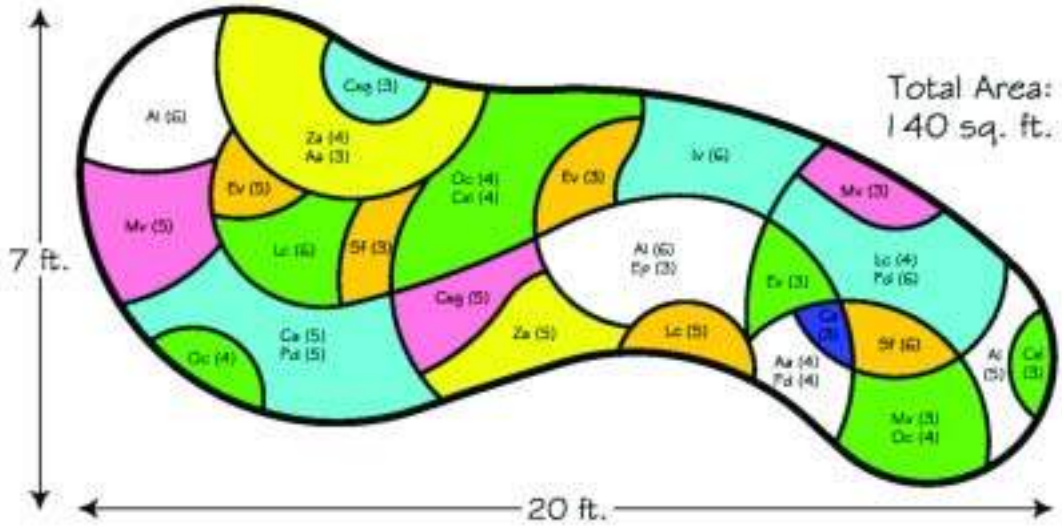
Symbol	Species Name	Common Name	No. of Plants
Ac	Acorus calamus	Sweet flag	16
Cp	Caltha palustris	Marsh marigold	9
Ca	Campanula americana	Tall bellflower	5
Cxg	Carex Grayi	Bur sedge	9
Cxl	Carex lupulina	Hop sedge	15
Iv	Iris virginica-shreveri	Wild blue flag iris	21
Lc	Lobelia cardinalis	Cardinal flower	15
Mv	Mertensia virginica	Virginia bluebells	25
Os	Onoclea sensibilis	Sensitive fern	25
		Total Plants Needed	140

10 feet wide; full to partial shade with silty & sandy soils



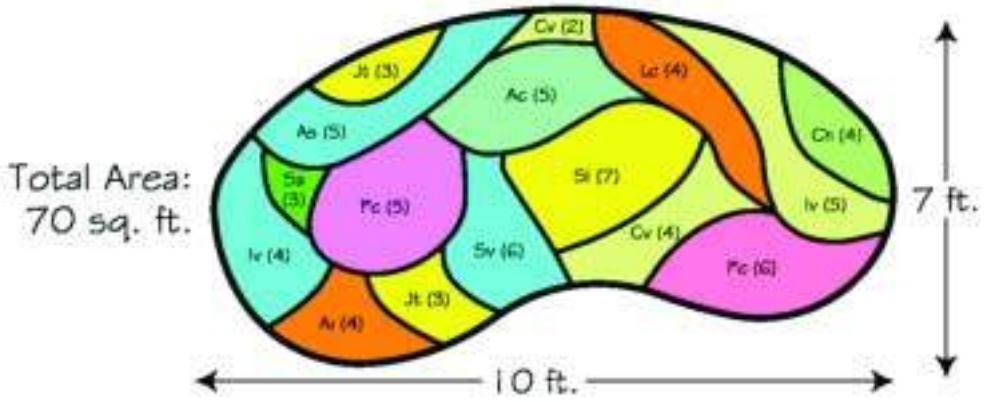
Symbol	Species Name	Common Name	No. of Plants
Al	Aster lateriflorus	Side-flowering aster	8
Ca	Campanula americana	Tall bellflower	6
Cxg	Carex Grayi	Bur sedge	5
Ev	Elymus virginicus	Virginia wild rye	9
Iv	Iris virginica-shreve	Wild blue flag iris	6
Lc	Lobelia cardinalis	Cardinal flower	10
Mv	Mertensia virginica	Virginia bluebells	6
Oc	Osmunda clayoniana	Interupted fern	3
Pd	Phlox divaricata	Woodland phlox	5
Sf	Solidago flexicaulis	Zig zag goldenrod	6
Za	Zizia aurea	Golden Alexander	6
		Total Plants Needed	70

20 feet wide; full to partial shade with silty & sandy soils



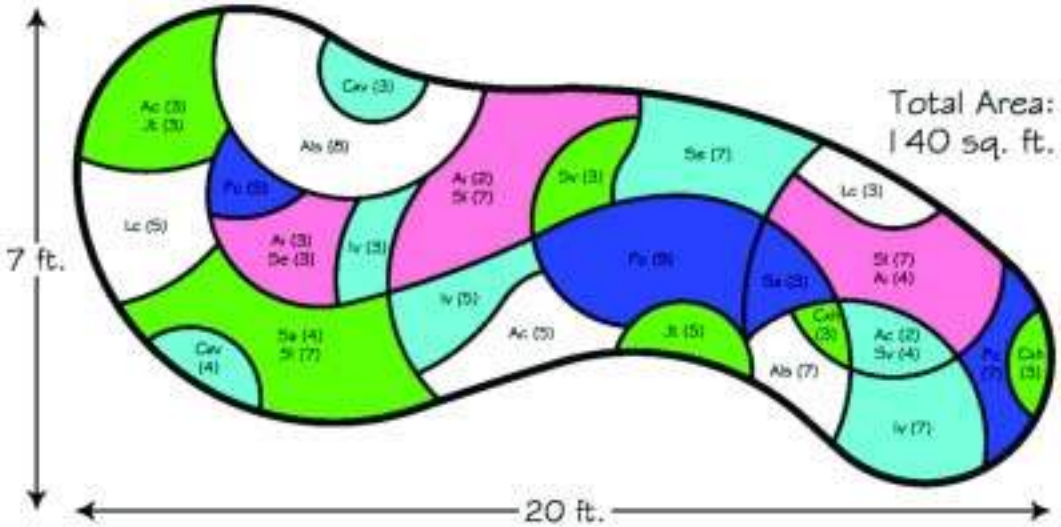
Symbol	Species Name	Common Name	No. of Plants
Aa	Arisaema atrorubens	Jack-in-the-pulpit	7
Al	Aster lateriflorus	Side-flowering aster	17
Ca	Campanula americana	Tall bellflower	8
Cxg	Carex Grayi	Bur sedge	8
Cxl	Carex lupulina	Hop sedge	7
Ev	Elymus virginicus	Virginia wild rye	11
Ep	Eupatorium purpureum	Purple Joe-Pye weed	3
Iv	Iris virginica-shrevei	Wild blue flag iris	6
Lc	Lobelia cardinalis	Cardinal flower	15
Mv	Mertensia virginica	Virginia bluebells	11
Oc	Osmunda clayoniana	Interupted fern	12
Pd	Phlox divaricata	Woodland phlox	15
Sf	Solidago flexicaulis	Zig zag goldenrod	9
Za	Zizia aurea	Golden Alexander	14
		Total Plants Needed	143

10 feet wide; full to partial sun with clay soils



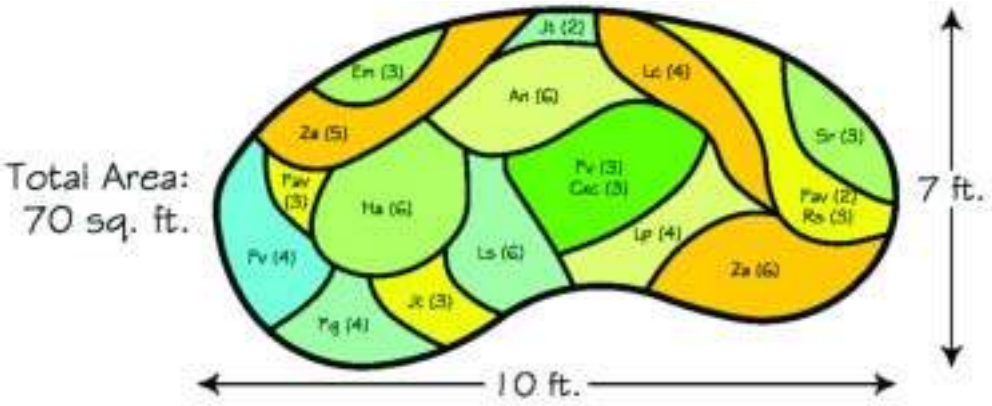
Symbol	Species Name	Common Name	No. of Plants
Ac	Acorus calamus	Sweet flag	5
As	Asclepias incarnata	Swamp milkweed	4
Als	Alisma subcordatum	Water plantain	5
Cxh	Carex hystricina	Bottle brush sedge	4
Cxv	Carex vulpinoidea	Fox sedge	6
Iv	Iris virginica-shrevei	Wild blue flag iris	9
Jt	Juncus torreyi	Torrey's rush	6
Lc	Lobelia cardinalis	Cardinal flower	4
Pc	Pontederia cordata	Pickerel weed	11
Si	Sagittaria latifolia	Arrowhead	7
Sa	Scirpus atrovirens	Green bulrush	3
Sv	Scirpus validus creber	Soft-stemmed bulrush	6
		Total Plants needed	70

20 feet wide; full to partial sun with clay soils



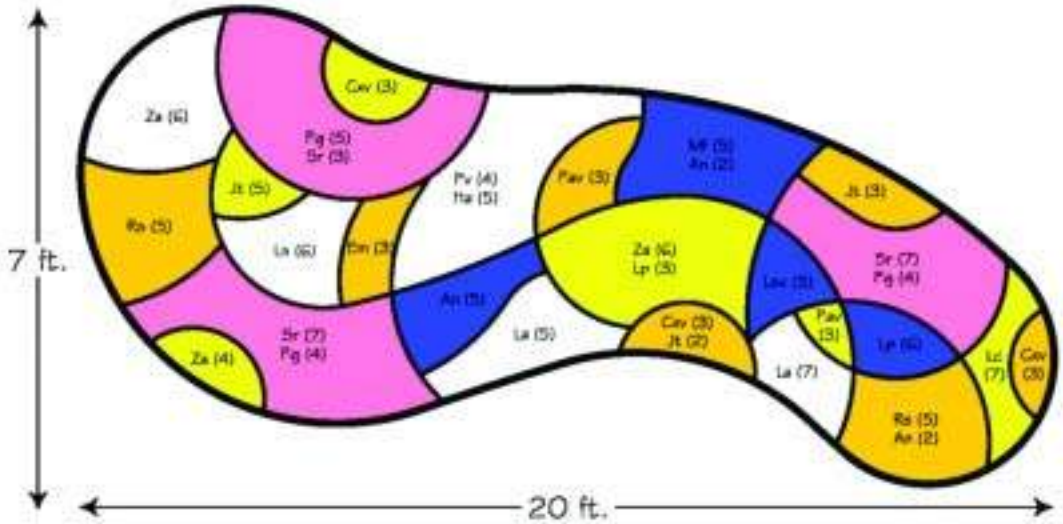
Symbol	Species Name	Common Name	No. of Plants
Ac	Acorus calamus	Sweet flag	10
Ar	Asclepias incarnata	Swamp milkweed	9
Als	Alisma subcordatum	Water plantain	15
Cxh	Carex hystricina	Bottle brush sedge	6
Cxv	Carex vulpinoidea	Fox sedge	7
Iv	Iris virginica-shreve	Wild blue flag iris	15
Jt	Juncus torreyi	Torrey's rush	8
Lc	Lobelia cardinalis	Cardinal flower	8
Pc	Pontederia cordata	Pickerel weed	21
Sl	Sagittaria latifolia	Arrowhead	21
Sa	Scirpus atrovirens	Green bulrush	7
Sv	Scirpus validus creber	Soft-stemmed bulrush	7
Se	Sparganium eurycarpum	Common bur-reed	10
		Total Plants needed	144

10 feet wide; full to partial sun with silt and sandy soils



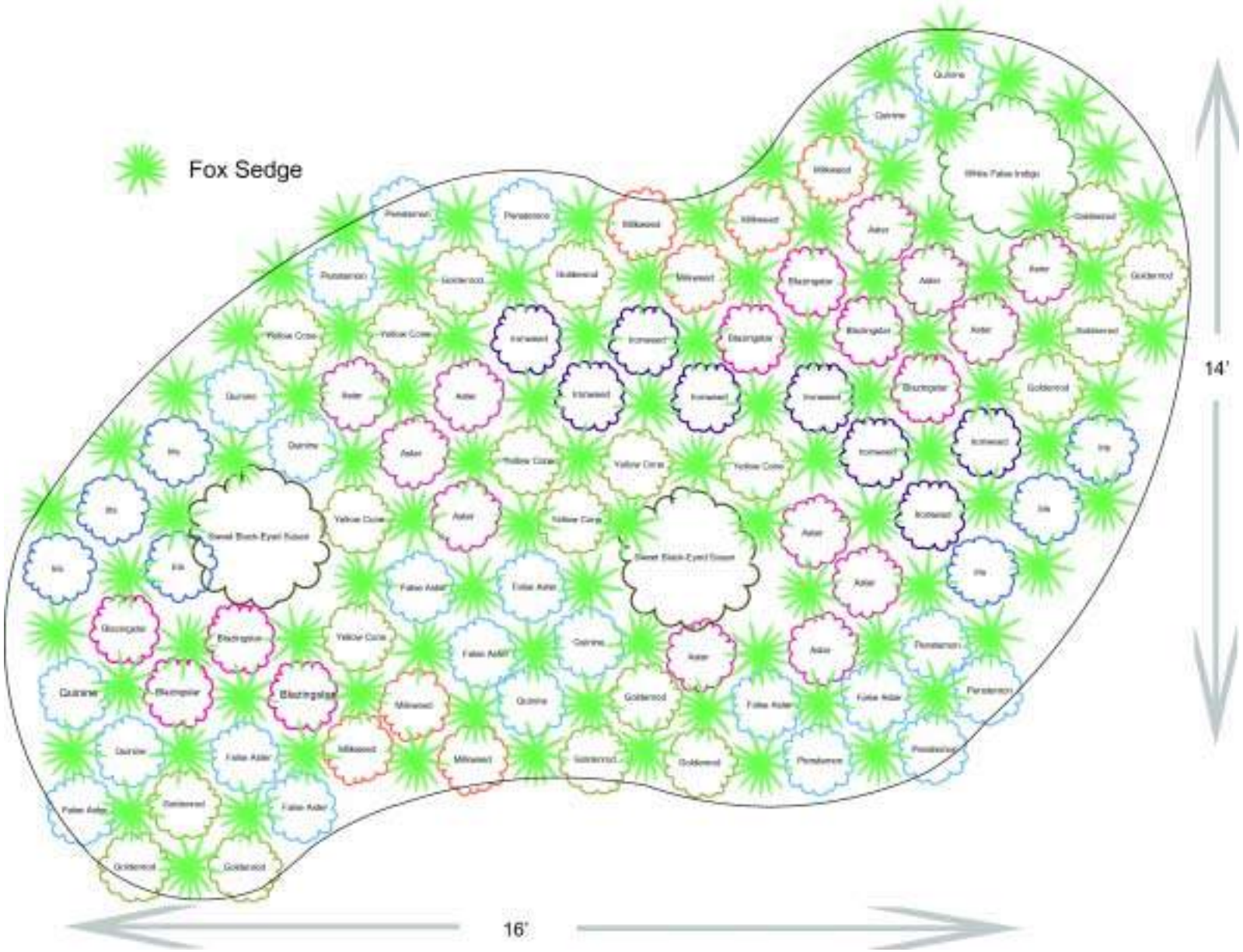
Symbol	Species Name	Common Name	No. of Plants
An	Aster novae-angliae	New England Aster	6
Cxc	Carex comosa	Bottlebrush sedge	3
Ep	Eupatorium maculatum	Spotted Joe-Pye weed	3
Ha	Helenium autumnale	Sneezeweed	6
Jt	Juncus torreyi	Torrey's rush	5
Lp	Liatris pycnostachya	Gayfeather	4
Lc	Lobelia cardinalis	Cardinal flower	4
Ls	Lobelia siphilitica	Great blue lobelia	6
Pav	Panicum virgatum	Switch grass	5
Pg	Phlox glaberrima	Marsh phlox	4
Pv	Pycnanthemum virginianum	Mountain mint	7
Rs	Rudbeckia subtomentosa	Sweet coneflower	5
Sr	Solidago Riddellii	Riddell's goldenrod	3
Za	Zizia aurea	Golden Alexander	11
		Total Plants needed	72

20 feet wide; full to partial sun with silt and sandy soils



Symbol	Species Name	Common Name	No. of Plants
An	Aster novae-angliae	New England Aster	9
Cxv	Carex vulpinoidea	Fox sedge	9
Ep	Eupatorium maculatum	Spotted Joe-Pye weed	3
Ha	Helenium autumnale	Sneezeweed	5
Jt	Juncus torreyi	Torrey's rush	10
Lp	Liatris pycnostachya	Gayfeather	9
Lc	Lobelia cardinalis	Cardinal flower	7
Ls	Lobelia siphilitica	Great blue lobelia	9
La	Lythrum alatum	Winged loosestrife	12
Mf	Monarda fistulosa	Wild Bergamot	5
Pav	Panicum virgatum	Switch grass	6
Pg	Phlox glaberrima	Marsh phlox	13
Pv	Pycnanthemum virginianum	Mountain mint	4
Rs	Rudbeckia subtomentosa	Sweet coneflower	10
Sr	Solidago Riddellii	Riddell's goldenrod	17
Za	Zizia aurea	Golden Alexander	16
		Total Plants needed	144

The following three designs and plant lists have been provided by Prairie Nursery, Inc., Westfield, WI


Fox Sedge
14'
16'

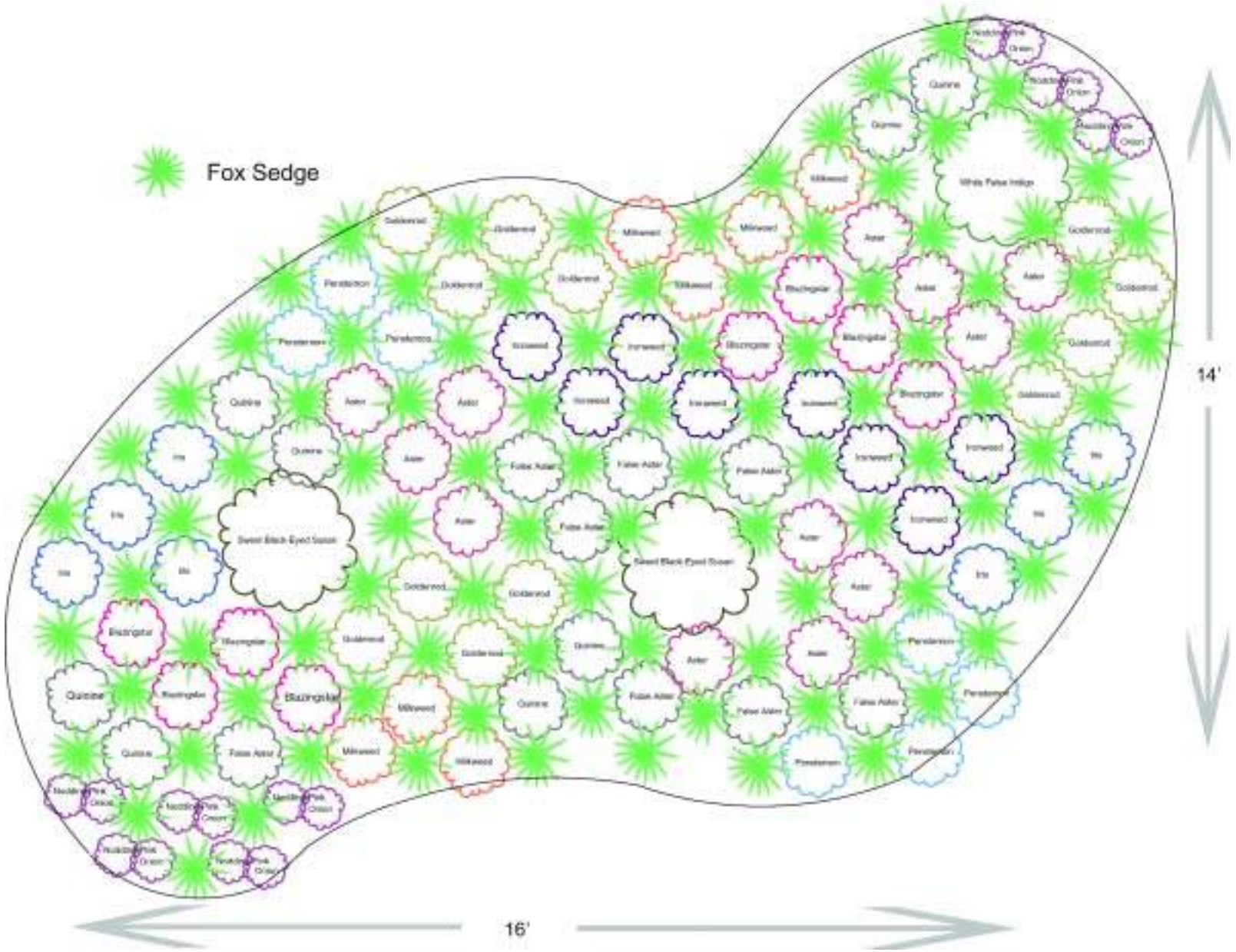
RAIN GARDEN FOR CLAY SOILS AND FULL SUN

AREA: 192 Square Feet

Designed to thrive through conditions of periodic water infiltrations as well as dry periods
Designed to control 45% of annual runoff from an average sized rooftop (500 to 700 square feet)
Install at least 10' from your foundation, in-line with a down-spout and/or downslope to intercept the rooftop water
Depth of the garden designed to be 3.5" to 4" deep to hold about 200 gallons of water during periods of heavy rainfall

LATIN NAME	COMMON NAME	AMT	BLOOM TIME	BLOOM COLOR	HEIGHT	SPACING
Asclepias incarnata	Red Milkweed	7	early summer	red	3'-5'	1'
Baptisia lactea	White False Indigo	1	early summer	white	3'-5'	2'
Iris versicolor	Blue Flag Iris	7	early summer	blue	2'-3'	1'
Penstemon digitalis	Smooth Penstemon	7	early summer	white	2'-3'	1'
Liatris pycnostachya	Prairie Blazingstar	8	summer	pink	3'-5'	1'
Parthenium integrifolium	Wild Quinine	8	summer	white	3'-5'	1'
Ratibida pinnata	Yellow Coneflower	8	summer	yellow	3'-6'	1'
Boltonia asteroides	False Aster	8	late summer	white/pink	2'-4'	1'
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	2	late summer	yellow	4'-6'	2'
Vernonia fasciculata	Ironweed	8	late summer	magenta	4'-6'	1'
Aster novae-angliae	New England Aster	12	fall	pink/purple	3'-6'	1'
Solidago rigida	Stiff Goldenrod	12	fall	yellow	3'-5'	1'
Carex vulpinoidea	Fox Sedge	96			1'-3'	1'

184 plants


Fox Sedge
14'
16'

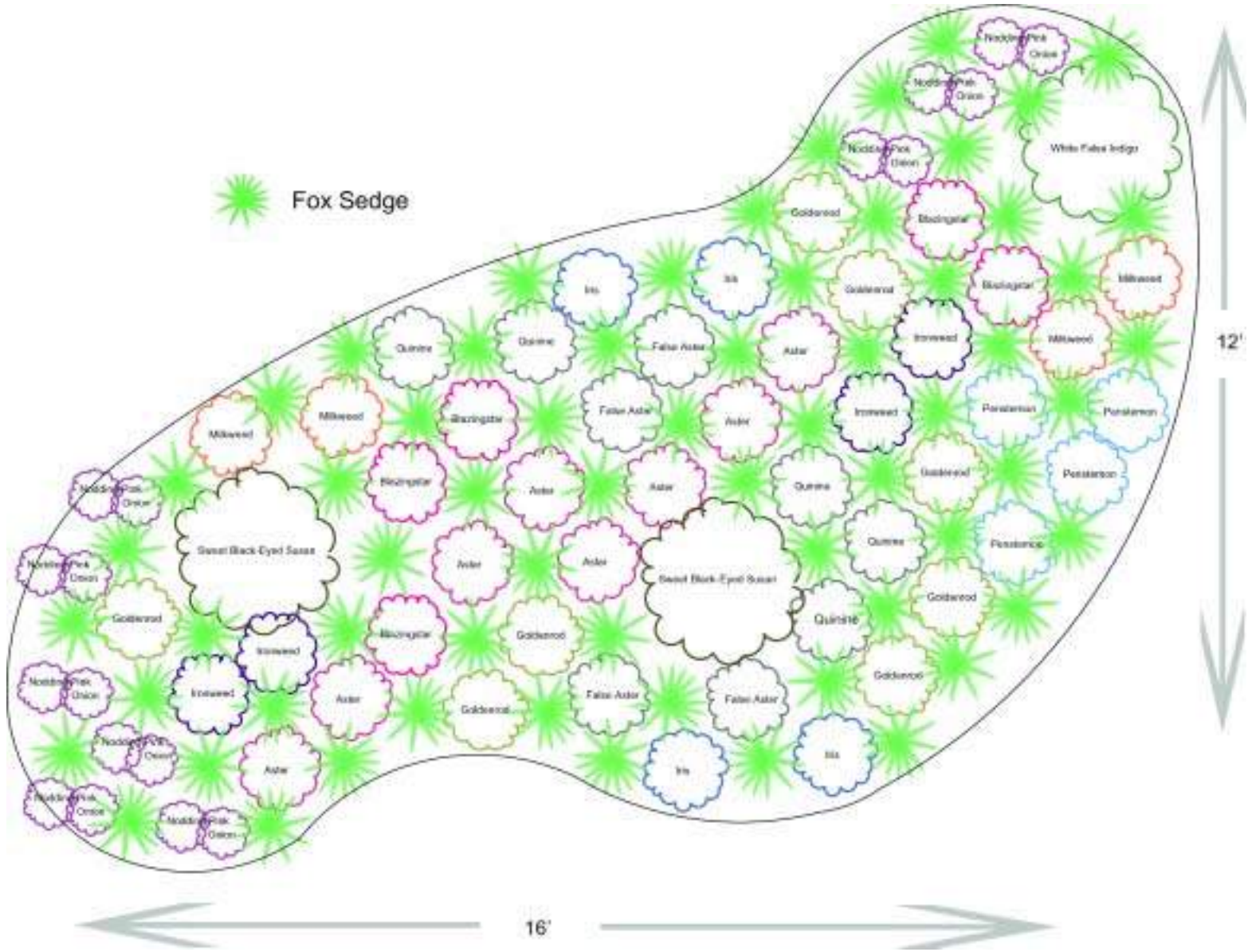
RAIN GARDEN FOR LOAM TO SANDY/LOAM SOILS AND FULL SUN

AREA: 192 Square Feet

Designed to thrive through conditions of periodic water infiltrations as well as dry periods
Designed to control 90% of annual runoff from an average sized rooftop (500 to 700 square feet)
Install at least 10' from your foundation, in-line with a down-spout and/or downslope to intercept the rooftop water
Depth of the garden designed to be 3.5" to 4" deep to hold about 400 gallons of water during periods of heavy rainfall

LATIN NAME	COMMON NAME	AMT	BLOOM TIME	BLOOM COLOR	HEIGHT	SPACING
Asclepias incarnata	Red Milkweed	7	early summer	red	3'-5'	1'
Baptisia lactea	White False Indigo	1	early summer	white	3'-5'	2'
Iris versicolor	Blue Flag Iris	7	early summer	blue	2'-3'	1'
Penstemon digitalis	Smooth Penstemon	7	early summer	white	2'-3'	1'
Allium cernuum	Nodding Pink Onion	16	summer	pink	1'-2'	6"
Liatris pycnostachya	Prairie Blazingstar	8	summer	pink	3'-5'	1'
Parthenium integrifolium	Wild Quinine	8	summer	white	3'-5'	1'
Boltonia asteroides	False Aster	8	late summer	white/pink	2'-4'	1'
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	2	late summer	yellow	4'-6'	2'
Vernonia fasciculata	Ironweed	8	late summer	magenta	4'-6'	1'
Aster novae-angliae	New England Aster	12	fall	pink/purple	3'-6'	1'
Solidago ohioensis	Ohio Goldenrod	12	fall	yellow	3'-4'	1'
Carex vulpinoidea	Fox Sedge	96			1'-3'	1'

192 plants


Fox Sedge
White False Indigo
Goldenrod
Blazingstar
Iris
Ironweed
Milkweed
Penstemon
Quinine
False Aster
Aster
Sweet Black-Eyed Susan
Nodding Pink Onion
12'
16'

RAIN GARDEN FOR SANDY SOILS AND FULL SUN

AREA: 128 Square Feet

Designed to thrive through conditions of periodic water infiltrations as well as dry periods
Designed to control 90% of annual runoff from an average sized rooftop (500 to 700 square feet)
Install at least 10' from your foundation, in-line with a down-spout and/or downslope to intercept the rooftop water
Depth of the garden designed to be 3.5" to 4" deep to hold about 400 gallons of water during periods of heavy rainfall

LATIN NAME	COMMON NAME	AMT	BLOOM TIME	BLOOM COLOR	HEIGHT	SPACING
Asclepias incarnata	Red Milkweed	4	early summer	red	3'-5'	1'
Baptisia lactea	White False Indigo	1	early summer	white	3'-5'	2'
Iris versicolor	Blue Flag Iris	4	early summer	blue	2'-3'	1'
Penstemon digitalis	Smooth Penstemon	4	early summer	white	2'-3'	1'
Allium cernuum	Nodding Pink Onion	18	summer	pink	1'-2'	6"
Liatris pycnostachya	Prairie Blazingstar	5	summer	pink	3'-5'	1'
Parthenium integrifolium	Wild Quinine	5	summer	white	3'-5'	1'
Boltonia asteroides	False Aster	4	late summer	white/pink	2'-4'	1'
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	2	late summer	yellow	4'-6'	2'
Vernonia fasciculata	Ironweed	4	late summer	magenta	4'-6'	1'
Aster novae-angliae	New England Aster	8	fall	pink/purple	3'-6'	1'
Solidago ohioensis	Ohio Goldenrod	8	fall	yellow	3'-4'	1'
Carex vulpinoidea	Fox Sedge (sedge)	64			1'-3'	1'

128 plants

Special Rain Garden Locations

In addition to conventional lawns, there are other locations where rain gardens can be created. A rectangular-shaped rain garden (above) was located in a narrow sideyard between two homes. A new rain garden (below), now helps control runoff that would flow into a parking lot.

