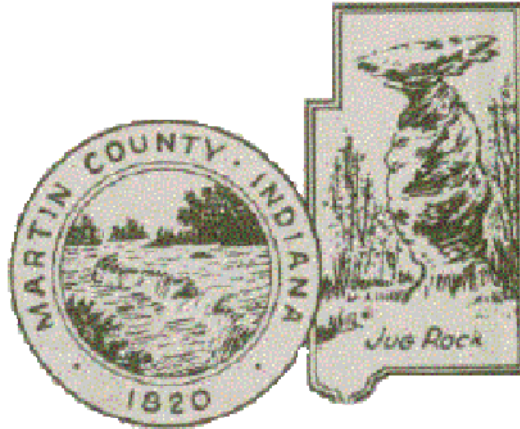


Martin County

Comprehensive Plan

Final



Prepared for: **Martin County Board of Commissioners**
129 Main Street
P.O. Box 600
Shoals, Indiana 47581
Phone: (812) 247-3731

Prepared by: **Bernardin, Lochmueller and Associates, Inc.**
Engineering, Planning, Surveying, Environmental Studies, Water/Wastewater
6200 Vogel Road
Evansville, Indiana 47715
Phone: (812) 479-6200

Draft Final Plan published: May 8, 2009
Martin County Advisory Plan Commission public hearing and adoption: July 23, 2009
Martin County Board of Commissioners adoption: August 13, 2009

Acknowledgements

Martin County Board of Commissioners

Paul George, President
Dan Gregory, Member
John Winger, Member

David Lett, County Attorney
Nancy Steiner, Clerk-Treasurer

Martin County Advisory Plan Commission

Dan Gregory, President (County Commissioner)
Walt Waggoner, Vice President (citizen)
Nathan Albright, Member (citizen)
Kenny H. Frye, Member (citizen)
Robin Haulk, Member (citizen)

Louise Parsons, Member (citizen)
Paul Sanders, Member (County Surveyor)
Jonathan Stevens, Member (extension educator)
John Stoll, Member (County Council)
Nancy Steiner, Non-Voting Secretary

Comprehensive Plan Steering Committee

Bernard Butcher
Darrell Courtright
Kenny Frye
Paul George

Dan Gregory
Aaron Jones
Paul Sanders
Gene Shaw

Jonathan Stevens
David Strange
Walt Waggoner

Southern Indiana Development Commission

Greg Jones, Executive Director

Matt Sward, Development Specialist

Bernardin, Lochmueller & Associates, Inc.

David Ripple, Project Manager
Eric Swickard, Deputy Project Manager

Matt Schriefer, Planner II
Laurie Miller, Planner I

Erin Mattingly, Planner I

The plan was funded in full with State funds through the Interstate 69 Community Planning Grant Program of the Indiana Department of Transportation with the assistance of the Indiana Office of Community and Rural Affairs.

RESOLUTION NO. 28

RESOLUTION ADOPTING THE COMPREHENSIVE PLAN

A RESOLUTION OF THE BOARD OF COMMISSIONERS OF MARTIN COUNTY , INDIANA ADOPTING THE COMPREHENSIVE PLAN FOR THE UNINCORPORATED AREA OF MARTIN COUNTY, INDIANA

WHEREAS, the Advisory Plan Commission of Martin County, Indiana, did on July 23, 2009 hold a legally advertised public meeting to consider adoption of the attached Comprehensive Plan (Exhibit A) for the Unincorporated Area of Martin County, and

WHEREAS, the Plan Commission did consider said Comprehensive Plan until all comments and objections were heard, and

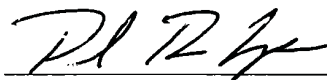
WHEREAS, the Plan Commission found that the plan meets the requirements of Indiana Code 36-7-4-500, and that the adoption of this plan is found to be in the best interests of Martin County, Indiana, and

WHEREAS, the Board of Commissioners finds that it is in the best interest of Martin County to adopt said plan.

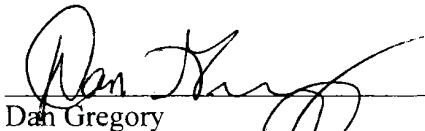
NOW THEREFORE, BE IT RESOLVED, that the Board of Commissioners of Martin County, Indiana, hereby adopts Exhibit A, attached and made a part hereof, as the Comprehensive Plan for the Unincorporated Area of Martin County, Indiana.

This resolution shall take effect from and after its passage as provided by law.

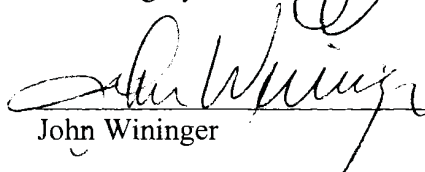
PASSED AND ADOPTED by the Board of Commissioners of Martin County, Indiana, on this the 13th day of August, 2009.



Paul George

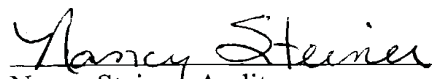


Dan Gregory



John Winger

ATTEST:



Nancy Steiner, Auditor
Martin County

RESOLUTION NO. 2009-01
RESOLUTION OF THE MARTIN COUNTY ADVISORY PLAN COMMISSION
ADOPTING THE COMPREHENSIVE PLAN

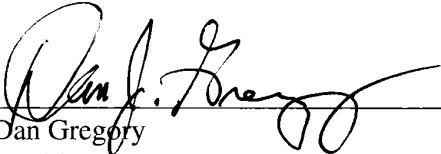
A RESOLUTION RECOMMENDING THAT THE BOARD OF COMMISSIONERS OF MARTIN COUNTY ADOPT THE ATTACHED COMPREHENSIVE PLAN FOR THE UNINCORPORATED AREA OF MARTIN COUNTY, CONSISTENT WITH INDIANA STATE LAW REQUIREMENTS, WHICH STATE THAT A COMPREHENSIVE PLAN MUST CONTAIN THE FOLLOWING ELEMENTS:

1. A statement of objectives for the future development of the jurisdiction.
2. A statement of policy for the land use development of the jurisdiction.
3. A statement of policy for the development of public ways, public places, public lands, public structures, and public utilities.

WHEREAS, the Advisory Plan Commission of Martin County, Indiana, did on July 23, 2009, hold a legally advertised public hearing on the proposed Comprehensive Plan for the Unincorporated Area of Martin County, Indiana until all comments and objections were heard; and

WHEREAS, the Advisory Plan Commission found that said plan is in the best interest of the citizens of Martin County, Indiana.

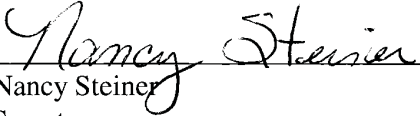
NOW THEREFORE, BE IT RESOLVED, that the Advisory Plan Commission of Martin County, Indiana, recommends to the Board of Commissioners the adoption of said Comprehensive Plan for the Unincorporated Area of Martin County attached hereto named Comprehensive Plan of Martin County, Indiana, dated April 2009.



Dan Gregory
President
Martin County Advisory Plan Commission

7-23-09

Date



Nancy Steiner
Secretary
Martin County Advisory Plan Commission

7-23-09

Date

**COMPREHENSIVE PLAN
CERTIFICATION**

I, Nancy Steiner, Secretary of the Martin County Advisory Plan Commission do hereby certify to the Martin County Board of Commissioners, that the Comprehensive Plan of Martin County, a true copy of which is attached, was considered and approved by the Martin County Advisory Plan Commission at their meeting held on July 23, 2009 by a vote of 7 in favor, 0 against, 0 abstaining, and 2 absent and do herewith forward the same to you for your consideration and approval.

Nancy Steiner
Nancy Steiner
Secretary
Martin County Advisory Plan Commission

July 23, 2009
Date

PROOF OF PUBLICATION

State of Indiana, Martin County, SS:

The Shoals News

Stephen A. Deckard, Publisher
 P.O. Box 240
 Shoals, Indiana 47581-0240

Stephen A. Deckard, being duly sworn, upon his oath, says that he is Publisher of THE SHOALS NEWS, a newspaper of general circulation, printed and published at Shoals, in the State and County aforesaid, and that the annexed notice was published in the said newspaper on the following dates, to-wit:

July 8, 2007
 _____, 200
 _____, 200
 _____, 200
 _____, 200
 _____, 200
 _____, Publisher

Subscribed and sworn to before me this

8th day of July, 2009

Joyanne Deckard
 Joyanne Deckard, Notary Public

My Commission Expires September 30, 2009
 County: Martin

Cost of Publication, \$ 23,38

Jan & Mike Keith
 Washington, Indiana

FOR SALE By Owner: 5 1/2 Acres, with home and pole garage. Price reduced to \$69,900. Call 247-3940. 8, July 29x

FREE KITTENS to a good home. 3 females, one male, all different colors. Hoopster local. Call 812-259-4392 @ Noon

Information: 1-800-4-A-TRUCK

FOR SALE
 247-3775

Bedroom, bath, Brick Mulberry Street in furniture. All appliances included. \$135,900.

FOR SALE
 Mulberry Street in

PROOF OF PUBLICATION

State of Indiana, Martin County, SS:

The Shoals News

Stephen A. Deckard, Publisher
 P.O. Box 240
 Shoals, Indiana 47581-0240

LEGAL ADVERTISEMENT

Martin County Comprehensive Plan for Unincorporated Area of Martin County

The Martin County Advisory Plan Commission will hold a public hearing on Thursday, July 23, 2009, at 7:00 p.m. (local time) in the Martin County 4-H Fairgrounds Community Center (2264 U.S. Highway 50, Loogootee, IN 47553); to provide citizens an opportunity to express views on the recently completed final draft of the Martin County Comprehensive Plan covering the unincorporated area of Martin County.

The Plan was paid for in full using Interstate 69 Community Planning Grant funds from the Indiana Department of Transportation. Representatives from Bernardin-Lochmueller & Associates will be available to answer questions.

Every effort will be made to allow persons to voice their opinions at the public hearing.

The Martin County 4-H Fairgrounds Community Center is handicapped accessible. However, persons with disabilities who wish to attend the public hearing and need assistance should contact the Martin County Auditor, Nancy Steiner, Martin County Auditor's Office (Martin County Courthouse, 129 Main Street, Shoals, IN 47581); phone: (812) 247-3731, at least seven days prior to the public hearing. Every effort will be made to provide reasonable accommodations for these persons.

For additional information co-

ncerning the Comprehensive Plan, please contact David Ripple, Bernardin-Lochmueller & Associates (6200 Vogel Road, Evansville, IN 47715), 800-423-7411 or dripple@blainc.com

Written comments will be accepted at the Martin County Courthouse Auditor's Office (address above) through 4:00 p.m. July 23, 2009, and at the public hearing that evening. A copy of the final draft Martin County Comprehensive Plan is available for public review at the Martin County Courthouse Auditor's Office, 8:00 a.m. to 4:00 p.m., Monday through Friday.

Copies of the plan are also available for inspection during regular business hours at:

- Loogootee Public Library, 408 N. Line Street, Loogootee, IN 47553; and
- Shoals Public Library, 402 High Street, Shoals, IN 47581.

, being duly sworn, upon his Publisher of THE SHOALS of general circulation, printed oals, in the State and County the annexed notice was pub- /spaper on the following dates,

_____ , 2009

_____ , 200

_____ , 200

_____ , 200

_____ , 200

Deckard _____ , Publisher

July 8c

Subscribed and sworn to before me this

8th day of July, 2009

Joyanne Deckard
 Joyanne Deckard, Notary Public

8
 My Commission Expires September 30, 2009
 County: Martin

CO.

Comprehensive Plan for Martin County, Indiana

Presentation

**Martin County Advisory Plan Commission
Martin County 4-H Fairground Community Center
2264 US Highway 50
Loogootee, Indiana 47553**

**July 22, 2009
at 7:00 PM**



OUTLINE

- A. What is it?
- B. What does it include?
- C. What brought it about?
- D. What geographic area does it cover?
- E. What did the plan find?
- F. How was it developed?
- G. What are the plan recommendations?
- H. What commitments are needed?
- I. Why act now?

A. What is it?

1. Framework for future physical development of the community
2. Addresses:
 - Land use to accommodate future activities
 - Infrastructure (roads and utilities) to sustain development
 - Provision of community and recreation facilities to meet the needs of residents
 - Preservation of the historic and natural amenities to protect the community heritage
3. Recommendations in fringe area of Loogootee reflected in both Loogootee and Martin County Comprehensive Plans

A. What is it? (continued)

5. Vision Statement -- "Martin County strives to be a great place to live, work and visit by embracing change that fosters economic development opportunities. Preserving historic, natural and rural features that foster a unique living environment, increasing quality employment opportunities, and promoting tourism are all high priorities."

B. What does it include?

1. A community profile →
 - Inventory of historic structures
 - Information on housing characteristics
 - Description of environmental features – prime farmlands, forests, karst topographic features, steep slopes, ground water resources, streams, floodplains, wetlands, nature areas, wildlife habitats, managed lands and natural areas, recreation, tourism, mineral resources and waste disposal
 - Generation of existing and projected demographic and economic characteristics
 - Assessment of existing and projected land use and infrastructure
 - Identification of development issues through the Steering Committee, a communitywide survey and community leader interviews
2. A future vision → Development Goals and Guidelines
3. Recommendations →
 - Land use development
 - Transportation, utilities, and community facilities and services
 - Open space and recreation, and environmental protection
 - Economic Development, housing preservation and
 - Comprehensive plan implementation

C. What brought it about?

1. INDOT I-69 Community Planning grants to Martin County and Loogootee to address economic development and growth opportunities induced by I-69 and to protect natural resources
2. Collaborative Effort Between Martin County and Loogootee →
 - New comprehensive plans for each with consistent future land use and infrastructure recommendations on the fringe of Loogootee

D. What geographic area does it cover?

1. Unincorporated Martin County only



E. What did the plan find?

1. Rich historic heritage →
 - Historic structures – Old County Courthouse (National Register), Old County Jail, Houghton House and Rott House
 - Historic sites – Musterling Elem Hindostan Falls, Overlook Park, Martin Forest and West Boggs Lake
 - Significant geological features – Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock
2. Very limited prime farmland -- west of White River/US 231 -- 12% of total county
3. Poor soils for on-site septic fields
4. Predominance of forestlands -- Crane and east of White River -- 62% of total county
5. Karst features in eastern Martin – 69 caves and 17 springs
6. Steep slopes throughout county except west of US 231 and Loogootee

E. What did the plan find?

7. Wellhead protection areas along White River east of Loogootee and south of Shoals and along Boggs Creek in Crane
8. Major wetlands (98%) located in floodplains of White River East Fork, Lost River, Beaver Creek, Indian Creek and Boggs Creek
9. Wildlife habitats concentrated along →
 - White River East Fork → Hindostan Falls, Bluffs of Beaver Bend, Dover Hill
 - Beaver Creek near the Martin-Lawrence County Line
 - Crane Naval Base, Martin State Forest and Hoosier National Forest
 - Most protected by publicly managed lands and conservation easements
10. Most managed lands in a county except Perry and Crawford Counties (nearly 40% land area exempt from property taxes)
11. Gypsum mines unique to Indiana

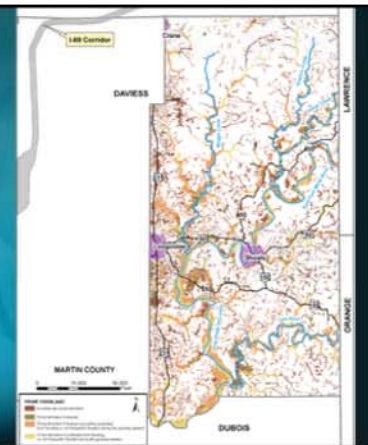
E. What did the plan find?

12. Severe environmental constraints to expanded urban growth east of US 231 →
 - Rugged terrain with steep slopes and forests
 - Narrow valleys with floodplains and wetlands
 - Karst topographic features (caves and springs) due to underlying limestone
 - Extensive wildlife habitats along the major rivers and in the forests that contain threatened and endangered species such as the Indiana Bat and the Fanshell Mussel

Historic Structures



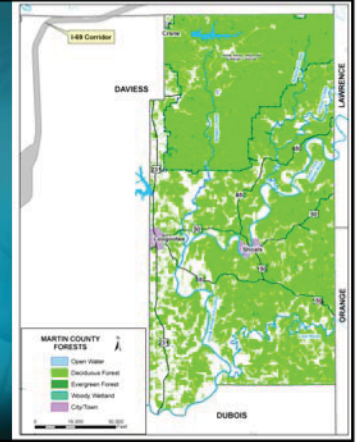
Prime Farmland



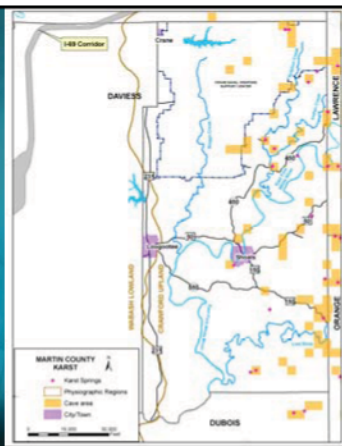
Septic Field Limitations



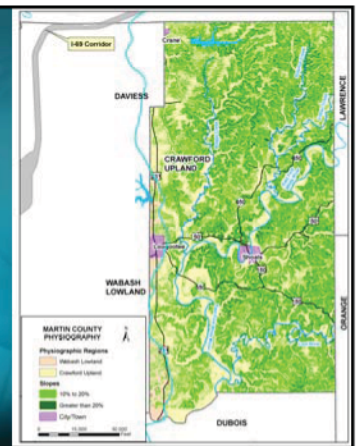
Forests



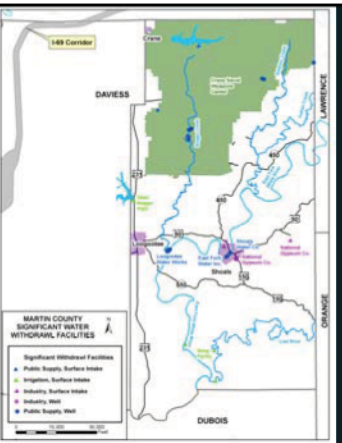
Karst Features



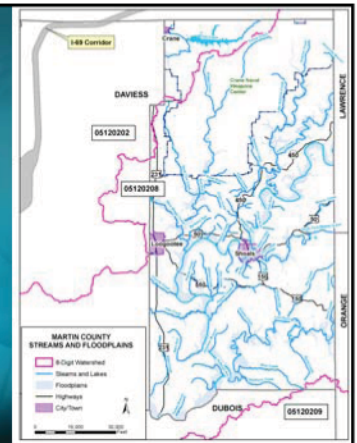
Steep Slopes



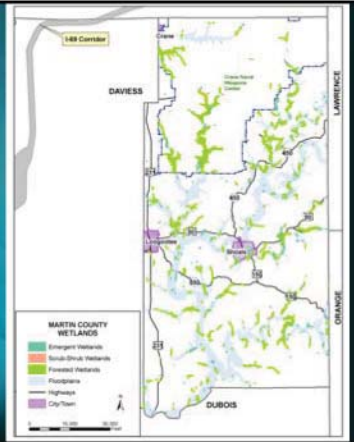
Major Water Wells



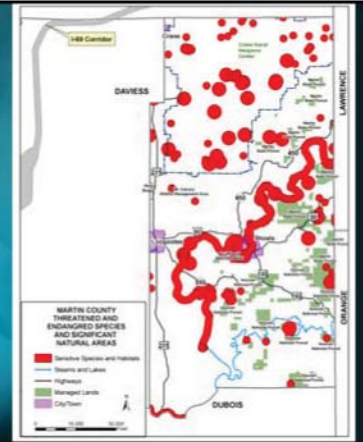
Floodplains



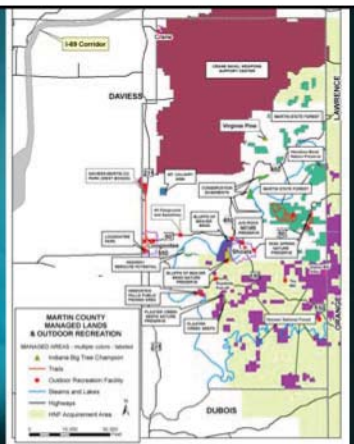
Wetlands concentrated in Floodplains



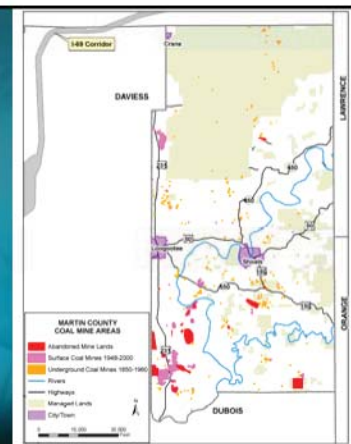
Wildlife Habitats



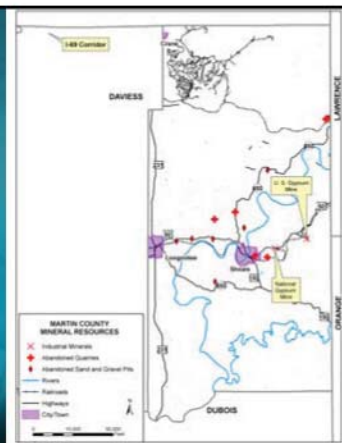
Managed Lands



Coal Mines

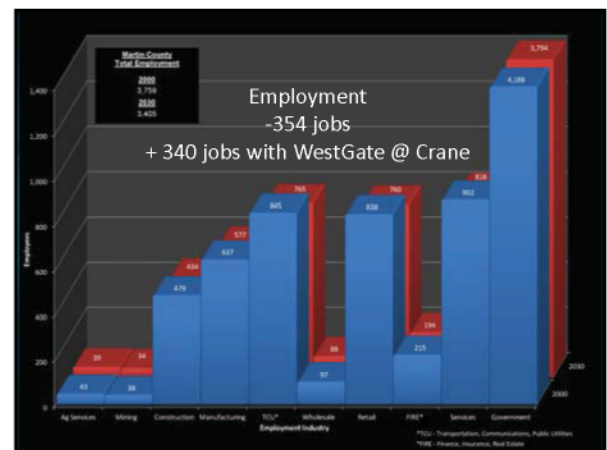
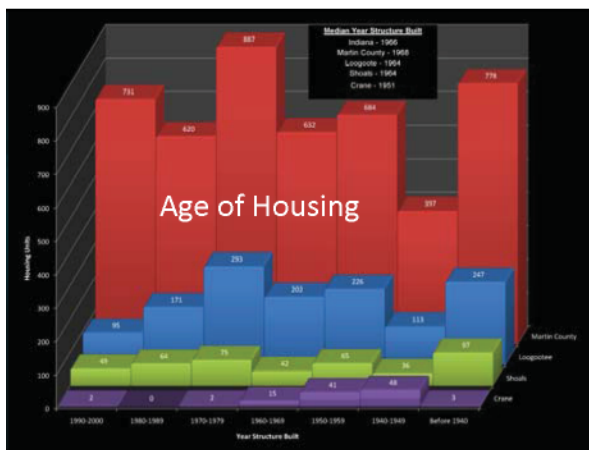
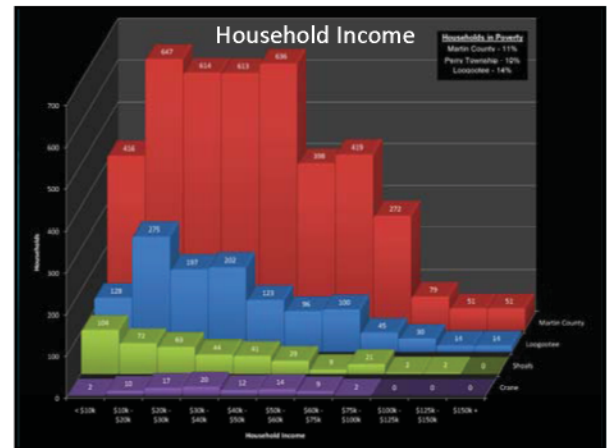
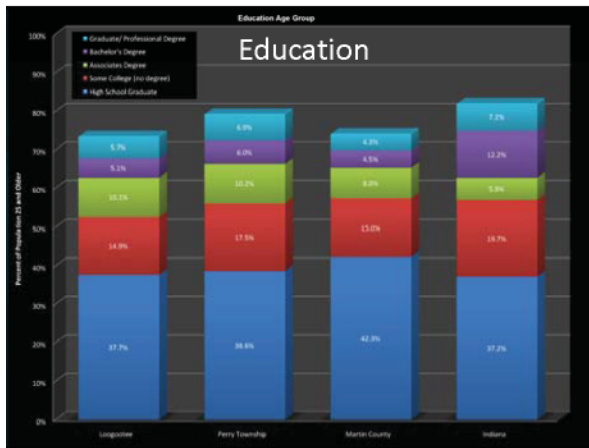
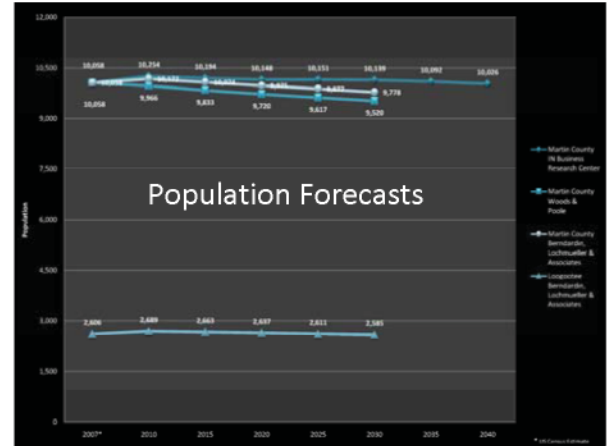
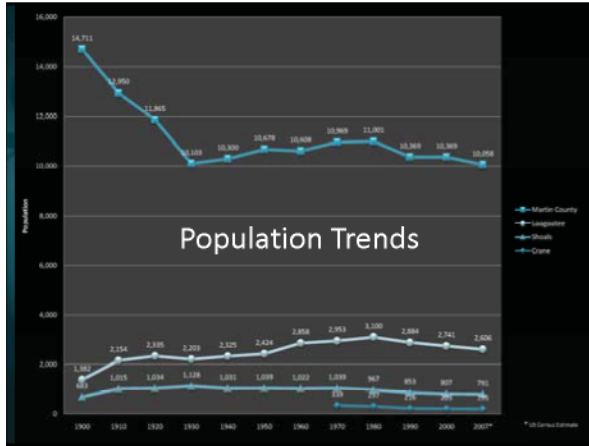


Other Mineral Resources



E. What did the plan find?

- No population growth → 280 person loss to year 2030 → offset by 594 persons with WestGate @Crane Tech Park
- Median age of 39 years, greater than Indiana at 35 years
- Lower education attainment than Indiana as whole
- Median household income 87% Indiana and higher percent of household poverty than Indiana
- Higher percent of people living in mobile homes at 25% compared to 9% statewide
- Aging housing stock → nearly half the homes over 40 years old
- Projected decrease of 163 housing units from 2000 to 2030 → offset by 238 housing units with WestGate @ Crane Tech Park
- Projected decrease of 354 jobs between 2000 and 2030 → offset by 340 jobs with WestGate@Crane Tech Park



E. What did the plan find?

21. Projected demand for 257 acres to accommodate growth to year 2030 → plus 92 more acres for residential and support retail/services for WestGate @ Crane Tech Park employees living in Martin County → Insufficient vacant land suitable for development inside incorporated areas
22. No major roadway improvements as relocation of US 50 unfunded → although projects underway for resurfacing, bridge replacement, intersection improvements and sidewalk improvements
23. Generally adequate water systems inside incorporated areas → but systems must be extended to accommodate growth
24. Wastewater systems at capacity due to storm events and must be expanded to accommodate growth
25. Adequate recreation areas → but facility improvements needed
26. No identified new schools → but improvements to existing schools likely to be needed over the next decades

Existing and Future Land Use Demand

2008 Existing Land Use				
Land Use Category	Acres	Percent of Category	Percent of Unincorporated Area*	Percent of Unincorporated County Area*
Residential	3,905		4.57%	1.87%
Commercial	23		0.0%	0.0%
Industrial	372		0.5%	0.2%
Public/Quasi-Public	77,420		94.7%	36.4%
Parks/Recreation	206	0.3%	0.3%	0.1%
State/Federal/Managed Lands	77,110	99.6%	94.4%	39.2%
Churches/Cemeteries	88	0.1%	0.1%	0.0%
Other	18	0.0%	0.0%	0.0%
Developed Subtotal	81,720		100.0%	38.4%
Agricultural/Forest Land	131,207			61.6%
Total of Unincorporated County Area	212,927			100.0%
Unincorporated Townships	4,100			1.9%
Total of County Area	215,027			101.0%

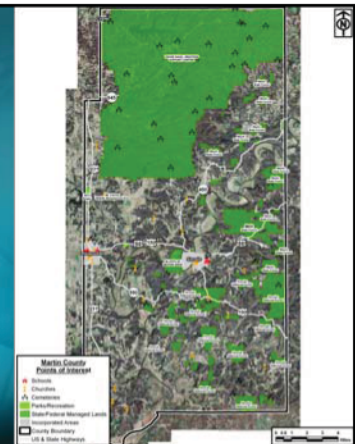
Source: Bernardi, Lochmuller and Associates, Inc.
 * Percented to the nearest acre
 ** Total of unincorporated county area and total of county area excludes roads, railroads and right-of-ways

+ 257 acres for normal demand
 + 92 more acres for WestGate @ Crane
 Not enough vacant land in incorporated areas

Existing Land Use



Community Facilities



F. How was it developed?

1. Four meetings of the two Steering Committees
 - Identify issues, develop communitywide survey and identify leaders to be interviewed (9/10/2008)
 - Develop future vision (12/04/2008)
 - Develop future alternatives (2/26/2009)
 - Develop recommendations (4/23/2009)
2. Steering Committees met jointly to address common issues
3. Two rounds of public information meetings
 - Review background information and the future vision (1/15/2009)
 - Review future land use/transportation alternatives (3/18/2009)
4. Steering Committee → Issues identification
5. Communitywide survey
6. Interviews of community leaders

G. What are the plan recommendations?

1. Stated Priorities:
 - Projects enhancing the natural features of Martin County
 - Continuing to work on economic growth through the provision of utilities to create shovel ready development sites

G. What are the plan recommendations?

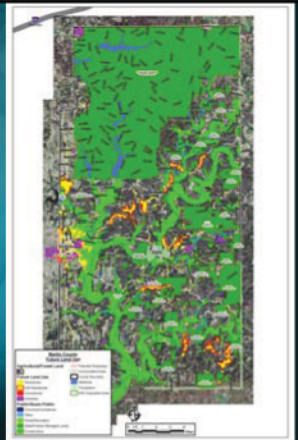
2. Future Land Use:

- Locations for future land use opportunities around Loogootee, along US 231 north of West Boggs Lake and north of the Town of Crane
 - Future industrial areas → WestGate @ Crane Tech Park, along US 50 east of Loogootee, and southeast side of Loogootee between US 231 and US 50
 - Future commercial areas → US 50 Connector/US 231 Connector southwest of Loogootee and US 231 Connector/existing US 231 north of Loogootee
 - New residential areas along → along US 231 north and south of Loogootee and north of West Boggs Lake and scattered un-forested flat-ridges in eastern Martin County
 - Potential conservation areas → along floodplains of White River East Fork, Lost River, Beaver Creek and Indian Creek

Existing and Potential Land Use



Future Land Use

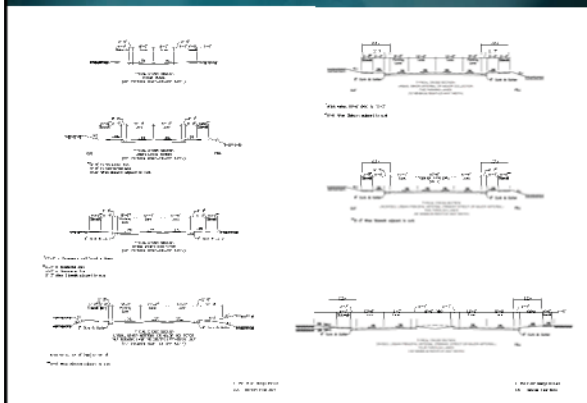


G. What are the plan recommendations?

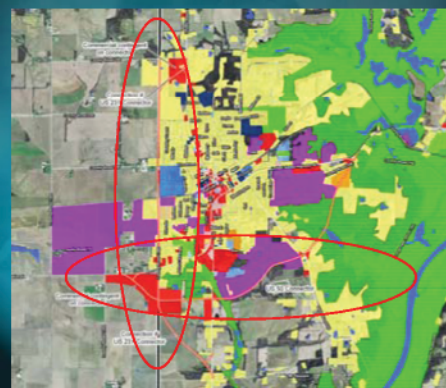
3. Transportation/Thoroughfare Plan

- Typical cross sections for design and right-of-way preservation for county thoroughfares
- Need to improve US 50 through Martin County with US 50 Connector around south side of Loogootee
- Possible improvement of US 231 along the county line on the west side of Loogootee from Mt. Pleasant Road to CR 132
- Extension of County Line Road from Park Street across CSX RR to CR 132 to provide continuous route west of Loogootee for school complex
- Trails connecting incorporated communities and major recreation areas such as Martin State Forest and West Boggs Lake

Typical Roadway Cross Sections



US 50 Connector and US 231 Connector



G. What are the plan recommendations?

4. Utilities Plan

- Monitoring water and wastewater treatment plants to ensure adequate capacity for growth
- Provision of sanitary sewers to industrial sites at WestGate@ Crane, along US 50 east of Loogootee and southeast of Loogootee from US 231 to US 50
- Extension of water lines to serve industrial sites east and southeast of Loogootee
- Exploration of innovative sewage treatment systems for unincorporated

5. Community Facilities/Services Plan and Open Space/Recreation Plan

- Addition of more active recreation facilities at existing recreation areas

G. What are the plan recommendations?

6. Environmental Plan

- Complete inventory of historic structures in Martin County
- Protection of historic properties through grants and tax incentives
- Check archaeological records for major construction projects
- Minimum prime farmland impacts by focusing future development adjacent to Loogootee where centralized sanitary sewers can be extended
- Create conservation areas → private dedication or voluntary acquisition → along floodplains of White River, Lost River, Beaver Creek and Indian Creek → to protect wetlands and wildlife habitats not presently within managed lands
- Continue voluntary acquisition of lands with the Hoosier National Forest Acquisition Areas in southeast and northeast Martin County → to protect karst caves and springs, forests, significant wildlife areas and high quality natural communities not presently within managed lands
- Follow IDEM rules to protect floodplains, wetlands and steep slopes

Environmental Composite



G. What are the plan recommendations?

7. Economic Development Plan →

- Improving economic development opportunities →
 - Incentives for new businesses, reuse of vacant properties, retaining businesses, and attracting businesses to WestGate @ Crane
 - Economic development planning and coordination
 - Providing adequate infrastructure for shovel ready development sites
 - Small business support and capital
 - Encourage new retail and personal services
 - Workforce development and continuing education
 - State and federal payments in lieu of taxes for publicly owned lands
 - Develop a program promoting tourism and economic development
- Preparing an economic development strategy

G. What are the plan recommendations?

8. Housing Preservation Plan →

- Developing a dilapidated housing program to return abandoned properties to tax rolls, pursuing federal and state programs for housing rehabilitation loans

9. Implementation Program

- Adopt new comprehensive plan to better compete with other communities for State and Federal grants

H. What commitments are needed?

1. Adoption of Plan by Plan Commission after public hearing and recommendation to Board of Commissioners
2. Adoption of Plan by Board of Commissioners through a resolution (resolution = guidance) not ordinance (ordinance = law) → Does not affect land use rights

I. Why act now?

1. Guides public and private decisions relative to land use development and infrastructure improvements **to capture the development opportunities** of I-69 and WestGate @ Crane
2. Enables the town **to better compete** with other communities for State and Federal grants and loans
3. Establishes the foundation under State statute for planning **to avoid starting over again** from scratch in the future

Thank You!



BERNARDIN LOCHMULLER & ASSOCIATES, INC.
Engineering • Surveying • Planning • Environmental Services • Water & Wastewater



Table of Contents

Executive SummaryES-1

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Executive Summary

What is it?

The comprehensive plan for Martin County directs the future physical development of the community. It addresses the use of land to accommodate future activities, the improvement of the infrastructure (roads and utilities) to sustain development, the provision of community and recreation facilities to meet the needs of its residents, and the preservation natural and historic amenities to protect the heritage of the community. Ultimately, the comprehensive plan reflects the values of the community in balancing the competition for land to sustain the economic vitality and the quality of life of the community. It is the collective vision for the physical future of Martin County.

What does it include?

Exceeding the minimum state statutory requirements for a comprehensive plan (IC 36-7-4-500 series), the comprehensive plan includes:

1. A community profile containing –
 - a) a review of historic structures, information on housing characteristics, a description of environmental features (prime farmland, forests, karst topographic features, steep slopes, groundwater resources, streams, floodplains, wetlands, natural areas, wildlife habitats, managed lands and natural areas, recreation areas, tourism, mineral resources and waste disposal), and generation of existing and projected demographic and economic characteristics;
 - b) an assessment of existing and projected land use (derived from aerial photographic interpretation) and an examination of existing and planned transportation, utility and community facility improvements; and
 - c) an identification of growth and development issues through the Land Use Plan Steering Committee, a community-wide survey and interviews of community leaders.
2. A future vision for the community setting forth development policies, goals, objectives and guidelines.
3. Recommendations covering land use development, transportation, utilities, community facilities and services, open space and recreation, environmental protection, economic development, housing preservation, and plan implementation.

What brought it about?

The Indiana Department of Transportation provided an I-69 Community Planning Program Grant to Martin County to assist the community in responding to the economic development and growth opportunities of I-69 and in protecting natural resources. These grants were made available to all counties and major communities in the I-69 corridor from Evansville to Indianapolis. Martin County joined with Loogootee in a collaborative effort to qualify for the maximum grant amount to produce a Martin County Land Use Plan and a Loogootee Land Use Plan.

What geographic area does it cover?

The comprehensive plan covers the unincorporated area of the Martin County. If cities or towns wish to exercise extra-territorial planning authority within the unincorporated area within their two-mile fringe, permission must be sought from the Martin County Board of Commissioners.

What did the plan find?

The Comprehensive Plan Community Profile revealed that Martin County has:

- A rich heritage of historic structures (Old County Courthouse, Old County Jail, Houghton House and



Routt House), historic sites (Mustering Elem, Hindostan Falls, Overlook Park, Martin State Forest and West Boggs Lake) and significant geological features (Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock). While only the Old County Courthouse is on the National Register of Historic Sites, many more sites would be eligible for the National and Indiana Registers of Historic Sites and Structures if an inventory were conducted.

- Very limited prime farmland that is concentrated west of the East Fork of the White River -- 12 percent of the total county.
- Poor soils which are very limited for on-site septic fields.
- A predominance of forestlands in Crane Naval Surface Warfare Center and east of the East Fork of the White River -- 62 percent of the total county.
- Karst topographic features (69 caves and 17 springs) in the eastern half of Martin County.
- Steeps slopes throughout most of Martin County with the exception of Loogootee and the US 231 corridor.
- Wellhead protection areas along the White River east of Loogootee and south of Shoals and along Boggs Creek in the Crane Naval Weapons Center.
- Major wetlands and floodplains associated with the East Fork of the White River, Lost River, Beaver Creek, Indian Creek and Boggs Creek. 98 percent of the wetlands are in the floodplains of these rivers.
- Wildlife habitats concentrated along the East Fork of the White River (Hindostan Falls, Bluffs of Beaver Bend and near Dover Hill), Beaver Creek near the Martin-Lawrence County Line, the Crane Naval Surface Warfare Center, and tracts of the Martin State Forest and Hoosier National Forest. Most endangered species sightings and high quality natural communities are presently protected by publicly managed land areas or conservation easements. The now protected fanshell mussels found in several bends of the White River were once exploited for a thriving button manufacturing industry until 1947.
- The most managed lands (Crane Naval Weapons Center, Hoosier National Forest and Martin State Forest) in the state except for Perry and Crawford Counties. Nearly 40 percent of the land area is exempt from property taxes; federal and state payments in lieu of property taxes have evaporated; and little income from timber sales on federal and state lands are shared with the county.
- Gypsum mines that are unique to Indiana.
- Severe environmental constraints to expanded urban growth east of the US 231 corridor due to rugged terrain with steep slopes and forests, narrow valleys with floodplains and wetlands, karst topographic features due to the underlying limestone, and extensive wildlife habitats along the major rivers and in the forests that contain threatened and endangered species such as the Indiana bat.
- No forecasted population growth between the year 2007 (with 10,058 persons) and the year 2030 (with 9,778 persons) regardless of the forecast source. However, the WestGate @ Crane Technology Park may boost Martin County's population by about 594 persons by the year 2030.
- A median age of 39 years, greater than Indiana at 35 years.
- A population with a lower educational attainment than the whole of Indiana.
- A median household income that is 87 percent of that of Indiana and a higher percent of the households in poverty than Indiana.
- A greater percentage of the households living in mobile homes at 25 percent compared to 9 percent statewide.
- An aging housing stock with more than half of its housing units over 40 years old.
- A projected decrease of 163 housing units from 2000 to 2030. However, the WestGate @ Crane Technology Park may require 238 housing units to accommodate the new employees who choose to live in Martin County.



- A projected decline of 354 jobs between 2000 and 2030 that could be offset by 340 jobs due to WestGate @ Crane.
- A projected demand for 257 acres of land to accommodate growth to the year 2030. The stimulus of the WestGate @ Crane Technology Park could add another 92 acres for residential and other nonindustrial uses to support the employees who chose to live in Martin County.
- Insufficient vacant land suitable for development within existing municipalities to accommodate forecasted growth.
- No major roadway improvement projects because the relocation of US 50 for 13.5 miles through Martin County for \$255 million remains unfunded. Most funded transportation projects involve roadway resurfacing, bridge replacements, intersection improvements and sidewalk improvements.
- Generally adequate water systems inside incorporated areas (Loogootee, Shoals and Crane), but waterlines must be extended to accommodate growth. The Eastern Heights Utility Company of Bloomfield serves the Town of Crane and the WestGate @ Crane Technology Park. Outside the municipal water systems and the East Fork Water near Shoals, most home are on private water wells.
- Wastewater treatment plants in municipal areas with the Crane Naval Surface Warfare Center serving the Town of Crane. However, most sanitary sewer systems are at capacity during storm events with significant stormwater inflow/infiltration problems, and sanitary sewers must be extended to accommodate growth. A wastewater treatment system will be needed for Martin County's portion of the WestGate @ Crane Technology Park.
- Adequate recreation areas, but improvements to recreation facilities may be needed.
- No identified new schools, but improvements to existing schools in the Loogootee Community School Corporation with 1,047 students in 2009 and Shoals Community School Corporation with 676 students in 2009 are likely to be needed over the next decades.

How was it developed?

The comprehensive plan was developed through four meetings of a steering committee (made up of local residents), two public open houses on the future vision of the community and future land use/infrastructure alternatives, a community-wide survey and interviews of community leaders. The top issues identified by the Land Use Plan Steering Committee were:

- County roads and bridges need to be upgraded and maintained. But, lack of funding for county road and bridge projects.
- Need economic growth through jobs.
- Lack of tax base due to large amount of state and federal lands.
- Lack of ambulance and 911 services.
- Water and wastewater needs, either the facilities don't exist or the existing facilities are outdated.
- Martin County should implement protective land use controls.
- Attract good quality jobs, specific to WestGate, to Martin County.
- Need better education of workforce, continuing education for agricultural and vocation jobs through the Learning Center.
- Raise awareness of recreational areas within the county.
- Increase tourism within the county as a long-term goal.

The questions receiving 88 percent or more agreement for the community surveys returned were:



- Need economic growth through jobs, any kind of job.
- Martin County needs to do more to keep young people in the community.
- Attract good quality jobs, specific to WestGate @ Crane Technology Park, to Martin County.
- There is a need for better coordination and education (all parties) regarding planning, economic development, etc.
- There is a need to change the attitude of the county from negative to positive.
- There is a need for a shared vision for the future of Martin County.
- There is a need for more public involvement.
- There is a lack of capital and business support to foster entrepreneurship/small businesses in Martin County.
- County roads and bridges need to be upgraded and maintained. But, lack of funding for county road and bridge projects.
- Need better education of workforce, continuing education for agricultural and vocation jobs through the Learning Center.

What are the plan recommendations?

The stated priorities of the comprehensive plan are:

- Projects enhancing the natural features of Martin County.
- Continuing to work on economic growth in the county including the provision of utilities to create shovel ready development sites.

The comprehensive plan makes the following recommendations:

- Locations for future land use opportunities around Loogootee, along US 231 north of West Boggs Lake and north of the Town of Crane.
 - Future industrial areas at the WestGate @ Crane Technology Park, along US 50 east of Loogootee and on the southeast side of Loogootee between US 231 and SR 550.
 - Future commercial areas at the intersection of the US 50 Connector and US 231 Connector on the southwest side Loogootee and at the intersection of the US 231 Connector and existing US 231 north of Loogootee
 - New residential areas along US 231 north and south of Loogootee, along US 231 north of West Boggs Lake and in scattered locations on the flat un-forested ridges of eastern Martin County where existing residential concentrations exist.
 - Potential conservancy areas along the floodplains of the East Fork of the White River, Lost River, Beaver Creek and Indian Creek.
- Typical cross sections for thoroughfare right-of-way preservation and design.
- The need to improve US 50 through Martin County with a US 50 Connector shown around the south side of Loogootee.
- The possible future improvement of US 231 along the County Line on the west side of Loogootee from Mt. Pleasant Road (south of Loogootee) to CR 132 (north of Loogootee).
- The extension of County Line Road from Park Street across the CSX Railroad to CR 132 to provide a continuous north-south facility on the west side of Loogootee improving access to the Loogootee Community School Complex.