Rain garden designs and plant lists provided by John Gishnock, Applied Ecological Services, Inc. (pages 19-22) and Jennifer Baker, Prairie Nursery Inc. (pages 24-29).

RAIN GARDENS

A how-to manual for homeowners

A frosted rain garden in autumn.

This publication developed by Roger Bannerman, Wisconsin Department of Natural Resources and Ellen Considine, U.S. Geological Survey. Special thanks to John Gishnock, Applied Ecological Services, Inc., Jennifer Baker, Prairie Nursery Inc. and Joyce Powers, CRM Ecosystems Inc.

Photos by Roger Bannerman, Wisconsin Department of Natural Resources.

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The publication can also be viewed and printed from pdf format on the web at clean-water.uwex.edu/pubs/raingarden

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EC-739

New Ventures
IN FOOD AND AGRICULTURE FOR INDIANA

Starting a Farmers' Market

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Department of Agricultural Economics
Purdue University

Introduction

Farmers' markets bring in $1 billion nationally and continue to grow (Shaffer and Cox, 2006). The United States Department of Agriculture lists over 19,000 farmers reporting farmers' markets as their sole marketing outlet. In 2004, the number of markets in Indiana grew to 77—an increase of 222% within a 10-year period (Wilmont, 2006).

Communities interested in starting a farmers' market should follow a series of steps to evaluate the feasibility of the idea for their area. Three components are required to begin and operate a farmers' market: a location, vendors, and customers. A series of planning meetings will help with determining a location, understanding whether vendors are available in the area, and evaluating customer interest.

Planning Meetings

A series of meetings is the best way to transform the market from an idea to reality. This series of meetings should involve those in the community who are essential in starting the farmers' market—including, but not limited to, growers, vendors, county Extension staff, civic leaders, consumers, and potential sponsors. The following sections explain the topics that participants should cover at these meetings. The actual number of meetings required may vary depending upon the amount of progress made at each.

Meeting 1—*Interest*

- Examine Community and Farmer Interest
- Evaluate Market Goals

This meeting should explore the possibility of establishing a farmers' market as well as determine community interest from both farmers and consumers. The meeting organizers should be open to suggestions and even opposition.

If the consensus of the meeting is positive and the group decides in favor of creating a farmers' market, the market's champions should begin setting realistic goals for the market, including the number of potential vendors and customers, and goals for sales volume in the upcoming season.

At this point, participants should create a timeline to assist with the planning process. The sample timeline included on page 2 may serve as a checklist of suggested activities the planning committee should consider. It is adapted from the Kentucky Cooperative Extension Service.

Farmers' Market Planning Timeline

January	Gather a group of interested people Determine specific goals and tasks
February	Explore the mechanics of direct marketing Look for and settle on a location Gain community support and begin fund-raising Check into legalities Begin publicity to farmers (continue through May)
March	Promote the farmers' market concept
April	Finalize market management and organization
May	Begin publicity to consumers (continue through September)
June	Open the farmers' market
July	Promote the farmers' market (peak season)
August	Sponsor a special activity
September	Organize and solidify farmer-consumer association
October	Extend the marketing season with fall crops
November	Solicit and evaluate suggestions from farmers and consumers
December	Close market

Planning for the farmers' market should be an ongoing process throughout the year.

Meeting 2—*Size*

- Create Market Share Worksheet
- Examine Vendor/Consumer Ratio

During the second meeting, the group should determine how large the market will be during the season. The size should be based on the goals made during the first planning meeting. The number of booth spaces for known and potential vendors should be set. The group should avoid creating a market with too many vendors and not enough customers, as well as the scenario of a market with not enough vendors to supply all of its customers. In either situation, neither the vendors nor the consumers are going to be pleased and the market will not succeed.

The perfect ratio of vendors to consumers for a successful farmers' market does not exist. The most important criteria are that consumers have an ample amount of goods to choose from so they return and that vendors have enough customers to make the market worth their time, effort, and energy. A suggestion is to include six vendors per 100 customers.

Vendors can produce a range of products from fruits and vegetables to live plants, processed meats, handmade crafts, etc. Limitations on what can be sold and how are often dictated by the bylaws and regulations of the farmers' market, which should be created during the planning sessions.

One way to find vendors is to place an ad in the local newspaper or agricultural newspaper such as the Farm World and/or Indiana AgriNews. Other outreach alternatives, such as Extension bulletins, community newspapers, and church announcements, also serve as great sources for reaching producers. All print media should include contact information for the market master, such as name, phone number, email address, as well as the intended date, time, and location of the farmers' market. Personal communication and word of mouth through the local convention and visitor's bureau, county Extension educators, community services, etc., are other ways to promote the need for vendors at little to no cost.

A successful market consists of vendors that have a large selection of products in adequate quantities. It is important that not every booth contain the same products. However, it is acceptable and healthy for a market to have a slight overlap of the products available because many vendors will produce the same crops. The overlap will provide options for the customer as well as help keep the vendors' pricing competitive.

After a vendor is found, a list of rules and regulations, as well as a contract, should be provided to him or her. This ensures that each vendor understands the general rules and regulations at the market and serves as reinforcement in the event of a discrepancy.

Meeting 3—*Location*

- Evaluate Atmosphere Desired
- Examine Physical Location
- Determine Site Amenities

At this meeting, the organizing committee or planning group should pinpoint the physical location of the farmers' market. The location will set the tone and atmosphere for the entire farmers' market, so the group

should make building and parking decisions carefully. The physical location should provide certain amenities to promote business on the site. Below is a list of location considerations and amenities. Although not all of these requirements must be satisfied, the more that are met, the better the site will work.

Location Considerations

- Does the location require a zoning permit?
- Will the location be accessible to the public?
- Are there enough parking spaces for customers?
- Does the location have a convenient and easy traffic flow from parking into the market?
- What is the location of the closest competitor (grocery or other farmers' market)?
- Will the ground surface hold up to foot traffic?
- Will the ground surface be suitable for various weather conditions?
- Does the facility have the necessary features?
  - Is there a roof for weather protection?
  - Is there electricity for cash registers, fans, etc?
  - Is there a restroom?
  - Is there a place to wash hands?
- Will this location be suitable if future growth and expansion are needed?

Meeting 4—*Operating the Market*

- Organize Season Dates
- Determine the Market Master

At this meeting, the group should decide how the market will operate—the opening and closing dates for the year and the number of days per week the market is open. The group should determine how often the market meets by examining potential demand created by customers and the availability of product supplied by vendors.

Some communities with an established farmers' market can support holding the market three times a week; other markets (especially new ones) can only justify meeting once a week. The most common day for farmers' markets is Saturday mornings. Vendors should be considered when determining the dates the market will open, based on the availability of goods they can provide. In Indiana, farmers' markets are generally open in April (Southern Indiana) or May and close between August and November.

By this meeting, the site should be selected and the number of vendors determined. The layout of booth spaces can now be determined, as well as how the foot-traffic will flow from the parking lot through the market and back out into the parking lot.

During this meeting, the group should choose an individual to serve as the market master. This individual will collect funds from vendors, deal with vendor issues and customer complaints and serve as the sole decision maker during the farmers' market operation. Market masters should designate booth assignments and formulate a plan for the next meeting (covering rules and bylaws). The market master should be identifiable and available for the duration of time the market is open.

Meeting 5—*Money*

- Organize Sponsorship
- Evaluate Budgets
- Determine Fees and Rates

This meeting should focus on the expenses and income related to financing the farmers' market. The market will require some initial capital to get started. Sponsorship can help the market cover some of these initial costs for promotion and insurance. Markets that are looking to obtain a sponsor should have an estimated budget that calculates the difference between revenues and expenses.

Creating a budget to figure expenses such as insurance, promotional costs, and supplies is important during the planning process. The budget should incorporate size of the market determined during the second meeting.

A common practice to help with the costs associated with operating a market is to pass them along to the vendors through booth fees. This fee is set based on the amount of retail space the vendor uses to sell his or her products. Booths are rented to vendors by the week or for the entire season, based on the specifications outlined in the bylaws (see Meeting 6). Booth fees are variable and should be determined based on the goals of the market and the operating budget.

Meeting 6—*Rules*

- Create Bylaws
- Develop Market Rules

At this meeting, the group should establish a regulatory structure for the annual market operations by drafting a set of bylaws. These bylaws should include:

- The purpose of the market
- The vendor application process
- The market's specific set-up, operation, and closing times
- Which products can or cannot be sold at the market
- How many overlapping products are allowed
- Guidelines on the origin of produce (definition of local or percentage grown on farm)
- Booth fees and assignments, how and when they will occur, and the possibility of changing the assignment
- The market master's role in decision making
- The insurance understanding between the market and vendors

Market masters are responsible for deciding on rules and enforcement practices before the opening day of the season. Market organizers should also outline the enforcement policy and identify the person responsible for enforcing it. Market masters who create a solid set of rules from the market's beginning can alleviate problems that may arise in the future.

Meeting 7—*Promotion*

- Promote and Advertise
- Arrange for Media Coverage and Publicity

Market masters should determine how they make the surrounding communities aware of the market's existence. Initial promotion and advertising are required to help create awareness of when the farmers' market will be operating for the season.

Promotional activities should focus on creating a positive image as well as providing details about when and where the market will occur. Market organizers should describe consumer benefits such as fresher products, producer/consumer interaction, and supporting local farmers. Markets should promote and advertise by posting fliers at community meeting places, purchasing newspaper advertisements, and securing radio advertisements. On "Grand Opening Day," organizers should ask local news media to visit the market to create further awareness. All markets should include the hours of operation for future weeks in their coverage.

Conclusion

A series of planning meetings will help build a strong foundation for newly formed farmers' markets. Communities should determine interest from vendors and farmers before publicizing and attempting to open a market. The market master and/or planning committee should assume responsibility for conducting these meetings and collecting information needed to determine whether a new market will work in a specified location. These measures could well determine whether or not a farmers' survives and thrives.

References

Shaffer, J. & B. Cox. 2006. "USDA Releases New Farmers' Market Statistics." Agricultural Marketing Service.

Wilmont, F. 2006. "Inside the Data Center." State Data Center, Indiana State Library.

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http://www.agecon.purdue.edu/newventures

for more information on the topics discussed in this publication and for other resources to help you decide whether to start a new agriculture- or food-related business.

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CHAPTER 3

Outdoor Recreation Supply

The previous two chapters discussed demand for outdoor recreation opportunities in Indiana. The surveys were the instruments used to assess what people were doing, where they were active, their perceptions of their experiences, and further needs that should be met. The surveys also addressed the needs, supplies and issues from the perspective of outdoor recreation providers.

This chapter addresses the supply of outdoor recreation acreage in Indiana. There are national benchmark standards that we have used as the baseline for our assessments. We have also used State recommendations (as defined in this chapter). The Division of Outdoor Recreation maintains a facilities inventory database to help determine the status of supply in Indiana. We compare the inventory against the standards to help set the priorities for our State.

Recreation, Parks and Open Space Guidelines

In 1983 the National Recreation and Park Association (NRPA) published a classification system and recommendations for park acreages per 1,000 people within each of those systems. The basic guidelines are

- Mini-Park: Service area < ¼ mile radius, 1 acre or less, ¼ to ½ acres/1,000 population
- Neighborhood Park/Playground: Service area ¼ to ½ mile radius with population up to 5,000, 15-plus acres, 1.0 to 2.0 acres/1,000 population
- Community Park: Service area 1 to 2 mile radius (several neighborhoods), 25-plus acres, 5.0 to 8.0 acres/1,000 population
- Regional/Metropolitan Park: Service area one hour driving time (several communities), 200-plus acres, 5.0 to 10.0 acres/1,000 population
- Regional Park Reserve: Service area 1 hour driving time (several communities, 1,000-plus acres (80% of land reserved for natural resources management and conservation, 20% for recreational development), Variable acres/1,000 population
- Linear Park, Special Use Areas, and Conservancy Areas: No applicable standards

(Lancaster [Ed.], National Recreation and Park Association, 1983)

The NRPA guidelines have remained the golden standard for baseline recommendations. NRPA has always said that the recommendations should guide outdoor recreation planning and should remain flexible. In 1996 the NRPA began to shift away from this population ratio method to a level-of-service system of recommendations. Level-of-service (LOS) is a strategic planning process that considers the demand for recreation opportunities within the community, current resources available, and opinions and views of the population. We rely more heavily on the use of an LOS system to assess the outdoor recreation needs in Indiana; we also refer back to the 1983 guidelines.

The surveys presented in this SCORP are the major means of assessing the demand for outdoor recreation in Indiana. Trends are also assessed by comparing the current survey responses to those from previous surveys. Changes or lack of changes in trends give a good idea of which outdoor recreation activities will remain consistent for extended periods of time and which are fads or have small user populations. For example, walking, hiking and jogging have remained the top outdoor recreation activities for the past three SCORPs (i.e., 15 years); remote control devices have never been in the top 10 respondent activities (see Table 9). This is not meant to imply that activities that ranked lower on the partici-

1979	1989	1995	2000	2005
Picnicking	Picnicking	Hiking/walking/ jogging	Hiking/walking/ jogging	Hiking/walking/ jogging
Fishing	Pleasure driving	Picnicking	Fairs/festivals	Fairs/festivals
Swimming	Walking	Swimming	Fishing	Swimming/SCUBA/ snorkeling
Hiking	Swimming	Camping	Camping	Nature observation/ photography
Biking	Fishing	Fishing/hunting	Picnicking	Camping
Play fields	Bicycling	Biking	Swimming/SCUBA/ snorkeling	Fishing
Camping	Camping	Boating	Nature observation/ photography	Picnicking
Boating	Nature observation	Nature observation	Playground use	Bicycling
Playgrounds	Motor boating	Playground use	Bicycling	Motorized vehicle use
	Golf		Boating/ water skiing/ personal watercraft	Boating/ water skiing/ personal watercraft
				Court sports

Table 9. Activity trends in Indiana, top 10 ranked in order (Outdoor Recreation Participation Surveys, 1979-2003)

pation survey scale are not important and should not be considered. It may be that a community has a very active user group (e.g., a remote control airplane club) that would be an excellent partner in resource development. The needs of such a group should be addressed. However, the most popular trends tend to have the highest user population, which typically translates into the greatest supply of resources.

Facilities Inventory

The Division of Outdoor Recreation maintains a facilities inventory database that reflects the current supply of outdoor recreation opportunities in the State. The inventory is updated regularly through on-site inspections, self-report data from municipalities, and public information (e.g., State school directories). The Indiana Facilities Inventory includes recreational facilities owned and managed by both public and private sectors. The inventory can be divided by area type: private, commercial, public, municipal, township, county, state, federal and school corporation.

By comparing demands for outdoor recreation opportunities and the supplies currently available, the Division of Outdoor Recreation is able to determine standards for acres per 1,000 people for Indiana. Standards currently in place are:

- Counties: 20 acres per 1,000 people (0.02 acre per person) of public local recreation acres (i.e., owned by township, municipal, county, and privately owned but open for public use)
- Indiana Regions: 35 acres per 1,000 people (0.035 acre per person) of public regional recreation acres (i.e., owned by State or federal entities)
- State: 55 acres per 1,000 people (0.055 acre per person) of public

recreation acres (i.e., a total of all acres in the above categories)

These standards are presented a bit differently than the NRPA standards; they are presented by geographic location (i.e., county, Indiana region, or State) versus by type of park system. Determination of acreage amounts is based on publicly owned lands; therefore, it excludes private (not open for public use) and commercial acreages. School corporation acreage has also been excluded because we do not have a complete and current assessment of schools that allow public use of their properties versus those that do not. Inclusion of school properties could skew the data and under-represent or over-represent outdoor recreation facilities by a substantial margin.

We also assess supply of local, regional and total acres at the county and Indiana region levels to help determine areas with the highest need. To determine the neediest counties, we include the population growth (compared to the State average population growth) and the most recent inventory of total recreation acres available within the county.

Local Outdoor Recreation Supply – Township, Municipal, County, and Privately owned but open for public use

The NRPA/Indiana standard of 20 acres of local public outdoor recreation opportunities per 1,000 people is used to determine which areas have an adequate supply or a deficit of smaller scale outdoor recreation acres (e.g., city or municipal parks rather than state parks).

County Level

Assessing local outdoor recreation acres at the county level may be the best way to identify counties that need more assistance in improving their outdoor recreation supply. Some of these counties may need additional funding, advocacy, organization, or community resources, or there may be an abundance of State or federally owned properties in the county leading citizens to believe that local outdoor recreation is not a priority. Whatever the reason, data analysis indicates that an overwhelming number of counties lack local outdoor recreation acreage.

Table 10 shows that 22 of Indiana's 92 counties have an adequate supply of local outdoor recreation acres. Column 6 of Table 10 (Difference-Local Acres) indicates the acres greater than (positive number) or less than (negative number) the recommendations. For example, the recommendation for Adams County, with a population of 33,849 people, is 677 acres of local recreation opportunity; however, Adams has 312 acres, a deficit of 365 acres.

Indiana Region Level

The State was divided into 15 planning regions in the late 1960s or early 1970s through the Indiana Department of Planning. Three of the regions (1, 3, and 13) were subdivided into two sections (A and B). Although many of the original regional planning commissions no longer exist, the DOR maintains the regional boundaries for our purposes. This helps to assess trends, developments and losses through time. It also allows for easier study and assessment of supply and demand. See Appendix F for a complete list of counties within each region.

The State is also divided into three major regions based on its physiography (physical description of Earth's surface). These major regions include:

- The Northern Lake and Moraine region
- The Central Drift region
- The Southern Upland and Lowland region

Indiana county - local acres					
Number	Name	PPN 2005*	Recommended 20 a/1000	Current	Difference
1	Adams	33,849.00	676.98	312.00	(364.98)
2	Allen	344,006.00	6,880.12	4,691.23	(2188.89)
3	Bartholomew	73,540.00	1,470.80	1,236.00	(234.80)
4	Benton	9,039.00	180.78	57.00	(123.78)
5	Blackford	13,849.00	276.98	91.00	(185.98)
6	Boone	52,061.00	1,041.22	597.55	(443.67)
7	Brown	15,154.00	303.08	76.00	(227.08)
8	Carroll	20,426.00	408.52	119.50	(289.02)
9	Cass	40,130.00	802.60	900.57	97.97
10	Clark	101,592.00	2,031.84	779.20	(1252.64)
11	Clay	27,142.00	542.84	284.00	(258.84)
12	Clinton	34,091.00	681.82	242.00	(439.82)
13	Crawford	11,216.00	224.32	33.00	(191.32)
14	Daviess	30,466.00	609.32	1,070.51	461.19
15	Dearborn	49,082.00	981.64	375.00	(606.64)
16	Decatur	25,184.00	503.68	235.34	(268.34)
17	Dekalb	41,659.00	833.18	285.00	(548.18)
18	Delaware	116,362.00	2,327.24	498.11	(1829.13)
19	Dubois	40,858.00	817.16	1,306.00	488.84
20	Elkhart	195,362.00	3,907.24	3,240.45	(666.79)
21	Fayette	24,885.00	497.70	112.00	(385.70)
22	Floyd	71,997.00	1,439.94	675.00	(764.94)
23	Fountain	17,462.00	349.24	432.50	83.26
24	Franklin	23,085.00	461.70	312.00	(149.70)
25	Fulton	20,665.00	413.30	306.70	(106.60)
26	Gibson	33,408.00	668.16	370.00	(298.16)
27	Grant	70,557.00	1,411.14	338.57	(1072.57)
28	Greene	33,479.00	669.58	680.00	10.42
29	Hamilton	240,685.00	4,813.70	2,911.93	(1901.77)
30	Hancock	63,138.00	1,262.76	297.20	(965.56)
31	Harrison	36,827.00	736.54	867.13	130.59
32	Hendricks	127,483.00	2,549.66	1,112.73	(1436.93)
33	Henry	47,244.00	944.88	1,334.00	389.12
34	Howard	84,977.00	1,699.54	415.91	(1283.63)
35	Huntington	38,236.00	764.72	322.13	(442.59)
36	Jackson	42,237.00	844.74	269.65	(575.09)
37	Jasper	31,876.00	637.52	189.49	(448.03)
38	Jay	21,606.00	432.12	237.10	(195.02)
39	Jefferson	32,430.00	648.60	309.00	(339.60)
40	Jennings	28,427.00	568.54	343.10	(225.44)
41	Johnson	128,436.00	2,568.72	1,056.50	(1512.22)
42	Knox	38,366.00	767.32	787.25	19.93
43	Kosciusko	76,072.00	1,521.44	406.95	(1114.49)
44	LaGrange	36,875.00	737.50	711.50	(26.00)
45	Lake	493,297.00	9,865.94	10,637.39	771.45

Table 10: County recreation acres-local
**Population, U.S. Census Bureau, 2005*

Indiana county - local acres					
Number	Name	PPN 2005*	Recommended 20 a/1000	Current	Difference
46	LaPorte	110,512.00	2,210.24	2,150.20	(60.04)
47	Lawrence	46,403.00	928.06	857.00	(71.06)
48	Madison	130,412.00	2,608.24	1,283.06	(1325.18)
49	Marion	863,133.00	17,262.66	10,986.74	(6275.92)
50	Marshall	46,945.00	938.90	323.25	(615.65)
51	Martin	10,386.00	207.72	1,171.03	963.31
52	Miami	35,620.00	712.40	261.85	(450.55)
53	Monroe	121,407.00	2,428.14	4,610.59	2182.45
54	Montgomery	38,239.00	764.78	907.08	142.30
55	Morgan	69,778.00	1,395.56	289.00	(1106.56)
56	Newton	14,456.00	289.12	115.00	(174.12)
57	Noble	47,448.00	948.96	808.60	(140.36)
58	Ohio	5,874.00	117.48	55.00	(62.48)
59	Orange	19,770.00	395.40	434.00	38.60
60	Owen	22,823.00	456.46	68.90	(387.56)
61	Parke	17,362.00	347.24	657.00	309.76
62	Perry	19,032.00	380.64	152.30	(228.34)
63	Pike	12,766.00	255.32	469.28	213.96
64	Porter	157,772.00	3,155.44	1,820.60	(1334.84)
65	Posey	26,852.00	537.04	218.81	(318.23)
66	Pulaski	13,783.00	275.66	78.50	(197.16)
67	Putnam	36,957.00	739.14	98.00	(641.14)
68	Randolph	26,684.00	533.68	533.83	0.15
69	Ripley	27,710.00	554.20	596.09	41.89
70	Rush	17,823.00	356.46	34.25	(322.21)
71	St. Joseph	266,160.00	5,323.20	500.33	(4822.87)
72	Scott	23,820.00	476.40	3,779.49	3303.09
73	Shelby	43,766.00	875.32	69.20	(806.12)
74	Spencer	20,528.00	410.56	186.08	(224.48)
75	Starke	22,933.00	458.66	211.50	(247.16)
76	Steuben	33,773.00	675.46	602.03	(73.43)
77	Sullivan	21,763.00	435.26	2,109.00	1673.74
78	Switzerland	9,718.00	194.36	70.00	(124.36)
79	Tippecanoe	153,875.00	3,077.50	2,765.72	(311.78)
80	Tipton	16,385.00	327.70	181.57	(146.13)
81	Union	7,208.00	144.16	12.00	(132.16)
82	Vanderburgh	173,187.00	3,463.74	3,171.31	(292.43)
83	Vermillion	16,562.00	331.24	179.90	(151.34)
84	Vigo	102,592.00	2,051.84	2,252.33	200.49
85	Wabash	33,843.00	676.86	179.50	(497.36)
86	Warren	8,785.00	175.70	46.50	(129.20)
87	Warrick	56,362.00	1,127.24	2,052.59	925.35
88	Washington	27,885.00	557.70	968.87	411.17
89	Wayne	69,192.00	1,383.84	1,233.53	(150.31)
90	Wells	28,085.00	561.70	176.03	(385.67)
91	White	24,463.00	489.26	126.00	(363.26)
92	Whitley	32,323.00	646.46	309.50	(336.96)

Table 10, continued

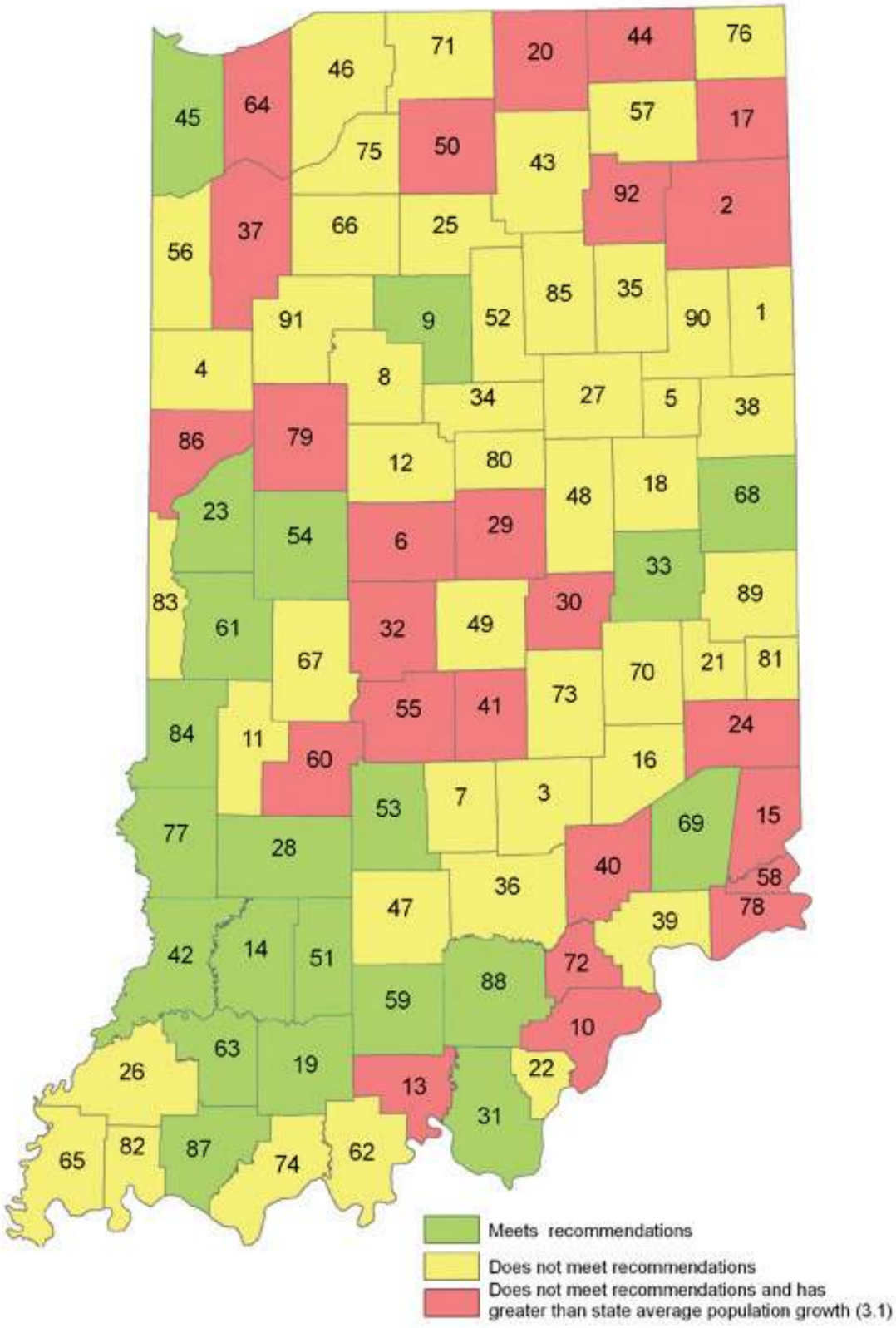

Figure 7. County outdoor recreation – local Recommendation – 20 acres/1000 persons

Indiana region - local acres				
Region	PPN 2005*	Recommended 20 a/ 1000	Current	Difference
1A	761,581.00	15,231.62	14,608.19	(623.43)
1B	107,511.00	2,150.22	720.49	(1,429.73)
2	584,539.00	11,690.78	7,750.14	(3,940.64)
3A	188,655.00	3,773.10	2,753.76	(1,019.34)
3B	447,599.00	8,951.98	5,464.26	(3,487.72)
4	281,917.00	5,638.34	4,570.30	(1,068.04)
5	231,620.00	4,632.40	2,246.10	(2,386.30)
6	426,714.00	8,534.28	4,315.67	(4,218.61)
7	222,378.00	4,447.56	5,580.23	1,132.67
8	1,588,480.00	31,769.60	17,437.73	(14,331.87)
9	119,108.00	2,382.16	1,391.78	(990.38)
10	144,230.00	2,884.60	4,679.49	1,794.89
11	156,115.00	3,122.30	1,816.99	(1,305.31)
12	176,326.00	3,526.52	2,060.19	(1,466.33)
13A	159,100.00	3,182.00	4,565.79	1,383.79
13B	289,809.00	5,796.18	5,812.71	16.53
14	262,121.00	5,242.42	3,359.40	(1,883.02)
15	124,170.00	2,483.40	2,894.91	411.51

Table 11. Indiana region outdoor recreation acres-local
**Population, U.S. Census Bureau, 2005*

Each of the 15 planning regions has similar topographical elements that help divide them into areas more suited for traditional outdoor recreation activities and sites or areas that may require non-traditional, more innovative ideas. Currently, 13 regions do not have an adequate supply of local outdoor recreation acres (See Table 11).

State Level

With such a deficit of local outdoor recreation acres at both the county and regional level, it follows that the State as a whole does not meet NRPA/Indiana recommendations of 20 acres per 1,000 people. The State has a total population of 6,271,973 people and a current total of 92,028 local recreation acres. NRPA/Indiana recommends a total of 125,439 local recreation acres; therefore, Indiana is 33,411 acres below recommended acreage for local outdoor recreation opportunities.

Regional Outdoor Recreation Supply – State and Federal

In this section "Indiana region" refers to geographic location within the State (e.g., Region 1A) and "region or regional outdoor recreation" refers to supply of recreation opportunities (i.e., State or federally owned properties).

Indiana county - regional acres					
Number	Name	PPN 2005*	Recommended 35 a/ 1000	Current	Difference
1	Adams	33,849.00	1,184.72	547.42	(637.30)
2	Allen	344,006.00	12,040.21	2.50	(12,037.71)
3	Bartholomew	73,540.00	2,573.90	881.85	(1,692.05)
4	Benton	9,039.00	316.37	1,715.00	1,398.64
5	Blackford	13,849.00	484.72	0.00	(484.72)
6	Boone	52,061.00	1,822.14	28.38	(1,793.76)
7	Brown	15,154.00	530.39	67,950.30	67,419.91
8	Carroll	20,426.00	714.91	269.37	(445.54)
9	Cass	40,130.00	1,404.55	2.00	(1,402.55)
10	Clark	101,592.00	3,555.72	28,998.24	25,442.52
11	Clay	27,142.00	949.97	2,652.32	1,702.35
12	Clinton	34,091.00	1,193.19	30.79	(1,162.39)
13	Crawford	11,216.00	392.56	43,734.05	43,341.49
14	Daviess	30,466.00	1,066.31	8,150.33	7,084.02
15	Dearborn	49,082.00	1,717.87	47.20	(1,670.67)
16	Decatur	25,184.00	881.44	36.08	(845.36)
17	Dekalb	41,659.00	1,458.07	9.40	(1,448.67)
18	Delaware	116,362.00	4,072.67	0.00	(4,072.67)
19	Dubois	40,858.00	1,430.03	14,204.38	12,774.35
20	Elkhart	195,362.00	6,837.67	444.95	(6,392.72)
21	Fayette	24,885.00	870.98	108.00	(762.98)
22	Floyd	71,997.00	2,519.90	2,068.32	(451.58)
23	Fountain	17,462.00	611.17	575.24	(35.93)
24	Franklin	23,085.00	807.98	9,640.96	8,832.98
25	Fulton	20,665.00	723.28	1,613.44	890.17
26	Gibson	33,408.00	1,169.28	3,194.10	2,024.82
27	Grant	70,557.00	2,469.50	1,619.00	(850.50)
28	Greene	33,479.00	1,171.77	8,455.78	7,284.02
29	Hamilton	240,685.00	8,423.98	1.00	(8,422.98)
30	Hancock	63,138.00	2,209.83	40.00	(2,169.83)
31	Harrison	36,827.00	1,288.95	15,441.73	14,152.79
32	Hendricks	127,483.00	4,461.91	0.00	(4,461.91)
33	Henry	47,244.00	1,653.54	3,784.54	2,131.00
34	Howard	84,977.00	2,974.20	80.00	(2,894.20)
35	Huntington	38,236.00	1,338.26	16,923.89	15,585.63
36	Jackson	42,237.00	1,478.30	35,489.73	34,011.44
37	Jasper	31,876.00	1,115.66	6,287.49	5,171.83
38	Jay	21,606.00	756.21	482.28	(273.93)
39	Jefferson	32,430.00	1,135.05	24,382.26	23,247.21
40	Jennings	28,427.00	994.95	18,156.24	17,161.30
41	Johnson	128,436.00	4,495.26	5,755.71	1,260.45
42	Knox	38,366.00	1,342.81	418.52	(924.29)
43	Kosciusko	76,072.00	2,662.52	3,877.03	1,214.51
44	LaGrange	36,875.00	1,290.63	9,907.91	8,617.29
45	Lake	493,297.00	17,265.40	5,937.39	(11,328.00)

Table 12. County outdoor recreation acres-regional
**Population, U.S. Census Bureau, 2005*

Indiana county - regional acres					
Number	Name	PPN 2005*	Recommended 35 a/ 1000	Current	Difference
46	LaPorte	110,512.00	3,867.92	11,788.83	7,920.91
47	Lawrence	46,403.00	1,624.11	17,631.12	16,007.02
48	Madison	130,412.00	4,564.42	303.69	(4,260.73)
49	Marion	863,133.00	30,209.66	2,533.54	(27,676.12)
50	Marshall	46,945.00	1,643.08	1,124.85	(518.23)
51	Martin	10,386.00	363.51	79,769.13	79,405.62
52	Miami	35,620.00	1,246.70	6,441.68	5,194.98
53	Monroe	121,407.00	4,249.25	69,111.49	64,862.24
54	Montgomery	38,239.00	1,338.37	2,450.30	1,111.94
55	Morgan	69,778.00	2,442.23	6,851.76	4,409.53
56	Newton	14,456.00	505.96	14,206.46	13,700.50
57	Noble	47,448.00	1,660.68	4,883.50	3,222.82
58	Ohio	5,874.00	205.59	22.29	(183.30)
59	Orange	19,770.00	691.95	51,011.02	50,319.07
60	Owen	22,823.00	798.81	12,315.31	11,516.51
61	Parke	17,362.00	607.67	7,827.62	7,219.95
62	Perry	19,032.00	666.12	70,900.42	70,234.30
63	Pike	12,766.00	446.81	14,851.35	14,404.54
64	Porter	157,772.00	5,522.02	15,739.68	10,217.66
65	Posey	26,852.00	939.82	10,931.49	9,991.67
66	Pulaski	13,783.00	482.41	9,695.00	9,212.59
67	Putnam	36,957.00	1,293.50	7,289.38	5,995.88
68	Randolph	26,684.00	933.94	432.61	(501.33)
69	Ripley	27,710.00	969.85	33,406.82	32,436.97
70	Rush	17,823.00	623.81	0.00	(623.81)
71	St. Joseph	266,160.00	9,315.60	3,654.03	(5,661.57)
72	Scott	23,820.00	833.70	3,903.59	3,069.89
73	Shelby	43,766.00	1,531.81	9,802.50	8,270.69
74	Spencer	20,528.00	718.48	5.50	(712.98)
75	Starke	22,933.00	802.66	4,402.60	3,599.95
76	Steuben	33,773.00	1,182.06	5,796.26	4,614.21
77	Sullivan	21,763.00	761.71	20,340.48	19,578.77
78	Switzerland	9,718.00	340.13	1,372.03	1,031.90
79	Tippecanoe	153,875.00	5,385.63	3,184.47	(2,201.16)
80	Tipton	16,385.00	573.48	0.00	(573.48)
81	Union	7,208.00	252.28	9,406.77	9,154.49
82	Vanderburgh	173,187.00	6,061.55	617.12	(5,444.43)
83	Vermillion	16,562.00	579.67	5,002.02	4,422.35
84	Vigo	102,592.00	3,590.72	306.62	(3,284.10)
85	Wabash	33,843.00	1,184.51	17,241.02	16,056.51
86	Warren	8,785.00	307.48	0.00	(307.48)
87	Warrick	56,362.00	1,972.67	6,793.02	4,820.35
88	Washington	27,885.00	975.98	15,620.31	14,644.33
89	Wayne	69,192.00	2,421.72	24.53	(2,397.19)
90	Wells	28,085.00	982.98	2,547.47	1,564.50
91	White	24,463.00	856.21	476.34	(379.87)
92	Whitley	32,323.00	1,131.31	680.06	(451.24)

Table 12, continued

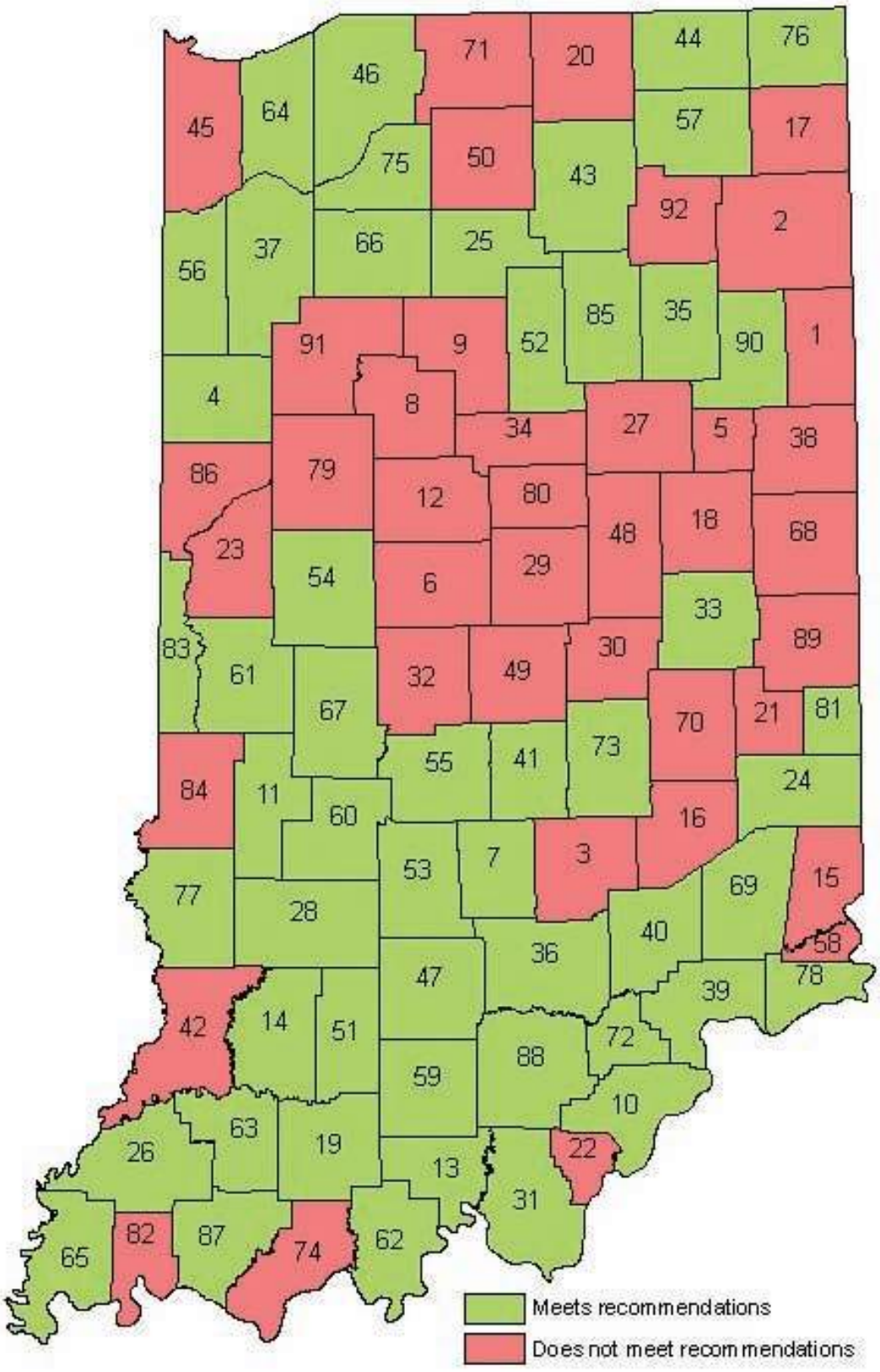

Figure 8. County outdoor recreation – regional Recommendation – 35 acres/1000 persons

Indiana region - regional acres				
Region	PPN 2005*	Recommended 35 a/1000	Current	Difference
1A	761,581.00	26,655.34	33,466.00	6,810.67
1B	107,511.00	3,762.89	35,067.00	31,304.12
2	584,539.00	20,458.87	9,350.00	(11,108.87)
3A	188,655.00	6,602.93	38,191.00	31,588.08
3B	447,599.00	15,665.97	3,107.00	(12,558.97)
4	281,917.00	9,867.10	8,225.00	(1,642.10)
5	231,620.00	8,106.70	25,378.00	17,271.30
6	426,714.00	14,934.99	6,622.00	(8,312.99)
7	222,378.00	7,783.23	43,418.00	35,634.77
8	1,588,480.00	55,596.80	15,216.00	(40,380.80)
9	119,108.00	4,168.78	9,539.00	5,370.22
10	144,230.00	5,048.05	81,426.00	76,377.95
11	156,115.00	5,464.03	104,358.00	98,893.98
12	176,326.00	6,171.41	87,027.00	80,855.59
13A	159,100.00	5,568.50	114,425.00	108,856.50
13B	289,809.00	10,143.32	21,536.00	11,392.69
14	262,121.00	9,174.24	71,931.00	62,756.77
15	124,170.00	4,345.95	198,355.00	194,009.05

Table 13. Indiana region outdoor recreation acres-regional
**Population, U.S. Census Bureau, 2005*

County Level

The DOR assesses regional outdoor recreation acres at all levels (county, Indiana region, and State). County level assessment identifies specific areas that are lacking in supply and do not meet the NRPA/Indiana recommendations of 35 acres of regional outdoor recreation opportunities per 1,000 people. This also helps the State make informed decisions concerning land acquisition and future outdoor recreation development. Table 12 shows that 52 counties have an adequate supply of regional outdoor recreation acres.

Indiana Region Level

Three of the 15 Indiana regions are subdivided into two sections (1A, 1B, 3A, 3B, 13A, and 13B) for a total of 18 planning sections. This is important in analysis of supply of regional outdoor recreation acres because Region 3A has an adequate supply; Region 3B does not. One very significant difference between these sections is Fort Wayne with its population of more than 220,000 and the industrial and agricultural base within the surrounding counties.

There are 13 Indiana planning sections (10 ½ regions) that meet the recommendation of 35 acres of regional outdoor recreation acres per 1,000 people (See Table 13). It is not surprising that Indiana planning sections that do not meet the standards (2, 3B, 4, 6, 8) are in the northern half of the State. Southern Indiana regions, with their vast supply of woodlands and undeveloped acres, lend themselves to development of traditional

Indiana county - total acres					
Number	Name	PPN 2005*	Recommended 55 a/ 1000	Current	Difference
1	Adams	33,849.00	1,861.70	859.42	(1,002.28)
2	Allen	344,006.00	18,920.33	4,693.73	(14,226.60)
3	Bartholomew	73,540.00	4,044.70	2,117.85	(1,926.85)
4	Benton	9,039.00	497.15	1,772.00	1,274.86
5	Blackford	13,849.00	761.70	91.00	(670.70)
6	Boone	52,061.00	2,863.36	625.93	(2,237.43)
7	Brown	15,154.00	833.47	68,026.30	67,192.83
8	Carroll	20,426.00	1,123.43	388.87	(734.56)
9	Cass	40,130.00	2,207.15	902.57	(1,304.58)
10	Clark	101,592.00	5,587.56	29,777.44	24,189.88
11	Clay	27,142.00	1,492.81	2,936.32	1,443.51
12	Clinton	34,091.00	1,875.01	272.79	(1,602.21)
13	Crawford	11,216.00	616.88	43,767.05	43,150.17
14	Daviess	30,466.00	1,675.63	9,220.84	7,545.21
15	Dearborn	49,082.00	2,699.51	422.20	(2,277.31)
16	Decatur	25,184.00	1,385.12	271.42	(1,113.70)
17	Dekalb	41,659.00	2,291.25	294.40	(1,996.85)
18	Delaware	116,362.00	6,399.91	498.11	(5,901.80)
19	Dubois	40,858.00	2,247.19	15,510.38	13,263.19
20	Elkhart	195,362.00	10,744.91	3,685.40	(7,059.51)
21	Fayette	24,885.00	1,368.68	220.00	(1,148.68)
22	Floyd	71,997.00	3,959.84	2,743.32	(1,216.52)
23	Fountain	17,462.00	960.41	1,007.74	47.33
24	Franklin	23,085.00	1,269.68	9,952.96	8,683.28
25	Fulton	20,665.00	1,136.58	1,920.14	783.56
26	Gibson	33,408.00	1,837.44	3,564.10	1,726.66
27	Grant	70,557.00	3,880.64	1,957.57	(1,923.07)
28	Greene	33,479.00	1,841.35	9,135.78	7,294.44
29	Hamilton	240,685.00	13,237.68	2,912.93	(10,324.74)
30	Hancock	63,138.00	3,472.59	337.20	(3,135.39)
31	Harrison	36,827.00	2,025.49	16,308.86	14,283.38
32	Hendricks	127,483.00	7,011.57	1,112.73	(5,898.83)
33	Henry	47,244.00	2,598.42	5,118.54	2,520.12
34	Howard	84,977.00	4,673.74	495.91	(4,177.82)
35	Huntington	38,236.00	2,102.98	17,246.02	15,143.04
36	Jackson	42,237.00	2,323.04	35,759.38	33,436.35
37	Jasper	31,876.00	1,753.18	6,476.98	4,723.80
38	Jay	21,606.00	1,188.33	719.38	(468.95)
39	Jefferson	32,430.00	1,783.65	24,691.26	22,907.61
40	Jennings	28,427.00	1,563.49	18,499.34	16,935.86
41	Johnson	128,436.00	7,063.98	6,812.21	(251.77)
42	Knox	38,366.00	2,110.13	1,205.77	(904.36)
43	Kosciusko	76,072.00	4,183.96	4,283.98	100.02
44	LaGrange	36,875.00	2,028.13	10,619.41	8,591.29
45	Lake	493,297.00	27,131.34	16,574.78	(10,556.55)

Table 14. County outdoor recreation acres-total
**Population, U.S. Census Bureau, 2005*

Indiana county - total acres					
Number	Name	PPN 2005*	Recommended 55 a/ 1000	Current	Difference
46	LaPorte	110,512.00	6,078.16	13,939.03	7,860.87
47	Lawrence	46,403.00	2,552.17	18,488.12	15,935.96
48	Madison	130,412.00	7,172.66	1,586.75	(5,585.91)
49	Marion	863,133.00	47,472.32	13,520.28	(33,952.04)
50	Marshall	46,945.00	2,581.98	1,448.10	(1,133.88)
51	Martin	10,386.00	571.23	80,940.16	80,368.93
52	Miami	35,620.00	1,959.10	6,703.53	4,744.43
53	Monroe	121,407.00	6,677.39	73,722.08	67,044.69
54	Montgomery	38,239.00	2,103.15	3,357.38	1,254.23
55	Morgan	69,778.00	3,837.79	7,140.76	3,302.97
56	Newton	14,456.00	795.08	14,321.46	13,526.38
57	Noble	47,448.00	2,609.64	5,692.10	3,082.46
58	Ohio	5,874.00	323.07	77.29	(245.78)
59	Orange	19,770.00	1,087.35	51,445.02	50,357.67
60	Owen	22,823.00	1,255.27	12,384.21	11,128.95
61	Parke	17,362.00	954.91	8,484.62	7,529.71
62	Perry	19,032.00	1,046.76	71,052.72	70,005.96
63	Pike	12,766.00	702.13	15,320.63	14,618.50
64	Porter	157,772.00	8,677.46	17,560.28	8,882.82
65	Posey	26,852.00	1,476.86	11,150.30	9,673.44
66	Pulaski	13,783.00	758.07	9,773.50	9,015.43
67	Putnam	36,957.00	2,032.64	7,387.38	5,354.74
68	Randolph	26,684.00	1,467.62	966.44	(501.18)
69	Ripley	27,710.00	1,524.05	34,002.91	32,478.86
70	Rush	17,823.00	980.27	34.25	(946.02)
71	St. Joseph	266,160.00	14,638.80	4,154.36	(10,484.44)
72	Scott	23,820.00	1,310.10	7,683.08	6,372.98
73	Shelby	43,766.00	2,407.13	9,871.70	7,464.57
74	Spencer	20,528.00	1,129.04	191.58	(937.46)
75	Starke	22,933.00	1,261.32	4,614.10	3,352.79
76	Steuben	33,773.00	1,857.52	6,398.30	4,540.78
77	Sullivan	21,763.00	1,196.97	22,449.48	21,252.51
78	Switzerland	9,718.00	534.49	1,442.03	907.54
79	Tippecanoe	153,875.00	8,463.13	5,950.19	(2,512.93)
80	Tipton	16,385.00	901.18	181.57	(719.61)
81	Union	7,208.00	396.44	9,418.77	9,022.33
82	Vanderburgh	173,187.00	9,525.29	3,788.43	(5,736.86)
83	Vermillion	16,562.00	910.91	5,181.92	4,271.01
84	Vigo	102,592.00	5,642.56	2,558.95	(3,083.61)
85	Wabash	33,843.00	1,861.37	17,420.52	15,559.15
86	Warren	8,785.00	483.18	46.50	(436.68)
87	Warrick	56,362.00	3,099.91	8,845.61	5,745.70
88	Washington	27,885.00	1,533.68	16,589.18	15,055.50
89	Wayne	69,192.00	3,805.56	1,258.06	(2,547.50)
90	Wells	28,085.00	1,544.68	2,723.50	1,178.82
91	White	24,463.00	1,345.47	602.34	(743.13)
92	Whitley	32,323.00	1,777.77	989.56	(788.20)

Table 14, continued

outdoor recreation opportunities. Northern Indiana regions are traditional agricultural areas. Unfortunately, this unbalanced distribution of regional outdoor recreation acres leaves a large gap in opportunity between ends of the State. This deficit in opportunity and tremendous difference in physiography opens the door to innovative thinking and development of culturally specific outdoor recreation opportunities in deficit regions.

State Level

Indiana meets the NRPA/Indiana state level recommendation of 35 acres of regional outdoor recreation acres per 1,000 people. Currently there are 906,641 acres for regional outdoor recreation. The recommended acreage is 219,519; therefore, Indiana is 687,122 acres above the recommendation.

Total Outdoor Recreation Supply-Local and Regional

NRPA/Indiana guidelines recommend 55 acres per 1,000 persons of total outdoor recreation acres. This acreage includes all township, municipal, county, privately owned but open for public use, State, and federal lands. Once again, total acres are assessed at the county, Indiana region and State levels.

County Level

Currently, 52 counties meet recommendations for total outdoor recreation acreage (See Table 14). Of those 52 counties, 16 have an adequate supply of both local and regional outdoor recreation acres. The 16 counties are:

- Daviess
- Dubois
- Greene
- Harrison
- Henry
- Martin
- Monroe
- Montgomery
- Orange
- Parke
- Pike
- Ripley
- Scott
- Sullivan
- Warrick
- Washington

Fountain County is the sole county in the State that has a deficit of regional outdoor recreation (OR) acres that is offset by a large enough supply of local acres to equal an adequate supply of total outdoor recreation acreage. Fountain County is ranked 16th in the State for estimated population, has 433 local OR acres (+83) and 575 regional acres (-36) for a total of 1,008 OR acres (+47).

The remaining 35 counties that have an adequate supply of total outdoor recreation acres do so because of State and federal lands within their boundaries. The vast majority of these counties are located in the southern half of Indiana; however, there are a few pockets of adequate total supply in northern regions.

Indiana Region Level

Currently 13 Indiana planning sections (10 ½ regions) meet NRPA/Indiana recommendations for 55 acres of total outdoor recreation acres per 1,000 people. Regions 2, 3B, 4, 6, and 8 do not have enough public outdoor recreation acreage to support their populations (See Table 15). Four of the deficient areas include counties that have a population growth rate higher than the State average and have a major city or cities:

- Region 2: Elkhart and Marshall counties, Elkhart
- Region 3B: Allen and Dekalb counties, Fort Wayne
- Region 4: Tippecanoe and Warren counties, Lafayette
- Region 8: Boone, Hamilton, Hancock, Hendricks, Johnson, Morgan counties, Indianapolis

Indiana region - total acres				
Region	PPN 2005*	Recommended 55 a/1000	Current	Difference
1A	761,581.00	41,886.96	48,074.09	6,187.14
1B	107,511.00	5,913.11	35,788.38	29,875.28
2	584,539.00	32,149.65	17,100.56	(15,049.09)
3A	188,655.00	10,376.03	40,945.39	30,569.36
3B	447,599.00	24,617.95	8,571.05	(16,046.89)
4	281,917.00	15,505.44	12,795.47	(2,709.96)
5	231,620.00	12,739.10	27,624.24	14,885.14
6	426,714.00	23,469.27	10,937.78	(12,531.49)
7	222,378.00	12,230.79	48,998.67	36,767.88
8	1,588,480.00	87,366.40	32,653.62	(54,712.78)
9	119,108.00	6,550.94	10,931.08	4,380.14
10	144,230.00	7,932.65	86,106.29	78,173.64
11	156,115.00	8,586.33	106,174.95	97,588.63
12	176,326.00	9,697.93	89,087.99	79,390.06
13A	159,100.00	8,750.50	118,990.67	110,240.17
13B	289,809.00	15,939.50	27,348.44	11,408.94
14	262,121.00	14,416.66	75,290.50	60,873.84
15	124,170.00	6,829.35	201,250.16	194,420.81

Table 15. Indiana region outdoor recreation acres-total
**Population, U.S. Census Bureau, 2005*

State Level

Currently, the Indiana Facility Inventory shows 998,669 acres of outdoor recreation opportunities. This includes every site that is open for public use (excluding school grounds). NRPA/Indiana guidelines recommend 55 acres per 1,000 persons (at this level). With an estimated State population of 6,271,973 (U.S. Census Bureau, 2005) current acreage exceeds the recommendation of 344,959 total outdoor recreation acres by 653,711 acres.

This indicates that acquisition of new lands and development of new outdoor recreation opportunities have not or are not keeping pace with population growth. Maintaining or improving the balance between outdoor recreation and economic growth, urban sprawl, and environmental or social health can require extensive planning and community organization and involvement. Unfortunately, funding and the amount of time it takes to develop a new site can also affect balance. For example, there have been major additions to the amount of outdoor recreation acreage in Tippecanoe County (e.g., Prophetstown State Park and a proposed 13 miles of ADA trails throughout West Lafayette), but population growth still overrides these tremendous advances.

Conclusion of Total Outdoor Recreation Acres

One might think these figures indicate that Indiana is in fine shape, but look back to the original NRPA guidelines. Regional/Metropolitan Park and Regional Park Reserve have a service area defined by driving time. The boundaries of the service area extend beyond a park's physical boundaries. The service area can also overlap into other counties, Indiana regions, or even other States.

Additionally, every park category has a service area limited by population density. For example, if the service area was a perfect circle, and a 200 acre park in downtown Indianapolis was the center of the circle, that park would have a smaller service area (circumference) than a 200 acre park in downtown Fowler (Benton County) because of the population difference.