- Trails connecting incorporated communities and major recreation areas such as the Martin State Forest and West Boggs Lake
- Monitoring water and wastewater treatment plants to ensure adequate capacity to accommodate anticipated growth.
- Provision of sanitary sewers to industrial sites at the WestGate @ Crane Technology Park, along US 50 east of Loogootee, and between US 231 and SR 550 southeast of Loogootee.
- Extension of water lines to serve possible industrial sites east and southeast of Loogootee.
- Exploration of innovative sewage treatment systems for unincorporated areas with large concentrations of on-site septic systems.
- The addition of more active recreation facilities at existing recreation areas.
- The completion of an inventory of historic structures throughout Martin County comparable to the other 84 counties in Indiana.
- Protection of historic properties through grants and tax incentives.
- Check of archaeological site records for major construction projects
- A future land use pattern that focuses development adjacent to Loogootee where centralized sewers can be readily extended to minimize the adverse impact on prime farmlands.
- The creation of conservancy areas (through private dedication or voluntary acquisition by non-profit entities) along the floodplains of the White River, Lost River, Beaver Creek and Indian Creek to protect the wetlands and wildlife habitats not presently within publicly managed lands.
- The continued voluntary acquisition of lands within the Hoosier National Forest Acquisition Area in southeast and northeast Martin County to protect karst caves and springs, forests, significant wildlife habitats and high quality natural communities not presently within publicly managed lands. The significant geological features of Martin County (Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock) fall within existing publicly managed lands.
- Following IDEM rules to protect floodplains, wetlands and steep slopes from inappropriate development.
- Improving economic development opportunities by:
 - Providing more job opportunities by attracting new businesses through incentives.
 - Providing incentives to encourage reuse of vacant commercial and industrial properties.
 - Promoting planning and economic development planning and coordination.
 - Providing adequate infrastructure to existing and proposed industrial, commercial and residential sites for shovel ready development.
 - Providing increased business support and capital opportunities to foster small businesses.
 - Providing incentives to retain and assist in the expansion of existing businesses.
 - Providing incentives to attract new businesses to the WestGate @ Crane Technology Park.
 - Encouraging the development of additional retail businesses and personal services.
 - Encouraging workforce development and continuing education.
 - Encouraging state and federal payments in lieu of tax payments on publicly owned lands.
 - Developing a program promoting economic development and tourism.
- Preparing an economic development strategy identifying assets, emerging business sectors, a business and attractive program, development and marking existing and potential sites, promoting small businesses, developing financial resources and developing a regional approach. This will capitalize on the economic development opportunities fostered by Interstate 69.



- Considering the development of a dilapidated housing program and pursuing grants and loans to assist in housing rehabilitation and maintenance.
- Adoption of the comprehensive plan to better compete with other communities for state and federal programs for economic development and downtown revitalization, commercial and residential structure rehabilitation, historic structure preservation, recreation land and facility improvements, bicycle and pedestrian facilities, sanitary sewer/potable water/stormwater facility improvements, and protection of floodplains/wetland/wildlife areas.

What commitments are needed?

The following actions are recommended:

1. The Martin County Advisory Plan Commission to hold a public hearing on the plan and recommend adoption by the Board of Commissioners.
2. Adoption of the Martin County Comprehensive Plan by the Plan Commission and the Board of Commissioners by resolution after a public hearing fulfilling state requirements.

Why act now?

Adoption of the Martin County Comprehensive Plan:

1. Guides public and private decisions relative to land use development and infrastructure improvements to take advantage of the economic development opportunities associated with I-69 and the WestGate @ Crane Technology Park. Economic development impact studies have shown that communities that plan ahead and cooperate with other levels of government reap the benefits of the economic opportunities.
2. Enables the county to better compete with other communities for state and federal program grants and loans. There are immediate and on-going needs for which the county may obtain financial assistance.
3. Establishes the foundation under state statute for Land Use Planning by meeting the state prerequisite for such planning, and enables the county to investigate land use controls anytime in the future at a time of the county's own choosing. Martin County must start over again in the future if the community passes up the opportunity to meet the state planning prerequisite today, and others may be planning the future vision for your community in the interim.



Chapter 1: Introduction

A. FOUNDATION

1. INTERSTATE 69 COMMUNITY PLANNING PROGRAM

The Martin County Comprehensive Plan is being completed through a grant from the Indiana Department of Transportation (INDOT). As the Martin County Comprehensive Plan will fulfill the Indiana statutory requirements for a comprehensive plan (IC-36-7-4-500 et seq.), the document will become the Martin County Comprehensive Plan if the Martin County Board of Commissioners adopts the plan by resolution after a public hearing and recommendation of the Martin County Advisory Plan Commission. The I-69 Community Planning Program was created by INDOT to aid the local communities along the proposed I-69 corridor in planning for their future. The Indiana Department of Transportation recognized the need to encourage local communities to protect natural resources, manage growth and promote economic development associated with I-69. The Community Planning Program was established in the I-69 Tier 1 Final Environmental Impact Statement (FEIS). Following the FEIS, the Tier 1 Record of Decision (ROD) established 31 counties, cities and towns along the selected corridor to be eligible for a Community Planning Grant. Martin County is one of the eligible places and received grant approval on October 25, 2007 from INDOT to create a Martin County Land Use Plan taking the proposed I-69 corridor into account. The State of Indiana executed the grant agreement with Martin County. The county retained Bernardin, Lochmueller and Associates, Inc. on April 29th, 2008 to prepare the Martin County Comprehensive plan for the unincorporated areas of the county.

2. PURPOSE

The Martin County Comprehensive Plan directs the future physical development of the county by serving as the key policy guide for public and private decision makers if adopted as a comprehensive plan under state statute. It addresses the use of land to accommodate future activities, the phasing of infrastructure (roads and utilities) to support development, the provision of county facilities to meet the needs of residents, and the preservation of natural and man-made amenities to protect the heritage of the county. Ultimately, the comprehensive plan reflects the values of the county in balancing the competition for land to sustain the economic vitality and the quality of life of the county. It is the collective vision for the future of Martin County.

According to the Indiana Code (IC 36-7-4-501), the purpose of the comprehensive plan is to provide for “the promotion of public health, safety, morals, convenience, order, or the general welfare and for the sake of efficiency and economy in the process of development.” Finally, its adoption is a prerequisite to adoption (if the community so chooses) of a variety of land use controls (zoning, subdivision, planned unit development, site plan review and thoroughfare regulations) for achieving the community’s future vision, and provides a long-range framework for developing capital improvement programs.

Martin County has never had a comprehensive or any type of land use control such as a zoning ordinance or subdivision control ordinance. Further, Martin County does not issue local building permits. Indiana Code requires that a comprehensive plan be completed before a county decides (if ever) to create zoning or subdivision control ordinances. The adoption of this comprehensive plan will allow Martin County to create and adopt, if so desired, zoning and subdivision control ordinances that are consistent with this plan.

3. ORGANIZATION

The comprehensive plan is being prepared by Bernardin, Lochmueller and Associates, Inc. under contract to the Martin County Board of Commissioners through an Indiana Department of Transportation (INDOT) I-69 Community Planning Program Grant. The purpose of the INDOT grant is to assist the community in responding to the economic development and growth opportunities of I-69 and in protecting natural resources. It will be reviewed and adopted by the Martin County Advisory Plan Commission (created May 12, 2009) and the Martin County Board of Commissioners after several public forums and a formal public hearing. However, adoption of the the comprehensive plan may not compel the Board of Commissioners as the county legislative body to prepare and adopt any land use control.



4. PLANNING PROCESS

This first comprehensive plan for Martin County will be prepared through an interactive process with community leaders and citizens over an eight-month period. The process involves four major steps:

- 1) developing a profile of where the community has been and where it may be going if existing trends and development policies continue,
- 2) preparing a vision of where the community desires to be in the future,
- 3) evaluating alternative future development patterns and supporting infrastructure to achieve the future vision,
- 4) documenting the desired land use pattern and associated infrastructure.

The Martin County Land Use Plan Steering Committee will meet every other month to develop this first plan. Broader community input will be achieved through interviews with community leaders, a public opinion survey, two public forums at major project milestones and a formal public hearing.

5. PLANNING PERIOD

The comprehensive plan will use the year 2030 as the horizon year for development of the community. Thus, population and economic forecasts have been prepared for the year 2030 to guide the determination of future land use needs. The desired future land use pattern addresses the preferred location for satisfying these land use needs. Because conditions and development assumptions change over time, forecasts for the immediate future are always more accurate than the distant future. Accordingly, it is desirable to review the underlying assumptions and to make mid-course adjustments as needed to achieve the future as envisioned by the comprehensive plan through a review every five years and an update every ten years.

6. PLANNING AREA

The Martin County Comprehensive Plan encompasses the unincorporated area of Martin County. This plan excludes the incorporated communities of Loogootee, Shoals and Crane. Under the same I-69 Community Planning Program Grant, the City of Loogootee is also working on a comprehensive plan at the same time as the county is working on its plan. Accordingly, the City of Loogootee and Martin County will collaborate on recommendations for the development of the fringe area of Loogootee, and these recommendations, will be the same for both plans.

B. USE

The comprehensive plan is a framework and guide for land use regulations (if any are adopted), development actions and decisions, and public expenditures on infrastructure to support land use activities. Prior to approval of requests for changes in land use (i.e., rezoning proposals and Future Land Use Map amendments, if a zoning ordinance is adopted) by the Plan Commission, the proposed changes are to be considered and evaluated in relation to the comprehensive plan. The comprehensive plan also serves as a guide for subdivision regulations, zoning ordinances and capital improvement programs, if such tools are adopted. Finally, the land use plan provides guidance on a variety of public programs ranging from economic development and housing improvement to environmental protection and historic preservation.

1. REVIEW OF LAND USE CHANGE PROPOSALS

The comprehensive plan must be considered by the Plan Commission in recommendations on rezonings (amendments to the zoning district map, if a zoning ordinance is adopted) or Future Land Use Map amendments, if zoning controls are subsequently adopted. In the case of rezoning applications, consideration should be given to the Future Land Use Map as well as applicable development review guidelines of the comprehensive plan. The rezoning proposal should be consistent with the future land use designation on the Future Land Use Map and should comply with applicable development review guidelines.



a. Consistency with Future Land Use Map (Test 1)

If the proposed land use change is of a comparable or lesser intensity land use than the future land use designation, the proposed land use change may be considered consistent with the future land use designation. For example, a land use change to offices or apartments would be generally consistent with the future land use designation for commercial use because offices and apartments are less intensive uses and are generally permitted uses in commercial zoning districts.

If the proposed land use change is of a significantly different intensity than the future land use designation, the proposal may not comply with the future land use designation. In such cases, the applicant may seek an amendment to the future land use designation using the development review guidelines to support the Future Land Use Map amendment.

b. Consistency with Development Review Guidelines (Test 2)

If the proposal is consistent with the future land use designation, but does not comply with all applicable development review guidelines, the rezoning applicant should identify mitigative actions to bring the development proposal into compliance with the development review guidelines. For a Zoning District Map amendment or Future Land Use Map amendment to be consistent with the comprehensive plan, it should normally be consistent with applicable development review guidelines.

c. Exceptions to General Consistency Tests

Lack of consistency with the future land use designation or violation of any applicable guideline will typically constitute sufficient reason to find the proposed land use change to be inconsistent with the comprehensive plan. However, there may be exceptions to this rule including:

- 1) If the proposed land use is not consistent with the future land use designation, consistency with all applicable development review guidelines may be sufficient to demonstrate consistency with the comprehensive plan.
- 2) If the proposed land use is in violation of a guideline, it may be considered consistent with the comprehensive plan when:
 - a) The overall intent of the comprehensive plan is followed.
 - b) The proposal does not substantially violate the applicable guideline or the adverse impact of the proposal on the community is minimal or nonexistent.
 - c) All feasible and practical methods have been exhausted for bringing the proposal into consistency with the applicable guideline.

2. FOUNDATION FOR LAND USE CONTROLS

Adoption of the comprehensive plan is a prerequisite to the adoption of land use controls such as the zoning ordinance, planned unit development ordinance, condominium control ordinance, subdivision control ordinance and thoroughfare ordinance by the local legislative body.

The zoning ordinance identifies permitted land uses and development standards relating to the intensity of the use. Development standards encompass such features as minimum lot size, housing unit density, lot coverage, floor area to lot area ratios, yard requirements, height restrictions, off-street parking space requirements, signing limitations and landscaping requirements. Martin County has never adopted a zoning ordinance.

The planned unit development ordinance is usually a special zoning district designation that permits the mixture of uses (which normally fall in multiple zoning district designations) and deviation from usual development standards. The planned unit development ordinance is usually a special district which is part of a zoning ordinance. Martin County has never had any type of planned unit development ordinance.



The condominium control ordinance may be used to control the development of condominium type projects. It often defines the arrangement of horizontal and vertical property rights in such developments. Loogootee has never had a condominium control ordinance. This type of ordinance is probably the least likely of the ordinances to be needed in Martin County.

The subdivision control ordinance establishes rules under which property owners may divide tracts of land. Exceptions from the rules are often established for land trades, the division of tracts for agricultural purposes and the division of tracts where public infrastructure improvements are not needed. Subdivision regulations generally cover the design of physical improvements to land such as roads, sanitary sewers, waterlines and drainage facilities. They are intended to protect the property owner from inadequate services essential to the use of the property and to protect the community from excessive maintenance costs associated with improperly constructed facilities. Martin County has never had a subdivision control ordinance.

The transportation element of a comprehensive plan may be adopted as a thoroughfare plan. The thoroughfare plan is crucial to the preservation of right-of-way and the designation of consistent design standards for arterials when subdivisions are created or land is developed abutting arterials. Martin County has never adopted any type of thoroughfare plan.

3. BASIS FOR CAPITAL IMPROVEMENT PROGRAMS

The comprehensive plan may also serve as the framework for local capital improvement programs. The future land use pattern must be associated with infrastructure improvements to sustain development. Thus, the comprehensive plan provides guidance on the long-term location and phasing of roadway, sanitary sewer, waterline and drainage improvements to support development. Annual or short-range capital improvement programs usually draw projects from the long-range capital improvement program defined by the comprehensive plan.

4. OTHER USES

The comprehensive plan has numerous other uses governing public and private decisions concerning physical improvements to the community. Of greatest significance, it guides private land owners. If land owners want to use their land in a new way, they need to identify the current zoning district designation (if zoning adopted) of their property and determine if the new use is permitted. If the proposed use is not permitted by the current zoning (if any) designation of the property, the comprehensive plan will be considered in determining the appropriateness of the proposed change in zoning (if adopted) to permit the new use.

Finally, the comprehensive plan is a resource and foundation for funding and grants from federal, state and private resources because the comprehensive plan documents needs relative to community infrastructure, community facilities (including park and recreation facilities), economic development, housing, downtown revitalization, historic preservation and natural environment protection.



Chapter 2: Community Setting

A. LOCATION

Martin County is located in southwestern Indiana. It is bordered by five Indiana counties, including Greene, Lawrence, Orange, Dubois and Daviess. There are three incorporated communities in Martin County, including Crane, Loogootee, and Shoals. Shoals is the county seat, and second largest community in the county. Figure 1 shows the location of Martin County and the County's incorporated communities.

Martin County's population was 10,058 persons in 2007 according to U.S. Census estimates. This is a decrease from the year 2000 population of 10,369 persons. Loogootee is the largest of the three incorporated communities in Martin County. The city had an estimated population of 2,606 persons in 2007, which is a decrease from the year 2000 population of 2,741. Shoals, the second largest community in Martin County, also had a decrease in population. The 2007 estimate is 791 persons, while the year 2000 population was 807. Crane is the smallest of the three incorporated communities in Martin County. Crane also decreased in population from 203 persons in 2000 to an estimated 195 persons in 2007. Figure 2 shows major points of interest in Martin County, including parks and recreational areas, schools, churches and cemeteries. (Schools, churches and recreational facilities are identified later in the document.)

B. HISTORIC

1. HISTORY OF MARTIN COUNTY

In 1820, land was divided from Dubois and Daviess Counties to form Martin County. The county seat of Martin County was originally located in Hindostan, but moved several times before it settled in Shoals in 1876. Martin County has had more locations for its county seat than any other county in Indiana, totaling ten.

There are many historic and geological sites in Martin County. Hindostan is known as the "lost city" and has few traces of its presence with the exception of a few cemeteries. Some believed that in 1820, yellow fever struck the community of 1000 people, killing most and causing others to flee the city. However, there have been many records recovered showing that only 15 people died due to yellow fever and that the ferries and local mills ran until the 1840's and 1850's. A more likely cause of the abandoned city is due to the depression of 1818-1820 when many of its residents bought property on "notes" and were unable to pay them back. In an attempt to avoid legal prosecution, residents fled the area.

Trinity Springs was considered a tourist attraction in the early 1900's. Trinity consisted of three sulphur water springs that were primarily used for medicinal purposes. Due to the popularity of the springs, seven hotels were built in the area along with a popular railway that delivered guest to Indian Springs, an adjacent railway depot to the north of Trinity Springs. When the railroad route was altered, Trinity Springs' tourism disappeared. The springs are still there and are part of the Hoosier National Forest.

Located at Trinity Springs, lies the Mustering Elm. This site was famous for the assembly of the 65th Indiana Regiment in 1862 near the beginning of the Civil War. The site is now used as a public park and is frequently used as a gathering place.

Over the years Martin County has seen a wealth of lucrative business opportunities. The most notable is Crane Naval Surface Warfare Center which was built in 1940 during World War II. Originally created as an ammunition depot, the base was named after Commodore William Montgomery Crane, the first head of the Navy's Bureau of Ordnance. Currently, Crane Naval Surface Warfare Center is the third largest employer in Southwest Indiana, employing approximately 3,600 people.

Other businesses relied on the natural resources available. Martin County has soil rich in gypsum making the area home to US Gypsum and National Gypsum, both located near Shoals. Between 1915 and 1947, Fabius Gwin's musseling company employed over 300 people to dig in the White River for mussels and create buttons. Known as the "button king", Gwin kept the business afloat until his death despite the growth in popularity of the



Figure 1: Martin County Location Map

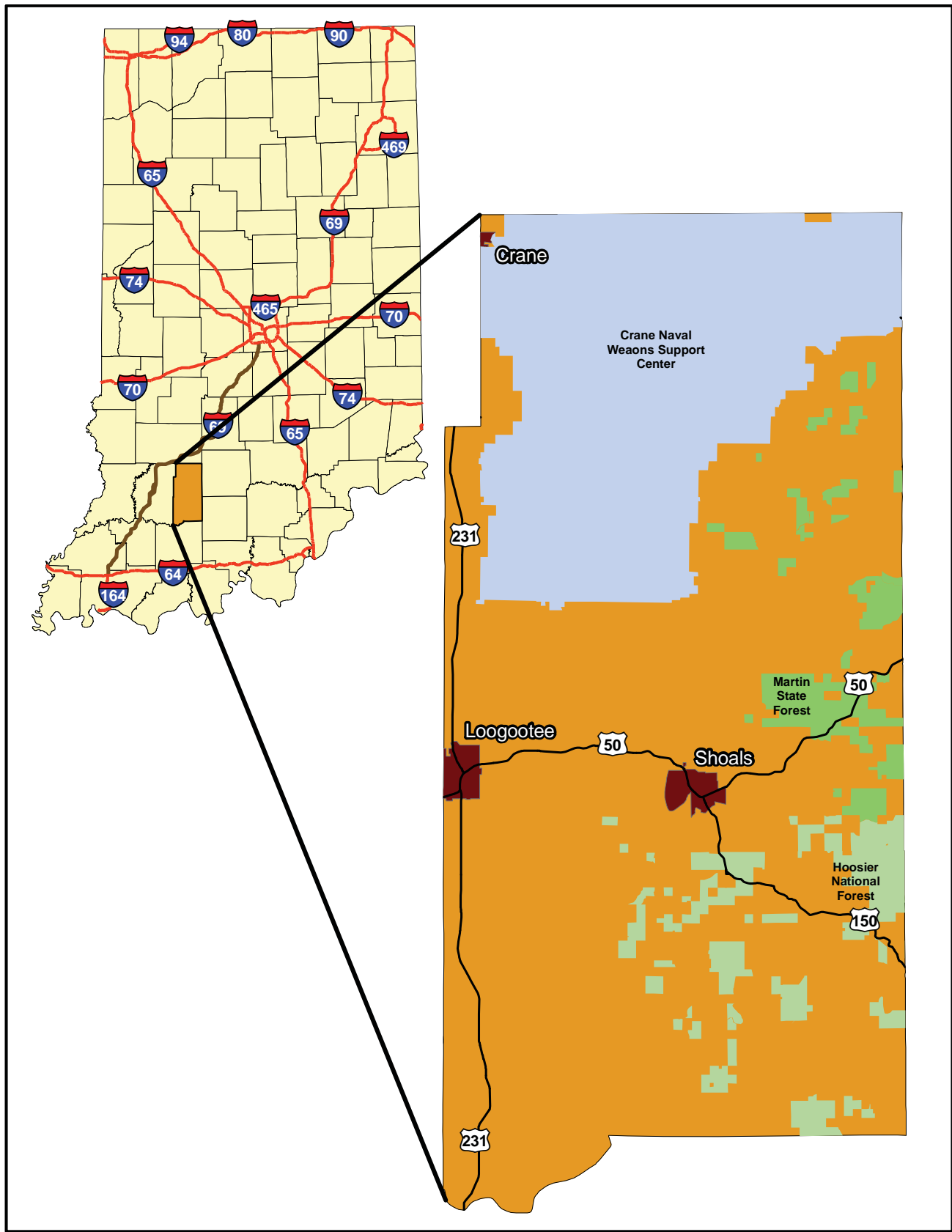
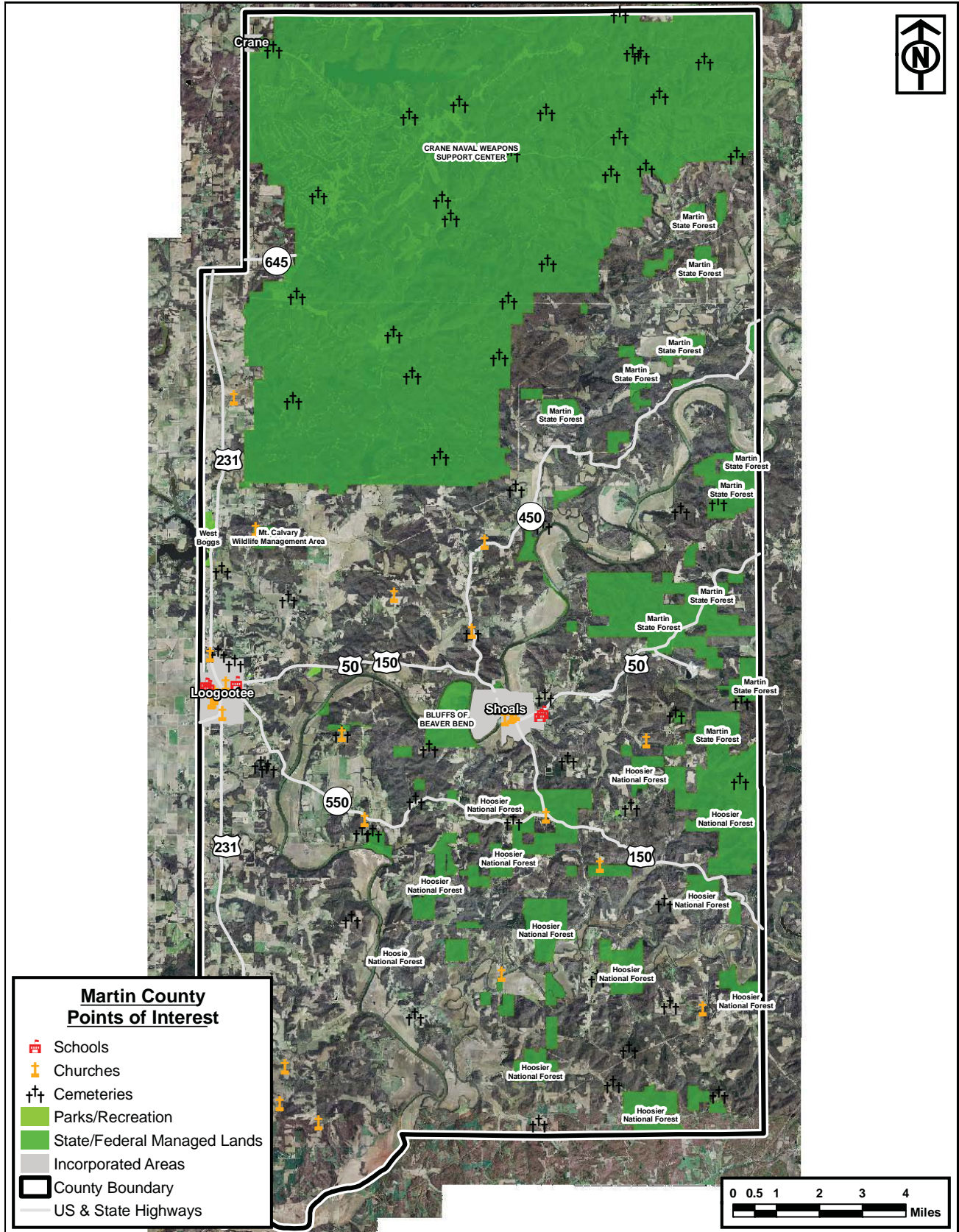




Figure 2: Points of Interest





zipper and elastics. In the mid 1800's, Upton Stuckey discovered the abundance of high quality yellow-loess clay located between Shoals and Loogootee. Between 1870 and 1892, Devol and Catterson operated two pottery kilns that produced over 92,000 gallons of stoneware annually. Around 1902, large amounts of sand and natural gas were discovered, leading to the creation of multiple glass companies. By 1915, however, these glass companies closed due to the severe decline in natural gas resources.

2. HISTORIC SITES AND STRUCTURES

The Indiana Department of Natural Resources and Historic Landmarks Foundation of Indiana jointly conduct historic structures inventories throughout the state. However, Martin County is one of the few counties that have never had an inventory completed. As part of the I-69 environmental studies, there have been fifteen potentially eligible historic sites for the National Register in the corridor. Although a complete historic inventory has not been conducted in Martin County and its communities, there are undoubtedly other structures that may be eligible for the National and State Register of Historic Landmarks throughout Martin County and particularly its incorporated areas.

One archaeological site has been identified in Martin County in the vicinity of the I-69 Corridor. A log barn and root cellar are all that remain of this abandoned farmstead.

The Martin County Historical Society identifies ten sites and four structures as being historic. The ten sites include numerous geological sites. The four structures include the Old County Courthouse (currently the Martin County Museum), the Old County Jail, the Houghton House, and the Routt House. Figure 3 shows the location of the Martin County Historical Society historic sites and structures.

Several geological sites are located in Martin County, including Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend, and Jug Rock. Spout Spring is one of the highest volume springs in Indiana. The spring is located at the base of Beaver Bluff. Pinnacle Rock is a 160 foot sandstone cliff near the White River along West River Road in Shoals. House Rock is a sandstone cave also located along West River Road in Shoals. The Bluffs of Beaver Bend is a 100-foot tall Mansfield Sandstone bluff near the White River. Jug Rock is a 64-foot tall, freestanding sandstone formation eroded from a ledge of rock. The formation is located just west of the White River bridge in Shoals.

Other historic sites in Martin County include Mustering Elm, Hindostan Falls, Overlook Park, Martin State Forest, and West Boggs Lake. Mustering Elm is the location of the Trinity Springs where the 65th Indiana Regiment were mustered for the Civil War in 1861. The site is currently a public park. Hindostan Falls is a ten-foot tall falls on the White River. The area is open to the public for fishing and picnicking. Overlook Park has a scenic view of the White River through river bottoms, farms, and valleys. The park is located at the intersection of US 50 and SR 450. The Martin State Forest covers more than 6,000 acres in Martin County. The park has numerous fishing lakes, picnic areas, shelters, campgrounds, and trails. West Boggs Lake is located north of Loogootee and includes a public park with camping, boating, swimming, and picnic areas. The Stoll's Lakeview Restaurant and Lakeview Golf Course are both located along West Boggs Lake.

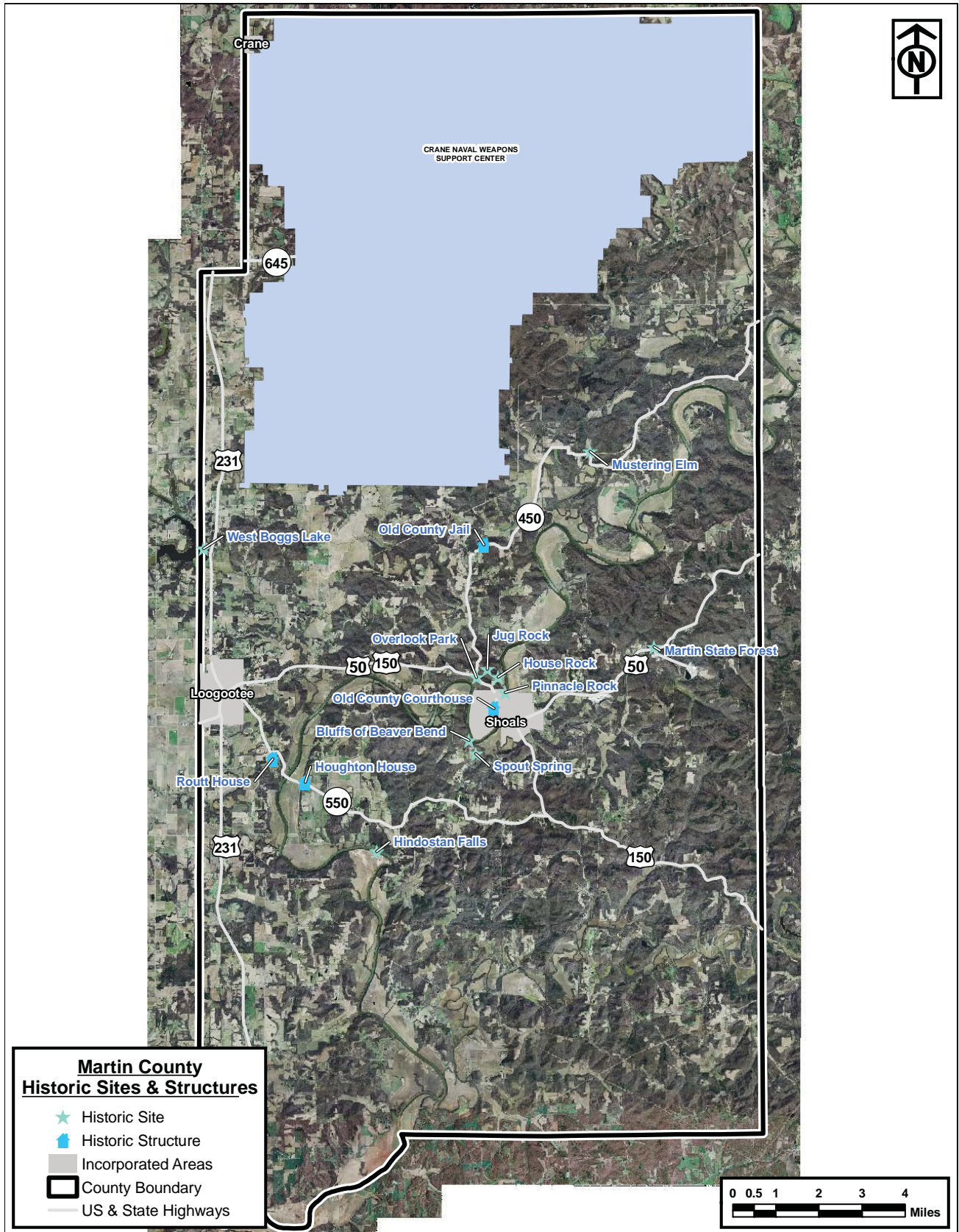
The Old County Courthouse is the only historical structure in Martin County listed on the National Register of Historic Places. It was built in 1875 and is now used for the Martin County Museum. The building is located on Capital Avenue in Shoals.

The Old County Jail was built in 1857 from large sandstone blocks. It is located in Dover Hill along SR 450. The old jail is currently used as a private home.

The Routt House and Houghton House were two Stage Coach Houses. The Houghton House was built around 1834 and home of Major William Houghton, a Civil War Veteran and president of the White River Bank. Routt House was constructed in 1832 and is located in Mount Pleasant. Both of these houses are currently used as private homes.



Figure 3: Historic Sites and Structures





C. NATURAL ENVIRONMENT

1. RELATION TO COMMUNITY GROWTH

The natural setting of a community generally determines constraints to urban development. The natural resources (e.g., mineral resources, topography, forested areas, etc.) of a community are an indicator of economic development opportunities. While some natural resources facilitate economic development, others can hinder development. The floodplains of the White River, steep slopes, and the numerous forested areas in the county make development difficult, especially in the Martin State Forest and Hoosier National Forest where no development is allowed.

2. AGRICULTURAL LANDS

Martin County is one of 12 counties that comprise the Southwest Agricultural Statistics District in Indiana¹. The 2002 census of agriculture data show farmland in this county encompassed 63,517 acres (30 percent of the total county area) on 350 farms. Average farm size was 181 acres. The average value per acre for land and buildings in 2002 was \$1,938 for Martin County (88th in Indiana). Cash receipts in 2005 totaled \$25,803,000 (76th in Indiana)².

Agricultural commodities produced in Martin County include corn, soybeans, and hay. Livestock production includes beef cattle, hogs, sheep, and turkeys. Martin County ranked 81st in corn production, 83rd in soybean production, and 54th in hay production compared with other Indiana counties in 2006. Martin County ranked 22nd for beef cows in January 2007. Additionally, it ranked 49th for hogs, 85th for sheep, and 3rd for turkeys in 2002.²

Prime farmland is defined by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is available for these uses (i.e., land that could be cropland, pastureland, rangeland, forest land or other land, but not urban built-up land or water)." It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if treated and managed according to acceptable farming methods. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, and few or no rocks. Its soils are permeable to water and air. Prime farmland is not excessively eroded or saturated with water for long periods of time, and it either does not flood frequently during the growing season or it is protected from flooding³.

According to NRCS digital SSURGO soil data for Martin County, 26,855 acres (12 percent) of the county consist of soils in which all areas are prime farmland; 3,195 acres (one percent) consist of soils that are prime farmland if drained; 11,587 acres (five percent) consist of soils that are prime farmland if protected from flooding or not frequently flooded during the growing season; 19,291 acres (nine percent) consist of soils that are prime farmland if drained and either protected from flooding or not frequently flooded during the growing season; and there are no soils that are farmland of statewide importance.

Figure 4 shows the NRCS soil layer and the different prime farmland categories. Most of the farmland and prime farmland soils are associated with the rivers and drainages.

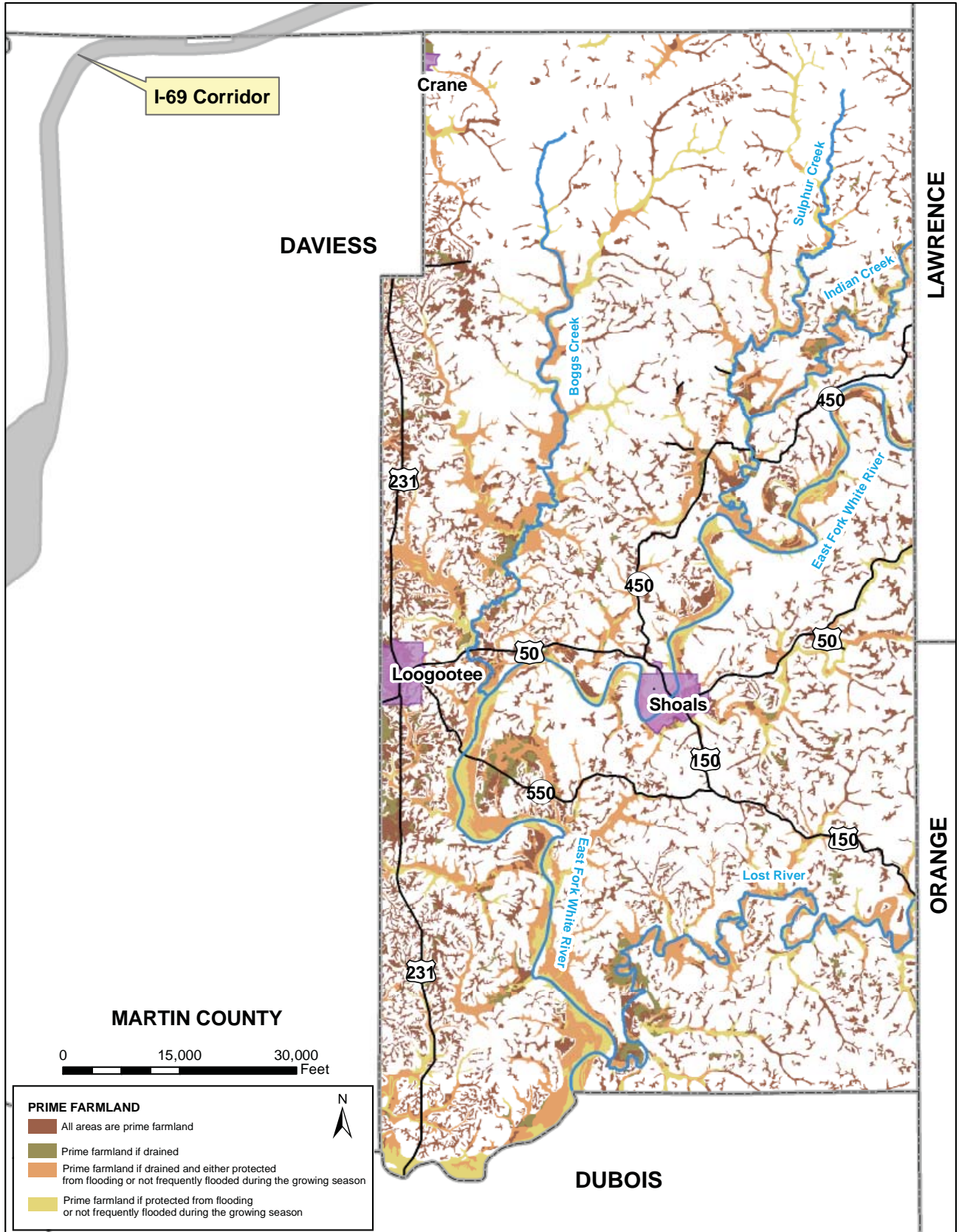
1 USDA, Indiana Agricultural Statistics Districts, 2006-2007. Map No. A. Accessed 07/28/09. http://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/0607/insdback.pdf

2 USDA Indiana Annual Statistical Bulletin. "County Highlights." Accessed 07/28/09. http://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/0607/pg116-125.pdf

3 USDA Natural Resources Conservation Service. "Definitions." Accessed 07/28/09. <http://www.nrcs.usda.gov/TECHNICAL/NRI/maps/meta/m5566.html>



Figure 4: Prime Farmland





3. RATINGS FOR SEPTIC TANK ABSORPTION FIELDS

Review of the engineering ratings for septic tank absorption fields for each soil unit using the digital files for NRCS SSURGO soils, showed ratings of “very limited” through the majority of the county, and “somewhat limited” scattered through the county in small spots. Figure 5 shows the septic ratings throughout the county.

4. SOILS

There are 68 soil types in Martin County. The soils vary frequently with the topography. The two most dominant soils are Wpfg (Wellston-Tipsaw Adyeville complex, 18 to 70 percent slopes), and WpnE (Wellston-Adyeville complex, 12 to 30 percent slopes).

5. FOREST LANDS

As part of the Forest Inventory Analysis by the United States Department of Agriculture (USDA) in 1950, Indiana was divided into four forest survey units. These units have remained consistent throughout the years in order to more accurately track changes in forests from survey to survey. Martin County is within the Lower Wabash Unit. The most common forest types in this unit are maple-beech and oak-hickory followed by the elm-ash-cottonwood type to a lesser extent. The higher, drier portions of the unit provide growing sites for most of the common tree species found in the other parts of Indiana⁴.

In 2006, the USDA Forest Service Forest Inventory and Analysis Data Center showed Martin County as having 134,940 acres of accessible forest (approximately 62 percent of total land acres). The forest is owned by private owners (64,295 acre, 48 percent), the Department of Defense (43,068 acre, 32 percent), the State of Indiana (15,164 acre, 11 percent), and National Forest (12,411 acre, nine percent). Most of the forest type in Martin County is comprised of white oak/red oak/hickory at 41 percent. Sugar maple/beech/yellow birch constitutes 23 percent. Yellow poplar/white oak/red oak was the third most abundant type at nine percent and white oak is eight percent. All other forest types comprised less than five percent: cherry ash/yellow-poplar, mixed upland hardwoods, sugarberry/hackberry/elm/green ash, sassafras/persimmon, Virginia pine/southern red oak, yellow poplar, chestnut oak.

Forest land is often present on steeper topography where the land is less conducive to agriculture and development. Figure 6 shows the location of forested areas based on the MRLC Land Cover GIS data for the year 2001.

6. TERRAIN AND TOPOGRAPHY

The western border of the county roughly follows the delineation between the Wabash Lowland and Crawford Upland Physiographic regions. Physiographic regions and slopes are shown in Figure 7.

The Wabash Lowland is a broad lowland about 500 feet above sea level. The major drainages, such as the West Fork of the White River, have extensive floodplains with sand dunes along major river valleys. Almost all of this section has been glaciated. Much of the land in this section is in agricultural use. Strip mines for coal are also common.

The Crawford Upland is a scenic section and makes up nearly all of Martin County. This section is comprised of rugged hills with steep stream valleys. It is the presence of sandstone that accounts for the relief in this section. Local relief of 200 to 300 feet is common. Sinkholes, karst valleys, and caves are common in the eastern portion of the section⁵. Much of the section is forested because the rugged topography is less conducive to agriculture.

4 Tormoehlen, Barbara, Joey Gallion, and Thomas L. Schmidt. 2000. Forests of Indiana: A 1998 Overview. Northeastern Area State and Private Forestry, Forest Service, United States Department of Agriculture. NA-TP-03-00, pp.17. Accessed 07/28/09. <http://www.na.fed.us/SPFO/pubs/misc/in98forests/webversion/>