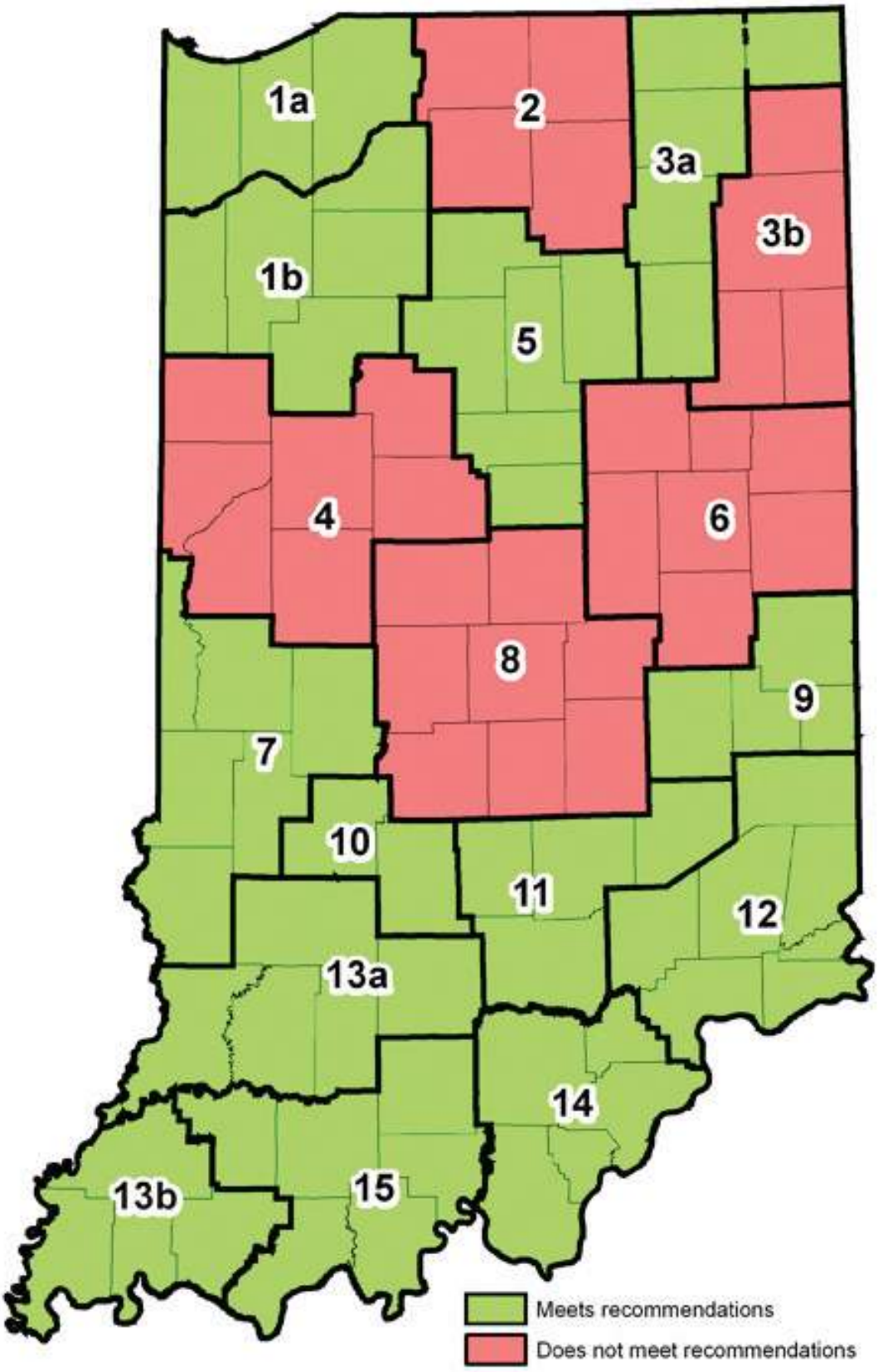

Figure 9. Indiana region outdoor recreation – total Recommendation – 55 acres/ 1000 persons

In this SCORP we have simplified the guidelines; however, that does not equate to the State being equally balanced or without problems. A theoretical example, Mounds State Park could have a service area that includes parts of Hancock County, the third-fastest growing county in Indiana (U.S. Census Bureau, 2005). If Anderson, which is closer to Mounds SP, has a population increase, the service area of Mounds would "shrink" to be able to absorb that increase in population density. Since Hancock County is already below standards for outdoor recreation supply, "shrinkage" of Mounds' service area would have a ripple effect and further increase Hancock County's shortage.

Our interpretation indicates that the State has adequate acreage; however, service areas of outdoor recreation sites in the southern third of the State do not extend to Lake or Allen counties. Each has a greater than 10,000-acre deficit in outdoor recreation supply. Allen has a population growth rate greater than the State average of 3.1% (U.S. Census Bureau, 2005).

Technological advances make it easier to assess park service areas based on population density; DOR hopes to include these assessments in future SCORPs.

One last thought before moving to the most critical areas in Indiana. Our state ranks 14th in population in the country. The total acreage is 23,307,520. Of that land, 998,669 acres is designated for outdoor recreation. That means Indiana has a mere 4.28% of her land allotted to recreation. The U.S. Census Bureau (2005) reported an estimated average population increase of 3.1% for the State from 2000 to 2005, with an estimated total population of 6,546,000 to 7,158,000 by 2025. The percentage of land for outdoor recreation has increased by 0.41% since 1999. It is evident that Indiana has not kept pace with population growth. As future population growth occurs, the State, regions, counties, municipalities, and townships will need to develop new outdoor recreation sites to accommodate current and expected deficiencies because our present outdoor recreation supply is not distributed in a manner that serves all areas of the State.

Critical Counties and Regions

DOR also assesses the critical counties (see Fig. 10). The definition of a critical county has changed slightly from the 2000-04 SCORP due to changes in the State's population growth. The current definition of a critical county is

A county that does not have the recommended outdoor recreation supply acreage of 55 acres per 1,000 population and has a population growth rate that is higher than the 2000-05 population growth rate of 3.1% for the Indiana (as reported by the U.S. Census Bureau).

Note: DOR is in the process of redefining "critical county" to include "degree of need." For example, Lake and St. Joseph counties, both of which have a total deficit of greater than 10,000 acres, are not currently considered critical counties because of population growth lower than the State average.

Counties that have been determined to be critical counties based on the defined criteria are

- Allen
- Boone
- Dearborn
- Dekalb
- Elkhart
- Hamilton
- Hancock
- Hendricks
- Johnson
- Marshall
- Ohio
- Tippecanoe
- Warren
- Whitley

Tables 16 and 17 show more detailed information regarding local and total outdoor recreation acres in critical counties.

Critical counties - local acres						
Number	Name	PPN 2005*	Growth percent	Recommended 20a/1000	Current	Difference
2	Allen	344,006.00	3.70	6,880.12	4,691.23	(2,188.89)
6	Boone	52,061.00	12.90	1,041.22	597.55	(443.67)
15	Dearborn	49,082.00	6.40	981.64	375.00	(606.64)
17	Dekalb	41,659.00	3.40	833.18	285.00	(548.18)
20	Elkhart	195,362.00	6.90	3,907.24	3,240.45	(666.79)
29	Hamilton	240,685.00	31.70	4,813.70	2,911.93	(1,901.77)
30	Hancock	63,138.00	14.00	1,262.76	297.20	(965.56)
32	Hendricks	127,483.00	22.50	2,549.66	1,112.73	(1,436.93)
41	Johnson	128,436.00	11.50	2,568.72	1,056.50	(1,512.22)
50	Marshall	46,945.00	4.00	938.90	323.25	(615.65)
58	Ohio	5,874.00	4.50	117.48	55.00	(62.48)
79	Tippecanoe	153,875.00	3.30	3,077.50	2,765.72	(311.78)
86	Warren	8,785.00	4.30	175.70	46.50	(129.20)
92	Whitley	32,323.00	5.30	646.46	309.50	(336.96)

Table 16. 2006 Critical counties: Outdoor recreation acres-local
**Population, U.S. Census Bureau, 2005*

Critical counties - total acres						
Number	Name	PPN 2005*	Growth percent	Recommended 55 a/1000	Current	Difference
2	Allen	344,006.00	3.70	18,920.33	4,693.73	(14,226.60)
6	Boone	52,061.00	12.90	2,863.36	625.93	(2,237.43)
15	Dearborn	49,082.00	6.40	2,699.51	422.20	(2,277.31)
17	Dekalb	41,659.00	3.40	2,291.25	294.40	(1,996.85)
20	Elkhart	195,362.00	6.90	10,744.91	3,685.40	(7,059.51)
29	Hamilton	240,685.00	31.70	13,237.68	2,912.93	(10,324.74)
30	Hancock	63,138.00	14.00	3,472.59	337.20	(3,135.39)
32	Hendricks	127,483.00	22.50	7,011.57	1,112.73	(5,898.83)
41	Johnson	128,436.00	11.50	7,063.98	6,812.21	(251.77)
50	Marshall	46,945.00	4.00	2,581.98	1,448.10	(1,133.88)
58	Ohio	5,874.00	4.50	323.07	77.29	(245.78)
79	Tippecanoe	153,875.00	3.30	8,463.13	5,950.19	(2,512.93)
86	Warren	8,785.00	4.30	483.18	46.50	(436.68)
92	Whitley	32,323.00	5.30	1,777.77	989.56	(788.20)

Table 17. 2006 Critical counties: Outdoor recreation acres-total
**Population, U.S. Census Bureau, 2005*

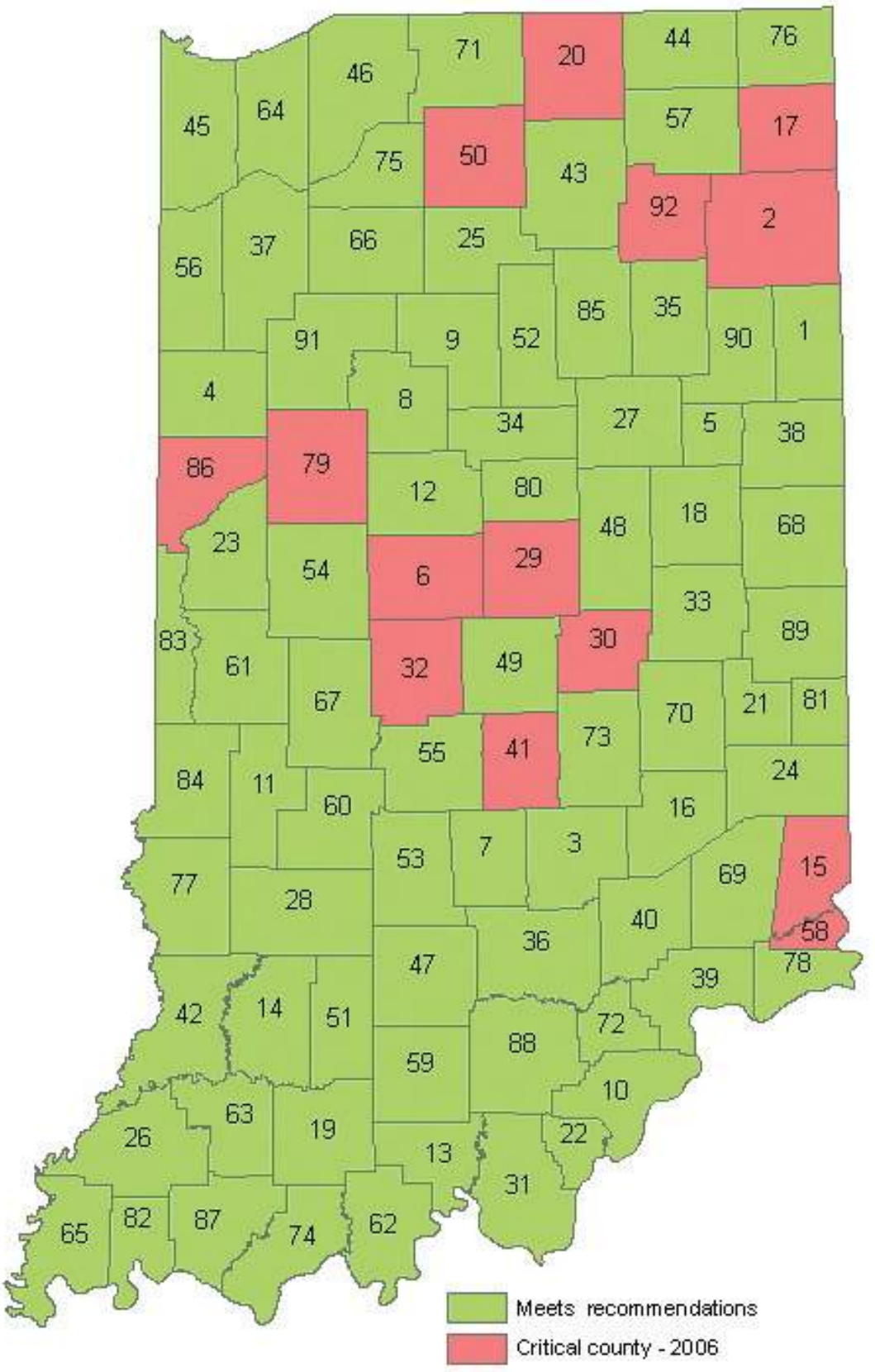

Figure 10. 2006 Critical counties

Program Information

Artist Relocation Incentives:

- Lowertown is dual zoned for commercial and residential use. This enables residents to have gallery/studio, restaurant/ café, etc. and living space all under one roof.
- 100% financing for purchase and rehabilitation of an existing structure or the building of a brand new structure.
- Free lots for new construction as available.
- City will pay up to $2500 for architectural services or other professional fees.
- National marketing of Lowertown Arts District and Paducah.

Proposal Requirements (Applies to PRA-owned buildings and lots)

At a minimum, each proposal should provide the following items in detail following a logical format.

- A $50 non-refundable application fee.
- Purchase price offer for property.
- Intended use of the property complete with any necessary documentation such as business plan, resume, portfolio, etc.
- Detailed rehab plans in which all changes and improvements necessary meet code requirements as well as provide for the intended use. Please note that Historic Design Guidelines must be adhered to as well.
- Detailed illustrations of floor plans and use of space.
- Front, side and rear elevations of exterior facades including any significant architectural details. Drawings/Renderings must be large, clear, and detailed.
- Firm third party professional (engineer, architect, knowledgeable & experienced contractor[s]) estimate of the entire costs for rehab. Estimate should be broken down by cost centers and include a total. At least two estimates are recommended.
- Estimated firm timeline indicating the duration of the project from start to finish. We require start time for projects to take place within 60 - 90 days of deed transfer and completion of project to be within 24 months.
- Proof of financial ability to complete the project in an amount matching the estimated costs. Proof must be in the form of a letter of credit, loan commitment, proof of cash on hand, or some other proof of financial ability acceptable to the Paducah Renaissance. Grants or special financing must be listed, but cannot count toward financial ability unless a copy of the award notice or other acceptable guarantee is provided.
- Priority for start to finish projects, which address the entire structure(s).
- Priority for owner occupied properties.
- Priority for uses which contribute to the Arts District or which otherwise serve the highest and best use of the property in the opinion of the board.

- Priority for proposals that retain and incorporate the significant exterior and interior architectural features of the property.
- Proposal must be delivered sealed.

Mail proposals to:

PADUCAH RENAISSANCE
PO BOX 809
PADUCAH, KENTUCKY 42002

Or hand deliver to:

605 BROADWAY, PADUCAH, KENTUCKY

Note: The Paducah Renaissance Alliance retains the right to deny any application for any reason.

Proposal Process:

1) Selection - Once you have selected a property, complete the proposal guidelines. A Paducah Renaissance Alliance (PRA) staff person will be able to walk you through these and answer any of your questions. Please call 270.444.8649 or email mbilak@ci.paducah.ky.us

2) Completed proposals should be delivered in a sealed envelope to the PRA office.

3) Upon receipt of a sealed proposal, the property will be advertised for seven days with and a notice published in the Paducah Sun that states the property is available for proposals. During this seven-day period, other interested parties may submit a competing proposal. After seven days from initial advertisement, a meeting to review proposals will be advertised for another seven days at which point all proposals are reviewed. At this meeting, each applicant will have the opportunity to present their case concerning the property and the committee members can ask questions.

4) The committee (composed of representatives from our Economic Restructuring and Design Teams) will then go into closed session to determine transfer of property. Generally, the committee will make a decision on property transfers at the meeting, however they have the option to table discussion, ask for alterations to the proposal or deny any transfers.

5) Once an applicant is selected, deed transfer will ensue. Any violation of the terms of the proposal may result in forfeiture of the property along with any improvements made. This is to ensure project completion and to protect taxpayer's investment in the project and the neighborhood.

6) Once the applicant has controlling interest in a property, the next step is the design review process. Any new construction or a change in the exterior appearance requires approval from

the Historic & Architectural Review Commission (HARC) as the LowerTown neighborhood is a designated Historic District. Applicant must contact the HARC Coordinator with the City of Paducah Planning Department with at 270-444-8640.

7) Once you are ready for construction, you may obtain your building permit by submitting plans to the City of Paducah Department of Inspection.

Questions to Consider:

1) Are you looking for live/work space, retail space or strictly residential? Note: All of LowerTown is zoned both residential and commercial.

2) Have you met with a lending institution to determine your project budget? Note: LowerTown is located within an Historic District and Historic Review of all building plans is necessary. Typically new construction (2008-09 figures) will run approximately $125 per square foot and rehabilitation can run $10-$25 more depending upon the condition of the building.

3) If you will be opening a business, do you have a business plan drafted? Note: Our inspections department can assist you with building specifications necessary for various types of businesses.

Arcadia Arts Initiative Cooperative Guidelines

Membership and Subsidies

Studio Artist/Artisan: teaching/shop artist/artisan who subleases studio space from the Initiative. Eligible for a monthly 40% studio space subsidy (based on the Initiative space lease cost) and a monthly 100% basic utility subsidy ($150/month maximum including natural gas, electric, water and sewer only).
Resident Artist/Artisan: teaching/shop artist/artisan who owns business space in Arcadia. Eligible for a monthly teaching workspace subsidy of $0.45/square foot (to a maximum of 600 square feet). No basic utility subsidy is provided.
Supporting Artist/Artisan: an artist/artisan who works in a personal location (home, for example), but desires to support the Initiative and will participate in special events and workshops.

Membership Information:

- **All members must meet the definition of "Artist or Artisan" as specified in the section "Definition of an Artist or Artisan".**
- **All members must be approved by the Artists/Artisans Advisory Committee.**
- **All members are invited to attend the Artists/Artisans Advisory Committee meetings. Committee voting rights are limited to Studio and Resident members.**
- **All members must follow the "Cooperative Rules".**
- **The annual membership fee must be submitted within 30 days after notification that a new applicant has been accepted into the Initiative. Annual fee renewals are due within 30 days of active member notification.**
- Studio and Resident Artist/Artisan annual membership fee is $30.
- Supporting Artist/Artisan annual membership fee is $25.
- Studio and Resident Artist/Artisan signage is provided by the Initiative.
- Supporting Artist/Artisan is provided with a window poster by the Initiative.
- Studio and Resident Artist/Artisan must provide a quarterly class plan/schedule at least 30 days prior to each new quarter which will be published on the Initiative website (arcadiainarts.com), and provide a quarterly summary of teaching activities at the first Advisory Committee meeting of each new quarter.
- All members are listed on the Initiative website and promoted through printed materials and media.

Arcadia Arts Initiative Cooperative Guidelines

Page 2 of 5

Sublease and Subsidy Information:

- Initial one year subleases or workspace subsidies will be established followed by six month renewals.
- Lease and workspace subsidy payments will be made on the first day of each month by the Initiative. Sublease payments to the Initiative are due on the first day of each month. Utility subsidy payments will be made by the Initiative at least 7 days prior to the due date.
- A damage deposit of 50% of the monthly lease amount or a minimum of $200. will be required for any studio space sublease applicant. The owners of buildings leased to the Initiative will maintain the general repair of the buildings and requests for routine repairs (heating, cooling, plumbing, electrical, leaks, etc)must be submitted to the Initiative unless it is an emergency – the building owner may be contacted. The Initiative will provide contact information.
- Enhancements to any building for studio work, or any damages as a result of anything other than “normal wear and tear”, must be removed or repaired prior to leaving the building at the risk of forfeiting the damage deposit or facing legal consequences.
- Rules define how the space can be used including safety rules for artists/artisans who may need to use flammable or combustible materials. Careful consideration will be given when new studio members come into the Initiative to ensure they share space with compatible art/craft forms.

Definition of an Artist or Artisan

Art: the conscious production or arrangement of sounds, colors, forms, movements or other elements in a manner that affects the sense of beauty.
Craft: skill or ability in handwork or the arts.
Artist: a person who creates a work of art; a professional performer; a person who works with dedication, devotion and skill in the creation of an art form by hand.
Artisan: a person who is a skilled craftsman; a person who works with dedication, devotion and skill in pursuit of a craft; a person who creates craft items by hand.

The term **Artist or Artisan** can apply to painters, musicians, performing artists, print makers, those who draw or fabricate using mixed media, creators of artists’ books, bookbinders, papermakers, arts photographers, potters, fiber artists including weavers, spinners and dyers, quilters, woodworkers, sculptors, jewelry makers, basket weavers and others. An applicant for membership in any of these categories, or others, will be required to personally present their resume and examples of their creations to the **Artists/Artisans Advisory Committee** for review, consideration and approval by a two-thirds majority vote.

Arcadia Arts Initiative Cooperative Guidelines

Page 3 of 5

Definition of an Artist or Artisan

An artist/artisan is a person regularly engaged in and who derives a portion of their annual income from creative art or craft work, including teaching, executed for a “one of a kind, limited” production exclusive of any piece or performance created or executed for industry oriented distribution or production. Artist/artisan members (**Studio and Resident**) of the Initiative must teach, in Arcadia in studio or workshop venue, a minimum of three classes per quarter or 90 hours per year in order in order to qualify for the applicable subsidy (or subsidies).

General Guidelines

- Every attempt will be made to make studio space diversified in order to make it more interesting to visitors and customers.
- Artists/Artisans from Hamilton County will be given first preference for space.
- Artists/Artisans must have been working in or performing their creative function for a minimum of one year prior to applying for membership.
- Artists/Artisans must submit to a background and credit check prior to acceptance into the Initiative.
- If all available studio spaces are filled at the time of application, the applicant must include a $25 non-refundable fee and will be placed on the waiting list in the order of application receipt.
- The Director of the Initiative and other voluntary administrative personnel cannot vote with the Advisory Committee.

Hours of Studio and Resident Artist/Artisan Operation

The Arcadia Arts Initiative is dedicated to the revitalization of historic Arcadia, especially the downtown district. It is essential that studios and resident locations be open for regular operating hours during potential visitor traffic periods, and especially for all special events such as festivals, special workshops, and scheduled visits such as the Indiana Transportation Museum trains and tourist groups.

Artists/Artisans sharing cooperative space must work together to ensure that at least one member or viable representative (someone very familiar with the art/craft form) is present.

Studio or workspace may be utilized at any other time of the day or evening for work or classes, but not as a place of residence.

Arcadia Arts Initiative Cooperative Guidelines

Page 4 of 5

Hours of Studio and Resident Artist/Artisan Operation

If a member artist/artisan cannot be present in their studio or resident location during the specified operating hours, or during special event/visit periods, every attempt should be made to have a viable representative substitute for them and the Director of the Initiative should be advised at least 72 hours in advance unless an emergency situation has occurred.

Variations to the operating hours by any member artist/artisan must be presented to the **Artists/Artisans Advisory Committee**, in writing, for review, consideration and vote by a two-thirds majority.

Regular Operating Hours for Studio and Resident Artists/Artisans:

January – April	May – October	November - December
Saturday **10:00am – 5:00pm**	**Wednesday – Friday** **12:00pm – 5:00pm**	**Friday** **12:00pm – 6:00pm**
	Saturday **10:00am – 5:00pm**	**Saturday** **10:00am – 5:00pm**

Sunday operating hours shall be scheduled for special events only after review and vote by a two thirds majority of the Artists/Artisans Advisory Committee.

Arcadia Arts Initiative Cooperative Rules

All artists/artisans participating in the Arts Initiative must agree to comply with these rules and must agree to subsequent rule changes or revisions so long as they are voted for by a two thirds majority of the **Artists/Artisans Advisory Committee.**

- The Arcadia Arts Initiative will maintain a minimum of one million dollars liability insurance on all leased buildings and spaces. Studio and Resident artists/artisans must maintain a minimum of one million dollars liability insurance, also. Studio artists/artisans must maintain renter's insurance for personal property protection naming the Arcadia Arts Initiative as the "additional insured". Proof of insurance is required prior to occupying a studio.
- Studio and workspace must be used for teaching and the display and sale of the artist/artisan creative works only. Member artists/artisans may display and offer for sale their creative works in any of the Initiative studios or resident workspaces. This activity must be agreed to and coordinated with the studio or resident artist/artisan occupying the location. The display and sale of creative works by non-member artists/artisans in any Initiative venue must be approved by the **Artists/Artisans Advisory Committee.**
- No more than three artists/artisans may sublet any studio location unless sufficient space is available.
- Artists/artisans are responsible for their window display signage. The design of such signage must be submitted to the Director of the Arts Initiative for approval prior to installation.
- Any exterior decorations, furnishings, etc. must be approved by the Director of the Arts Initiative.
- Artists/artisans may not sublet their studio space or workspace to others.
- Each artist/artisan must maintain their own sales tax account with the Indiana Department of Revenue. The Arcadia Arts Initiative is not responsible for the payment of any taxes.
- The creative works of all artists/artisans must be exhibited in their respective studio or resident spaces and be clearly identified for public viewing. Items for sale must be clearly marked. Shared studio space members must be able to make a sale within the guidelines of the creator of the item – clearly marked price, identified item, whether cash, credit or check can be used, etc.
- All studio and resident members must maintain cleanliness and organization in their locations. If a restroom is available it must be maintained clean and orderly and made available to all visitors.
- It is the responsibility of all studio and resident members to maintain a safe work/display area. Flammable or combustible materials must be safely utilized and stored.
- Any grievance by a member artist/artisan against another or the Arts Initiative must be made in writing clearly stating the concerns, submitted to the Director of the Initiative, and acted upon by the **Artists/Artisans Advisory Committee**, in meeting, with all involved parties present. Trust is of paramount importance to the success of the Arts Initiative.

Issue 2

Heartland Papers

Past Silos and Smokestacks:

Transforming the Rural Economy in the Midwest

By Mark Drabenstott

With contributions from Sean Moore

The Chicago Council on Global Affairs

HEARTLAND PAPERS

Past Silos and Smokestacks:
Transforming the Rural Economy in the Midwest

By Mark Drabenstott
Director
RUPRI Center for Regional Competitiveness
Chairman
Territorial Development Policy Committee for the Organization for Economic Cooperation and Development

The views expressed are strictly those of the author.

Sean Moore, a research analyst at the Center for Regional Competitiveness, provided invaluable support in preparing this report.

SPONSORED BY
THE CHICAGO COUNCIL ON GLOBAL AFFAIRS

The Chicago Council on Global Affairs is a leading independent, nonpartisan organization committed to influencing the discourse on global issues through contributions to opinion and policy formation, leadership dialogue, and public learning.

The Chicago Council provides members, specialized groups, and the general public with a forum for the consideration of significant international issues and their bearing on American foreign policy.

THE CHICAGO COUNCIL TAKES NO INSTITUTIONAL POSITION ON MATTERS OF PUBLIC POLICY AND OTHER ISSUES ADDRESSED IN THE REPORTS AND PUBLICATIONS IT SPONSORS. ALL STATEMENTS OF FACT AND EXPRESSIONS OF OPINION CONTAINED IN THIS REPORT ARE THE SOLE RESPONSIBILITY OF ITS AUTHORS AND MAY NOT REFLECT THE VIEWS OF THEIR RESPECTIVE ORGANIZATIONS, THE PROJECT FUNDERS, OR THE CHICAGO COUNCIL'S BOARD AND STAFF.

The Chicago Council will sponsor the publication of a *Heartland Paper* when an issue arises that is critical to the Midwest region and national policy. Authors are expected to "benchmark" their findings against current policy in order to make explicit areas of agreement and disagreement. The authors are solely responsible for the published report. The Chicago Council takes no institutional position.

For further information about The Chicago Council or *Heartland Papers,* please write to The Chicago Council on Global Affairs, 332 South Michigan Avenue, Suite 1100, Chicago, Illinois, 60604; e-mail info@thechicagocouncil.org; or visit www.thechicagocouncil.org.

Printed in the United States of America.

About *Heartland Papers*

Heartland Papers are a monograph series devoted to helping the Midwest succeed in an era of globalization. Published by The Chicago Council on Global Affairs as part of the Global Midwest Initiative, *Heartland Papers* address issues that are vital to the future of the Midwest as it transitions from its industrial past. The views are those of the author(s), and The Chicago Council takes no institutional position. All statements of facts and opinions are those of the author(s).

In October 2008 The Chicago Council on Global Affairs launched the Global Midwest Initiative, a regional effort to promote interstate dialogue between government, business, and civic leaders about how best to respond to globalization. Through a series of conferences, seminars, and publications, including *Heartland Papers* and its Web site (globalmidwest.org), the initiative aims to serve as a resource for those interested in the Midwest's ability to navigate today's global landscape.

Table of Contents

Foreword

The rural Midwest, home to traditional Midwestern values, is in trouble. For years it has relied more on industry than on farming for its livelihood. Now that industry is vanishing. A variety of factors—some short-term, like the recession, others long-term, like globalization—are undermining the rural Midwest economy. Old factory towns are shrinking. Once-humming plants now stand empty. The best-educated young people leave and often don't come back. Those who stay find that the good jobs that supported their parent's generation just aren't there anymore.

This decline has been going on for years. But globalization has put it into high gear. The economy and the legion of Midwestern communities those factories supported are now under enormous threat.

The rural Midwest has a choice between two futures. It can continue to decline, or it can reinvent itself to complete in the global economy, as regions around the world are now doing. The first choice is not acceptable. But the second demands a new path to development and prosperity.

For The Chicago Council on Global Affairs, the relationship of Chicago and the Midwest to the globalizing economy is a key mandate. The place of the rural Midwest in this world is the subject of this report, the second in the *Heartland Papers* series sponsored by The Chicago Council's Global Midwest Initiative.

Heartland Papers explore how best to position the Midwest in the age of globalization by examining key issues and providing policy recommendations to improve regional success. The focus in these papers is on the region, not a particular state. Many states wrestle with problems in their rural areas, but this *Heartland Paper* is one of the first attempts to examine this issue from a broader Midwestern perspective and to recommend policies to deal with it.

No one is better qualified to discuss these issues than the author of this paper, Mark Drabenstott. Mark grew up on an Indiana farm, earned his Ph.D. at Iowa State University, and was for many years the director of the Center for the Study of Rural America, at the time the nation's leading center on rural issues. Currently, he is director of the Center for Regional Competitiveness at the Rural Policy Research Institute and chairman of the Organization for Economic Cooperation and Development's Territorial Development Policy Committee, the premier global forum on regional economic development. He has advised and led rural development programs

around the globe, including two from the Midwest that are included in this report: the Southern Minnesota Regional Competitiveness Project and the RiverLands Economic Advantage Project.