5 Gray, H. 2000. Physiographic Divisions of Indiana. Indiana Geological Survey Special Report 61, Indiana University.



Figure 5: Septic Fields

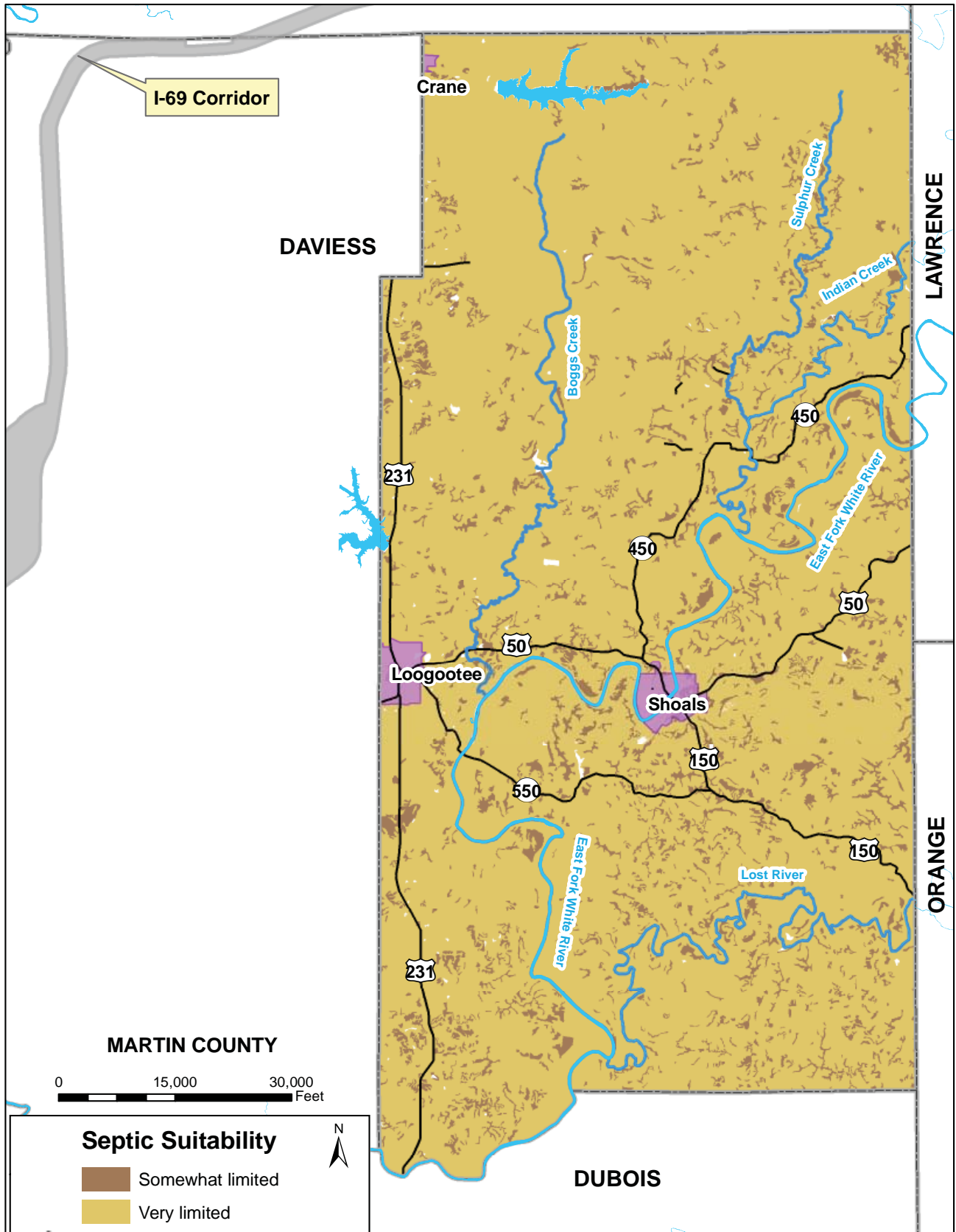




Figure 6: Forested Areas

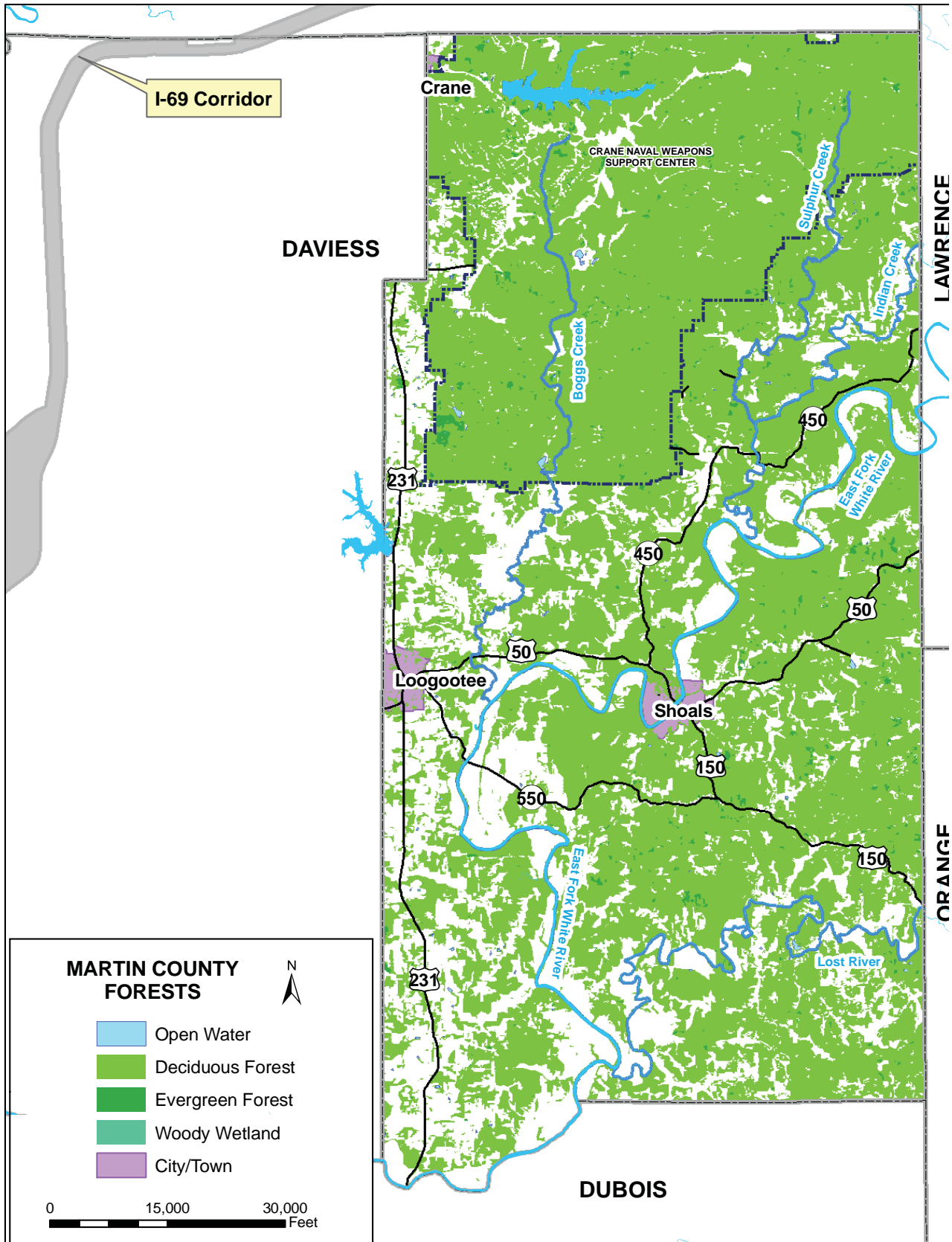




Figure 7: Physiographic Regions and Slopes

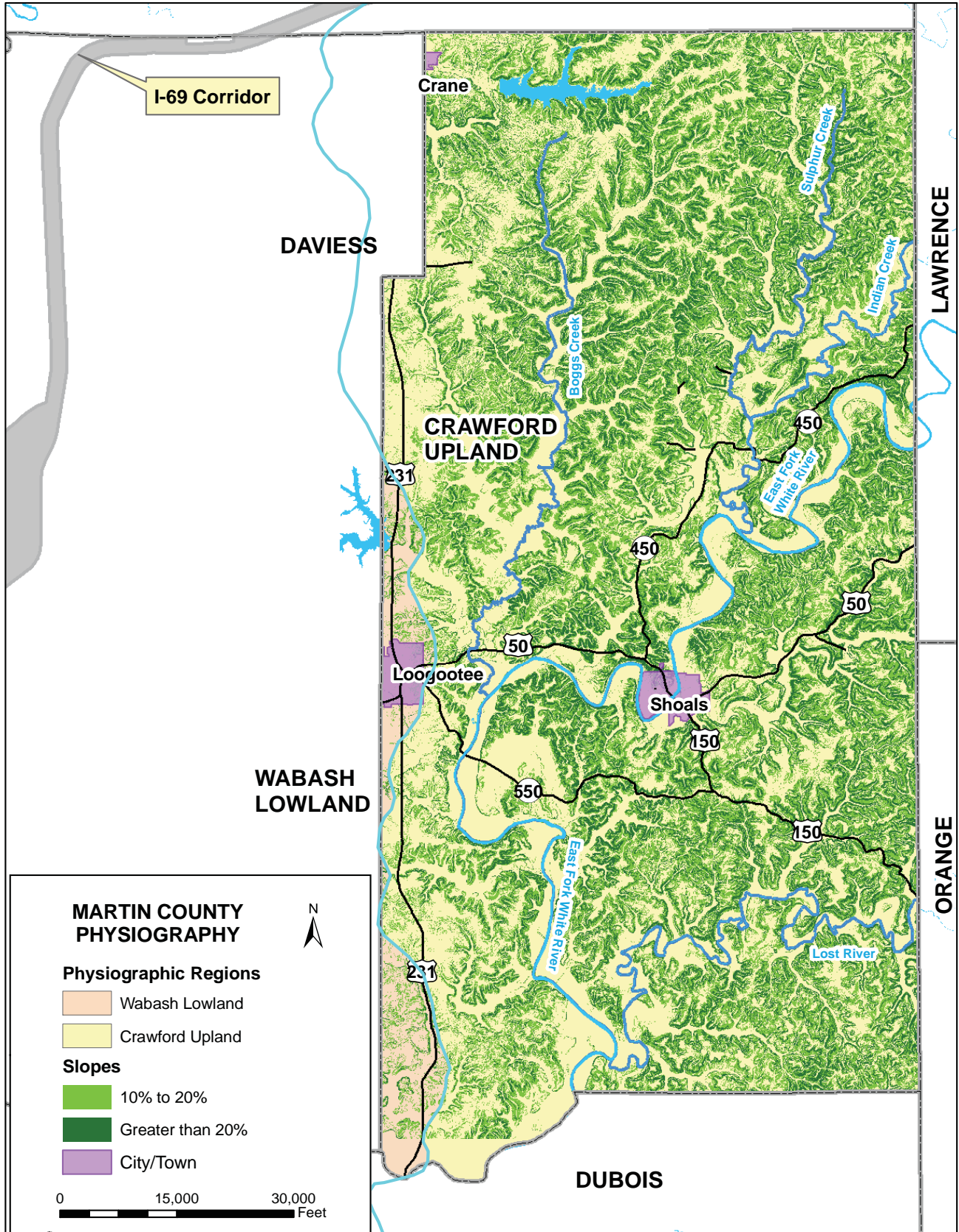
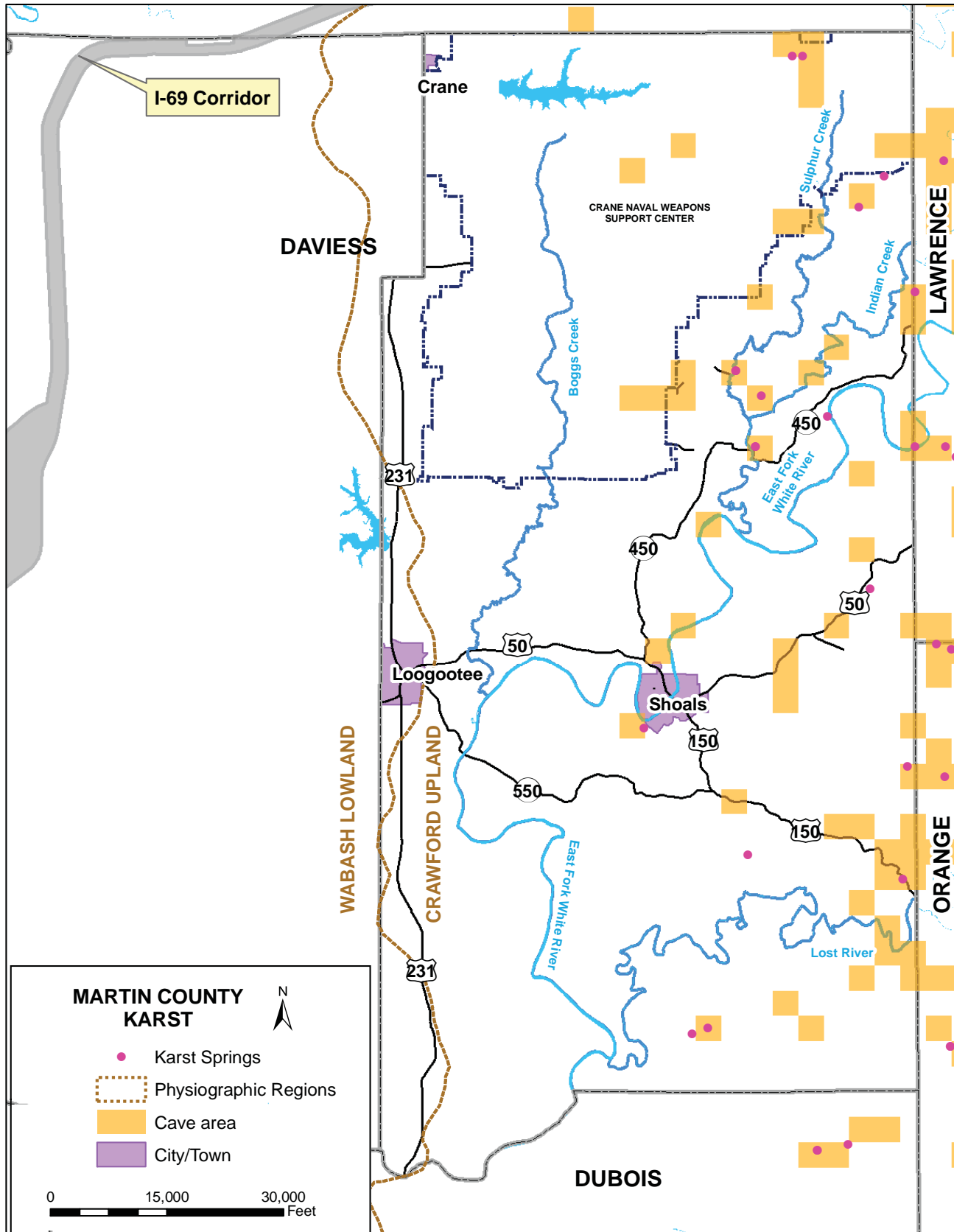




Figure 8: Karst Features





a. Karst Topography in the Crawford Upland

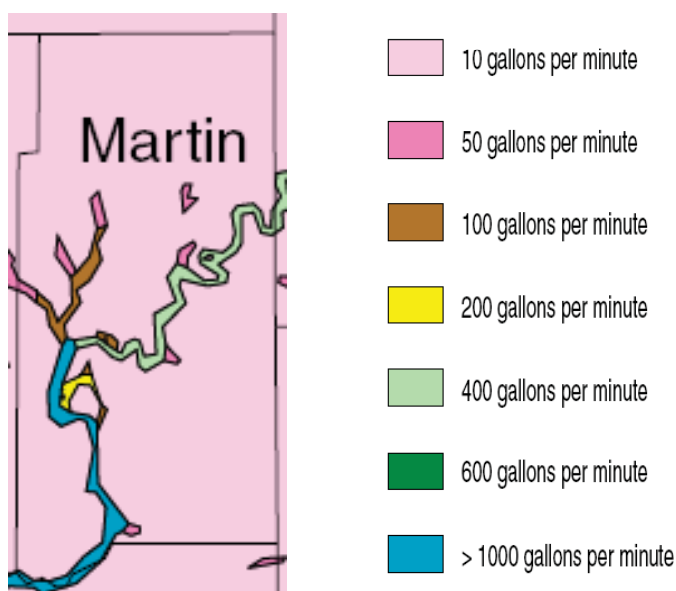
One of the dominant features of the Crawford Upland is karst geology. As you move east across the county, more and more previously identified karst features are present. Indiana Geological Survey databases have identified 69 caves in a 55 square kilometer area and 17 karst springs were identified. The Crawford Upland is characterized by karst topography; therefore, all development in the county should include a thorough investigation for karst topography to locate previously unidentified features. Known karst features are shown in Figure 8.

7. GROUNDWATER RESOURCES

a. Groundwater Availability

The generalized map of groundwater availability is presented in Figure 9. It is a subset of a statewide map available from IDNR, Division of water⁶. The map shows that the majority of available groundwater is associated with the branches of the East Fork White River.

Figure 9: Groundwater Availability



b. Aquifers

More detailed information about Martin County aquifers are available in reports from the Indiana Department of Natural Resources, Division of Water, titled “Bedrock Aquifer Systems of Martin County” and “Unconsolidated Aquifer Systems of Martin County” by William C. Herring, June 2003 (<http://www.in.gov/dnr/water/4607.htm>). Indiana Department of Natural Resources, Water Division maps for bedrock aquifers and unconsolidated aquifers can also be found at the above mentioned website.

i. Bedrock⁷

The occurrence of bedrock aquifers depends on the original composition of the rocks and subsequent changes

6 Indiana Department of Natural Resources, Division of Water. Groundwater Availability. Accessed 07/28/09. <http://www.in.gov/dnr/water/files/indiana-wa.pdf>

7 Herring, W. C. 2003. “Bedrock Aquifer Systems of Martin County, Indiana”, Indiana Department of Natural Resources, Division of Water, Resource Assessment Section. Accessed 07/28/09. http://www.in.gov/dnr/water/files/martin_bedrock.pdf



which influence the hydraulic properties. Post-depositional processes which promote jointing, fracturing, and solution activity of exposed bedrock generally increase the hydraulic conductivity (permeability) of the upper portion of bedrock aquifer systems. Because permeability is often greatest near the bedrock surface, bedrock units within the upper 100 feet are generally the most productive aquifers. In Martin County, rock types exposed at the bedrock surface range from relatively unproductive shales to moderately productive limestones and sandstones.

Bedrock aquifer systems in the county are overlain by unconsolidated deposits of varying thickness. Refer to the map for unconsolidated aquifer systems for more information. Most of the bedrock aquifers in the county are under confined conditions. In other words, the potentiometric surface (water level) in most wells completed in bedrock rises above the top of the water-bearing zone.

The yield of a bedrock aquifer depends on its hydraulic characteristics and the nature of the overlying deposits. Shale and glacial till act as aquitards, restricting recharge to underlying bedrock aquifers. However, fracturing and/or jointing may occur in aquitards, which can increase recharge to the underlying aquifers. Hydraulic properties of the bedrock aquifers are highly variable.

In general, the potential for encountering mineralized or saline ground water in Martin County increases rapidly for bedrock wells deeper than about 300 feet. Mineralized water is sometimes noted in springs and shallower wells, particularly in low-lying areas. Therefore, the discussion and evaluation of the ground-water potential of the bedrock aquifers is essentially limited to those geologic units lying above the expected limits of non-potable water. Three bedrock aquifer systems are identified for Martin County based on bedrock lithology. They are, from west to east and youngest to oldest: Raccoon Creek Group of Pennsylvanian age; Buffalo Wallow, Stephensport, and West Baden Groups of Mississippian age; and Blue River and Sanders Groups of Mississippian age.

The bedrock aquifer systems extend across Martin County generally as a series of bands trending north-northwest to south-southeast. In the county, the Mississippian age bedrock was truncated by thousands of years of erosion. Subsequent burial of the erosion surface by sediments during Pennsylvanian time created one of the most widespread regional unconformities in the world, the Mississippian-Pennsylvanian unconformity. Younger Pennsylvanian age rocks overlap onto progressively older Mississippian age rocks at increasing distances north of the Ohio River.

Bedrock aquifers are used much more than unconsolidated aquifers in most of the county. This is because unconsolidated materials are typically very thin, primarily consisting of weathered bedrock residuum. The largest exception is the main valley of the East Fork White River, where thick deposits of sand and gravel provide abundant ground water.

The susceptibility of bedrock aquifer systems to surface contamination is largely dependent on the type and thickness of the overlying sediments. Just as recharge for bedrock aquifers cannot exceed that of overlying unconsolidated deposits, susceptibility to surface contamination will not exceed that of overlying deposits. However, because the bedrock aquifer systems have complex fracturing systems, once a contaminant has been introduced into a bedrock aquifer system, it will be difficult to track and remediate.

ii. Unconsolidated Aquifers⁸

Four unconsolidated aquifer systems have been mapped in Martin County: the Dissected Till and Residuum; the Alluvial, Lacustrine, and Backwater Deposits; the White River and Tributaries Outwash; and the Coal Mine Spoil. The first three aquifer systems comprise sediments that were deposited by glaciers and their meltwaters, or are thin, eroded residuum (a product of bedrock weathering). Boundaries of these aquifer systems are often gradational and individual aquifers may extend across aquifer system boundaries. The Coal Mine Spoil Aquifer System is man-made and the larger area boundaries are well defined.

⁸ Spaeth, R. H. and W. C. Herring. 2003. Map: "Unconsolidated Aquifers of Martin County, Indiana", Indiana Department of Natural Resources, Division of Water, Resource Assessment Section. Accessed 07/28/09. http://www.in.gov/dnr/water/files/martin_unconsolidated.pdf



The Division of Water has records of only 31 wells completed in these aquifers due to the low population density, limited amount of unconsolidated material in the county, and with the exception of the White River and Tributaries Outwash Aquifer System, the limited productivity of the aquifers. Regional estimates of aquifer susceptibility to contamination from the surface can differ considerably from local reality. Variations within geologic environments can cause variation in susceptibility to surface contamination. In addition, man-made structures such as poorly constructed water wells, unplugged or improperly abandoned wells, and open excavations, can provide contaminant pathways that bypass the naturally protective clays.

c. Wells and Wellhead Protection

Indiana Department of Environmental Management (IDEM) keeps a Drinking Water Facilities Database⁹. A search of the database for Martin County returned six active status facilities and nine inactive facilities. The records of the active facilities are shown in Table 1.

Table 1: IDEM Drinking Water Facility Database Records for Active Facilities

Water System No.	Water System Name	Type	Status	Primary Source Water Type	Population Served	Source
IN5251003	CRANE DIV, NAVAL SURFACE WARFARE CENTER	Community	Active	Surface Water	4500	Lake Greenwood
IN5251002	CRANE WATER WORKS	Community	Active	Groundwater Purchased	329	Eastern Heights Utilities
IN5251004	EAST FORK WATER	Community	Active	Groundwater	3267	3 wells
IN5251005	LOGOOTEER WATER WORKS	Community	Active	Groundwater	3800	7 wells
IN5251006	PERRY WATER SYSTEM, INC.	Community	Active	Groundwater Purchased	731	Daviess Co. Rural Water; Loogootee Water Works
IN5251007	SHOALS WATER COMPANY	Community	Active	Groundwater	853	2 wells

A water well records database was obtained from Indiana Department of Natural Resources, Division of Water on January 15, 2008. The database contained records for 731 groundwater wells in Martin County shown in Figure 10.

Significant water withdrawal facilities, those with capability to pump more than 100,000 gallons per day, in Martin County are listed and described in Table 2¹⁰.

Wellhead protection areas are associated with public water supply wells. A wellhead protection area is the surface and subsurface area surrounding a public water supply well, through which contaminants are reasonably likely to move toward and reach the well. Wellhead protection areas are delineated in order to prevent the contamination of groundwater used as drinking water. Wellhead protection areas may have a detailed delineation and unique shape or a fixed 3,000-foot radius.

The IDEM Ground Water Section administers the Wellhead Protection Program¹¹, which is a strategy to protect ground water drinking supplies from pollution. The Safe Drinking Water Act and the Indiana Wellhead Protection Rule (327 IAC 8.4-1) mandates a wellhead program for all Community Public Water Systems. The Wellhead Protection Programs consists of two phases. Phase I involves the delineation of a Wellhead Protection Area (WHPA), identifying potential sources of contamination, and creating management and contingency plans for the WHPA. Phase II involves the implementation of the plan created in Phase I, and communities are required to report to IDEM how they have protected ground water resources.

⁹ Indiana Department of Environmental Management. Drinking Water Branch, SDWIS Ver. 1.1, Drinking Water Facility Database. Accessed 10/08/08. http://www.in.gov/apps/idem/sdwis_state/

¹⁰ Registered Significant Ground-water Withdrawal Facilities in Daviess County, Indiana. Accessed 07/28/09. http://www.in.gov/dnr/water/files/martin_highcap_table.pdf

¹¹ Indiana Department of Environmental Management. Wellhead Protection Program. Accessed 07/28/09. <http://www.in.gov/idem/4289.htm#proxdet>



Figure 10: Groundwater Wells

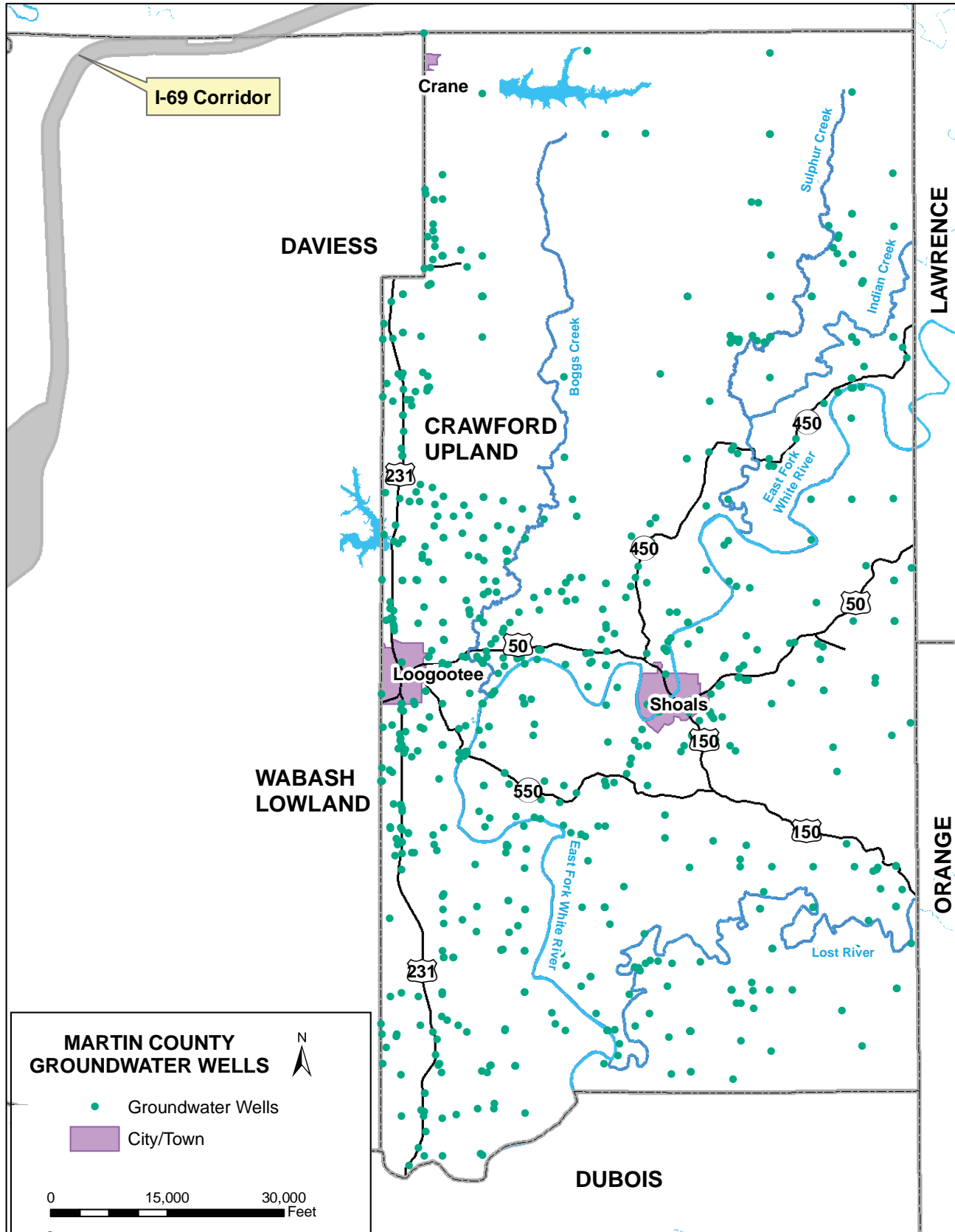




Table 2: Registered Significant Water Withdrawal Facilities

Table X. Registered Significant Water Withdrawal Facilities in Martin, County, Indiana.								
Regist. #	Use	Owner	Regist. Date	Source	Source ID	Pump GPM	Depth (ft)	Quadrangle
02449	Public Supply	Commanding Officer	1985	Intake	GC-1	100	0	Williams
02449	Public Supply	Commanding Officer	1985	Well	2670	60	205	Williams
02449	Public Supply	Commanding Officer	1985	Well	2688	8	127	Williams
02449	Public Supply	Commanding Officer	1985	Well	2797	60	150	Williams
02449	Public Supply	Commanding Officer	1985	Well	2908	60	190	Williams
02449	Public Supply	Commanding Officer	1985	Well	2945	60	150	Williams
02449	Public Supply	Commanding Officer	1985	Well	3004	50	141	Williams
02449	Public Supply	Commanding Officer	1985	Well	3255	8	400	Williams
02449	Public Supply	Commanding Officer	1985	Well	OTA 1	60	65	Williams
02449	Public Supply	Commanding Officer	1985	Well	OTA 2	30	65	Williams
02489	Public Supply	Commanding Officer	1985	Intake	1	1500	0	Koleen
00250	Public Supply	East Fork Water Inc.	1984	Well	1	300	78	Shoals
00250	Public Supply	East Fork Water Inc.	1984	Well	2	300	78	Shoals
00250	Public Supply	East Fork Water Inc.	1984	Well	3	300	72	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	1	500	105	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	2	500	105	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	3	500	105	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	4	500	105	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	5	1000	98	Shoals
00988	Public Supply	Loogootee Water Works	1984	Well	6	1000	105	Shoals
00428	Industry	National Gypsum Co.	1984	Well	1	324	117	Shoals
00428	Industry	National Gypsum Co.	1984	Well	2	350	121	Shoals
04624	Irrigation	Seng Brothers	2006	Intake	1	1200	0	Rusk
04653	Irrigation	Seng Brothers	2007	Intake	1	1000	0	Rusk
04654	Irrigation	Seng Farms	2007	Intake	1	1000	0	Rusk
02235	Public Supply	Shoals Water Co.	1985	Well	1	350	65	Shoals
02235	Public Supply	Shoals Water Co.	1985	Well	2	350	65	Shoals
00791	Industry	U. S. Gypsum Co.	1984	Intake	1	2000	0	Huron
03558	Industry	U. S. Gypsum Co.	1991	Intake	1	200	0	Shoals
03077	Irrigation	West Boggs Park	1989	Intake	1	250	0	Loogootee

All community water systems were required to develop a plan, commonly referred to as a Phase I plan, to protect the areas around their wellheads. All Phase I plans were required to contain, at a minimum the following:

- Establishment of a Local Planning Team
- Delineation of the Wellhead Protection Area
- Identification and Inventory of Potential Contaminant Sources
- Development of a Management Plan for Potential Contaminant Sources
- Development of a Contingency Plan

IDEM provides a Wellhead Protection Program Tracking Database¹². This database provides tracking information on the status of Community Public Water Supply Systems' Wellhead Protection Plans. Results from a search of this database for Martin County are shown in Table 3.