The Chicago Council on Global Affairs has devoted significant attention to the Midwest and rural issues. The first *Heartland Paper* focused on Mexican immigration to the Midwest. Other Chicago Council projects have included the major recent report *"Renewing American Leadership in the Fight Against Global Hunger and Poverty"* plus reports on energy and federal farm policy, both important issues to the rural Midwest.

The Chicago Council is grateful to the Rural Development agency of the United States Department of Agriculture for its generous support of this paper.

Rachel Bronson, the Council's vice president for programs and studies, has guided the development of *Heartland Papers* and the Global Midwest Initiative. Juliana Kerr Viohl, director of Global Chicago/Global Midwest, and Alya Adamany, senior program officer of studies, oversaw the production of this report. Richard Longworth, whose book *Caught in the Middle: America's Heartland in the Age of Globalism* led to the founding of the Global Midwest Initiative, also contributed directly to this paper. The Council would also like to thank Catherine Hug, whose editing skills helped shape this paper.

Executive Summary

Most people think of the rural Midwest, away from the great cities, as one big farm—solidly bucolic and dependent on agriculture for its living. Yet industry and manufacturing have always been a key part of the rural Midwest economy. In fact, today they dominate that economy. More smokestacks than silos dot the rural landscape. As farms consolidated and the farm population fell, factory jobs—often based on autos, food, and agricultural equipment—picked up the slack. Rural towns and counties depend on manufacturing even more than Midwestern cities, where service industries dominate. Put simply, as goes manufacturing, so goes the rural Midwest.

Today, that industry is going away, and much of the rural Midwest's economic vitality is going with it. The current recession is only accelerating a decline that has its roots in a rapidly globalizing market for industrial products. Traditional manufacturing jobs are leaving the rural Midwest. And so are many of its best-educated and most talented young people.

The rural Midwest could have an economic future as bright as its vibrant past. But it is basing its twenty-first-century future on a twentieth-century playbook. This is not a recipe for success. Towns and counties compete with neighboring towns and counties for jobs and investments. Industrial recruitment—"smokestack chasing"—is the norm. Economic development agencies spend millions on infrastructure and tax breaks to lure companies from afar instead of creating new jobs at home. Boosters sell the rural Midwest as a cheap place to make things, ignoring the region's many other economic assets—its natural resources, its hard-working people, its central location, its schools and universities, and its scientific base, among others —that could all be leveraged into a competitive new economy.

The path to stronger economies in the rural Midwest is plain. *Partnering regionally to compete globally is what's needed*. This pathway will lead to scores of multicounty, self-defined regions across the Midwest. Only by combining their forces to create new businesses and good jobs at home will the towns and counties of the rural Midwest compete and thrive in a global economy where this sort of collaboration is fast becoming the norm.

The rural Midwest needs a bold new development strategy to transform its economy. The strategy developed in this report stands on four legs:

- Help rural communities and counties think regionally to compete globally.

- Focus public investments on transforming economic opportunities rooted in distinct economic strengths, not on smokestack chasing.

- Spur innovation and entrepreneurship, turning ideas and innovations into economic progress.

- Create a world-class entrepreneurial climate and innovation culture to grow a landscape of new companies, in the process recycling the region's considerable wealth.

This is a brand new game plan—a bold game plan. For more than a half century the rural Midwest has followed one basic path to economic development: Recruit a factory to the edge of town, and give away the farm to get it. In the twelve Midwestern states, something approaching 80 percent of development budgets goes to recruitment incentives. At the federal level, only 4 percent of rural development spending goes to regional development. At the local level, county economic development boards and local chambers of commerce dominate, preserving the lines in the sand that hinder regional action. Universities compete for research funding but devote too little effort to turning good ideas into local jobs. Even farm extension programs too often operate at the county level, not the regional level.

Exceptions exist and should become models. Purdue University's Center for Regional Development takes a regional approach to Indiana's economic goals. In northeastern Minnesota, the True North Initiative turned seven county-level community colleges into one regional college, sparking a major new development strategy throughout Minnesota's Arrowhead region. In southern Minnesota, the Southern Minnesota Regional Competitiveness Project spans thirty-eight counties, among other things uniting three of the region's major assets—the Mayo Clinic, The Hormel Institute, and the area's farmers—into a joint bioscience initiative. Nearby, the RiverLands project is working to bring together fourteen counties in northwestern Illinois, eastern Iowa, and southwestern Wisconsin in a new regional effort to transform that region's economy.

These projects fit the new global paradigm for rural economic development because they go beyond local political boundaries and instead focus on the economic potential of the region to compete globally. The new model for rural development has been usefully summarized by the Organization for Economic Cooperation and Development (OECD). This model emphasizes regional action across traditional political boundaries, targeted investment in public goods such as transportation and telecommunications, active efforts to spur innovation, and a focus on regional competitive advantages. In short, the new paradigm represents the end of a "one-size-fits-all" approach.

The new paradigm is also embodied in the *Barca Report,* an independent report assessing the European Union's "cohesion" policy. The report advocates regionalism as the path to economic growth and development, but adds that local leaders are so wedded to their old ways that they often need an external jolt to put their region on the path to growth. In Toronto, the MaRS Discovery District—an innovation center that fosters collaboration among the communities of science, business, and finance to accelerate the growth of successful Canadian enterprises—has provided this jolt in their metropolitan region by connecting the city's universities with new businesses that can take ideas to markets.

These examples point to what is needed to embark on a new path of Midwestern rural development—a more regional approach. To succeed, regional leaders will need a neutral "safe space" where new partnerships can be forged. They will also need "coaches" that can effectively bring local players out of their traditional silos and combine their strengths on a new economic team. A critical challenge is that both the safe spaces and the coaches are in very short supply.

No one says this will be easy. Regional partnerships are rare in the rural Midwest. There is a potent mix of obstacles: county lines drawn long ago, the persistent devotion to industrial recruitment, and an embedded culture of rivalry often played out on Friday nights on football fields or basketball courts.

To overcome this, many regional champions will be needed. Federal policy can help by providing new incentives to change the legacy of local action. So can state governments, universities, businesses, and nonprofit organizations.

The rural Midwest must move past silos and smokestacks. Globalization has changed the field of play, demanding the region find a new playbook. The current one is simply not working. The future demands new approaches—regional cooperation, innovation, and a leveraging of all strengths into a new rural Midwest economy. In all of these there are national and international models of best practices that the Midwest can draw on and that can, if carefully tailored, be a roadmap back to economic prosperity.

Town of Thorntown Comprehensive Plan

INDOT Meeting Notes – April 20, 2010

Meeting Attendees:

INDOT Crawfordville District: (do not have INDOT sign-in sheet)

Joe Lewien	Technical Services Manager
George Kopcha	Traffic Manager
Mike Wink	Local Project Engineer
Bill Smith	Permit Engineer

(1 or 2 other female participants – one was an administrative support person, and the other may have been from the permit section)

Consultant Team

Chris Colsen	The Creighton Studios
Mark Behrens	Terra Site Development
Eric Batt	Terra Site Development
Tom Sturmer	Transportation Solutions

Meeting Notes

1. Discussed potential traffic circle or roundabout at intersection of Main street (SR 47) at Market Street, with a fountain/statue in the middle of the center island. Since this roadway improvement within the State right-of-way is not being conducted because of a “transportation need”, the State is not very likely to pay for these improvements.

2. The design of the roundabout would need to meet INDOT’s design criteria in order to be approved, as shown in newly updated Chapter 51 of the Indiana Department of Transportation (INDOT) Design Manual.

3. Relinquishment of SR 47 to the Town of Thorntown and the County is not likely to approved, and is a complicated process. A State Route must end at a State Route. INDOT would not allow just a section of the SR to be relinquished since it would interrupt SR continuity.

4. SR 47 and 75 do not convey high traffic volumes (less than 5,000 vehicles per day), but SR 47 is important as an east-west connector between Sheridan and Crawfordsville

5. If the Town can provide funding for project, INDOT can consider this a “cultural” revitalization effort. It helps if there is some historic significance, such as re-instating a portion of the statue that occupied Main Street in years past.

6. Federal transportation improvement funding programs (such as STP funding) would probably not be a justifiable for a project that does not address a

transportation need. Transportation Enhancement (TE) funding might be appropriate, especially if there is an historical component to the project. $920,000 awarded to District projects last year for project to be initiated three to four years from now. This funding program is very competitive. Can proceed in phases, for example, do the design work one year and build it in future years when federal money is available.

7. Discussed crosswalks for pedestrians and a potential crossing for the Kewasaukee bike trail. Good that the trail crosses SR 47 perpendicular, easier to deal with versus parallel routes. State working on developing consistent standards. INDOT does not typically mark crosswalks on State Routes unless at traffic signals with pedestrian indications, or at school crossings with a crossing guard. Trail identification and warning signs OK if located outside of the State Road right-of-way. We discussed the specifics of the potential bike path crossing and school zone to the east. Crossing may be able to be included in a “Safe Routes to School” funding application. Apparently, a crosswalk was removed from Main Street previously.

8. INDOT does not typically approve of on-street parking on State Routes, although they have permitted the angled parking on Main Street. Joe Lewien not in approval of raised curb “bumpouts” to protect parking and shorten crosswalk distances. (There are examples throughout the state of where this has been approved as part of INDOT’s Context Sensitive Solutions approach, however).

END OF MEETING NOTES

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR
FROM	01	01	09
TO	01	31	09

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		7.24	******	******	mg/L		5/7 Five Per Week	GRAB-2 GRAB-2
00300 1 2 0 Effluent Gross	PERMIT REQUIREMENT				5 DLYAVMIN				0		
pH	SAMPLE MEASUREMENT	******	******		6.4	******	8.2	SU		5/7 Five Per Week	GRAB GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0		
Solids, total suspended	SAMPLE MEASUREMENT	2.92	2.93	lb/d	******	46	45	mg/L		2/7 Twice Per Week	COMP24 COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		1		
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.05	0.07	lb/d	******	0.84	1.14	mg/L		2/7 Twice Per Week	COMP24 COMP24
00610 1 2 0 Effluent Gross	PERMIT REQUIREMENT	.9 MO AVG	1.4 MX WK AV			1.9 MO AVG	2.9 MX WK AV		0		
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.006	0.012	Mgal/d	******	******	******			7/7 Five Per Week	TOTAL2 TOTAL2
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0		
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	1.02	0.67	lb/d	******	16.9	16.8	mg/L		2/7 Twice Per Week	COMP24 COMP24
80082 1 0 0 Effluent Gross	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0		
Flow, total	SAMPLE MEASUREMENT	******	0.1795	Mgal/mo	******	******	******			MONTHLY Monthly	RCOTOT RCOTOT
82220 1 0 0 Effluent Gross	PERMIT REQUIREMENT		Report MO TOTAL						0		

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TYPED OR PRINTED	SIGNATURE	TELEPHONE AREA CODE AND NO.	DATE MO	DAY	YEAR
Karl Kyle	Karl Kyle	765 361-5264	2	11	09

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	Year	Plant Design Flow	Telephone Number
January	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):	info@astburygroup.com		
Certified Operator: Name	Class	Certificate Number	Expiration Date
Nicholas Dezelan	II	18656	6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Precipitation - Inches (Total= 1.7)	Bypass At Plant Site ("x" If Occurred)	Collection System Overflow ("x" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
29	Mon	Fill in December's effluent data on page 3 as necessary for correct weekly average calculations.																
30	Tue																	
31	Wed																	
1	Thu			0														
2	Fri			0							8.6	171	10.225	461	27.5668		117	
3	Sat			0														
4	Sun			0.02														
5	Mon			0														
6	Tue	1		0.2							8.6							
7	Wed	6		0.03														
8	Thu	1.75		0														
9	Fri	6.25		0							8.0	356	0.475	1500	2.0016		50.1	
10	Sat			0.19														
11	Sun			0														
12	Mon	2.5		0														
13	Tue	1.5		0.01							8.0	264	21.599	1440	117.814		48.9	
14	Wed	0.5		0.06														
15	Thu	1.25		0							8.1	60	2.9524	115	5.65869		52.6	
16	Fri	2.33		0														
17	Sat			0														
18	Sun			0														
19	Mon	1.5		0														
20	Tue	1.5		0														
21	Wed	4		0														
22	Thu	1.25		0							7.9							
23	Fri	4.25		0														
24	Sat	1.5		0								642		2750			68.1	
25	Sun			0														
26	Mon	1		0.01							8.3	701		2690			65.1	
27	Tue	1		0.49														
28	Wed	0.5		0.69														
29	Thu	1		0							7.8	358		2230			50.8	
30	Fri	5.25		0								317		2040			47.7	
31	Sat			0														
Average												359	8.813	1653	38.2603		62.54	
Maximum				0.69							8.6	701	21.599	2750	117.814		117	
Minimum											7.8	60	0.475	115	2.0016		47.7	
No. of Data				31	0	0	0	0	0	0	8	8	4	8	4	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator	Date (month, day, year)
[signature]	2/10/09
Signature of principal executive officer or authorized agent	Date (month, day, year)
[signature]	2-11-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Signature of Certified Operator	Date (*month, day, year*)
	2/10/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	2-11-09

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	January	2009

Day Of Month	PRIMARY EFFLUENT		AERATION MIXED LIQUOR					AERATION RETURN SLUDGE		SECONDARY EFFLUENT		FINAL EFFLUENT						
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1																		
2			420	5260	80				4930	19.2	73.2				6.6		10.0	
3																		
4																		
5			560												7.1		10.0	
6			550			11.1	5								6.4		7.2	
7																		
8																		
9			450	4890	92	13.7	4		5660									
10																		
11																		
12			600			10.3	4								7.5		12.8	
13			625	4400	142	10.1	4		6050	11.4	50				7.0		10.8	
14															7.2		11.4	
15			600	4730	127	11.3	4		5410	12.9	50.8				7.3		11.6	
16						13.8	3								7.0		16.1	
17																		
18																		
19															7.2		12.5	
20																		
21			300			12.8	2											
22			240			12.9	4								7.4		12.2	
23			300			14.3	2										14.2	
24			330	2780	119	14.1	2		3200	16.8	63.6						14.4	
25																		
26			310	3200	97	12.4	3		3190						8.2		12.1	
27						12.7	2											
28															8.1		10.7	
29			275	3240	85	12.2	2		3700	13	38.1							
30				3530		13.8	2		4220	19.4	67.8							
31																		
Avg.			428	4004	106	12.5	3		4545	15.5	57.3						11.9	
Max.			625	5260	142	14.32	5		6050	19.4	73.2				8.2		16.14	
Min.			240	2780	80	10.12	2		3190	11.4	38.1				6.4		7.24	
Data	0	0	13	8	7	14	14	0	8	6	6	0	0	0	12		14	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	January	2009

Signature of Certified Operator	Date (*month, day, year*)
	2/10/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	2-11-09

		FINAL EFFLUENT															
		Flow		BOD				Total Suspended Solids				Ammonia				Other	
Day Of Month	Day of Week	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
29	Mon																
30	Tue																
31	Wed																
1	Thu	0.00947															
2	Fri	0.00717		37.8		2.2617		68.8		4.1166		0.652		0.039			0.735
3	Sat	0.00878															
4	Sun	0.00829															
5	Mon	0.00629		9.45		0.496		32.7		1.7164		0.48		0.0252			
6	Tue	0.00376															
7	Wed	0.06517															
8	Thu	0															
9	Fri	0.00016															
10	Sat	0.0009	0.01208		9		0.496		33		1.7164		0.48		0.0252		
11	Sun	0.00118															
12	Mon	0.00326															
13	Tue	0.00981		10.2		0.835		43		3.5202		0.77		0.063			0.677
14	Wed	0.03479															
15	Thu	0.0059		10.2		0.5022		47.7		2.3485		1.5		0.0739			1.83
16	Fri	0.0059															
17	Sat	0.0086	0.00993		10		0.6686		45		2.9344		1.135		0.0684		
18	Sun	0.0000															
19	Mon	0.0000															
20	Tue	0.0000															
21	Wed	0.0000															
22	Thu	0.0000															
23	Fri	0.0000															
24	Sat	0.0000															0.624
25	Sun	0.0000															
26	Mon	0.0000															
27	Tue	0.0000															
28	Wed	0.0000															
29	Thu	0.0000															
30	Fri	0.0000															0.666
31	Sat	0.0000		16.8	17			36.4	36			0.796	0.796				0.719
Avg		0.00579		16.9		1.0237		45.7		2.9254		0.8396		0.0503			0.875
Max		0.06517	0.01208	37.8	16.8	2.2617	0.6686	68.8	45	4.1166	2.9344	1.5	1.135	0.0739	0.0684		1.83
Min		0	0.00993	9.45	9.45	0.496	0.496	32.7	32.7	1.7164	1.7164	0.48	0.48	0.0252	0.0252		0.624
Data		31	2	5	3	4	2	5	3	4	2	5	3	4	2	0	6

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	95.7	96.5		
Tertiary Treatment	-9.3	20.1		
Overall Treatment	95.3	97.2	98.7	NA

Total Monthly Flow:
(million gallons) 0.1795

Percent Capacity
(actual flow/design) 10%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest A	IN0034428	January	2009

Signature of Certified Operator	Date (*month, day, year*)
	2/10/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
Karl Kyle	2-11-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - F	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
Avg.														
Max.														
Min.														
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

PERMIT NUMBER	PERMITTED FEATURE
IN0034428	001 A

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	02	01	09	TO	02	28	09

* I N 0 0 3 4 4 2 8 0 0 0 1 A 2 2 0 0 9 *

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		9.95	******	******	mg/L		5/7	GRAB-2
00300 1 2 0 Effluent Gross	PERMIT REQUIREMENT				5 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		6.5	******	7.9	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	1.08	1.37	lb/d	******	26.5	32.7	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.02	0.02	lb/d	******	0.48	0.56	mg/L		2/7	COMP24
00610 1 2 0 Effluent Gross	PERMIT REQUIREMENT	.9 MO AVG	1.4 MX WK AV			1.9 MO AVG	2.9 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0053	0.0058	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	0.49	0.67	lb/d	******	11.3	14.25	mg/L		2/7	COMP24
80082 1 0 0 Effluent Gross	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0	Twice Per Week	COMP24
Flow, total	SAMPLE MEASUREMENT	******	0.1488	Mgal/mo	******	******	******			MONTHLY	RCOTOT
82220 1 0 0 Effluent Gross	PERMIT REQUIREMENT		Report MO TOTAL						0	Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibiliy of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5243	12	09	
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

For any questions call Rose McDaniel at 317-233-2653

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	02	01	09	TO	02	28	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	Frequency of Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum	Units			

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibiliy of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
Karl Kyle	Karl Kyle	765 361-5264	3/12/09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO DAY YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	**Year**	**Plant Design Flow**	**Telephone Number**
February	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		**Class**	**Certificate Number** / **Expiration Date**
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 2.16 Precipitation - Inches	Bypass At Plant Site ("x" If Occurred)	Collection System Overflow ("x" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	RAW SEWAGE: pH	RAW SEWAGE: CBOD5 - mg/l	RAW SEWAGE: CBOD5 - lbs	RAW SEWAGE: Susp. Solids - mg/l	RAW SEWAGE: Susp. Solids - lbs	RAW SEWAGE: Phosphorus - mg/l	RAW SEWAGE: Ammonia - mg/l	
1	Sun			0.01														
2	Mon	1.5		0							7.3	359	12.605	1670	58.636		47.3	
3	Tue	1.5		0							7.0							
4	Wed	1.25		0														
5	Thu	1.75		0							7.4	434	25.047	1550	89.455		51.4	
6	Fri	1.5		0							7.6							
7	Sat			0														
8	Sun			0.01														
9	Mon	1.75		0.16							7.8	248	11.5	1250	57.963		42.5	
10	Tue	1.5		0							7.9	157	3.902	1230	30.569		46.2	
11	Wed	1		1.26							7.6							
12	Thu	2		0							7.8							
13	Fri	2.25		0							7.6							
14	Sat			0.07														
15	Sun			0														
16	Mon	1.5		0							6.3	166	6.7145	783	31.672		31.5	
17	Tue	1.25		0							7.6	233	11.271	1120	54.177		30.4	
18	Wed	1		0.21							7.5							
19	Thu	1.25		0							7.5							
20	Fri	1.5		0							7.0							
21	Sat			0.01														
22	Sun			0														
23	Mon	1.25		0							7.1	261	11.798	598	27.031		23.9	
24	Tue	1.75		0							7.8	235	8.4276	563	20.19		27.8	
25	Wed	1		0							7.4							
26	Thu	0.75		0.43							7.6							
27	Fri			0														
28	Sat	0.75		0							8.1							
Average												262	11.408	1096	46.212		37.63	
Maximum				1.26							8.1	434	25.047	1670	89.455		51.4	
Minimum											6.3	157	3.902	563	20.19		23.9	
No. of Data				28	0	0	0	0	0	0	19	8	8	8	8	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator	Date (month, day, year)
[signature]	3/10/09
Signature of principal executive officer or authorized agent	**Date (month, day, year)**
[signature]	3-12-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	February	2009

Signature of Certified Operator	Date (*month, day, year*)
[signature]	3/10/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
Karl Kyle	3-12-09

Day Of Month	PRIMARY EFFLUENT		AERATION MIXED LIQUOR					AERATION RETURN SLUDGE		SECONDARY EFFLUENT		FINAL EFFLUENT						
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1																		
2			490	4200	117	13.5			5100	22.5	56.8				7.9		13.8	
3			520			13.2									6.9		14.1	
4			570			11.0									7.9		11.4	
5			560	4480	125	11.8			5290	24.7	67				7.7		12.4	
6			510			12.0									7.0		13.9	
7																		
8																		
9			650	5090	128	7.8			6000	19.4	44.3				7.2		13.7	
10			500	4870	103	7.9			5650	7.44	27.4				7.3		10.8	
11			540			4.8									6.9		10.9	
12			550			6.7									7.1		11.3	
13			540			8.7									6.9		11.3	
14																		
15																		
16			540	4610	117	6.9			6170	6.02	44.4				6.5		10.0	
17			525	4830	109	8.0			5530	9.72	21.9				7.2		11.0	
18			580			7.3									7.3		11.9	
19			550												7.4		11.2	
20			540			8.5									7.0		10.2	
21																		
22																		
23			380	3600	106	10.8			5520	18.7	25				6.7		13.1	
24			425	3750	113	9.1	4		4460	10.5	22.1				7.3		12.9	
25			410			9.3									7.3		12.8	
26			450			8.5	4								7.3		11.8	
27																		
28			425			9.5	4								7.3		11.9	
Avg.			513	4429	115	9.2	4		5465	14.9	38.6						12.0	
Max.			650	5090	127.7	13.54	4		6170	24.7	67				7.9		14.09	
Min.			380	3600	102.67	4.78	4		4460	6.02	21.9				6.5		9.95	
Data	0	0	20	8	8	19	3	0	8	8	8	0	0	0	20		20	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
NDOT Lebanon Rest Area	IN0034428	February	2009

Signature of Certified Operator: [signature] Date (month, day, year): 3/10/09

Signature of principal executive officer or authorized agent: [signature] Date (month, day, year): 3-12-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow		BOD				Total Suspended Solids				Ammonia				Other	
		Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Sun	0.0024															
2	Mon	0.0042		13.4		0.4708		39.2		1.3772		0.606		0.0213			0.46
3	Tue	0.0047															
4	Wed	0.0038						25		0.7823							
5	Thu	0.0069		15.1		0.872		33.9		1.9576		0.428		0.0247			0.669
6	Fri	0.0056															
7	Sat	0.0038	0.0045		14.25		0.6714		32.7		1.3724		0.517		0.023		
8	Sun	0.0037															
9	Mon	0.0056		12.2		0.5661		24.7		1.146		0.593		0.0275			0.413
10	Tue	0.003		6.28		0.1562		29.7		0.7386		0.52		0.0129			0.426
11	Wed	0.0068															
12	Thu	0.008															
13	Fri	0.0055															
14	Sat	0.0053	0.0054		9.24		0.3611		27.2		0.9423		0.5565		0.0202		
15	Sun	0.0066															
16	Mon	0.0049		13.7		0.5545		20.5		0.8297		0.448		0.0181			0.371
17	Tue	0.0058		5.08		0.2459		23		1.1132		0.486		0.0236			0.444
18	Wed	0.0033															
19	Thu	0.0053															
20	Fri	0.0079															
21	Sat	0.0068	0.0058		9.39		0.4002		21.75		0.9715		0.468		0.0209		
22	Sun	0.0077															
23	Mon	0.0054		14.2		0.6423		29.7		1.3433		0.432		0.0195			0.228
24	Tue	0.0043		10.8		0.3875		12.7		0.4557		0.364		0.0131			0.415
25	Wed	0.0028															
26	Thu	0.0048															
27	Fri	0.0061															
28	Sat	0.0081	0.0056		12.5		0.5149		21.2		0.8995		0.398		0.0163		
Avg		0.0053		11.3		0.4869		26.5		1.0826		0.4849		0.0201			0.428
Max		0.0081	0.0058	15.1	14.25	0.872	0.6714	39.2	32.7	1.9576	1.3724	0.606	0.5565	0.0275	0.023		0.669
Min		0.0024	0.0045	5.08	9.24	0.1562	0.3611	12.7	21.2	0.4557	0.8995	0.364	0.398	0.0129	0.0163		0.228
Data		28	4	8	4	8	4	9	4	9	4	8	4	8	4	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	94.3	96.5		
Tertiary Treatment	23.7	31.4		
Overall Treatment	95.7	97.6	98.7	NA

Total Monthly Flow: (million gallons) 0.1488

Percent Capacity (actual flow/design) 9%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	February	2009

Signature of Certified Operator: [signature] — Date (*month, day, year*): 3/10/09

Signature of principal executive officer or authorized agent: [signature] — Date (*month, day, year*): 3-12-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - F	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13	0.785													
14														
15														
16	0.785													
17	0.6													
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
Avg.	0.7233													
Max.	0.785													
Min.	0.6													
Data	3	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD
MO DAY YEAR FROM 03/01/09 MO DAY YEAR TO 03/31/09

*** Mark box if NO DISCHARGE ☐ ***

For any questions call Rose McDaniel at 317-233-2653

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		6.75	******	******	mg/L		5/7	GRAB-2
00300 1 2 0 Effluent Gross	PERMIT REQUIREMENT				5 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		6.6	******	7.8	SU		5/7	Grab
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.3456	0.4609	lb/d	******	7.6	10.23	mg/L		2/7	COMP 24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.07	0.23	lb/d	******	1.07	3.02	mg/L		2/7	COMP24
00610 1 2 0 Effluent Gross	PERMIT REQUIREMENT	.9 MO AVG	1.4 MX WK AV			1.9 MO AVG	2.9 MX WK AV		1	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0058	0.0061	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	0.26	0.31	lb/d	******	5.2	5.63	mg/L		2/7	COMP24
80082 1 0 0 Effluent Gross	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0	Twice Per Week	COMP24
Flow, total	SAMPLE MEASUREMENT	******	0.1783	Mgal/mo	******	******	******			Monthly	RCOTOT
82220 1 0 0 Effluent Gross	PERMIT REQUIREMENT		Report MO TOTAL						0	Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibiliy of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TYPED OR PRINTED	SIGNATURE	TELEPHONE AREA CODE AND NO.	DATE MO	DAY	YEAR
Karl Kyle	Karl Kyle	765 864-5264	4	14	09

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	03	01	09	TO	03	31	09

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	Frequency of Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum	Units			

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	4	14	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	**Year**	**Plant Design Flow**	**Telephone Number**
March	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		**Class**	**Certificate Number** / **Expiration Date**
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 2.28 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	Lbs/Day or Gal./Day	Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Sun			0														
2	Mon	1.5		0							7.5	146	6.831	488	22.832		35.1	
3	Tue	1.5		0							7.9	177	8.9752	476	24.137		33.9	
4	Wed	1		0							7.7							
5	Thu	1		0							7.9							
6	Fri	1.25		0							7.6							
7	Sat			0														
8	Sun			0.12														
9	Mon	1.5		0							6.9	154	5.998	390	15.19		30.4	
10	Tue	1.25		0.3							7.6	169	6.2016	387	14.201		27.3	
11	Wed	1		0							6.8							
12	Thu	1.25		0							7.4							
13	Fri	1		0							6.5							
14	Sat			0														
15	Sun			0														
16	Mon	1.25		0							7.8	161	5.2501	321	10.468		22.2	
17	Tue	1.5		0							7.4	211	15.151	403	28.938		17.6	
18	Wed	1		0.2							7.5							
19	Thu	3		0							7.5							
20	Fri	2		0							7.2							
21	Sat			0														
22	Sun			0														
23	Mon	1		0							6.8							
24	Tue	1.5		0							7.1							
25	Wed	1.75		0.26							6.2	130	4.4886	338	11.67		11.2	
26	Thu	7.75		0							6.3	161	16.865	1100	115.23		11.8	
27	Fri	0.5		0														
28	Sat			1.16														
29	Sun			0.05														
30	Mon	3.25		0														
31	Tue	2.5		0.19							6.3	234	10.616	339	15.38		12.6	
Average												171	8.9308	471	28.671		22.46	
Maximum				1.16							7.9	234	16.865	1100	115.23		35.1	
Minimum											6.2	130	4.4886	321	10.468		11.2	
No. of Data				31	0	0	0	0	0	0	20	9	9	9	9	0	9	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 4/9/09

Signature of principal executive officer or authorized agent: Karl Kyle — Date (*month, day, year*): 4-14-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	March	2009

Signature of Certified Operator: [signature] — Date (month, day, year): 4/9/09

Signature of principal executive officer or authorized agent: Karl Kyle — Date (month, day, year): 4-14-09

Day Of Month	PRIMARY EFFLUENT		AERATION MIXED LIQUOR					AERATION RETURN SLUDGE		SECONDARY EFFLUENT		FINAL EFFLUENT						
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1																		
2			390	3320	117	10.0	4		4130	12.4	32.1				6.6		14.0	
3			400	3630	110	9.4	3		4550	9.16	24.6				7.2		10.2	
4			410			11.0	3								7.2		12.1	
5			425			10.6	4								7.8		9.2	
6			420			8.8	5								7.4		12.3	
7																		
8																		
9			410	4980	82	7.0	8		4520	7.6	16.7				7.1		10.3	
10			400	4070	98	8.3	8		6120	4.63	18.3				7.1		11.0	
11			380			8.9	8								7.0		9.7	
12			400			8.8	8								7.1		11.3	
13			360			9.8	8								6.8		10.6	
14																		
15																		
16			340	3840	89	9.1	8		6750	5.57	21.4				7.0		10.8	
17			300	4060	74	8.7	8		5520	5.45	13.5				7.2		9.2	
18			290			7.4	9								7.1		9.0	
19			325			8.7									7.0		10.9	
20			340			8.9	9											
21																		
22																		
23			300			6.3	9								6.9		9.0	
24			300			7.4	9								7.1		10.3	
25			270	3500	77	7.9	10		5080	4	31.2				7.3		9.0	
26			300	3330	90	8.4			5300	5.16	12.3				7.0		9.7	
27																		
28																		
29																		
30																		
31			270	3650	74	10.1	10		5260	7.36	14.5				6.7		6.8	
Avg.			352	3820	90	8.8	7		5248	6.8	20.5						10.3	
Max.			425	4980	117.47	11.02	10		6750	12.4	32.1				7.8		13.97	
Min.			270	3320	73.892	6.34	3		4130	4	12.3				6.6		6.75	
Data	0	0	20	9	9	20	18	0	9	9	9	0	0	0	19		19	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	March	2009

Signature of Certified Operator — Date (*month, day, year*): 4/9/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 4-14-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow		BOD				Total Suspended Solids				Ammonia				Other	
		Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Sun	0.007															
2	Mon	0.0056		4.9		0.2294		6.25		0.2926		0.351		0.0164			0.485
3	Tue	0.0061		5.76		0.2922		7.5		0.3805		0.512		0.026			0.308
4	Wed	0.0034															
5	Thu	0.0037															
6	Fri	0.004															
7	Sat	0.0044	0.0049		5.33		0.2608		6.875		0.3366		0.4315		0.0212		
8	Sun	0.006															
9	Mon	0.0047		5.52		0.2151		10.8		0.4209		0.269		0.0105			0.179
10	Tue	0.0044		4		0.1469		9.65		0.3543		0.242		0.0089			0.468
11	Wed	0.0047															
12	Thu	0.0077															
13	Fri	0.0077															
14	Sat	0.0075	0.0061		4.76		0.181		10.225		0.3876		0.2555		0.0097		
15	Sun	0.006															
16	Mon	0.0039		4.61		0.1504		12		0.3915		0.784		0.0256			0.412
17	Tue	0.0086		6.65		0.4778		7.38		0.5303		0.87		0.0625			1.61
18	Wed	0.0068															
19	Thu	0.0025															
20	Fri	0.0037															
21	Sat	0.0112	0.0061		5.63		0.3141		9.69		0.4609		0.827		0.044		
22	Sun	0.0075															
23	Mon	0.0061															
24	Tue	0.0044															
25	Wed	0.0041		4		0.1382		6.78		0.2342		2.6		0.0898			0.355
26	Thu	0.0126		4		0.4193		2.38		0.2495		3.44		0.3606			0.246
27	Fri	0															
28	Sat	0	0.0049		4		0.2787		4.58		0.2418		3.02		0.2252		
29	Sun	0															
30	Mon	0.0188															
31	Tue	0.0054		6.92		0.3141		5.65		0.2565		0.524		0.0238			0.352
Avg		0.0058		5.2		0.2648		7.6		0.3456		1.0658		0.0693			0.491
Max		0.0188	0.0061	6.92	5.63	0.4778	0.3141	12	10.225	0.5303	0.4609	3.44	3.02	0.3606	0.2252		1.61
Min		0	0.0049	4	4	0.1382	0.181	2.38	4.58	0.2342	0.2418	0.242	0.2555	0.0089	0.0097		0.179
Data		31	4	9	4	9	4	9	4	9	4	9	4	9	4	0	9

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	96.0	95.6		
Tertiary Treatment	24.4	63.0		
Overall Treatment	97.0	98.4	95.3	NA

Total Monthly Flow: (million gallons) 0.1783

Percent Capacity (actual flow/design) 10%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	March	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	4/9/09
Signature of principal executive officer or authorized agent	Date (month, day, year)
Kal Kyle	4-14-09

	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - F	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13	0.4													
14														
15														
16														
17														
18														
19														
20														
21														
22														
23	0.39													
24														
25														
26														
27														
28														
29														
30														
31														
Avg.	0.395													
Max.	0.4													
Min.	0.39													
Data	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR
FROM	04/01/09		
TO	04/30/09		

IN0034428001A42009

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		6.86	******	******	mg/L		5/7	GRAB-2
00300 1 2 0 Effluent Gross	PERMIT REQUIREMENT				5 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		6.1	******	8.5	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.94	2.2	lb/d	******	18.2	45.0	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.02	0.04	lb/d	******	0.45	0.91	mg/L		2/7	COMP 24
00610 1 2 0 Effluent Gross	PERMIT REQUIREMENT	.9 MO AVG	1.4 MX WK AV			1.9 MO AVG	2.9 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0069	0.0079	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	7	78	CFU/100 mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		6	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	78	CFU/100 mL		9/30	GRAB
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX		0	Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765-361-5264	5	11	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	04	01	09	TO	04	30	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

For any questions call Rose McDaniel at 317-233-2653

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results 51484 Y 0 0 Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	9	Total Samples Taken	******	******	0	Number of Results above 235		Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL		0		
BOD, carbonaceous, 05 day, 20 C 80082 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	0.33	0.50	lb/d	******	6.1	10.2	mg/L		2/7 Twice Per Week	COMP24 COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0		
Flow, total 82220 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	******	0.208	Mgal/mo	******	******	******			Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL						0		

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NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	5	11	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility			Permit Number
INDOT Lebanon Rest Area			IN0034428
Month	Year	Plant Design Flow	Telephone Number
April	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		Class	Certificate Number / Expiration Date
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 7.1 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Wed	1		0.25							6.1							
2	Thu	1									8.9							
3	Fri	2		0.8							6.3	199	16.978	311	26.534		10	
4	Sat																	
5	Sun																	
6	Mon	1.5		1.4							6.6	141	7.9846	317	17.951		15.1	
7	Tue	1.75									6.7	226	9.7823	763	33.026		17.4	
8	Wed	1		0.05							6.4							
9	Thu	1									6.4							
10	Fri	0.75									6.7							
11	Sat																	
12	Sun																	
13	Mon	2.25									7.2							
14	Tue	1.25									6.9							
15	Wed	1		1.65							6.4							
16	Thu	1.25									6.7	102	4.7893	276	12.959		11.8	
17	Fri	2									6.9	250	12.51	282	14.111		10.6	
18	Sat																	
19	Sun																	
20	Mon	1.5		1.2							6.8	208	10.53	319	16.149		17.9	
21	Tue	2									6.7	161	7.6536	307	14.594		12.7	
22	Wed	1.25		0.25							7.3							
23	Thu	3.25									6.6							
24	Fri	0.75																
25	Sat																	
26	Sun																	
27	Mon	3									9.0	72.1	4.8406	248	16.65		7.87	
28	Tue	1.5									6.5	179	9.1214	369	18.803		7.35	
29	Wed	1		1							6.0							
30	Thu	1.25		0.5							6.2							
Average												171	9.3544	355	18.975		12.3	
Maximum				1.65							9.0	250	16.978	763	33.026		17.9	
Minimum											6.0	72.1	4.7893	248	12.959		7.35	
No. of Data				9	0	0	0	0	0	0	21	9	9	9	9	0	9	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 5/8/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 5/11/09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	April	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	5/8/09
Signature of principal executive officer or authorized agent	Date (month, day, year)
[signature]	5-11-09

	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
Day Of Month	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			300			9.7	10								6.7		8.1	
2			230			10.5	10								6.8		9.5	
3			270	3430	79	10.4	11		5470	4.55	17			10	6.7		10.5	
4																		
5																		
6			300	3570	84	9.1	11		4140	5.86	20			2	6.6		9.4	
7			275	3490	79	7.6	10		5310	4	7.5			1	8.5		7.4	
8			260			9.3	10								6.8		9.0	
9			300			9.3	10								6.6		7.7	
10			290			9.0	13								6.2		9.7	
11																		
12																		
13			250			8.9	10								6.3		7.4	
14			250			10.7	10								6.3		9.5	
15			260			8.7	10								6.1		6.9	
16			275	3180	86	11.3	10		3740	11.7	51.9			18	6.9		8.0	
17			270	3630	74	9.5	10		3910	17.1	49			5	6.7		7.9	
18																		
19																		
20			300	3710	81	8.3	12		4200	14.5	37.1			40	6.7		8.5	
21			275	3360	82	8.8	12		4150	9.45	16.9			78	7.2		8.9	
22			290			8.6	11								7.3		9.0	
23			270			8.2	12								7.4		7.2	
24			260			8.1	12								7.5		7.4	
25																		
26																		
27			270	4010	67	8.3	15		4440	4.77	10.5			11	6.3		9.2	
28			300	4000	75	7.2	16		4580	4	11.9			1	7.0		7.3	
29			280			6.9	15								7.4		7.7	
30			300			7.4	15								7.2		8.3	
Avg.			276	3598	79	8.9	11		4438	8.4	24.6			7			8.4	
Max.			300	4010	86.478	11.32	16		5470	17.1	51.9			78	8.5		10.46	
Min.			230	3180	67.332	6.87	10		3740	4	7.5			1	6.1		6.86	
Data	0	0	22	9	9	22	22	0	9	9	9	0	0	9	22		22	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Signature of Certified Operator	Date (month, day, year)
[signature]	5/8/09
Signature of principal executive officer or authorized agent	Date (month, day, year)
[signature]	5/11/09

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	April	2009

		FINAL EFFLUENT															
		Flow		BOD				Total Suspended Solids				Ammonia				Other	
Day Of Month	Day of Week	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Wed	0.0043															
2	Thu	0.0068															
3	Fri	0.0102		4.0		0.344		10.3		0.8793		0.316		0.027			0.379
4	Sat	0.0095	0.0079		5.5		0.3291		8		0.6		0.42		0.0254		
5	Sun	0.0102															
6	Mon	0.0068		4.0		0.2267		4.4		0.2487		0.399		0.0226			0.228
7	Tue	0.0052		4.0		0.1732		2.7		0.1161		0.382		0.0165			0.583
8	Wed	0.0046															
9	Thu	0.0073															
10	Fri	0.0107															
11	Sat	0.008	0.0075		4.0		0.1999		4		0.2		0.3905		0.0196		
12	Sun	0.0085															
13	Mon	0.0069															
14	Tue	0.0071															
15	Wed	0.0046															
16	Thu	0.0056		8.7		0.4092		51.8		2.4337		1.12		0.0526			0.726
17	Fri	0.006		11.6		0.5808		38.7		1.9377		0.696		0.0348			0.344
18	Sat	0.0077	0.0066		10.2		0.495		45		2.2		0.908		0.0437		
19	Sun	0.0105															
20	Mon	0.0061		7.6		0.3829		25.9		1.3119		0.346		0.0175			0.292
21	Tue	0.0057		6.9		0.3296		18.8		0.8943		0.271		0.0129			0.573
22	Wed	0.0036															
23	Thu	0.0047															
24	Fri	0.0049															
25	Sat	0.0054	0.0058		7.2		0.3563		22		1.1		0.3085		0.0152		
26	Sun	0.0058															
27	Mon	0.0081		4.0		0.2687		6.7		0.4481		0.31		0.0208			0.26
28	Tue	0.0061		4.2		0.2147		4.3		0.2198		0.236		0.012			0.145
29	Wed	0.009															
30	Thu	0.0081	0.0074		4.1		0.2417		5		0.3		0.273		0.0164		
Avg		0.0069		6.1		0.3255		18.2		0.9433		0.4529		0.0241			0.392
Max		0.0107	0.0079	11.6	10.2	0.5808	0.495	51.8	45	2.4337	2.2	1.12	0.908	0.0526	0.0437		0.726
Min		0.0036	0.0058	4.0	4	0.1732	0.1999	2.7	4	0.1161	0.2	0.236	0.273	0.012	0.0152		0.145
Data		30	5	9	5	9	5	9	5	9	5	9	5	9	5	0	9

MONTHLY REMOVAL SUMMARY					Total Monthly Flow:
Percent Removal	BOD5	S.S.	Ammonia	Phosphorus	(million gallons) 0.208
Primary Treatment	NA	NA			
Secondary Treatment	95.1	93.1			Percent Capacity
Tertiary Treatment	27.5	26.3			(actual flow/design) 12%
Overall Treatment	96.4	94.9	96.3	NA	

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
NDOT Lebanon Re	IN0034428	April	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	5/8/09
Signature of principal executive officer or authorized agent	**Date (month, day, year)**
Karl Kyle	5-11-09

	SLUDGE TO DIGESTER		DIGESTER OPERATION												
			Anaerobic Only												
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - F	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1															
2															
3															
4															
5															
6															
7															
8															
9															
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25															
26															
27															
28															
29															
30															
Avg.															
Max.															
Min.															
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

IN0034428001A52009

For any questions call Rose McDaniel at 317-233-2653

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR
FROM	05	01	09
TO	05	31	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		5.86	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				1	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		6.8	******	7.6	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.26	0.32	lb/d	******	3.6	4.89	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.03	0.04	lb/d	******	0.38	0.65	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0099	0.0125	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	10	210	CFU/100 mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	210	CFU/100 mL		8/31	GRAB
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX		0	Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
Karl Kyle	Karl Kyle	765-361-1264	6-11-09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO DAY YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428 | 001 A
PERMIT NUMBER | PERMITTED FEATURE

MONITORING PERIOD

FROM MO DAY YEAR 05/01/09 TO MO DAY YEAR 05/31/09

*** Mark box if NO DISCHARGE ☐ ***

NOTE Read Instructions before completing this form

For any questions call Rose McDaniel at 317-233-2653

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results 51484 Y 0 0 Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	8	Total Samples Taken	******	******	0	Number of Results above 235 mg/L	0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL				
BOD, carbonaceous, 05 day, 20 C 80082 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	0.3	0.45	lb/d	******	4.3	4.6		0	2/7 Twice Per Week	COMP24 COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV				
Flow, total 82220 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	******	0.3071	Mgal/mo	******	******	******		0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL								

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NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	6	1	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	**Year**	**Plant Design Flow**	**Telephone Number**
May	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		**Class**	**Certificate Number** / **Expiration Date**
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 5.975 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Fri	3		1.4							6.1							
2	Sat																	
3	Sun																	
4	Mon	1.5		0							6.1	85.2	4.7608	254	14.193		5.85	
5	Tue	1.5		0							6.9	110	4.0366	446	16.366		8.96	
6	Wed	1		0.075							6.0							
7	Thu	1.5		0.4							6.2							
8	Fri	1.5		0.9							6.3							
9	Sat																	
10	Sun																	
11	Mon	1		0							7.6	164	14.088	229	19.672		26.4	
12	Tue	1.5		0							7.8	109	5.818	236	12.597		25.2	
13	Wed	1		0.1							7.8							
14	Thu	0.75		1.65							7.8							
15	Fri	1.5		0							7.8							
16	Sat																	
17	Sun																	
18	Mon	1.5		1.15							7.5	176	12.036	284	19.422		19.3	
19	Tue	2.5		0							6.5	105	5.5169	258	13.556		3.31	
20	Wed	1		0							6.4							
21	Thu	1		0							6.9							
22	Fri	1.25		0							6.9							
23	Sat																	
24	Sun																	
25	Mon	1		0							6.5	90	12.46	258	35.719		14.1	
26	Tue	1.5		0.1							6.5	104	6.7654	222	14.442		8.5	
27	Wed	1		0							5.8							
28	Thu	1		0.2							6.5							
29	Fri	1		0							6.5							
30	Sat																	
31	Sun																	
Average												118	8.1852	273	18.246		13.95	
Maximum				1.65							7.8	176	14.088	446	35.719		26.4	
Minimum											5.8	85.2	4.0366	222	12.597		3.31	
No. of Data				21	0	0	0	0	0	0	21	8	8	8	8	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 6/4/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 6-11-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	May	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	6/4/09
Signature of principal executive officer or authorized agent	**Date (month, day, year)**
[signature]	6-11-09

	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
Day Of Month	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - C	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			270			7.4	16								7.3		7.3	
2																		
3																		
4			290	4160	70	8.3	15		4340	4.16	11.2			1	7.4		10.1	
5			300	4180	72	8.0	16		5510	4	10.8			2	7.2		9.8	
6			300			7.4	15								7.2		7.5	
7			300			6.5	16								7.4		6.1	
8			300			7.4	16								7.1		6.8	
9																		
10																		
11			330	4280	77	5.9	15		5430	10.1	14.7			1	7.3		6.1	
12			325	4290	76	6.7	15		4800	4.69	19.3			31	6.8		8.8	
13			330			7.2	15								6.9		6.4	
14			320			7.3	16								7.5		6.8	
15			320			7.6	16								7.5		10.0	
16																		
17																		
18			280	3770	74	7.9	16		4440	4	4.1			17	7.4		6.4	
19			300	3770	80	7.4	16		4150	4	6.03			19	7.3		7.3	
20			250			8.1	16								7.4		7.4	
21			250			7.9	17								7.1		8.2	
22			240			7.4	17								7.4		7.4	
23																		
24																		
25			270	4070	66	6.5	18		4390	4.88	6.78				7.1		6.4	
26			325	3950	82	7.9	18		5450	4.04	10.9			210	7.4		7.8	
27			250			6.1	19							28	7.3		5.9	
28			300			7.6	19								7.6		6.8	
29			300			7.9	19								7.6		6.9	
30																		
31																		
Avg.			293	4059	75	7.3	16		4814	5.0	10.5			10			7.4	
Max.			330	4290	82.278	8.28	19		5510	10.1	19.3			210	7.6		10.11	
Min.			240	3770	66.339	5.92	15		4150	4	4.1			1	6.8		5.86	
Data	0	0	21	8	8	21	21	0	8	8	8	0	0	8	21		21	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):
Final D.O. violation due to a restriction in the air line going to the final aeration tank. The air line was repaired and a new diffuser was installed at the final

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	May	2009

Signature of Certified Operator: [signature]
Date (month, day, year): 6/4/09

Signature of principal executive officer or authorized agent: Karl Kyle
Date (month, day, year): 6-11-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow		BOD				Total Suspended Solids				Ammonia				Other	
		Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Fri	0.0119															
2	Sat	0.0091															
3	Sun	0.0083															
4	Mon	0.0067		4		0.2236		3.45		0.1929		0.323		0.0181			0.214
5	Tue	0.0044		4		0.1469		4.84		0.1777		0.246		0.009			0.273
6	Wed	0.0092															
7	Thu	0.018															
8	Fri	0.022															
9	Sat	0.0192	0.0125		4		0.1853		4.145		0.1853		0.2845		0.0135		
10	Sun	0.0207															
11	Mon	0.0103		5.21		0.4478		4.17		0.3584		0.295		0.0254			0.254
12	Tue	0.0064		4		0.2136		1.69		0.0903		0.38		0.0203			0.249
13	Wed	0.0138															
14	Thu	0.0023															
15	Fri	0.0029															
16	Sat	0.0015	0.0083		4.605		0.3307		2.93		0.2243		0.3375		0.0228		
17	Sun	0.0017															
18	Mon	0.0082		4		0.2737		4.39		0.3004		0.93		0.0636			0.25
19	Tue	0.0063		4.13		0.2171		5.38		0.2828		0.37		0.0195			0.139
20	Wed	0.0061															
21	Thu	0.0084															
22	Fri	0.0132															
23	Sat	0.0112	0.0079		4.065		0.2454		4.885		0.2916		0.65		0.0415		
24	Sun	0.0115															
25	Mon	0.0166		4.48		0.6206		4.17		0.5777		0.229		0.0317			0.257
26	Tue	0.0078		4.44		0.289		1		0.0651		0.287		0.0187			0.307
27	Wed	0.0081															
28	Thu	0.0086															
29	Fri	0.0103															
30	Sat	0.012	0.0107		4.46		0.4548		2.585		0.3214		0.258		0.0252		
31	Sun	0.0104															
Avg		0.0099		4.3		0.3041		3.6		0.2557		0.3825		0.0258			0.243
Max		0.022	0.0125	5.21	4.605	0.6206	0.4548	5.38	4.885	0.5777	0.3214	0.93	0.65	0.0636	0.0415		0.307
Min		0.0015	0.0079	4	4	0.1469	0.1853	1	2.585	0.0651	0.1853	0.229	0.258	0.009	0.0135		0.139
Data		31	4	8	4	8	4	8	4	8	4	8	4	8	4	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	95.8	96.2		
Tertiary Treatment	14.1	65.3		
Overall Treatment	96.4	98.7	97.3	NA

Total Monthly Flow: (million gallons) 0.3071

Percent Capacity (actual flow/design) 18%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
NDOT Lebanon Re	IN0034428	May	2009

Signature of Certified Operator: [signature] — Date (month, day, year): 6/4/09

Signature of principal executive officer or authorized agent: [signature] — Date (month, day, year): 6-11-09

	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
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19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
Avg.														
Max.														
Min.														
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR
FROM	06	01	09
TO	06	30	09

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		6.5	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.0	******	7.9	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.28	0.36	lb/d	******	2.6	3.06	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.06	0.05	lb/d	******	0.53	0.44	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0113	0.0153	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	17	53	CFU/100 mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	53	CFU/100 mL		10/30	GRAB
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX		0	Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
Karl Kyle	Karl Kyle	765-362-5264	7-10-09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO DAY YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR
FROM	06	01	09
TO	06	30	09

IN0034428001A62009

For any questions call Rose McDaniel at 317-233-2653

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results 51484 Y 0 0 Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	10	Total Samples Taken	******	******	0	Number of Results above 235 mg/L	0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL				
BOD, carbonaceous, 05 day, 20 C 80082 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	0.39	0.52	lb/d	******	4.3	5.12		0	2/7 Twice Per Week	comp24 COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV				
Flow, total 82220 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	******	0.3397	Mgal/mo	******	******	******		0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL								

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			DATE		
Karl Kyle	Karl Kyle	765	361-5264		9	10	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.			MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	**Year**	**Plant Design Flow**	**Telephone Number**
June	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		**Class**	**Certificate Number** / **Expiration Date**
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 3.825 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Mon	2.25									6.6	106	8.6901	365	29.924		9.18	
2	Tue	3.5		1							6.6	224	11.938	337	17.96		7.1	
3	Wed	1		0.3							6.6							
4	Thu	2		0.4							6.9							
5	Fri	1									8.8							
6	Sat																	
7	Sun																	
8	Mon	1.5									7.1	83.7	7.6158	220	20.018		20	
9	Tue	1.25		0							7.5	73.7	3.7187	240	12.11		16.5	
10	Wed	1		0.025							7.2							
11	Thu	2		0.6							7.5							
12	Fri	1.25									7.3							
13	Sat																	
14	Sun																	
15	Mon	2									7.6	133	9.0512	294	20.008		38.9	
16	Tue	2.5		0							7.3	150	23.118	278	42.846		18.2	
17	Wed	1		0.15							6.5							
18	Thu	1		0.1							6.6							
19	Fri	2									9.1							
20	Sat																	
21	Sun																	
22	Mon	1.5		1.25							8.8							
23	Tue	1.5		0							8.1	82	6.2233	438	33.242		53.6	
24	Wed	1.5		0							7.8	150	12.835	416	35.596		25.8	
25	Thu	2		0							7.9							
26	Fri	1.5									6.9							
27	Sat																	
28	Sun																	
29	Mon	1.5									6.8	77.7	10.524	241	32.641		2.71	
30	Tue	1.5									6.9	83.3	11.741	257	36.223		1.95	
Average												116	10.546	309	28.057		19.39	
Maximum				1.25							9.1	224	23.118	438	42.846		53.6	
Minimum											6.5	73.7	3.7187	220	12.11		1.95	
No. of Data				13	0	0	0	0	0	0	22	10	10	10	10	0	10	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator	Date (*month, day, year*)
[signature]	7/7/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
Karl Kyle	7-10-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	June	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	7/7/09
Signature of principal executive officer or authorized agent	Date (month, day, year)
[signature]	7-10-09

	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
Day Of Month	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			260	4230	61	4.5	66		3380	5.28	12.5			53	7.7		8.4	
2			250	4100	61	5.0	68		4760	4	17.2			36	7.6		8.8	
3			300			6.7	68								7.9		7.4	
4			270			6.4	66								7.9		7.3	
5			250			5.9	66								7.6		8.0	
6																		
7																		
8			200	3840	52	5.0	66		5680	5.16	42.6			39	7.3		8.6	
9			200	4060	49	7.4	67		5400	5.71	26.5			47	7.6		8.6	
10			210			5.4	67								7.4		7.5	
11			200			6.1	68								7.8		8.0	
12			200			4.4	68								7.0		8.5	
13																		
14																		
15			230	3880	59	5.7	68		5290	7.52	9.09			8	7.2		9.5	
16			200	3840	52	7.0	68		8280	6.79	1			10	7.5		8.1	
17			230			4.9	68								7.2		7.1	
18			250			7.1	68								7.4		8.0	
19			230			5.9	70								7.7		9.1	
20																		
21																		
22			230			2.0	73								7.5		7.2	
23			225	4010	56	5.9	73		5110	4	13			14	7.3		7.6	
24			210	4140	51	4.5	72		3790	4	4			5	7.7		6.6	
25			220			5.0	73								7.4		6.5	
26			50			8.0	75								7.6		9.9	
27																		
28																		
29			220	4010	55	6.5	73		4300	4	13.8			7	7.2		8.6	
30			250	3690	68	6.7	72		4610	4	1			12	7.6		7.2	
Avg.			222.0	3980	56	5.7	69		5060	5.0	14.1			17			8.0	
Max.			300	4230	67.751	7.96	75		8280	7.52	42.6			53	7.9		9.9	
Min.			50	3690	49.261	1.98	66		3380	4	1			5	7.0		6.455	
Data	0	0	22	10	10	22	22	0	10	10	10	0	0	10	22		22	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	June	2009

Signature of Certified Operator	Date (month, day, year)
[signature]	7/7/09
Signature of principal executive officer or authorized agent	**Date (month, day, year)**
[signature]	7-10-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow: Effluent Flow Rate (MGD)	Flow: Effluent Flow Weekly Average	BOD: CBOD5 - mg/l	BOD: CBOD5 - mg/l Weekly Average	BOD: CBOD5 - lbs	BOD: CBOD5 - lbs/day Weekly Average	Total Suspended Solids: Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia: Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Other: Oil & Grease (mg/l)	Secondary Ammonia
1	Mon	0.0098		4		0.3281		2.73		0.2239		0.442		0.0363			
2	Tue	0.0064		4		0.2133		3.39		0.1808		0.446		0.0238			
3	Wed	0.0095															
4	Thu	0.0083															
5	Fri	0.0106															
6	Sat	0.0107	0.0094		4		0.2707		3.06		0.2024		0.444		0.03		
7	Sun	0.0127															
8	Mon	0.0109		4		0.3642		1		0.091		0.275		0.025			
9	Tue	0.0061		4		0.2019		1		0.0505		0.277		0.014			
10	Wed	0.0089															
11	Thu	0.0273															
12	Fri	0.0237															
13	Sat	0.0172	0.0153		4		0.2831		1		0.0708		0.276		0.0195		
14	Sun	0.0068															
15	Mon	0.0082		6.24		0.4249		1		0.0681		0.325		0.0221			
16	Tue	0.0185		4		0.6169		4.17		0.6431		0.466		0.0719			
17	Wed	0.0136															
18	Thu	0.0112															
19	Fri	0.0067															
20	Sat	0.001	0.0094		5.12		0.5209		2.585		0.3556		0.3955		0.047		
21	Sun	0.0001															
22	Mon	0.0097															
23	Tue	0.0091		4.41		0.3349		1		0.0759		0.349		0.0265			
24	Wed	0.0103		4		0.3425		2.94		0.2517		0.295		0.0253			0.255
25	Thu	0.0119															
26	Fri	0.0121															
27	Sat	0.0121	0.0093		4.205		0.3387		1.97		0.1638		0.322		0.0259		
28	Sun	0.0132															
29	Mon	0.0162		4		0.5421		5.88		0.7969		0.936		0.1268			0.282
30	Tue	0.0169		4		0.5641		2.94		0.4146		1.46		0.2059			0.155
Avg		0.0113		4.3		0.3933		2.6		0.2797		0.5271		0.0578			0.231
Max		0.0273	0.0153	6.24	5.12	0.6169	0.5209	5.88	3.06	0.7969	0.3556	1.46	0.444	0.2059	0.047		0.282
Min		0.0001	0.0093	4	4	0.2019	0.2707	1	1	0.0505	0.0708	0.275	0.276	0.014	0.0195		0.155
Data		30	4	10	4	10	4	10	4	10	4	10	4	10	4	0	3