8. STREAMS AND FLOODPLAINS

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. Rivers, streams, and creeks are all names of water flowing on the earth's surface. The flowing water drains a particular watershed.

Martin County intersects three 8-digit watersheds. The majority is in the Lower East Fork White (05120208), while a portion of the northwest in the Lower White (05120202) and a small corner of the southeast is in the Patoka (05120209).

¹² Indiana Department of Environmental Management. Wellhead Protection Program Tracking Database. Accessed 07/28/09. http://www.in.gov/serv/idem_groundwater.



Table 3: IDEM Wellhead Protection Program Tracking Database

PWSID	System Name	Tracking Type	Tracking Action	Action Date
5251004	East Fork Water	Phase 1	Resubmitt	10/15/03
		Phase 1	Review	10/29/03
		ModelDel	Review	04/25/02
		RegLetter	Returned	08/19/03
		ModelDel	Approved	05/10/02
		Phase1	Approved	12/01/03
		ModelDel	Submit	03/28/01
		Phase1	Submit	03/28/01
		Phase1	Returned	10/29/01
		Phase1	Review	10/29/01
5251005	Loogootee Water Works	Phase1	Resubmit	10/15/03
		ModelDel	Approved	05/10/02
		ModelDel	Submit	03/28/01
		Phase1	Review	10/29/01
		Phase1	Returned	10/29/01
		Phase1	Submit	03/28/01
		RegLetter	Returned	08/12/03
		Phase1	Review	10/15/03
		Phase1	Approved	12/01/03
		ModelDel	Review	04/25/02
5251007	Shoals Water Company	ModelDel	Approved	05/10/02
		Phase1	Resubmit	10/15/03
		Phase1	Returned	10/29/01
		Phase1	Approved	12/01/03
		Phase1	Review	10/29/01
		Phase1	Review	10/29/03
		RegLetter	Returned	08/12/03
		Phase1	Submit	03/28/01
		ModelDel	Submit	03/28/01
		ModelDel	Review	04/26/02



The county has two major rivers: East Fork of the White River runs north-south roughly in the middle, and branching off of it in the south, the Lost River runs east-west. Streams branching off East Fork of the White River include: Barn Run, Beaver Creek, Beech Creek, Boggs Creek, Cedar Brook, Crooked Creek, Flood Run, Freemans Spring Branch, Friends Creek, Haw Creek, Hickory Run, Hoffman Run, House Rock Branch, Indian Creek, Jackman Branch, Nubbin Ridge Branch, Overlook Drain, Plaster Creek, Poplar Creek, River Drain, Speel Creek and Willow Creek. The Lost River is also a tributary of the East Fork of the White River. Its tributaries include: Big Creek, Blue Creek, Buck Creek, Grassy Creek, Sams Creek, Simmons Creek, and Virginia Rill. Other streams in the county include Buck Knob Creek, Buzzard Run, Church Brook, Culpepper Brook, Dover Run, Elm Creek, First Creek, Freemans Spring Branch, French Run, Friends Creek, Grove Brook, Gushing Creek, Houghton Run, House Rock Branch, Iron Creek, Jet Run, Lacy Drain, Leaf Branch, Lemon Run, Limb Run, Little Sulphur Creek, Mountain Stream, Nest Brook, Nut Brook, Opossum Creek, Poss Creek, Seed Tick Creek, Sherfick Stream, Silverville Branch, Slate Creek, South Fork Beaver Creek, Sulphur Creek, Swain Branch, Turkey Creek, Union Creek and West Boggs Creek. Martin County has approximately 309 miles of streams and waterways. There are two large lakes in Martin County, Greenwood Lake (805 acres) located in the Crane Naval Surface Warfare Center and West Boggs Lake (459 acres) located primarily in bordering Daviess County. Other lakes include Seed Tick Lake, Baver Lake, and Oberlin Lake.

Floodplains are a vital part of a river's or stream's ecosystem. They are important because they act as flood buffers, water filters, nurseries, and are major centers of biological life in the river or stream ecosystem. Floodplains are also important for maintenance of water quality because they provide fresh water to wetlands and backwaters, dilute salts and nutrients, and improve the overall health of the habitat used by many species of birds, fish, and plants. They are vital biologically because they represent areas where many species reproduce and are important for breeding and regeneration cycles. High water tables, insurance restrictions because of flooding, and problems with groundwater contamination can severely restrict or prohibit development within a floodplain. In Martin County, most significant streams have accompanying significant floodplains.

Figure 12 shows the 8-digit watersheds, streams, and 100-year floodplains within Martin County.

Drainage area determinations are required for engineering studies related to streams. The drainage area is a parameter used in the analysis of streamflow characteristics, the design of hydraulic structures, and water availability evaluations. The drainage areas of the streams in Martin County is presented in "Drainage Areas of Indiana Streams" created by the U.S. Geological Survey and the Indiana Department of Natural Resources in 1975 and now published by the Indiana Department of Natural Resources, Division of Water. The document is available at the website, <http://www.in.gov/dnr/water/8722.htm>. A map of Indiana streams is shown in Figure 13 and drainage areas are listed in Table 4.

Section 303(d) of the 1972 Federal Clean Water Act (CWA) requires each state to identify those waters that do not meet the state's Water Quality Standards (WQS) for designated uses. For these impaired waters, states are required to establish total maximum daily loads (TMDLs) to meet the state WQS. In addition, the USEPA has released guidance recommending that states, territories, and authorized tribes submit an Integrated Water Quality Monitoring and Assessment Report that will satisfy CWA requirements for both the Section 305(b) water quality report and Section 303(d) list of impaired waters. Indiana has integrated this guidance into the IDEM's 303(d) listing methodology. This methodology is detailed in the document, "Indiana's 2008 Consolidated Assessment and Listing Methodology."¹³

Waters listed as impaired on the Indiana Department of Environmental Management's 2008 303d list of impaired waters in Martin County include Beaver Creek, Beaver Creek-Lower, Boggs Creek, seven sections of the East Fork of the White River, and the Lost River. The East Fork of the White River has sections listed for mercury, PCBs and the most northern section listed for impaired biotic communities, lead, mercury, and PCBs. Beaver Creek is listed for impaired biotic communities and the lower section is listed for dissolved oxygen. Boggs Creek and the Lost River are listed for E. coli¹⁴.

¹³ Indiana Department of Environmental Management. "Attachment 2: Indiana's 2008 Consolidated Assessment and Listing Methodology (CALM). Accessed 10/28/08. <http://www.in.gov/idem/4680.htm>

¹⁴ Indiana Department of Environmental Management. Approved 2008 303(d) list. Accessed 07/28/09. <http://www.in.gov/idem/4680>.



Figure 12: Streams and Drainage Areas

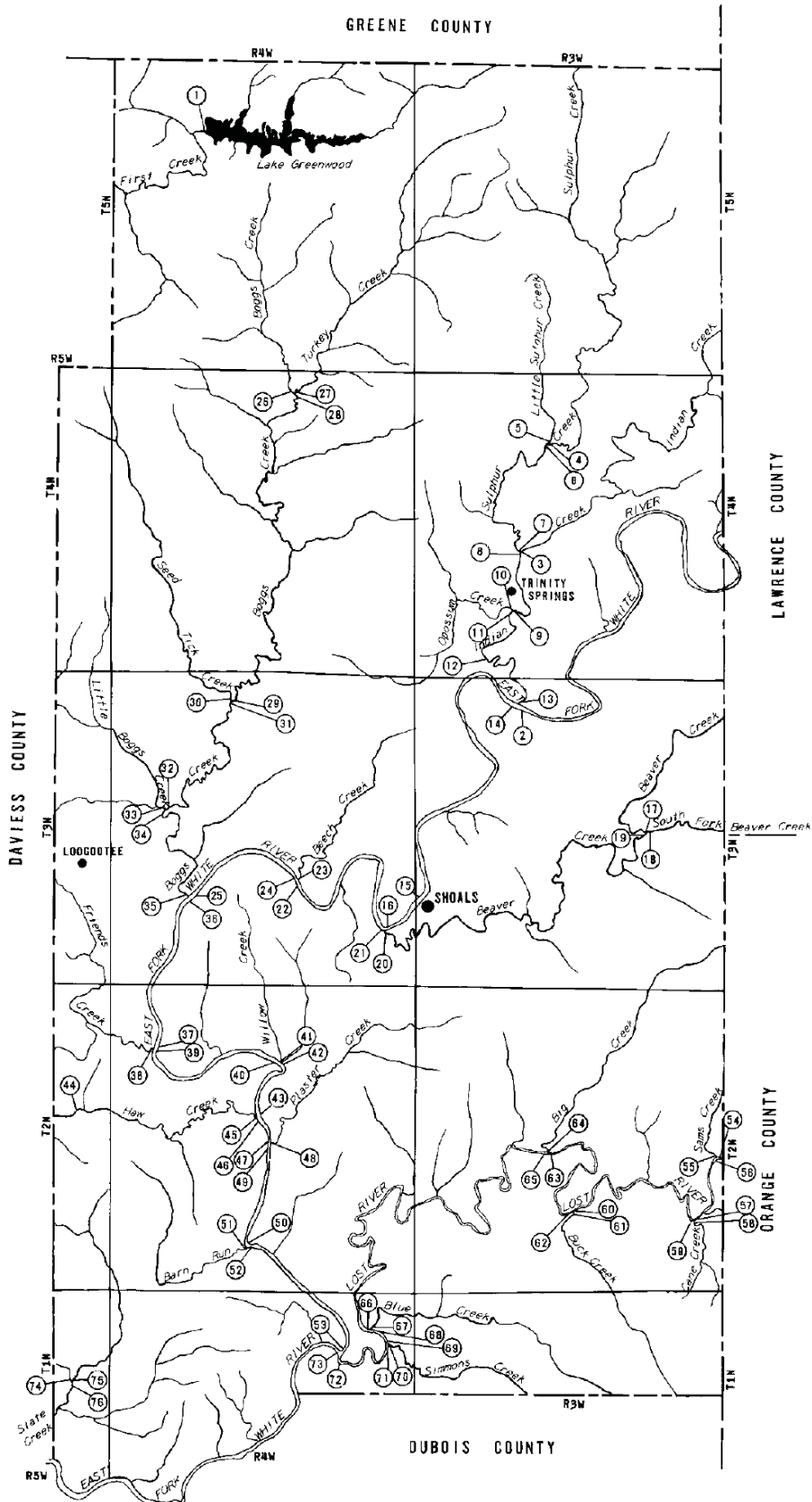




Table 4: Drainage Areas

Co#	Stream and Location	Quadrangle	Sec	Twn	Rng	D Area	NC-OS	R Mile
1	Lake Greenwood (First Creek) at Dam	Koleen	8	5N	4W	14.8		
2	E. FK. White River above Indian Creek	Shoals	5	3N	3W	4745		111.88
3	Indiana Creek above Sulphur Creek	Indian Springs	21	4N	3W	130	10	5.37
4	Sulphur Creek above Little Sulphur Creek	Williams	9	4N	3W	17.5		
5	Little Sulphur Creek at mouth	Williams	9	4N	3W	6.11		
6	Sulphur Creek including Little Sulphur Creek	Williams	9	4N	3W	23.6		
7	Sulphur Creek at mouth	Indian Springs	21	4N	3W	30.7		
8	Indian Creek including Sulphur Creek	Indian Springs	21	4N	3W	161	10	5.37
9	Indian Creek above Opossum Creek	Shoals	29	4N	3W	162	10	3.72
10	Opossum Creek at mouth	Shoals	29	4N	3W	8.42		
11	Indian Creek including Opossum Creek	Shoals	29	4N	3W	171	10	3.72
12	Indian Creek near Trinity Springs--USGS Partial Record Station	Shoals	32	4N	3W	172	10	2.33
13	Indian Creek at mouth	Shoals	5	3N	3W	172	10	
14	E. FK. White River including Indian Creek	Shoals	5	3N	3W	4918		111.88
15	E. FK. White River at Shoals -- USGS Gage (U.S. 50)	Shoals	30	3N	3W	4927		105.34
16	E. FK. White River above Beaver Creek	Shoals	25	3N	4W	4927		104.40
17	Beaver Creek above S. FK. Beaver Creek	Huron	23	3N	3W	45.2	25.1	
18	S. FK. Beaver Creek at Mouth	Huron	23	3N	3W	8.88		
19	Beaver Creek Including S. FK. Beaver Creek	Huron	23	3N	3W	54.1	25.1	
20	Beaver Creek at mouth	Shoals	25	3N	4W	73.5	25.1	
21	E. FK. White River including Beaver Creek	Shoals	25	3N	4W	5011		104.40
22	E. FK. White River above Beech Creek	Shoals	22	3N	4W	5004		100.40
23	Beech Creek at mouth	Shoals	22	3N	4W	6.45		
24	E. FK. White River including Beech Creek	Shoals	22	3N	4W	5011		100.40
25	E. FK. White River above Boggs Creek	Loogootee	29	3N	4W	5013		97.71
26	Boggs Creek above Turkey Creek	Indian Springs	3	4N	4W	7.76		
27	Turkey Creek at mouth	Indian Springs	3	4N	4W	16.0		
28	Boggs Creek including Turkey Creek	Indian Springs	3	4N	4W	23.8		
29	Boggs Creek above Seed Tick Creek	Shoals	4	3N	4W	46.0		
30	Seed Tick Creek at mouth	Shoals	4	3N	4W	13.7		
31	Boggs Creek including Seed Tick Creek	Shoals	4	3N	4W	59.6		
32	Boggs Creek above Little Boggs Creek	Loogootee	17	3N	4W	63.6		
33	Little Boggs Creek at mouth	Loogootee	17	3N	4W	22.0		
34	Boggs Creek including Little Boggs Creek	Loogootee	17	3N	4W	85.6		
35	Boggs Creek at mouth	Loogootee	29	3N	4W	89.1		
36	E. FK. White River including Boggs Creek	Loogootee	29	3N	4W	5102		97.74
37	E. FK. White River above Friends Creek	Alfordsville	7	2N	4W	5105		94.40
38	Friends Creek at mouth	Alfordsville	7	2N	4W	7.99		
39	E. FK. White River including Friends Creek	Alfordsville	7	2N	4W	5113		94.40
40	E. FK. White River above Willow Creek	Rusk	10	2N	4W	5118		91.40
41	Willow Creek at mouth	Rusk	10	2N	4W	5.49		
42	E. FK. White River including Willow Creek	Rusk	10	2N	4W	5123		91.40
43	E. FK. White River above Ham Creek	Rusk	16	2N	4W	5124		89.97
44	Ham c reek at U.S. 231	Alfordsville	13	2N	5W	13.9		
45	Ham Creek at mouth	Rusk	16	2N	4W	20.2		
46	E. FK. White River including Ham Creek	Rusk	16	2N	4W	5144		89.97
47	E. FK. White River above Plaster Creek	Rusk	22	2N	4W	5145		89.42



Table 4 (continued): Drainage Areas

Co#	Stream and Location	Quadrangle	Sec	Twn	Rng	D Area	NC-OS	R Mile
48	Plaster Creek at Mouth	Rusk	22	2N	4W	6.11		
49	E. FK. White River including Plaster Creek	Rusk	22	2N	4W	5151		89.42
50	E. FK. White River above Barn Run	Rusk	33	2N	4W	5153		87.22
51	Barn Run at mouth	Rusk	33	2N	4W	5.26		
52	E. FK. White River including Barn Run	Rusk	33	2N	4W	5158		87.22
53	E. FK. White River above Lost River	Rusk	11	1N	4W	5162		84.14
54	Lost River above Sams Creek	Hillham	24	2N	3W	309		24.16
55	Sams Creek at mouth	Hillham	24	2N	3W	5.65		
56	Lost River including Sams Creek	Hillham	24	2N	3W	314		24.16
57	Lost River above Cane Creek	Hillham	25	2N	3W	315		22.62
58	Cane Creek at mouth	Hillham	25	2N	3W	8.19		
59	Lost River including Cane Creek	Hillham	25	2N	3W	323		22.62
60	Lost River above Buck Creek	Hillham	27	2N	3W	329		18.17
61	Buck Creek at mouth	Hillham	27	2N	3W	5.21		
62	Lost River including Buck Creek	Hillham	27	2N	3W	334		18.17
63	Lost River above Big Creek	Hillham	21	2N	3W	336		14.62
64	Big Creek at mouth	Hillham	21	2N	3W	8.78		
65	Lost River including Big Creek	Hillham	21	2N	3W	345		14.62
66	Lost River above Blue Creek	Rusk	1	1N	4W	362		2.27
67	Blue Creek at mouth	Rusk	1	1N	4W	6.59		
68	Lost River including Blue Creek	Rusk	1	1N	4W	368		2.27
69	Lost River above Simmons Creek	Rusk	12	1N	4W	369		1.75
70	Simmons Creek at mouth	Rusk	12	1N	4W	5.94		
71	Lost River including Simmons Creek	Rusk	12	1N	4W	374		1.75
72	Lost River at mouth	Rusk	11	1N	4W	376		
73	E. FK. White River including Lost River	Rusk	11	1N	4W	5538		84.14
74	Slate Creek Tributary #1 at mouth	Alfordsville	13	1N	5W	7.96		
75	Slate Creek Tributary #2 at mouth	Alfordsville	13	1N	5W	5.42		
76	Slate Creek at confluence of Tributaries 1 and 2	Alfordsville	13	1N	5W	13.4		

The National Park Service has compiled and maintains the Nationwide Rivers Inventory (NRI). The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic Rivers System. The intent of the NRI is to provide information to assist in making balanced decisions regarding use of the nation’s river resources. The Lost River is listed in the Nationwide Rivers List (NRI). The river description in the NRI listing states, “The river is an internationally known example of karst topography. Water enters the system through literally thousands of sinkholes. In addition, the surface river loses water into a system of swallow holes draining portions of the surface river. About 22 miles is then dry except during periods of flooding. With the exception of the dry bed portion, the entire river is canoeable. Frequent log jams and slow meandering flow make for a challenging experience.”

To help identify the rivers and streams that have particular environmental or aesthetic interest, a special listing has been prepared by the Division of Outdoor Recreation of the Department of Natural Resources and is published as the “Outstanding Rivers List for Indiana” by the Natural Resource Commission. The Lost River is listed as significant for its potential to be added to the National Wild and Scenic Rivers System, listed by state natural heritage program sites having outstanding ecological importance, designation as a National Natural Landmark (not verified with the National Natural Landmark listings), and description as an exceptional use water. The East Fork of the White River is listed as significant for its inclusion in the Nationwide Rivers



Inventory, listed by state natural heritage program sites having outstanding ecological importance, and being a state designated canoe trail¹⁵.

9. WETLANDS

Wetlands, as defined by the US Army Corps of Engineers (USACE) (33 CFR 328.3) and the Environmental Protection Agency (EPA), are “those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands are an important natural resource because they support rich biological communities. Because of their functions and values, there are several federal and state laws that regulate activities that affect wetlands. The major laws protecting wetlands include the Federal Clean Water Act, the River and Harbors Act, and Indiana’s Flood Control Act.

Martin County has over 4,778 acres of wetlands, according to the National Wetlands Inventory (NWI) digital shapefiles¹⁶. They are located throughout the county, mostly within the floodplains. Figure 14 shows the location of NWI wetlands in Martin County.

Most of the wetlands within the county are classified as forested wetlands, consisting of 4,268 acres. Forested wetlands are wetlands that are characterized by woody vegetation that is six meters (20 feet) tall or taller. Forested wetlands are the most common wetland type in Indiana where moisture is abundant particularly along rivers and streams¹⁷. Forested wetlands normally possess an upper canopy of trees, an understory of young trees and shrubs, and a herbaceous ground layer¹⁸. Emergent wetlands make up 436 acres and are emergent characterized by erect, rooted, herbaceous hydrophytes (excluding mosses and lichens). Emergent wetlands are also known as marshes. Scrub-shrub wetlands, which consist of shrubs and/or small trees, make up 74 acres of the wetlands Martin County.

10. CONSERVANCY DISTRICT¹⁹

The Indiana Conservancy Act, IC 14-33, provides a vehicle by which landowners can organize a special taxing district to solve problems related to water resources management. Martin County is served by the Prairie Creek Conservancy District headquartered in Washington, Indiana. Its stated purpose is drainage, erosion, flood control, and recreation. Problems that can be solved through the Indiana Conservancy District Act are as follows:

1. Flood prevention and control.
2. Improving drainage.
3. Providing for irrigation.
4. Providing water supply, including treatment and distribution, for domestic, industrial, and public use.
5. Providing for collection, treatment, and disposal of sewage and other liquid wastes.
6. Developing forests, wildlife areas, parks, and recreational facilities where feasible in connection with beneficial water management.
7. Preventing loss of topsoil from injurious water erosion.
8. Storage of water for augmentation of stream flow.

¹⁵ Indiana Register. Natural Resources Commission. Information Bulletin #4. “Outstanding Rivers List”. Accessed 07/28/09. <http://www.in.gov/legislative/register/20070530-IR-312070287NRA.xml.pdf>

¹⁶ Calculated by adding the acreage value of polygons, the length of lines in feet multiplied by 100 feet for estimated width converted to acres, and the number of points multiplied by 0.1 acres.