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	95.7	95.4		
Tertiary Treatment	15.5	81.5		
Overall Treatment	96.3	99.2	97.3	NA

Total Monthly Flow: (million gallons) 0.3397

Percent Capacity (actual flow/design) 20%

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	June	2009

Signature of Certified Operator	Date (*month, day, year*)
[signature]	7/7/09
Signature of principal executive officer or authorized agent	Date (*month, day, year*)
[signature]	7-10-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12		0.37												
13														
14														
15														
16														
17														
18														
19														
20														
21														
22		0.79												
23														
24														
25														
26														
27														
28														
29		0.9												
30														
Avg.		0.6867												
Max.		0.9												
Min.		0.37												
Data	0	3	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No 2040-004
Approval Expires 05-31-98

1N0034428001A7200 9

For any questions call Dan Knowles at 317-232-0019

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

*** Mark box if NO DISCHARGE ☐ ***

NOTE Read Instructions before completing this form

MONITORING PERIOD

	MO DAY YEAR		MO DAY YEAR
FROM	07/01/09	TO	07/31/09

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		6.3	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		6.9	******	7.8	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.24	0.61	lb/d	******	2.6	5.28	mg/L		2/7	COMP 24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		6	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.03	0.16	lb/d	******	0.25	1.20	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		6	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0145	0.019	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	8	96	CFU/100mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	N/A	CFU/100mL		N/A	
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX		N/A	Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
Karl Kyle	Karl Kyle	765-361-5261	8-11-09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO DAY YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428 | 001 A
PERMIT NUMBER | PERMITTED FEATURE

MONITORING PERIOD

MO DAY YEAR — MO DAY YEAR

FROM 07/01/09 TO 07/31/09

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results **51484 Y 0 0** Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	8	Total Samples Taken	******	******	0	Number of Results above 235 mg/L	0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL				
BOD, carbonaceous, 05 day, 20 C **80082 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	0.38	0.57	lb/d	******	4.0	4.0		0	2/7 Twice Per Week	COMP24 COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV				
Flow, total **82220 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	******	0.4481	Mgal/mo	******	******	******		0	Monthly Monthly	RCOTOT RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL								

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE
KARL Kyle	Karl Kyle	765 361-5264	8-11-09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO DAY YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	**Year**	**Plant Design Flow**	**Telephone Number**
July	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):	info@astburygroup.com		
Certified Operator: Name	**Class**	**Certificate Number**	**Expiration Date**
Nicholas Dezelan	II	18656	6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 2.85 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Wed	1.25									6.7							
2	Thu	1.5									6.7							
3	Fri	1									6.6							
4	Sat																	
5	Sun																	
6	Mon	2.5		0.5							7.6	30	4.36349	208	30.2535		38.7	
7	Tue	2									7.8	117	16.3443	205	28.6375		39.6	
8	Wed	0.75									7.7							
9	Thu	1		0.05							7.8							
10	Fri	1									7.7							
11	Sat																	
12	Sun																	
13	Mon	1.75		0.4							7.6	148	14.6514	253	25.0459		35.8	
14	Tue	1.25									7.7	158	9.02638	339	19.3667		24.2	
15	Wed	1		0.3							7.0							
16	Thu	1.25									7.3							
17	Fri	2.5									7.7							
18	Sat																	
19	Sun																	
20	Mon	1.25									7.7	127	14.1612	274	30.5526		34.2	
21	Tue	1.5									7.7	133	9.1067	258	17.6656		38.1	
22	Wed	1									7.6							
23	Thu	1.5									7.6							
24	Fri	0.75									7.8							
25	Sat			0.5														
26	Sun																	
27	Mon	1.5									8.0	196	9.07225	251	11.618		73.3	
28	Tue	2.5									7.7	230	33.3575	295	42.7846		53.5	
29	Wed	1.25		1.1							7.5							
30	Thu	1									7.6							
31	Fri	0.75									7.7							
Average												142	13.7604	260	25.7406		42.18	
Maximum				1.1							8.0	230	33.3575	339	42.7846		73.3	
Minimum											6.6	30	4.36349	205	11.618		24.2	
No. of Data				6	0	0	0	0	0	0	23	8	8	8	8	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 8/6/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 8-11-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	July	2009

Signature of Certified Operator	Date (*month, day, year*)
	8/6/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	8-11-09

Day Of Month	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			220			5.3	70								7.5		7.1	
2			200			6.1	69								7.4		6.9	
3			200			6.0	69								7.2		7.0	
4																		
5																		
6			220	3610	61	3.2	68		5070	13.2	1			21	6.9		8.0	
7			230	3820	60	3.0	69		4960	4	7.45			1	7.1		8.2	
8			280			6.7									7.2		7.9	
9			250			6.4									7.3		6.3	
10			260			7.7	71								7.3		8.8	
11																		
12																		
13			260	4550	57	7.5	70		5030	6.35	9.52			26	7.7		8.7	
14			250	4240	59	7.2	70		4030	4	12.5			4	7.6		8.0	
15			220			7.3	70								7.8		7.5	
16			225			8.1	71								7.6		8.0	
17			220			8.2	72								7.3		8.1	
18																		
19																		
20			220	3460	64	8.2	70		3860	4	6.48			11	7.3		7.8	
21			210	3610	58	8.1	69		4260	4	1.25			10	7.4		8.7	
22			200			7.7	69								7.4		7.5	
23			225			8.3	70								7.5		7.7	
24			200			7.9	70								7.3		9.3	
25																		
26																		
27			210	3560	59	8.3	70		4020	4.49	1			96	7.4		8.7	
28			200	3200	63	8.2	70		5690	4	5.32				7.7		8.7	
29			210			7.8	71							1	7.4		7.7	
30			200			7.5	71								7.5		7.6	
31			190			7.6	71								7.5		7.7	
Avg.			222	3756	60	7.0	70		4615	5.5	5.6			8			7.9	
Max.			280	4550	63.584	8.33	72		5690	13.2	12.5			96	7.8		9.27	
Min.			190	3200	57.143	2.96	68		3860	4	1			1	6.9		6.3	
Data	0	0	23	8	8	23	21	0	8	8	8	0	0	8	23		23	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Rest Area	IN0034428	July	2009

Signature of Certified Operator	Date (*month, day, year*)
	8/6/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	8-11-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow		BOD				Total Suspended Solids				Ammonia				Other	
		Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Wed	0.01384															
2	Thu	0.01954															
3	Fri	0.02692															
4	Sat	0.02686	0.01906		4		0.5531		4.41		0.6058		1.198		0.1664		
5	Sun	0.02099															
6	Mon	0.01744		4		0.5821		1		0.1455		0.266		0.0387			0.363
7	Tue	0.01675		4		0.5591		1		0.1398		0.258		0.0361			0.21
8	Wed	0.01044															
9	Thu	0.01129															
10	Fri	0.01224															
11	Sat	0.01665	0.01511		4		0.5706		1		0.1427		0.262		0.0374		
12	Sun	0.01656															
13	Mon	0.01187		4		0.3962		5		0.4953		0.179		0.0177			0.246
14	Tue	0.00685		4		0.2287		5.56		0.3178		0.258		0.0147			0.206
15	Wed	0.0093															
16	Thu	0.00865															
17	Fri	0.01371															
18	Sat	0.01542	0.01177		4		0.3124		5.28		0.4066		0.2185		0.0162		
19	Sun	0.01527															
20	Mon	0.01337		4		0.4463		5.56		0.6203		0.401		0.0447			0.174
21	Tue	0.00821		4		0.274		1		0.0685		0.182		0.0125			0.352
22	Wed	0.00828															
23	Thu	0.01349															
24	Fri	0.01548															
25	Sat	0.01914	0.01332		4		0.3602		3.28		0.3444		0.2915		0.0286		
26	Sun	0.02024															
27	Mon	0.00555		4		0.1853		1.02		0.0472		0.19		0.0088			0.226
28	Tue	0.01739															0.233
29	Wed	0.01109		4		0.3702		1		0.0925		0.293		0.0271			
30	Thu	0.00952															
31	Fri	0.01577	0.01326		4		0.2777		1.01		0.0699		0.2415		0.018		
Avg		0.01446		4.0		0.3802		2.6		0.2409		0.2534		0.025			0.251
Max		0.02692	0.01906	4	4	0.5821	0.5706	5.56	5.28	0.6203	0.6058	0.401	1.198	0.0447	0.1664		0.363
Min		0.00555	0.01177	4	4	0.1853	0.2777	1	1	0.0472	0.0699	0.179	0.2185	0.0088	0.0162		0.174
Data		31	5	8	5	8	5	8	5	8	5	8	5	8	5	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	96.1	97.9		
Tertiary Treatment	27.3	52.5		
Overall Treatment	97.2	99.0	99.4	NA

Total Monthly Flow: (million gallons) 0.4481

Percent Capacity (actual flow/design) 26%

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of	Year
INDOT Lebanon Re	IN0034428	July	2009

Signature of Certified Operator	Date (*month, day, year*)
[signature]	8/6/09
Signature of principal executive officer or authorized agent	Date (*month, day, year*)
[signature]	8-11-09

	SLUDGE TO DIGESTER		DIGESTER OPERATION												
			Anaerobic Only												
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
Avg.															
Max.															
Min.															
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	08/01/09			TO	08/31/09		

IN0034428001A8200 9

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		7.45	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.3	******	8.3	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.56	1.06	lb/d	******	5.6	9.67	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.02	0.03	lb/d	******	0.19	0.24	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0136	0.0162	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	6	50	CFU/100mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	N/A	CFU/100mL		N/A	N/A
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX			Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	9	17	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	08	01	09	TO	08	31	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

For any questions call Dan Knowles at 317-232-0019

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results **51484 Y 0 0** Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	9	Total Samples Taken	******	******	0	Number of Results above .025		Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL		0	Monthly	RCOTOT
BOD, carbonaceous, 05 day, 20 C **80082 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	0.4	0.49	lb/d	******	4.4	5.07	mg/L		2/7	comp24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0	Twice Per Week	COMP24
Flow, total **82220 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	******	0.4214	Mgal/mo	******	******	******			Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL						0	Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	9	17	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	Year	Plant Design Flow	Telephone Number
August	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		Class	Certificate Number / Expiration Date
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 4.5 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	Lbs/Day or Gal./Day	Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Sat			0.2														
2	Sun			0														
3	Mon	1.75		0							8.1	92.7	11.605	293	36.679		51.9	
4	Tue	1.75		0							8.1	135	3.5241	279	7.2831		47.7	
5	Wed	1		1.15							7.7							
6	Thu	1		0							8.1							
7	Fri	2		0							7.9							
8	Sat			0														
9	Sun			0														
10	Mon	1.5		0							7.7	210	26.324	293	36.728		36.2	
11	Tue	1.15		0							8.0	119	9.6765	242	19.678		21.5	
12	Wed	1.25		0							7.9							
13	Thu	1		0							7.9							
14	Fri	1.5		0							7.5							
15	Sat			0														
16	Sun			0														
17	Mon	2		0.2							8.7	145	17.523	317	38.308		7.07	
18	Tue	2.75		0							8.3							
19	Wed	1		0.3							8.2							
20	Thu	1.75		1.3							7.9	118	11.091	297	27.916		2.62	
21	Fri	1.5		0							7.6							
22	Sat			0														
23	Sun			0														
24	Mon	1.25		0.2							7.8	132	10.756	294	23.956		21	
25	Tue	1.25		0							7.6	111	8.452	266	20.254		7.76	
26	Wed	0.75		0							7.7							
27	Thu	1		0							7.6							
28	Fri	1		0							7.1							
29	Sat			0														
30	Sun			0														
31	Mon	1.5		1.15							7.7	179	16.033	288	25.797		21	
Average												138	12.776	285	26.289		24.08	
Maximum				1.3							8.7	210	26.324	317	38.308		51.9	
Minimum											7.1	92.7	3.5241	242	7.2831		2.62	
No. of Data				31	0	0	0	0	0	0	21	9	9	9	9	0	9	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 9/8/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 9-17-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	August	2009

Signature of Certified Operator	Date (*month, day, year*)
	9/18/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	9-17-09

Day Of Month	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1																		
2																		
3			200	3190	63	7.1	70		8380	4	19.3			50	7.5		7.7	
4			200	3420	58	7.4	73		4880	4	13			12	7.6		8.4	
5			200			7.5	70								7.3		7.5	
6			250			7.1	70								8.1		7.5	
7			200			7.3	70								7.6		8.2	
8																		
9																		
10			220	3290	67	6.6	73		4970	5.69	7.61			3	7.5		8.2	
11			225	3600	63	7.3	74		4760	4	8.82			2	7.8		7.6	
12			200			7.2	74								7.7		7.8	
13			225			7.4	74								8.0		7.8	
14			230			7.8	73								7.7		8.2	
15																		
16																		
17			230	3550	65	7.8	74		4160	4	6.38				7.8		8.6	
18			250			7.0	75								8.0		8.0	
19			250			7.5	74								7.8		8.0	
20			250	3840	65	7.6	74		4570	4	2.38			2	8.3		7.9	
21			250			8.2	73							8	7.8		8.8	
22																		
23																		
24			250	3560	70	7.7	70		3900	4	8.14			5	7.6		7.9	
25			250	3670	68	8.7	70		4190	4	5.68			5	7.6		9.6	
26			310			8.0	72								7.5		8.2	
27			275			8.4	72								7.5		8.9	
28			260			8.3	72								8.0		9.5	
29																		
30																		
31			310	4000	78	9.1	69		4260	4	11.4			10	7.7		9.2	
Avg.			240	3569	66	7.7	72		4897	4.2	9.2			6			8.3	
Max.			310	4000	77.5	9.13	75		8380	5.69	19.3			50	8.3		9.6	
Min.			200	3190	58.48	6.56	69		3900	4	2.38			2	7.3		7.45	
Data	0	0	21	9	9	21	21	0	9	9	9	0	0	9	21		21	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	August	2009

Signature of Certified Operator	Date (*month, day, year*)
[signature]	9/8/09
Signature of principal executive officer or authorized agent	Date (*month, day, year*)
Karl Kyle	9-17-09

		FINAL EFFLUENT															
		Flow		BOD				Total Suspended Solids				Ammonia				Other	
Day Of Month	Day of Week	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Sat	0.0203															
2	Sun	0.0201															
3	Mon	0.015		4		0.501		6.25		0.7829		0.177		0.0222			0.218
4	Tue	0.0031		4		0.1045		4.55		0.1188		0.191		0.005			0.209
5	Wed	0.0107															
6	Thu	0.0123															
7	Fri	0.0187															
8	Sat	0.0172	0.0139		4		0.3028		5.4		0.4509		0.184		0.0136		
9	Sun	0.0215															
10	Mon	0.015		5.25		0.6585		9.38		1.1765		0.154		0.0193			0.191
11	Tue	0.0098		4		0.3255		3.85		0.3133		0.217		0.0177			0.142
12	Wed	0.0106															
13	Thu	0.0106															
14	Fri	0.0137															
15	Sat	0.0146	0.0137		4.625		0.492		6.615		0.7449		0.1855		0.0185		
16	Sun	0.0204															
17	Mon	0.0145		4		0.4837		11.2		1.3543		0.24		0.029			0.177
18	Tue	0.0195															
19	Wed	0.0207															
20	Thu	0.0113		4		0.3762		8.14		0.7656		0.242		0.0228			0.231
21	Fri	0.014															
22	Sat	0.0129	0.0162		4		0.4299		9.67		1.0599		0.241		0.0259		
23	Sun	0.0144															
24	Mon	0.0098		4		0.3261		4.55		0.371		0.143		0.0117			0.152
25	Tue	0.0091		6.13		0.467		1		0.0762		0.139		0.0106			0.233
26	Wed	0.0076															
27	Thu	0.0069															
28	Fri	0.0129															
29	Sat	0.0126	0.0105		5.065		0.3966		2.775		0.2236		0.141		0.0111		
30	Sun	0.0109															
31	Mon	0.0107		4		0.3585		1.06		0.095		0.201		0.018			0.184
Avg		0.0136		4.4		0.4001		5.6		0.5615		0.1893		0.0174			0.193
Max		0.0215	0.0162	6.13	5.065	0.6585	0.492	11.2	9.67	1.3543	1.0599	0.242	0.241	0.029	0.0259		0.233
Min		0.0031	0.0105	4	4	0.1045	0.3028	1	2.775	0.0762	0.2236	0.139	0.141	0.005	0.0111		0.142
Data		31	4	9	4	9	4	9	4	9	4	9	4	9	4	0	9

MONTHLY REMOVAL SUMMARY					Total Monthly Flow:
Percent Removal	BOD5	S.S.	Ammonia	Phosphorus	(million gallons) 0.4214
Primary Treatment	NA	NA			
Secondary Treatment	97.0	96.8			Percent Capacity
Tertiary Treatment	-4.5	39.6			(actual flow/design) 24%
Overall Treatment	96.8	98.1	99.2	NA	

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	August	2009

Signature of Certified Operator: [signature] — Date (*month, day, year*): 9/13/09

Signature of principal executive officer or authorized agent: Karl Kyle — Date (*month, day, year*): 9-17-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1		0												
2		0												
3		0.39												
4		0												
5		0												
6		0												
7		0												
8		0												
9		0												
10		0												
11		0												
12		0												
13		0												
14		0.8												
15		0												
16		0												
17		0												
18		0												
19		0												
20		0												
21		0.785												
22		0												
23		0												
24		0												
25		0												
26		0												
27		0												
28		0.785												
29		0												
30		0												
31		0.65												
Avg.		0.11												
Max.		0.8												
Min.		0												
Data	0	31	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS
NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	09	01	09	TO	09	30	09

IN0034428001A9200 9

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		6.8	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.1	******	8.3	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.26	0.42	lb/d	******	3.8	6.9	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.02	0.02	lb/d	******	0.23	0.29	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0108	0.0119	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	6	36	CFU/100mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	N/A	CFU/100mL		N/A	N/A
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX			Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5244	10	19	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

* I N 0 0 3 4 4 2 8 0 0 1 A 9 2 0 0 9 *

For any questions call Dan Knowles at 317-232-0019

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	09	01	09	TO	09	30	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
E. coli, total number of sample results 51484 Y 0 0 Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	9	Total Samples Taken	******	******	0	Number of Results above 235	0	Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL			Monthly	RCOTOT
BOD, carbonaceous, 05 day, 20 C 80082 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	0.29	0.33	lb/d	******	4.0	4.0	mg/L	0	2/7	COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV			Twice Per Week	COMP24
Flow, total 82220 1 0 0 Effluent Gross	SAMPLE MEASUREMENT	******	0.323	Mgal/mo	******	******	******		0	Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL							Monthly	RCOTOT

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NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	10	19	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	Year	Plant Design Flow	Telephone Number
September	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):	info@astburygroup.com		
Certified Operator: Name	Class	Certificate Number	Expiration Date
Nicholas Dezelan	II	18656	6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 0.31 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	Lbs/Day or Gal./Day	Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Tue	1		0							7.9	109	6.8907	438	27.689		2.91	
2	Wed	1		0							7.8							
3	Thu	0.75		0														
4	Fri	0.75		0							8.7							
5	Sat			0														
6	Sun			0														
7	Mon	1		0							7.3							
8	Tue	1.5		0							8.0	221	17.399	289	22.753		16.7	
9	Wed	1		0							7.9							
10	Thu	1.5		0							7.6	228	14.623	589	37.775		2.4	
11	Fri	1		0							7.5							
12	Sat			0														
13	Sun			0														
14	Mon	1.5		0							7.9	253	24.582	480	46.637		4.59	
15	Tue	1.5		0							8.1	336	19.756	685	40.276		4.49	
16	Wed	1		0							8.2							
17	Thu	1.25		0							7.7							
18	Fri	0.75		0							7.8							
19	Sat			0														
20	Sun			0.05														
21	Mon	1.25		0							6.6							
22	Tue	1.75		0							7.7	127	9.3208	380	27.889		5.37	
23	Wed	1		0.01							7.3	135	6.6541	291	14.343		7.59	
24	Thu	1.25		0.1							7.2							
25	Fri	1.5		0.15							7.1							
26	Sat			0														
27	Sun			0														
28	Mon	1.25		0							7.4	136	13.089	316	30.413		10.5	
29	Tue			0							7.9	162	10.809	305	20.35		4.03	
30	Wed	1		0							7.9							
Average												190	13.68	419	29.792		6.509	
Maximum				0.15							8.7	336	24.582	685	46.637		16.7	
Minimum											6.6	109	6.6541	289	14.343		2.4	
No. of Data				30	0	0	0	0	0	0	21	9	9	9	9	0	9	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator	Date (*month, day, year*)
	10/9/09
Signature of principal executive officer or authorized agent	Date (*month, day, year*)
	10-19-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	September	2009

Signature of Certified Operator	Date (*month, day, year*)
[signature]	10/9/09
Signature of principal or executive or athroized agent	**Date (*month, day, year*)**
[signature]	10-19-09

Day Of Month	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			290	4320	67	7.0	68		4500	4	10.4				8.1		6.8	
2			310			7.0	69							1	7.9		7.1	
3						8.3	67								7.8		7.7	
4			310			8.3	67								7.9		8.9	
5																		
6																		
7			300			7.8	69								7.8		8.7	
8			325	2830	115	7.5	69		4680	4	5.95			36	8.1		7.0	
9			300			7.3	69								8.1		7.1	
10			325	4000	81	7.5	69		4470	4	3.95			2	8.1		7.9	
11			330			8.1	69								8.0		9.5	
12																		
13																		
14			300	3310	91	8.4	69		3910	4	5.81			7	8.0		9.0	
15			325	3670	89	8.4	69		3450	4	5			8	8.0		8.6	
16			320			8.2	69								8.1		8.4	
17			325			8.9	69								8.0		9.4	
18			330			8.6	69								8.1		9.3	
19																		
20																		
21			340			8.8	68								7.1		9.1	
22			260	3650	71	8.7	67		3720	4	11.5			10	8.0		9.2	
23			300	3660	82	8.8	67		4200	4.43	16.3			10	7.8		9.0	
24			310			8.2	70								7.3		8.4	
25			330			8.2	70								7.5		8.4	
26																		
27																		
28			350	3560	98	8.4	67		3650	4	14.9			14	7.5		8.5	
29			325	3320	98	9.2	65		4060	4	14.6			1	8.3		8.3	
30			330			9.1	65								8.0		8.6	
Avg.			316	3591	88	8.2	68		4071	4.0	9.8			6			8.4	
Max.			350	4320	114.84	9.19	70		4680	4.43	16.3			36	8.3		9.5	
Min.			260	2830	67.13	6.95	65		3450	4	3.95			1	7.1		6.8	
Data	0	0	21	9	9	22	22	0	9	9	9	0	0	9	22		22	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	September	2009

Signature of Certified Operator — Date (*month, day, year*): 10/9/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 10-9-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow: Effluent Flow Rate (MGD)	Flow: Effluent Flow Weekly Average	BOD: CBOD5 - mg/l	BOD: CBOD5 - mg/l Weekly Average	BOD: CBOD5 - lbs	BOD: CBOD5 - lbs/day Weekly Average	Total Suspended Solids: Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia: Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Other: Oil & Grease (mg/l)	Secondary Ammonia
1	Tue	0.0076		4		0.253		3.85		0.2435		0.223		0.0141			
2	Wed	0.0095															
3	Thu	0.0078															
4	Fri	0.0151															
5	Sat	0.0148	0.0109		4		0.3058		2.455		0.1693		0.212		0.0161		
6	Sun	0.0116															
7	Mon	0.0158															
8	Tue	0.0094		4		0.3151		2		0.1576		0.33		0.026			0.159
9	Wed	0.0072															
10	Thu	0.0077		4		0.2567		1		0.0642		0.146		0.0094			0.102
11	Fri	0.0096															
12	Sat	0.0096	0.0101		4		0.2859		1.5		0.1109		0.238		0.0177		
13	Sun	0.0118															
14	Mon	0.0117		4		0.3889		1.19		0.1157		0.19		0.0185			0.13
15	Tue	0.0071		4		0.2353		3.41		0.2006		0.242		0.0142			0.144
16	Wed	0.0059															
17	Thu	0.0088															
18	Fri	0.0112															
19	Sat	0.0123	0.0098		4		0.3121		2.3		0.1582		0.216		0.0164		
20	Sun	0.0128															
21	Mon	0.0114															
22	Tue	0.0088		4		0.2937		6.38		0.4685		0.411		0.0302			0.179
23	Wed	0.0059		4		0.1973		7.45		0.3674		0.165		0.0081			0.275
24	Thu	0.0123															
25	Fri	0.0175															
26	Sat	0.0145	0.0119		4		0.2455		6.915		0.418		0.288		0.0192		
27	Sun	0.0169															
28	Mon	0.0115		4		0.3852		6.38		0.6144		0.12		0.0116			0.105
29	Tue	0.008		4		0.267		2.13		0.1422		0.226		0.0151			0.216
30	Wed	0.0089	0.0113		4		0.3261		4.255		0.3783		0.173		0.0133		
Avg		0.0108		4.0		0.288		3.8		0.2638		0.2281		0.0163			0.164
Max		0.0175	0.0119	4	4	0.3889	0.3261	7.45	6.915	0.6144	0.418	0.411	0.288	0.0302	0.0192		0.275
Min		0.0059	0.0098	4	4	0.1973	0.2455	1	1.5	0.0642	0.1109	0.12	0.173	0.0081	0.0133		0.102
Data		30	5	9	5	9	5	9	5	9	5	9	5	9	5	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	97.9	97.7		
Tertiary Treatment	1.2	61.8		
Overall Treatment	97.9	99.1	96.5	NA

Total Monthly Flow: (million gallons) 0.323

Percent Capacity (actual flow/design) 19%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	September	2009

Signature of Certified Operator — Date (*month, day, year*): 10/9/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 10-19-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1		0												
2		0												
3		0												
4		0												
5		0												
6		0												
7		0												
8		0												
9		0												
10		0												
11		0.785												
12		0												
13		0												
14		0												
15		0												
16		0												
17		0												
18		0												
19		0												
20		0												
21		0.39												
22		0												
23		0												
24		0												
25		0												
26		0												
27		0												
28		0												
29		0												
30		0												
Avg.		0.0392												
Max.		0.785												
Min.		0												
Data	0	30	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)

ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)

LOCATION LEBANON IN

ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	10	01	09	TO	10	31	09

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		7.15	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.4	******	8.3	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.48	0.54	lb/d	******	5.6	7.14	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.04	0.10	lb/d	******	0.51	1.37	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0125	0.0132	Mgal/d	******	******	******			5/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
E. coli, colony forming units (CFU)	SAMPLE MEASUREMENT	******	******		******	17	142	CFU/100mL		2/7	GRAB
51041 1 0 0 Effluent Gross	PERMIT REQUIREMENT					125 MO GEO	235 DAILY MX		0	Twice Per Week	GRAB
E. coli, maximum daily sample result	SAMPLE MEASUREMENT	******	******		******	******	N/A	CFU/100mL		N/A	N/A
51041 Y 0 0 Effluent Gross (Supplemen	PERMIT REQUIREMENT						Report DAILY MAX			Ten Per Month	GRAB

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TYPED OR PRINTED	SIGNATURE	TELEPHONE AREA CODE AND NO.	DATE MO	DAY	YEAR
Karl Kyle	Karl Kyle	765 361-5264	11	14	09

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

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For any questions call Dan Knowles at 317-232-0019

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	10	01	09	TO	10	31	09

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	Frequency of Analysis	Sample Type
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
E. coli, total number of sample results **51484 Y 0 0** Effluent Gross (Supplemen	SAMPLE MEASUREMENT	******	8	Total Samples Taken	******	******	0	Number of Results above	0	Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL				Report MO TOTAL			Monthly	RCOTOT
BOD, carbonaceous, 05 day, 20 C **80082 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	0.34	0.41	lb/d	******	4.0	4.0	mg/L	0	2/7 Twice Per Week	COMP24
	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV				COMP24
Flow, total **82220 1 0 0** Effluent Gross	SAMPLE MEASUREMENT	******	0.3863	Mgal/mo	******	******	******		0	Monthly	RCOTOT
	PERMIT REQUIREMENT		Report MO TOTAL							Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 761	11	19	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility		Permit Number	
INDOT Lebanon Rest Area		IN0034428	
Month	Year	Plant Design Flow	Telephone Number
October	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		Class	Certificate Number / Expiration Date
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 4.37 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	Lbs/Day or Gal./Day	Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Thu	1.25		0.4							7.9							
2	Fri	1.25		0							7.4							
3	Sat			0.01														
4	Sun			0														
5	Mon	1.25		0							8.2	205	20.79	333	33.771		35.8	
6	Tue	0.75		0.29							8.2	127	9.3314	549	40.338		30.6	
7	Wed	0.75		0							8.1							
8	Thu	1.25		1.36							8.0							
9	Fri	1		0.33							7.5							
10	Sat			0														
11	Sun			0														
12	Mon	1.5		0							8.0	94.3	11.176	294	34.842		51.8	
13	Tue	1.5		0.15							8.4	196	17.147	7.7	0.6736		52.4	
14	Wed	1		0.2							8.6							
15	Thu	0.75		0.01							8.2							
16	Fri	1.25		0							7.8							
17	Sat			0														
18	Sun			0														
19	Mon	1.5		0							8.7	155	16.068	270	27.99		68.1	
20	Tue	1.5		0							8.6	148	5.8136	278	10.92		58.8	
21	Wed	1		0							8.6							
22	Thu	3		1.25							8.0							
23	Fri	1		0.16							8.1							
24	Sat			0														
25	Sun			0														
26	Mon	2		0							8.9	85.2	6.4164	448	33.739		77.7	
27	Tue	2		0.13							8.3	218	16.509	395	29.912		90.3	
28	Wed	0.75		0							8.2							
29	Thu	1.25		0							8.8							
30	Fri	1		0.07							8.9							
31	Sat			0.01														
Average												154	12.906	322	26.523		58.19	
Maximum				1.36							8.9	218	20.79	549	40.338		90.3	
Minimum											7.4	85.2	5.8136	7.7	0.6736		30.6	
No. of Data				31	0	0	0	0	0	0	22	8	8	8	8	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 11/10/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 11-19-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	October	2009

Signature of Certified Operator	Date (*month, day, year*)
	11/10/09
Signature of principal executive officer or authorized agent	Date (*month, day, year*)
	11-19-09

Day Of Month	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			275			8.6	64								8.1		7.7	
2			270			9.8	63								7.7		9.9	
3																		
4																		
5			300	2810	107	9.0	60		3360	4.84	8.7			142	8.3		8.6	
6			280	2620	107	9.1	60		3050	11.2	14.1			38	8.2		8.8	
7			300			8.8	60								8.1		9.0	
8			300			9.0	60								7.9		9.1	
9			270			10.5	59								7.4		10.1	
10																		
11																		
12			340	2980	114	10.2	56		3720	4	11.7			6	7.7		10.3	
13			350	3300	106	9.3	56		3390	4	15			19	8.0		9.4	
14			330			9.2	56								7.8		9.1	
15			320			9.6	56								7.9		9.2	
16			370			9.1	55								7.6		9.3	
17																		
18																		
19			370	3370	110	10.4	53		4210	4	21.9			16	7.4		9.8	
20			350	3190	110	10.3	54		5320	4	13.3			2	8.1		9.8	
21			340			10.3	54								8.0		10.5	
22			325			10.3	55								8.1		9.8	
23						9.3	56								7.4		8.3	
24																		
25																		
26			375	3620	104	8.6	56		4380	4	14.7			16	8.2		8.3	
27			390	3630	107	10.1	56		5780	4	11.6			24	7.5		9.1	
28			320			9.6	56								7.4		9.3	
29			425			8.1	57								8.0		7.2	
30			370			9.9	58								7.4		10.1	
31																		
Avg.			332	3190	108	9.5	57		4151	5.0	13.9			17			9.2	
Max.			425	3630	114.09	10.51	64		5780	11.2	21.9			142	8.3		10.5	
Min.			270	2620	103.59	8.05	53		3050	4	8.7			2	7.4		7.15	
Data	0	0	21	8	8	22	22	0	8	8	8	0	0	8	22		22	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	October	2009

Signature of Certified Operator

Date (*month, day, year*): 11/10/09

Signature of principal executive officer or authorized agent

Date (*month, day, year*): 11-19-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow: Effluent Flow Rate (MGD)	Flow: Effluent Flow Weekly Average	BOD: CBOD5 - mg/l	BOD: CBOD5 - mg/l Weekly Average	BOD: CBOD5 - lbs	BOD: CBOD5 - lbs/day Weekly Average	Total Suspended Solids: Susp. Solids - mg/l	Total Suspended Solids: Susp. Solids - mg/l Weekly Average	Total Suspended Solids: Susp. Solids - lbs	Total Suspended Solids: Susp. Solids - lbs/day Weekly Average	Ammonia: Ammonia - mg/l	Ammonia: Ammonia - mg/l Weekly Average	Ammonia: Ammonia - lbs	Ammonia: Ammonia - lbs/day Weekly Average	Other: Oil & Grease (mg/l)	Other: Secondary Ammonia
1	Thu	0.0112															
2	Fri	0.0175															
3	Sat	0.0151															
4	Sun	0.015															
5	Mon	0.0122		4		0.4059		4		0.4059		0.123		0.0125			0.173
6	Tue	0.0088		4		0.2941		3.85		0.283		0.252		0.0185			0.14
7	Wed	0.0071															
8	Thu	0.0124															
9	Fri	0.0169															
10	Sat	0.0141	0.0124		4		0.35		3.925		0.3445		0.1875		0.0155		
11	Sun	0.0131															
12	Mon	0.0142		4		0.4743		4.65		0.5514		0.353		0.0419			0.251
13	Tue	0.0105		4		0.3502		5.43		0.4753		0.176		0.0154			0.236
14	Wed	0.0114															
15	Thu	0.0113															
16	Fri	0.0151															
17	Sat	0.0168	0.0132		4		0.4122		5.04		0.5134		0.2645		0.0286		
18	Sun	0.0169															
19	Mon	0.0124		4		0.4149		8.89		0.9221		0.298		0.0309			0.293
20	Tue	0.0047		4		0.1572		3.33		0.1309		0.125		0.0049			0.171
21	Wed	0.0082															
22	Thu	0.0126															
23	Fri	0.0169															
24	Sat	0.0177	0.0128		4		0.2861		6.11		0.5265		0.2115		0.0179		
25	Sun	0.0118															
26	Mon	0.009		4		0.3014		3.57		0.269		1.28		0.0965			0.221
27	Tue	0.0091		4		0.3031		10.7		0.8108		1.45		0.1099			0.55
28	Wed	0.0089															
29	Thu	0.0106															
30	Fri	0.0132															
31	Sat	0.0115	0.0106		4		0.3023		7.135		0.5399		1.365		0.1032		
Avg		0.0125		4.0		0.3376		5.6		0.4811		0.5071		0.0413			0.254
Max		0.0177	0.0132	4	4	0.4743	0.4122	10.7	7.135	0.9221	0.5399	1.45	1.365	0.1099	0.1032		0.55
Min		0.0047	0.0106	4	4	0.1572	0.2861	3.33	3.925	0.1309	0.3445	0.123	0.1875	0.0049	0.0155		0.14
Data		31	4	8	4	8	4	8	4	8	4	8	4	8	4	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	96.7	95.7		
Tertiary Treatment	20.1	60.0		
Overall Treatment	97.4	98.3	99.1	NA

Total Monthly Flow: (million gallons) 0.3863

Percent Capacity (actual flow/design) 22%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	October	2009

Signature of Certified Operator — Date (*month, day, year*): 11/10/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 11-19-09

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
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18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
Avg.														
Max.														
Min.														
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933
FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	11	01	09	TO	11	30	09

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		7.5	******	******	mg/L		5/7	GRAB-2
00300 1 1 0 Effluent Gross	PERMIT REQUIREMENT				6 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.0	******	8.4	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.30	0.61	lb/d	******	3.6	6.21	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.04	0.04	lb/d	******	0.50	0.60	mg/L		2/7	COMP24
00610 1 1 0 Effluent Gross	PERMIT REQUIREMENT	.6 MO AVG	.9 MX WK AV			1.3 MO AVG	2 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0118	0.0152	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	0.31	0.40	lb/d	******	4.0	4.0	mg/L		2/7	COMP24
80082 1 0 0 Effluent Gross	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0	Twice Per Week	COMP24
Flow, total	SAMPLE MEASUREMENT	******	0.3525	Mgal/ mo	******	******	******			Monthly	RCOTOT
82220 1 0 0 Effluent Gross	PERMIT REQUIREMENT		Report MO TOTAL						0	Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5264	12	17	09
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility			Permit Number
INDOT Lebanon Rest Area			IN0034428
Month	Year	Plant Design Flow	Telephone Number
November	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):		info@astburygroup.com	
Certified Operator: Name		Class	Certificate Number / Expiration Date
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 2.41 Precipitation - Inches	Bypass At Plant Site ("X" If Occurred)	Collection System Overflow ("X" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Sun																	
2	Mon	1.5		0.4							8.5	66.2	5.1843	365	28.584		88.8	
3	Tue	1.5									9.0	152	9.5963	774	48.866		80.3	
4	Wed	1									8.9							
5	Thu	0.75									8.8							
6	Fri	1									8.1							
7	Sat																	
8	Sun																	
9	Mon	1.75									8.5	71.1	4.7082	194	12.847		107	
10	Tue	1.25									8.9	111	5.0916	329	15.091		100	
11	Wed	1									8.8							
12	Thu	1									8.4							
13	Fri	2.5									8.6							
14	Sat																	
15	Sun																	
16	Mon	1.5		0.95							8.0	98.9	9.0483	153	13.998		103	
17	Tue	1.5		0.1							9.1	117	7.9428	320	21.724		106	
18	Wed	1		0.6							9.0							
19	Thu	0.75		0.01							9.0							
20	Fri	1.5									8.6							
21	Sat																	
22	Sun																	
23	Mon	1.75									8.4	77.5	7.5494	150	14.612		107	
24	Tue	1.25									9.8	130	13.065	248	24.923		106	
25	Wed	0.75									8.6							
26	Thu																	
27	Fri	1.25		0.25							9.0							
28	Sat	1									8.6							
29	Sun																	
30	Mon	1.75		0.1							8.4							
Average												103	7.7732	317	22.581		99.76	
Maximum				0.95							9.8	152	13.065	774	48.866		107	
Minimum											8.0	66.2	4.7082	150	12.847		80.3	
No. of Data				7	0	0	0	0	0	0	21	8	8	8	8	0	8	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 12/8/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 12-17-09

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	November	2009

Signature of Certified Operator	Date (*month, day, year*)
	12/8/09
Signature of principal executive officer or authorized agent	**Date (*month, day, year*)**
	12-17-09

Day Of Month	PRIMARY EFFLUENT		AERATION							SECONDARY EFFLUENT		FINAL EFFLUENT						
			MIXED LIQUOR					RETURN SLUDGE										
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1																		
2			400	3420	117	10.7	56		4220	4	17				7.4		10.7	
3			375	3200	117	9.8	55		3820	4	8				8.0		9.8	
4			380			9.9	55								7.8		9.5	
5			400			8.0	54								8.0		8.1	
6			380			11.0	53								7.5		11.1	
7																		
8																		
9			380	3380	112	10.4	55		3870	4	12.8				7.3		10.4	
10			350	3350	104	11.4	56		3340	4	7.45				8.1		10.5	
11			350			10.7	56								8.1		10.2	
12			380			9.7	54								7.0		10.0	
13			390			11.2	54								7.4		11.5	
14																		
15																		
16			390	3340	117	9.7	54		3470	4	13.3				7.9		9.4	
17			375	2970	126	8.5			6240	4	10.8				8.4		8.8	
18			380			8.6	54								8.3		8.3	
19			375			5.7	53								8.3		7.5	
20			360			8.0	53								8.0		8.3	
21																		
22																		
23			390	2880	135	10.3	52		4090	4	16.7				7.6		9.5	
24			375	3000	125	10.7	53		4350	4	9.47				8.4		9.9	
25			380			10.5	53								7.6		9.8	
26																		
27			370			9.4	52								7.1		9.8	
28			370			6.9	51								7.5		10.2	
29																		
30			300			6.8	52								7.3		9.8	
Avg.			374	3193	119	9.4	54		4175	4.0	11.9						9.7	
Max.			400	3420	135.42	11.42	56		6240	4	17				8.4		11.53	
Min.			300	2880	104.48	5.71	51		3340	4	7.45				7.0		7.5	
Data	0	0	21	8	8	21	20	0	8	8	8	0	0	0	21		21	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	November	2009

Signature of Certified Operator — Date (*month, day, year*): 12/8/09

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 12-17-09

FINAL EFFLUENT

Day Of Month	Day of Week	Flow		BOD				Total Suspended Solids				Ammonia				Other	
		Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Oil & Grease (mg/l)	Secondary Ammonia
1	Sun	0.0121															
2	Mon	0.0094		4		0.3134		3.41		0.2672		0.526		0.0412			0.255
3	Tue	0.0076		4		0.2527		3.13		0.1977		0.523		0.033			0.185
4	Wed	0.0068															
5	Thu	0.009															
6	Fri	0.0125															
7	Sat	0.0113	0.0098		4		0.2831		3.27		0.2325		0.5245		0.0371		
8	Sun	0.0096															
9	Mon	0.0079		4		0.265		2.33		0.1544		0.601		0.0398			0.17
10	Tue	0.0055		4		0.1836		2.22		0.1019		0.608		0.0279			0.134
11	Wed	0.0071															
12	Thu	0.01															
13	Fri	0.0099															
14	Sat	0.0099	0.0086		4		0.2243		2.275		0.1281		0.6045		0.0339		
15	Sun	0.0116															
16	Mon	0.011		4		0.3662		3.95		0.3616		0.502		0.046			0.104
17	Tue	0.0081		4		0.2717		1.39		0.0944		0.542		0.0368			0.167
18	Wed	0.0083															
19	Thu	0.0101															
20	Fri	0.0083															
21	Sat	0.0113	0.0098		4		0.3189		2.67		0.228		0.522		0.0414		
22	Sun	0.0109															
23	Mon	0.0117		4		0.3899		8.89		0.8665		0.361		0.0352			0.229
24	Tue	0.0121		4		0.4022		3.53		0.355		0.289		0.0291			0.246
25	Wed	0.0239															
26	Thu	0.0179															
27	Fri	0.0145															
28	Sat	0.0154	0.0152		4		0.3961		6.21		0.6107		0.325		0.0321		
29	Sun	0.023															
30	Mon	0.0259															
Avg		0.0118		4.0		0.3056		3.6		0.2998		0.494		0.0361			0.186
Max		0.0259	0.0152	4	4	0.4022	0.3961	8.89	6.21	0.8665	0.6107	0.608	0.6045	0.046	0.0414		0.255
Min		0.0055	0.0086	4	4	0.1836	0.2243	1.39	2.275	0.0944	0.1281	0.289	0.325	0.0279	0.0321		0.104
Data		30	4	8	4	8	4	8	4	8	4	8	4	8	4	0	8

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	96.1	96.2		
Tertiary Treatment	0.0	69.8		
Overall Treatment	96.1	98.9	99.5	NA

Total Monthly Flow: (million gallons) 0.3525

Percent Capacity (actual flow/design) 21%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	November	2009

Signature of Certified Operator: [signature] — Date (*month, day, year*): 12/8/09

Signature of principal executive officer or authorized agent: [signature] — Date (*month, day, year*): 12-17-09

	SLUDGE TO DIGESTER		DIGESTER OPERATION												
			Anaerobic Only												
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1															
2															
3															
4															
5															
6															
7															
8															
9		1.16													
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20		0.8													
21															
22															
23															
24															
25															
26															
27		0.79													
28															
29															
30															
Avg.		0.9167													
Max.		1.16													
Min.		0.79													
Data	0	3	0	0	0	0	0	0	0	0	0	0	0	0	

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

PERMITTEE NAME/ADDRESS

NAME LEBANON REST AREA (NORTHBOUND)
ADDRESS INDOT CRAWFORSVILLE DISTRICT
41 W 300 N
CRAWFORDSVILLE IN 47933

FACILITY LEBANON REST AREA (NORTHBOUND)
LOCATION LEBANON IN
ATTN: DENNIS MAXWELL, FAC & ENV MGR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-004
Approval Expires 05-31-98

Revised: ☐

IN0034428	001 A
PERMIT NUMBER	PERMITTED FEATURE

MONITORING PERIOD

	MO	DAY	YEAR		MO	DAY	YEAR
FROM	12	01	09	TO	12	31	09

IN0034428001A12200 9

For any questions call Dan Knowles at 317-232-0019

*** Mark box if NO DISCHARGE ☐ ***

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING Average	QUANTITY OR LOADING Maximum	Units	QUALITY OR CONCENTRATION Minimum	QUALITY OR CONCENTRATION Average	QUALITY OR CONCENTRATION Maximum	Units	NO. EX	Frequency of Analysis	Sample Type
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		8.52	******	******	mg/L		5/7	GRAB-2
00300 1 2 0 Effluent Gross	PERMIT REQUIREMENT				5 DLYAVMIN				0	Five Per Week	GRAB-2
pH	SAMPLE MEASUREMENT	******	******		7.1	******	8.1	SU		5/7	GRAB
00400 1 0 0 Effluent Gross	PERMIT REQUIREMENT				6 DAILY MN		9 DAILY MX		0	Five Per Week	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	0.64	1.37	lb/d	******	6.9	11.57	mg/L		2/7	COMP24
00530 1 0 0 Effluent Gross	PERMIT REQUIREMENT	14 MO AVG	21 MX WK AV			30 MO AVG	45 MX WK AV		0	Twice Per Week	COMP24
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	0.01	0.02	lb/d	******	0.18	0.38	mg/L		2/7	COMP24
00610 1 2 0 Effluent Gross	PERMIT REQUIREMENT	.9 MO AVG	1.4 MX WK AV			1.9 MO AVG	2.9 MX WK AV		0	Twice Per Week	COMP24
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.0106	0.0128	Mgal/d	******	******	******			7/7	TOTALZ
50050 1 0 0 Effluent Gross	PERMIT REQUIREMENT	Report MO AVG	Report MX WK AV						0	Five Per Week	TOTALZ
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	0.32	0.42	lb/d	******	4.0	4.0	mg/L		2/7	COMP24
80082 1 0 0 Effluent Gross	PERMIT REQUIREMENT	11.7 MO AVG	18.6 MX WK AV			25 MO AVG	40 MX WK AV		0	Twice Per Week	COMP24
Flow, total	SAMPLE MEASUREMENT	******	0.3282	Mgal/mo	******	******	******			Monthly	RCOTOT
82220 1 0 0 Effluent Gross	PERMIT REQUIREMENT		Report MO TOTAL						0	Monthly	RCOTOT

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

NAME AND TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE	DATE		
Karl Kyle	Karl Kyle	765 361-5261	1	20	10
TYPED OR PRINTED	SIGNATURE	AREA CODE AND NO.	MO	DAY	YEAR

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

THE FLOW METER(S) SHALL BE CALIBRATED AT LEAST ONCE ANNUALLY. STATE MINOR BOONE COUNTY

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard

State Form 53463 (R / 11-08)

Name of Facility			Permit Number
INDOT Lebanon Rest Area			IN0034428
Month	Year	Plant Design Flow	Telephone Number
December	2009	0.056 mgd	317-328-7153
Facility's e-mail address (if available):	info@astburygroup.com		
Certified Operator: Name		Class	Certificate Number / Expiration Date
Nicholas Dezelan		II	18656 / 6/30/2010

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature (optional)	Total= 3.19 Precipitation - Inches	Bypass At Plant Site ("x" If Occurred)	Collection System Overflow ("x" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Lbs/Day or Gal./Day	CHEMICALS USED: Lbs/Day or Gal./Day	RAW SEWAGE: Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Tue	1.25		0							8.2							
2	Wed	3		0.58							8.8	120	4.6237	200	7.7062		120	
3	Thu	2		0							8.7							
4	Fri	1.75		0							8.3	125	12.468	270	26.932		97.2	
5	Sat			0														
6	Sun			0														
7	Mon	1.25		0.05							8.8	168	15.244	274	24.863		109	
8	Tue	1		0.73							8.7	191	12.457	226	14.739		117	
9	Wed	1		0							8.5							
10	Thu	1		0							8.6							
11	Fri	1		0							8.6							
12	Sat			1.01														
13	Sun			0														
14	Mon	1.25		0							8.8	182	13.099	220	15.834		101	
15	Tue	1.5		0							8.7	162	9.2279	262	14.924		73	
16	Wed	1		0							8.8							
17	Thu	1.25		0							8.6							
18	Fri	1		0							8.5							
19	Sat			0.12														
20	Sun			0.03														
21	Mon	1		0							8.7							
22	Tue	1.75		0.02							8.8	361	30.679	605	51.416		102	
23	Wed	1.5		0.03							8.9	132	16.227	269	33.069		106	
24	Thu	1.75		0.08							9.0							
25	Fri			0.34														
26	Sat	1		0.01							9.0							
27	Sun			0.09														
28	Mon	1.5		0							8.7	112	16.757	360	53.863		99.2	
29	Tue	1.5		0							8.7	94.9	1.7096	334	6.0168		126	
30	Wed	1		0.03							8.8							
31	Thu	0.5		0.07							8.7							
1	Fri	Fill in January's effluent data on page 3 as needed for weekly average calculations.																
2	Sat																	
3	Sun																	
Average												165	13.249	302	24.936		105	
Maximum				1.01							9.0	361	30.679	605	53.863		126	
Minimum											8.2	94.9	1.7096	200	6.0168		73	
No. of Data				31	0	0	0	0	0	0	23	10	10	10	10	0	10	0

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Certified Operator — Date (*month, day, year*): 1/11/10

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 1-20-10

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	December	2009

Signature of Certified Operator — Date (*month, day, year*): 1/11/10

Signature of principal executive officer or authorized agent: Karl Kyle — Date (*month, day, year*): 1-20-10

Day Of Month	PRIMARY EFFLUENT		AERATION MIXED LIQUOR					RETURN SLUDGE		SECONDARY EFFLUENT		FINAL EFFLUENT						
	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Temperature - F	Volume - MG	Susp. Solids - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)	Dissolved Oxygen - mg/l	Phosphorus - mg/l
1			350			8.6	51								7.2		8.5	
2			325	2740	119	7.8	51		3600	4	11.4				7.9		9.4	
3			325			8.9	50											
4			360	2930	123	9.3	51		3460	4	18.2				7.2		11.4	
5																		
6																		
7			325	2800	116	9.2	50		3900	4	17.4				8.0		9.2	
8			340	2580	132	11.3	50		5110	4	21.9				7.7		12.4	
9			340			11.6	49								7.7		12.2	
10			325			7.7	47								7.9		12.4	
11			350			11.8	45								8.1		13.4	
12																		
13																		
14			310	2680	116	10.2	45		3470	4	14.9				7.8		12.2	
15			350	2870	122	11.7	46		4690	4	3.41				7.8		10.4	
16			360			11.4	46								7.8		10.1	
17			300			7.8	46								7.6		8.8	
18			300			8.5	46								7.6		9.7	
19																		
20																		
21			320			7.4	45								7.3		9.3	
22			375	3060	123	11.8	47		3590	4	6.86				7.9		12.0	
23			360	3170	114	11.9	46		3840	4	18.1				7.7		11.5	
24			400			9.5	47								7.6		11.8	
25																		
26			410			7.0	47								7.5		12.2	
27																		
28			400	2990	134	7.7	47		3290	4	17.7				7.3		11.3	
29			400	3210	125	6.3	47		4520	4	10.9				7.1		11.3	
30			400			7.1	47								7.9		11.0	
31						7.2									7.8		11.2	
Avg.			351	2903	122	9.2	47		3947	4.0	14.1						11.0	
Max.			410	3210	133.78	11.85	51		5110	4	21.9				8.1		13.4	
Min.			300	2580	113.56	6.26	45		3290	4	3.41				7.1		8.52	
Data	0	0	22	10	10	23	22	0	10	10	10	0	0	0	22		22	0

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

Monthly Report of Operation
Activated Sludge Type Wastewater
Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Rest Area	IN0034428	December	2009

Signature of Certified Operator — Date (*month, day, year*): 1/11/10

Signature of principal executive officer or authorized agent — Date (*month, day, year*): 1-20-10

Day Of Month	Day of Week	FINAL EFFLUENT — Flow: Effluent Flow Rate (MGD)	Flow: Effluent Flow Weekly Average	BOD: CBOD5 - mg/l	BOD: CBOD5 - mg/l Weekly Average	BOD: CBOD5 - lbs	BOD: CBOD5 - lbs/day Weekly Average	Total Suspended Solids: Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia: Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	Other: Oil & Grease (mg/l)	Secondary Ammonia
1	Tue	0.0061															
2	Wed	0.0046		4		0.1542		7.58		0.2922		0.507		0.0195			0.186
3	Thu	0.0042															
4	Fri	0.012		4		0.3992		6.38		0.6368		0.246		0.0246			0.134
5	Sat	0.0112	0.0124		4		0.2767		6.98		0.4645		0.3765		0.022		
6	Sun	0.0115															
7	Mon	0.0109		4		0.3632		2.22		0.2016		0.124		0.0113			0.166
8	Tue	0.0078		4		0.261		3.75		0.2447		0.142		0.0093			0.205
9	Wed	0.0064															
10	Thu	0.0076															
11	Fri	0.0118															
12	Sat	0.0093	0.0093		4		0.3121		2.985		0.2231		0.133		0.0103		
13	Sun	0.0098															
14	Mon	0.0086		4		0.2881		5.32		0.3831		0.163		0.0117			0.164
15	Tue	0.0068		4		0.228		4.72		0.269		0.141		0.008			0.159
16	Wed	0.0084															
17	Thu	0.0072															
18	Fri	0.0196															
19	Sat	0.013	0.0105		4		0.258		5.02		0.3261		0.152		0.0099		
20	Sun	0.011															
21	Mon	0.0132															
22	Tue	0.0102		4		0.3401		7.61		0.6471		0.118		0.01			0.106
23	Wed	0.0147		4		0.492		8.14		1.0013		0.106		0.013			0.165
24	Thu	0.0103															
25	Fri	0.0129															
26	Sat	0.017	0.0128		4		0.4161		7.875		0.8242		0.112		0.0115		
27	Sun	0.0233															
28	Mon	0.0179		4		0.5988		17.7		2.6499		0.107		0.016			0.174
29	Tue	0.0022		4		0.0721		5.43		0.0979		0.188		0.0034			0.179
30	Wed	0.0085															
31	Thu	0.0102	0.0124		4		0.3355		11.565		1.3739		0.1475		0.0097		
1	Fri																
2	Sat																
3	Sun																
Avg		0.0106		4.0		0.3197		6.9		0.6424		0.1842		0.0127			0.164
Max		0.0233	0.0128	4	4	0.5988	0.4161	17.7	11.565	2.6499	1.3739	0.507	0.3765	0.0246	0.022		0.205
Min		0.0022	0.0093	4	4	0.0721	0.258	2.22	2.985	0.0979	0.2231	0.106	0.112	0.0034	0.0097		0.106
Data		31	5	10	5	10	5	10	5	10	5	10	5	10	5	0	10

MONTHLY REMOVAL SUMMARY

Percent Removal	BOD5	S.S.	Ammonia	Phosphorus
Primary Treatment	NA	NA		
Secondary Treatment	97.6	95.3		
Tertiary Treatment	0.0	51.1		
Overall Treatment	97.6	97.7	99.8	NA

Total Monthly Flow: (million gallons) 0.3282

Percent Capacity (actual flow/design) 19%

Monthly Report of Operation
Activated Sludge Type Wastewater Treatment Plant — Standard
State Form 53463 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
INDOT Lebanon Re	IN0034428	December	2009

Signature of Certified Operator

Date (*month, day, year*) 1/11/10

Signature of principal executive officer or authorized agent

Date (*month, day, year*) 1-20-10

	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
Day Of Month	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - C	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000		
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
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20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
Avg.														
Max.														
Min.														
Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management
Office of Water Quality, Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

WHITAKER ENGINEERING

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PROGRESS MEETING MINUTES

Date: 04/16/2010 **Project:** Town of Thorntown Comprehensive Plan

Location: INDOT Crawfordsville District Office **WE Job #:**

Reported by: Andrew Cochrane

Name	Company	Phone	E-Mail Address
see attached sign-in sheet			

CC:

MEETING MINUTES:

- Meeting began at 1:15 p.m.
- Cecil described Plainfield's acquisition of rest area WWTP and providing water service to rest area
- Cecil explained Thorntown's current situation and the desire for potential for economic development with proximity to I-65 and likelihood that growth will continue north from Lebanon in future
- Lebanon Rest Area WWTP described as follows:
    - Design flow (average daily) = 0.056 MGD
    - Peak flow = 0.14 - 0.15 MGD
    - new steel tanks replaced old lagoons
    - steel and concrete construction for components
    - good condition
    - no generator is on-site
    - there are minor mechanical flaws
    - the WWTP is fed by two lift stations from the east and west rest areas
    - discharges to No Name Ditch tributary to Sugar Creek
    - tucked up against right-of-way
    - permit for access would not be an issue
    - well maintained, stable, with no recent violations
    - within 10 years the rest area will likely need to be re-built/expanded for additional capacity
    - low operational cost, low priority on INDOT's list for replacement
- Long-term benefits are critical and INDOT needs to perform a benefit/cost analysis based upon the rates to get the better understanding of the implications of an ownership transfer
    - current location is in a great location
    - building and parking lot are dated
    - consider situation where ownership transfer occurs with Thorntown then not continuing to operate plant - where does INDOT get treatment?
- Cecil inquired about INDOT's wells, their condition, ability to serve the demand

- INDOT stated that master planning would need to be addressed before INDOT would consider the possibility of a transfer
- Cecil confirmed that there would be no breaks in the right-of-way for access to the WWTP or a potential force main
- Cecil discussed possibility of force main corridor just inside the INDOT right-of-way as was done in Plainfield. INDOT responded by stating they would need to check into it and could not make a commitment
- Draft report should be sent to INDOT prior to showing Thorntown to ensure there are no misrepresentations
- Mark Shields will email the 2009 Monthly Reports of Operation and the NPDES Permit to Whitaker

Thorntown Rest Area Meeting

4/16/10

Alan's Office 1:00 p.m.

Attendees

Name	Agency	Phone	Email
Mark Albers	INDOT-LPA	765 361 5224	malbers@indot.in.gov
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