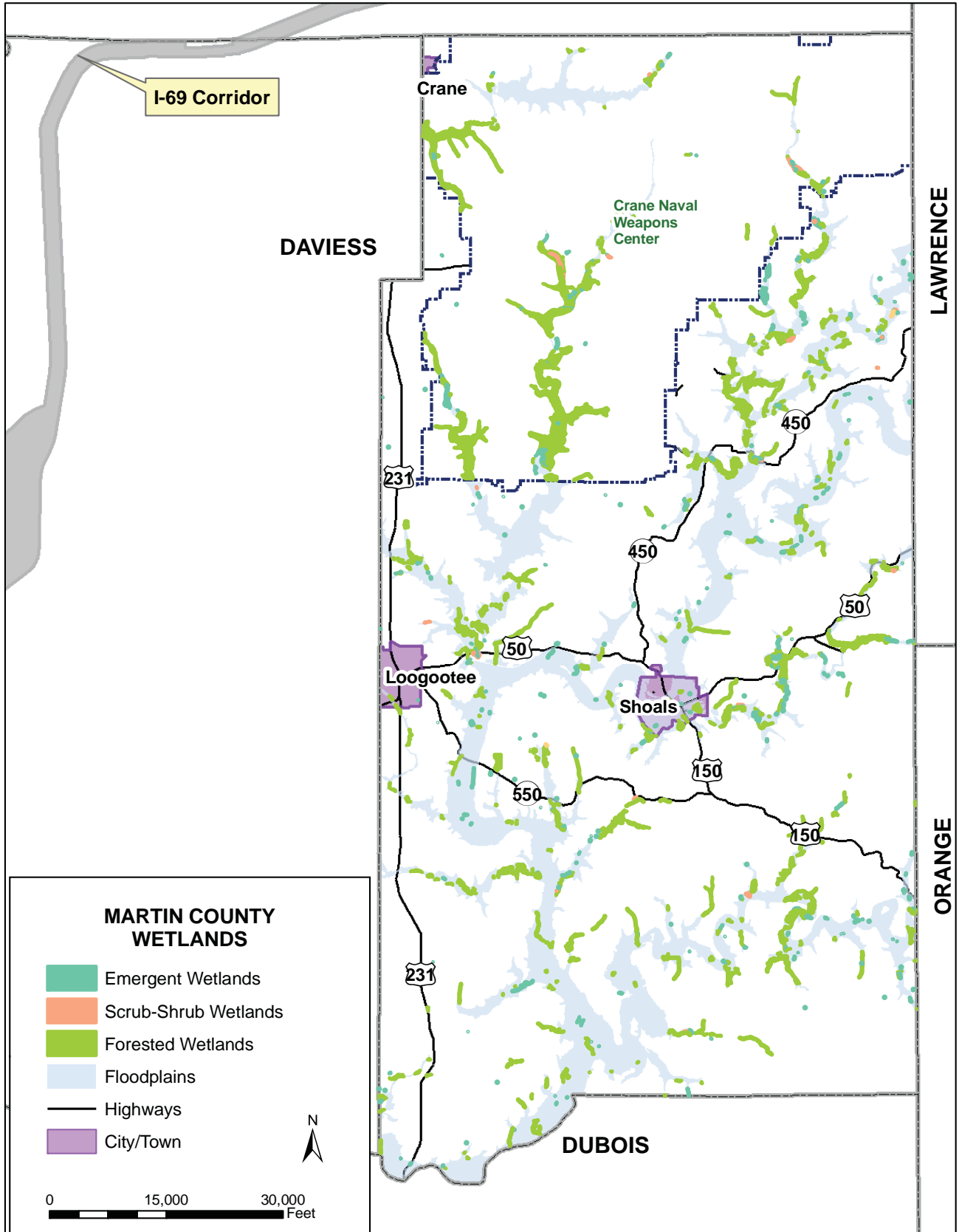
¹⁷ Cowardin, L. M., V. Carter, F. C. Golet and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. United States Fish and Wildlife Service, Office of Biological Services. Government Printing Office, Washington, D.C. FWS/OBS-79/31. 103 pp.

¹⁸ United States Geological Survey. 1998. Classification of Wetlands and Deepwater Habitats of the United States: Emergent Wetland. United States Geological Survey, Northern Prairie Wildlife Research Center. Accessed 07/28/09. <http://www.npwrc.usgs.gov/resource/wetlands/classwet/emergent.htm>

¹⁹ Indiana Department of Natural Resources, Department of Water. Community Assistance and Information. What is a Conservancy District? Accessed 07/28/09. <http://www.in.gov/dnr/water/files/1001.pdf>



Figure 13: Wetlands





9. Operation, maintenance, and improvement of any work of improvement for water based recreational purposes, or other work of improvement that could have been built for any other purpose authorized by the Act.

11. WATER USE²⁰

The Water Resource Management Act (Indiana Code 14-25-7, previously 13-2-6.1) passed by the State Legislature in 1983, mandates that owners of all wells and surface water intakes register with the Indiana Department of Natural Resources (IDNR), Division of Water if their pumping facilities have the capability of withdrawing 100,000 gallons or more of water per day (70 gallons per minute). A yearly inventory is done of each registered facility that includes the owner's best estimate of totally monthly withdrawals for each pump. Indiana Geological Survey (IGS) and IDNR prepared a report that aggregated the inventory data for the years 1986-2006 by county and category of use. Categories are:

- Energy production facilities – primary purpose is power generation including coal mining. A major component is water for cooling condensers at fossil fuel power plants.
- Industrial facilities – manufacturing and sand a gravel operations
- Public supply – water supply utilities, self-supplied mobile home parks or apartments, schools, and institutions.
- Agricultural – irrigating crops or golf courses and dewatering farm sites
- Rural use – livestock and fish hatcheries
- Miscellaneous – other uses like fish and wildlife areas, maintaining lake levels, construction dewatering, and landfills (through 1995).

Results for Martin County are shown in Figure 15.

Total water withdrawal for Martin county in 2007 for each category is presented in Table 5²¹.

Table 5: 2007 Water Withdrawal (million gallons)

	Energy	Industry	Agriculture	Public Supply	Misc	Rural	Totals
Surface	0.00	86.16	25.34	312.20	0.00	0.00	423.70
Wells	0.00	46.09	0.00	266.80	0.00	0.00	312.89
Totals	0.00	132.25	25.34	579.00	0.00	0.00	736.59

12. WILDLIFE HABITAT AND THREATENED AND ENDANGERED SPECIES

Natural Regions are “a major, generalized unit of the landscape where a distinctive assemblage of natural features is present. It is part of a classification system that integrates several natural features, including climate, soils, glacial history, topography, exposed bedrock, pre-settlement vegetation, species composition, physiography, and plant and animal distribution, to identify a natural region.”²² Natural regions are similar to physiographic regions, but whereas physiographic regions may give information on predominant topography and land use, natural regions give more information about the native plant and animal species of an area. Practically all of Martin County is within the Crawford Upland Section of the Shawnee Hills Natural Region. A small area in and around the City of Loogootee and Town of Crane is with the Glaciated Section of the Southwestern Lowlands

20 Arvin, D.V. and R. Spaeth. Water Use in Indiana: Graphs by County and Water Management Basin, 1986-2006. Indiana Department of Natural Resources and Indiana Geological Survey. Accessed 07/28/09. http://www.in.gov/dnr/water/files/water_use_graphs1986-2006.pdf

21 Indiana Department of Natural Resources, Division of Water, Water Use System. Withdrawal Amounts by County / Category for 2007. Accessed 09/14/08. <http://www.in.gov/dnr/water/8542.htm>

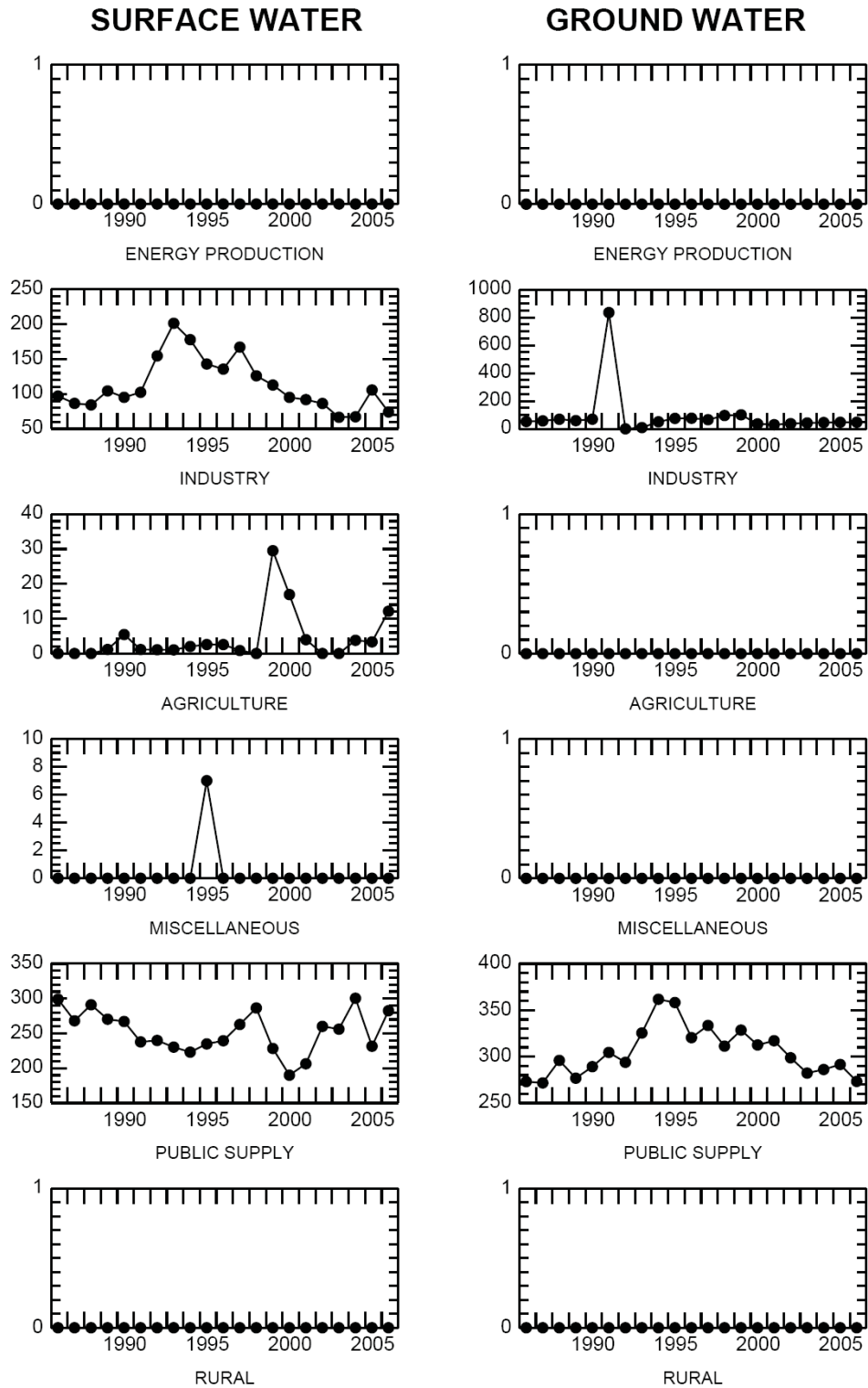
22 Homoya, M. A., B. Abrell, J. R. Aldrich, and T. W. Post. 1985. Natural Regions of Indiana. In Proceedings of the Indiana Academy of Science For 1984, Vol. 94, edited by Donald R. Winslow, pp. 245-268, Indiana Academy of Science, Indianapolis.



Figure 14: Reported Water Withdrawals

Martin County Reported Withdrawals, 1986-2006

ANNUAL WITHDRAWALS IN MILLIONS OF GALLONS





Natural Region. A very small piece of the northeast corner is in the Escarpment Section of the Shawnee Hills Natural Region.

The following natural region and section descriptions are from “The Natural Regions of Indiana” by Homoya et al. (1985).

The **Shawnee Hills Natural Region** consists of areas where Pennsylvanian and Mississippian bedrock, mostly sandstone, crop out to form cliffs and rockhouses. Most of the region is driftless with rugged and sparsely populated areas. The majority of natural communities are upland forest types with a few sandstone and limestone glades, gravel washes and barrens.

The **Crawford Upland Section** has distinctive hills with sandstone cliffs and rockhouses. Characteristic soils include the well drained acid silt loams of the Wellston-Zanesville-Berks Association. The upper slope forest vegetation is a mixture of an oak-hickory, including black oak (*Quercus velutina*), white oak (*Q. alba*), chestnut oak (*Q. prinus*), scarlet oak (*Q. coccinea*), post oak (*Q. stellata*), pignut hickory (*Carya glabra*), small-fruited hickory (*C. ovalis*), shagbark hickory (*C. ovata*) and sourwood (*Oxydendrum arboreum*). The coves have a mesic component and consist of beech (*Fagus grandifolia*), tulip tree (*Liriodendron tulipifera*), red oak (*Q. rubra*), sugar maple (*Acer saccharum*), black walnut (*Juglans nigra*), white ash (*Fraxinus americana*), yellow buckeye (*Aesculus octandra*), white basswood (*Tilia heterophylla*), umbrella magnolia (*Magnolia tripetala*), hemlock (*Tsuga canadensis*) and yellow birch (*Betula lutea*). Mountain laurel (*Kalmia latifolia*), mountain spleenwort (*Asplenium montanum*), sourwood, umbrella magnolia, filmy fern (*Trichomanes boschianum*), alumroot (*Heuchera parviflora*), Bradley’s spleenwort (*Asplenium bradleyi*), French’s shooting star (*Dodecatheon frenchii*) and the Appalachian gametophyte (*Vittaria* sp.) have an affinity to the sandstone cliff and rockhouse communities.

The acid seep spring community, rare in Indiana, has flora consisting of cinnamon fern (*Osmunda cinnamomea*), royal fern (*O. regalis*), sedges (*Carex bromoides*, *C. lurida*), small clubspur orchid (*Platanthera clavellata*), black chokecherry (*Aronia melanocarpa*), winterberry (*Ilex verticillata*), tearthumb (*Polygonum arifolium*), jewelweed (*Impatiens biflora*), crested wood fern (*Dryopteris cristata*) and Sphagnum spp.

The barrens community is a minor component of this section with only a few remnants remaining. Sandstone glades are rare in Indiana but at least two small ones exist in this region. Most of Indiana’s timber rattlesnake (*Crotalis horridus*; state endangered) have come from this and the Brown County Hills Section. The smoky shrew (*Sorex fumeus*; state species of concern) and the pygmy shrew (*Sorex hoyi*; state species of concern) are restricted in Indiana in this and the Highland Rim Section.

The **Southwestern Lowlands Natural Region** is known for its low relief and extensive aggraded valleys. Much of the region is nearly level, un-dissected and poorly drained. The northern portion was glaciated by the Illinoian ice sheet. The extant natural communities are mostly forest types.

The **Glaciated Section** has an abundance of acid to neutral silt loams with a thick layer of loess (usually Iva, Cincinnati, Avon, Vigo and Alford series). Natural communities are mostly forest types but several types of former prairies are known. The flatwood community type is common and includes shagbark hickory (*C. ovata*), shellbark hickory (*C. laciniosa*), pin oak (*Q. palustris*), shingle oak (*Q. imbricaria*), hackberry (*Celtis occidentalis*), green ash (*Fraxinus pennsylvanica*), red maple (*A. rubrum*) and silver maple (*A. saccharinum*). Black ash (*F. nigra*) swamps are near their southern limit here. Additional community types include swamp, marsh, pond and low-gradient streams (i.e. Eel River and Busseron Creek). The prairie kingsnake (*Lampropeltis calligaster*) and the crawfish frog (*Rana areolata circulosa*; state endangered) are characteristic species of this region.

The Indiana Natural Heritage Data Center is a comprehensive attempt to determine the state’s most significant natural areas through a statewide inventory. This program is designed to provide information about Indiana’s diversity of natural ecosystems, species, landscape features, and outdoor amenities, and to assure adequate



Table 6: Threatened, Endangered, and Rare Species

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Indiana County Endangered, Threatened and Rare Species List

County: **Martin**

Species Name	Common Name	FED	STATE	GRANK	SRANK
Crustacean: Malacostraca					
Orconectes inermis inermis	A Troglitic Crayfish			G5T3T4	S3
Mollusk: Bivalvia (Mussels)					
Arcidens confragosus	Rock Pocketbook			G4	S2
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1	S1
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	S1
Epioblasma torulosa torulosa	Tubercled Blossom	LE	SE	G2TX	SH
Epioblasma triquetra	Snuffbox		SE	G3	S1
Fusconaia subrotunda	Longsolid		SE	G3	S1
Ligumia recta	Black Sandshell			G5	S2
Obovaria retusa	Ring Pink	LE	SX	G1	SX
Obovaria subrotunda	Round Hickorynut		SSC	G4	S2
Plethobasus cyphus	Sheepnose	C	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G2	S1
Pleurobema cordatum	Ohio Pigtoe		SSC	G3	S2
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot		SE	G3T3	S1
Simpsonaias ambigua	Salamander Mussel		SSC	G3	S2
Toxolasma lividus	Purple Lilliput		SSC	G2	S2
Villosa lienosa	Little Spectaclecase		SSC	G5	S2
Insect: Coleoptera (Beetles)					
Dryobius sexnotatus	Six-banded Longhorn Beetle		ST	GNR	SNR
Insect: Ephemeroptera (Mayflies)					
Ephemerella argo	Argo Ephemerellid Mayfly		SE	G4	SNR
Raptoheptagenia cruentata	A Flatheaded Mayfly		SE	G4	S1
Spinadis wallacei	Wallace's Deepwater Mayfly		SE	G2G4	SNR
Insect: Lepidoptera (Butterflies & Moths)					
Amblyscirtes hegon	Salt-and-pepper Skipper		SR	G5	S2
Fish					
Acipenser fulvescens	Lake Sturgeon		SE	G3G4	S1
Ammocrypta pellucida	Eastern Sand Darter			G3	S2
Cycleptus elongatus	Blue Sucker			G3G4	S2
Etheostoma camurum	Bluebreast Darter			G4	S1
Etheostoma histrio	Harlequin Darter			G5	S1
Etheostoma maculatum	Spotted Darter		SSC	G2	S1
Etheostoma tippecanoe	Tippecanoe Darter		SSC	G3G4	S1
Moxostoma carinatum	River Redhorse			G4	S3
Polyodon spathula	Paddlefish			G4	S3
Amphibian					
Scaphiopus holbrookii holbrookii	Eastern Spadefoot		SSC	G5T5	S2
Reptile					
Crotalus horridus	Timber Rattlesnake		SE	G4	S2
Bird					
Accipiter striatus	Sharp-shinned Hawk	No Status	SSC	G5	S2B
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Ardea herodias	Great Blue Heron			G5	S4B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platypterus	Broad-winged Hawk	No Status	SSC	G5	S3B
Dendroica cerulea	Cerulean Warbler		SSC	G4	S3B
Haliaeetus leucocephalus	Bald Eagle	L.T,PDL	SE	G5	S2
Helmitheros vermivorus	Worm-eating Warbler		SSC	G5	S3B
Lanius ludovicianus	Loggerhead Shrike	No Status	SE	G4	S3B

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern;
SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G7 = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked



Table 6 (continued): Threatened, Endangered, and Rare Species

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Indiana County Endangered, Threatened and Rare Species List

County: Martin

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Mniotilta varia</i>	Black-and-white Warbler		SSC	G5	S1S2B
<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron		SE	G5	S2B
<i>Pandion haliaetus</i>	Osprey		SE	G5	S1B
<i>Wilsonia citrina</i>	Hooded Warbler		SSC	G5	S3B
Mammal					
<i>Lynx rufus</i>	Bobcat	No Status		G5	S1
<i>Myotis sodalis</i>	Indiana Bat or Social Myotis	LE	SE	G2	S1
<i>Spilogale putorius</i>	Eastern Spotted Skunk		SX	G5	SX
Vascular Plant					
<i>Cheilanthes lanosa</i>	Hairy Lipfern		SR	G5	S2
<i>Chelone obliqua</i> var. <i>speciosa</i>	Rose Turtlehead		WL	G4T3	S3
<i>Crataegus chrysocarpa</i>	Fineberry Hawthorn		SE	G5T5	S1
<i>Hydrastis canadensis</i>	Golden Seal		WL	G4	S3
<i>Juglans cinerea</i>	Butternut		WL	G3G4	S3
<i>Nothoscordum bivalve</i>	Crow-poison		SR	G4	S2
<i>Panax quinquefolius</i>	American Ginseng		WL	G3G4	S3
<i>Panicum yadkinense</i>	A Panic-grass		SE	G3G4Q	S2
<i>Rubus centralis</i>	Illinois Blackberry		SE	G2?Q	S1
<i>Rubus enslenii</i>	Southern Dewberry		SE	G4G5Q	S1
<i>Trichomanes boschianum</i>	Filmy Fern		SE	G4	S1
<i>Trichostema dichotomum</i>	Forked Bluecurl		SR	G5	S2
<i>Trifolium reflexum</i> var. <i>glabrum</i>	Buffalo Clover		SE	G5T2T4Q	S1
High Quality Natural Community					
Barrens - bedrock sandstone	Sandstone Glade		SG	G2	S1
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - upland dry	Dry Upland Forest		SG	G4	S4
Forest - upland dry-mesic	Dry-mesic Upland Forest		SG	G4	S4
Forest - upland mesic	Mesic Upland Forest		SG	G3?	S3
Primary - cliff sandstone	Sandstone Cliff		SG	GU	S3
Wetland - seep acid	Acid Seep		SG	GU	S1

Indiana Natural Heritage Data Center
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Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G7 = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked



methods for evaluating this information and setting land protection priorities. The inventory is a continuous process to update Indiana's high quality natural communities and endangered, threatened and rare species by county²³. Table 6 lists the state and federal species listed for Martin County. Figure 16 shows locations of TES species or sensitive habitats.

In 2004 and 2005, three Indiana bat maternity colonies were discovered in southwestern Indiana. One of these is located at least partially in Martin County. It is associated with Doans Creek and intersects Martin County in the northwest, near Crane. The Indiana bat maternity colonies consist of a maternity roost tree or trees as well as a 2.5-mile radius foraging area.

13. MANAGED LANDS AND NATURAL AREAS

There is one 2005 record holding "Big Tree" in Martin County. It is a Virginia Pine near the intersection of County Road 81 and County Road 86. The Indiana Big Tree Register (IBTR) was initially based on the American Forestry Association's (now called American Forests) Big Tree Register, which began in 1945. American Forests' definition of a big tree was adopted by Indiana. A big tree is defined by three measurements: 1) circumference in inches at 4 ½ feet above the ground; 2) total height in feet; and 3) ¼ of the average crown spread measured in feet. These three measurements are then added together to give a point index. The tree of each species with the highest point index is considered the champion big tree. The Indiana Register is unique since tree selection is limited to native Indiana species. *Trees of Indiana* by Charles Deam is the guide used to determine whether a tree is native.

Martin County has a lot of land being managed. There are 16 individual managed lands in the county, several with multiple units. They are: the Bluffs of Beaver Bend and its nature preserve, INDOT conservation easements, the Crane Naval Surface Warfare Center, West Boggs Daviess-Martin Counties Park, land set aside for highway reroute potential, Henshaw Bend Nature Preserve, Hindostan Falls Public Fishing Area, Hoosier National Forest, Jug Rock Nature Preserve, Loogootee Park, Martin State Forest, Mt. Calvary Wildlife Management Area, Plaster Creek Seeps and its nature preserve, and Tank Spring Nature Preserve.

Recreation sites, managed areas, and natural features are shown in Figure 17 and Figure 18.

The **Bluffs of Beaver Bend Nature Preserve** has colorful sandstone cliffs that tower over the White River. It is 748 acres, with no trails at this time, and is owned and managed by the Nature Conservancy and the Indiana Department of Natural Resources, Division of Nature Preserves. Partners include the Indiana Heritage Trust, Department of Natural Resources and the Natural Resource Conservation Services. A variety of ferns, mosses, liverworts and lichens can be seen on the ground while 38 species of trees can be viewed overhead. Migrating warblers and downy and red-bellied woodpeckers may also be seen. With the Division of Nature Preserves, the floodplain is being reforested to buffer the high-quality preserve lands. The existing woods will be protected and the lowlands will be restored to bottom-land hardwoods and managed as a natural area²⁴. Spout Spring exists from the base of Beaver Bluff. It is one of the highest volume springs in Indiana.

At the Bluffs of Beaver Bend, sometimes called, "Beaver Bluffs", you can find 100 feet of pure Mansfield sandstone²⁵.

The **Crane Division, Naval Surface Warfare Center (NSWC Crane)**, located in Crane is a shore command of the United States Navy under the Naval Sea Systems Command headquartered in Washington D.C. The focus of NSWC Crane is harnessing the power of technology for the Warfighter²⁶. The base is the third largest naval installation in the world by geographic area and employs approximately 3300 people. With an increasing demand in the 1990s and 2000s by the U.S. military for bases to support multiple functions rather than being

23 IDNR. Indiana Natural Heritage Data Center. "Indiana County Endangered, Threatened and Rare Species List." Accessed 07/28/09. http://www.in.gov/dnr/naturepreserve/files/np_martin.pdf

24 The Nature Conservancy. Bluffs of Beaver Bend. Accessed 07/28/09. <http://www.nature.org/wherewework/northamerica/states/indiana/work/art21512.html>

25 Martin County. Visit Martin County: Sight-seeing. Accessed 10/12/08. http://www.visitmartincounty.org/sight_seeing.htm

26 U. S. Navy. Crane Division, Naval Surface Warfare Center. Accessed 10/12/08. <http://www.crane.navy.mil/defaulthome.asp>



Figure 16: Managed Land and Outdoor Recreation

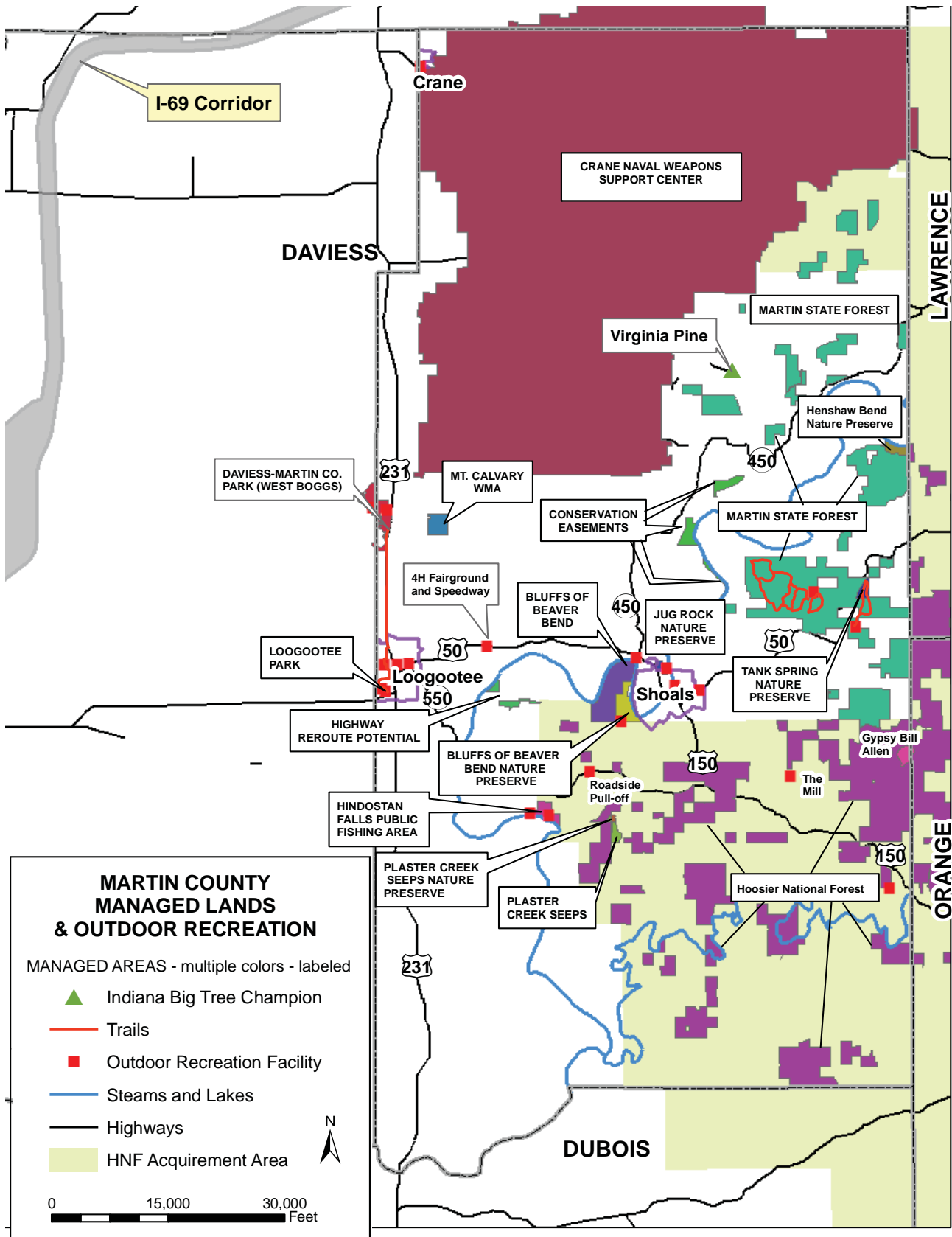
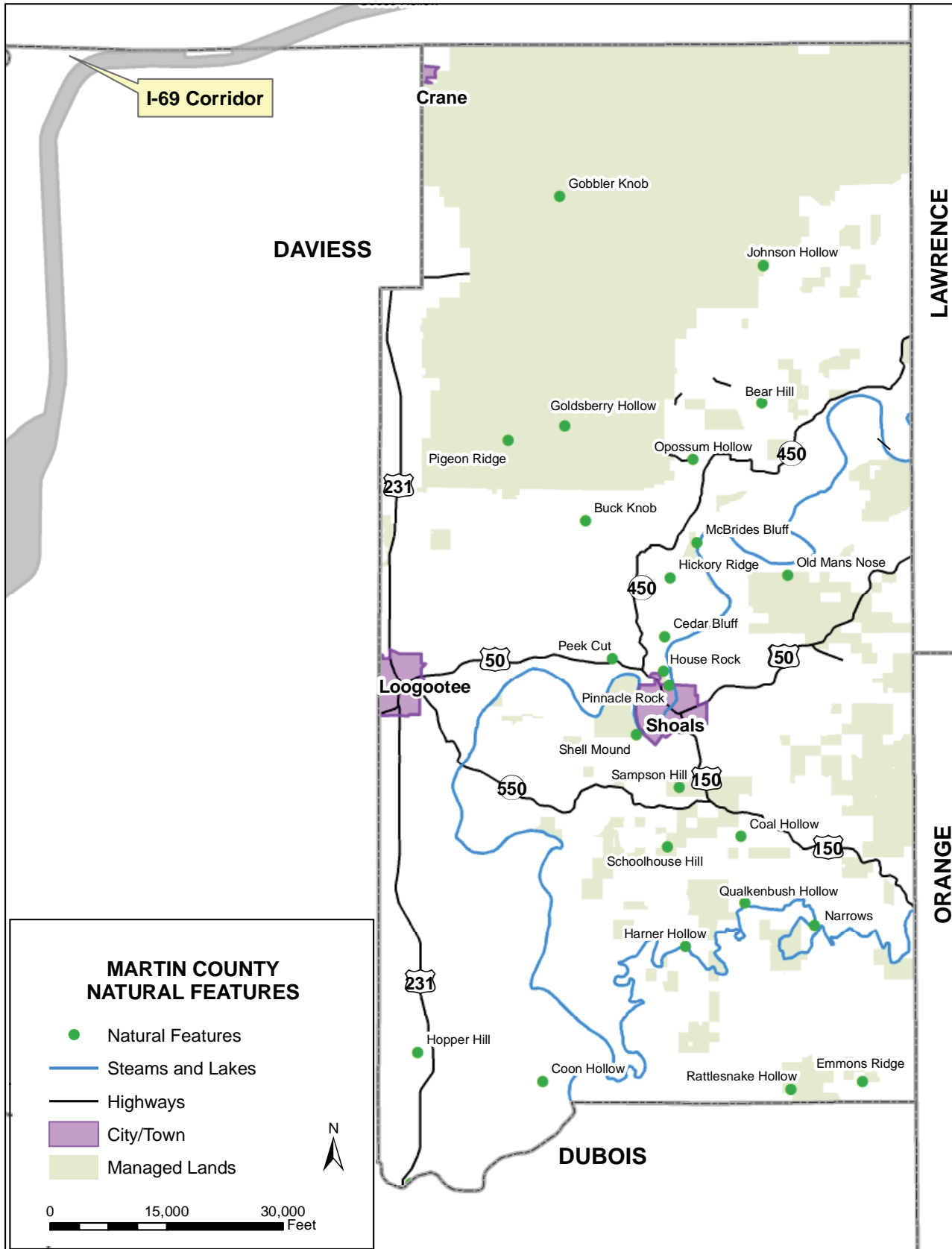




Figure 17: Natural Features





sole-purpose installations, Crane has taken on a broad variety of development and support operations. These include expeditionary warfare systems, fleet maintenance and modernization, radar, power systems, strategic systems, small arms, surface and airborne electronic warfare, night vision systems, and undersea warfare systems. Crane is also involved in systems development for the upcoming DD(X) class of destroyer for the U.S. Navy and the Littoral Combat Ship. Reconstructive White Oak wood for the USS Constitution is harvested from this base from a grove of trees known as “Constitution Grove”²⁷.

West Boggs Reservoir is a 622-acre multi-purpose impoundment located in West Boggs Park north of Loogootee. The lake was constructed in 1971 with federal funds appropriated under Public Law 566. Operation of the reservoir and park is administered by the Daviess and Martin County Park Boards. Facilities at the park include a boat ramp, boat rental concession, boat mooring sites, shoreline fishing area, disabled fishing pier, beach, and campground. Fees are assessed both for entrance to the park and use of the boat ramp. Fish surveys of the lake in 2000 showed largemouth bass were most abundant by number, followed by bluegill, redear sunfish, green sunfish, channel catfish, black bullhead, and black crappie. The remaining fish (yellow bullhead, hybrid sunfish, and golden shiner) accounted for less than one percent of the sample by number²⁸.

Hindostan Falls Public Access and Fishing Area is described as one of the best areas in Indiana and the only area on the White River for whitewater canoeing and kayaking. Businesses offer rental canoe and kayak trips from May – September. Potential trips are described from Williams Dam to Shoals (eight-hour float), Shoals to Hindostan Falls (six-hour float), and Hindostan Falls to Portersville (nine-hour float). The falls themselves are to be avoided. The Hindostan Falls area is a favorite fishing spot in the summer when you can walk out into the River bed on the rocky shelf above the falls. Fishing is good at Hindostan Falls for freshwater drum and trotline fishing in the river²⁹.

The **Hoosier National Forest** occupies approximately 9,500 acres in Martin County and provides a wide mix of opportunities and resources for people to enjoy. Rolling hills, back-country trails, and rural crossroad communities make this small but beautiful forest a favorite. Forest managers work with the public to develop a shared vision of how this 200,000 acre forest should be managed. The challenge is to provide a forest with the values and benefits people want while protecting the unique ecosystems on the Hoosier National Forest. Management of the forest works toward the following eight goals: conservation of threatened and endangered species habitat, maintain and restore sustainable ecosystems, maintain and restore watershed health, protect cultural heritage, provide a visually pleasing landscape, provide for recreation use in harmony with natural communities, provide a land base, and provide for human and community development. Recreation opportunities in the forest include camping, picnicking, hiking, horseback riding, mountain biking, hunting, fishing, scenic driving, collecting (mushrooms, berries, arrowheads, rocks, etc.) and viewing wildlife and wildflowers³⁰.

In 2007, an average of \$1.63/acre was paid to counties with National Forest land. Martin County contains 7,705 acres listed for PILT entitlement and received \$7,237. They also received \$6,044 in Title III money for a total of \$13,281³¹.

The National Forest (NF) made payments to the state under the Secure Rural Schools and Community Self-Determination Act passed by Congress in 2000 (Title III or P.L. 106-393). These funds temporarily replaced the former federal revenue sharing of 25 percent of all fees collected on National Forest land from activities such as camping, special use permit fees, and timber sales. The funds are distributed to counties based on NF acreage within the county. The act was extended in 2007 for one last distribution of funds under the law. Title III funds must be used for roads and schools.

27 Wikipedia. Naval Surface Warfare Center Crane Division. Accessed 10/12/08. http://en.wikipedia.org/wiki/Naval_Surface_Warfare_Center_Crane_Division

28 Schoenung, B. M. Indiana Department of Natural Resources, Division of Fish and Wildlife, Fisheries Section. West Boggs Creek Reservoir: 2000 Fish Management Report. Accessed 07/28/09. <http://www.in.gov/dnr/fishwild/files/wboggs00.pdf>

29 Indiana Outfitters. Whiter River (East Fork) in Indiana. Accessed 07/28/09. http://www.indianaoutfitters.com/white_river_e.html

30 U. S. Forest Service. Hoosier National Forest. Accessed 10/12/08. http://www.fs.fed.us/r9/hoosier/forest_info.htm

31 U. S. Forest Service. Hoosier National Forest. 2007 Payments to Counties. Accessed 10/12/08. http://www.fs.fed.us/r9/hoosier/docs/payments_to_counties.htm



Congress authorizes Payment in Lieu of Taxes (PILT) monies to compensate county governments for private property taxes forgone due to public ownership. PILT amounts vary based on the amount of national forest monies paid in the previous year and congressional appropriations. PILT payments are also made to the counties based on acres of NF land within the county (entitlement acres exclude tax exempt lands acquired from state or local governments).

Special management areas and areas of interest include the Gypsy Bill Allen Special Unit, the Plaster Creek Special Unit, and the Paw-Paw Marsh Watchable Wildlife Site. The Hoosier National Forest Acquirement Area is the boundary within which the forest may purchase additional properties from willing sellers.

Within the Hoosier National Forest, the Paw-Paw Marsh Watchable Wildlife Site is five acres near the Lost River seven miles south of Shoals. In this flooded stand of bottomland trees along an oxbow of the Lost River, there's a high probability of seeing beaver and muskrat. Surrounding lowlands contain hardwood forest, a white pine plantation, and shrubby, old field areas. Heron and egrets are often seen on the marsh and along the river. Winter songbirds may be seen frequenting the area of pine and shrubby fields between the parking lot and the marsh³².

Within the Hoosier National Forest, on the county border with Orange County, the Gypsy Bill Allen special unit is located. This area has karst features including species that depend on the features, a spring, and exposed rock cliffs, shelters, and joints in a unique geomorphic weathering feature contained in the Pennsylvanian age Mansfield stone. The management needs are to ensure the recharge area of the karst features does not add more than background levels of sediment to the system³³.

The **Plaster Creek** Special Unit is located within the Hoosier National Forest. The special unit contains the Plaster Creek Seeps (67 acres) and Plaster Creek Seeps Nature Preserve (11.7 acres) dedicated in 1996 and managed by the Nature Conservancy. It consists of dry upland forest of chestnut oak-blueberry, sandstone cliff community, acid-seep spring community, bottomland hardwood forest of swamp white oak, sweetgum, and red maple. It contains RNA equivalent acres in the rock chestnut-oak forest alliance; the American beech, sugar maple, yellow poplar forest alliance; the little bluestem, sideoats grama, evergreen, or mixed wooded, herbaceous alliance; the fringed sedge – royal fern/sphagnum spp. saturated herbaceous alliance; the open bluff/cliff sparse vegetation; and the pin oak seasonally flooded forest alliance communities.

The area occurs adjacent to a series of sandstone bluffs paralleling Plaster Creek. A dry forest of chestnut-oak, blackjack oak, and blueberry occur on the uplands. The few-flowered nut rush occurs here. This is the northernmost occurrence of blackjack oak on the forest. The sandstone cliffs support hay-scented fern and cliff club moss. At Plaster Creek acid-seep, springs occur along the base of the cliffs. Cinnamon fern, royal fern, sphagnum moss, and green wood orchid occur there. The bottomland forest contains swamp white oak, swamp cottonwood, red maple, sweetgum, and yellow poplar with an understory of spicebush and winterberry.

Non-native shortleaf pine seedlings occur in the dry forest above the seeps. The management plan for the area recommends their removal or killing them before they begin to replace the native plants. Reed canary grass, a nonnative invasive plant, threatens the noteworthy plant communities. Management proposals need to control and manage this species.

Jug Rock Nature Preserve was dedicated in 2002 and is owned by the Indiana Department of Nature Preserves and is open to the public. It contains two unique formations called "**Jug Rock**" and "**Pinnacle Rock**". With a third companion formation called "House Rock" just north of the preserve.

³² U. S. Forest Service. Hoosier National Forest. Paw Paw Marsh Watchable Wildlife Site. Accessed 10/12/08 http://www.fs.fed.us/r9/hoosier/recreation/watchable_wildlife/watch_wild_pp.htm

³³ U. S. Forest Service. Hoosier National Forest. 2006 Land and Resource Management Plan. <http://www.fs.fed.us/r9/hoosier/forestplaninfo.htm>



Jug Rock is composed of sandstone, and is the largest free-standing table rock formation (also called a “tea table”) in the United States east of the Mississippi River. Erosion along fracture lines separated it from a nearby cliff. Jug Rock, has an overall dimension of sixty feet high and twenty feet in diameter. Pinnacle Rock is the front part of the original sandstone formation that eroded to form Jug Rock, with a perpendicular descent of over two hundred feet. Jug Rock stands alone with no adjacent ledge, which classifies it as one of the most puzzling formations, known as “Stand Rocks,” in the United States.

House Rock is part of this same sandstone formation that has melted away, moved and shifted on the foundation of the whole throughout the centuries. The massive rock formations, placed as if they were set by hand, create a shelter, a ‘rock house’ as these places are known locally. Indians and the first settlers used the ‘rock houses’ as meeting places, conventions centers of their day³⁴.

Martin State Forest, created in 1931, is roughly 7,000 acres and offers a variety of educational and recreational opportunities with its woodland management trail and arboretum. The forest features rugged hills, deep woods, and long hiking trails. There are 26 primitive designated campsites in the forests. Pit toilets, drinking water, and a self-check in station are available nearby. Fishing lakes include Martin Lake (three acres), Hardwood Lake (four acres) and Pine Lake (three acres). Species present include channel catfish, bluegill, and largemouth bass, and some crappie and redear. Hunting is available for deer, turkey, gray squirrel, rough grouse, quail, rabbit, and raccoon. Picnic areas include four picnic shelters. There are three hiking trails – Tank Spring Trail (three miles), Woodland Education Trail (1.25 miles) and Arboretum Trail (0.25 miles). There are seven miles of mountain bike trails. There are two nature preserves within the forest, Tank Spring Nature Preserve and Henshaw Bend Nature Preserve³⁵.

Tank Spring Nature Preserve is 60 acres that was dedicated in 2005 and has restricted access. It contains a three mile rugged hiking trail. Originally called Green Spring, Tank Spring was once used to supply steam-powered locomotives on the adjacent railroad. Water was piped to a tank near the former hamlet of Willow Valley. Tank Spring is a permanent fresh water spring issuing from a layer of limestone at the base of a picturesque sandstone cliff alcove, situated in a mesic upland forest community. A similar but smaller spring alcove is located on the adjacent bluff 0.25 mi. south of Tank Spring.

Henshaw Bend Nature Preserve, dedicated in June 1997, is a 77-acre tract in Martin State Forest which includes a high-quality example of mesic upland forest. The site is situated on bluffs overlooking the East Fork of the White River and was selected as a result of an inventory of resources within the State Forest³⁶.

14. RECREATION AREAS

Indiana Department of Natural Resources, Division of Outdoor Recreation, maintains a database of all outdoor recreation facilities in the state that are publicly accessible. This includes access to playgrounds, picnic areas, sports fields, open spaces, and all manner of other outdoor recreation. The parks, schools and other facilities in Martin County identified in this database are listed below and grouped by the closest city (data currentness: June 2006). This database may be viewed and downloaded using the Indiana Map interactive viewer (http://129.79.145.7/arcims/statewide_mxd/viewer.htm).

34 Visit Martin County. Sight Seeing. Accessed 10/13/08. http://www.visitmartincounty.org/sight_seeing.htm

35 Indiana Department of Natural Resources. Forestry Division. Martin State Forest. Accessed 10/12/08. <http://www.in.gov/dnr/forestry/6439.htm>

36 Natural Resource Commission. Minutes June 26-27, 1997. Accessed 07/28/09. http://www.in.gov/nrc/files/June_1997_Minutes.pdf

Crane

Crane Naval Surface Warfare Center, Crane Golf Course

Loogootee

West Boggs Park & Lakeview Golf Course
 East Elementary / Middle School
 West Elementary & Jr/Sr High School
 Fountain Square Park
 Loogootee Municipal Pool
 Hindostan Falls Public Fishing Area
 Hindostan Falls Boat Ramp
 Martin County 4-H Fairground and Speedway
 Loogootee City Park

Shoals

The Mill
 Elementary, Jr/Sr High School
 Shoals Community Park
 Bluffs of Beaver Bend
 White River Public Access Site
 Overlook Park
 Tank Spring Trail Head
 Jug Rock Nature Preserve
 Martin State Forest

Roadside Pull-off

15. RECREATION AND TOURISM

Martin County is a popular destination for boating, canoeing, kayaking, fishing, camping and picnicking. Businesses provide canoes and kayaks with drop off and pick up services³⁷.

Lark Ranch, just north of Loogootee on US 231, offers fun activities for families in the fall season. They are most noted for their 15-acre corn maze. They have many activities such as the corn maze, pumpkin patch, wagon ride, gem mining, dinosaur dig, bouncy house, pony rides, a weaving exhibition, and many other activities. There are the buffalo, longhorn steers, donkeys, llama, pigs chickens, goats, cows, rabbits, etc. There are opportunities to see a wide variety of crops growing, making it an educational experience. Lark Ranch has become a very popular destination for field trips, hosting around 4,000 students each fall³⁸.

There are several scenic roadways available for pleasure drives:

- US 50 from SR 37 to Shoals
- US 150 from Shoals to French Lick
- SR 450 from Shoals to Williams through Dover Hill and Trinity Springs
- West River Road from Shoals to Dover Hill.

16. MINERAL RESOURCES**a. COAL*****i. Underground and Surface Mines***

A guide is available from the Division of Reclamation to help the public and local officials further understand potential problems associated with previously mined areas. These problems may be associated with both underground and surface mined sites and can result in serious damage to improvements. Previously mined land may have many attractive features for development as residential, industrial and recreational sites. Hidden dangers such as dangerous mine openings, unstable highwalls, and unpredictable ground movement have resulted in serious damages to improvements on these sites. Additional problems can result from subsidence, mine spoils, mine impoundments, and landslides. The Indiana Division of Reclamation always suggests obtaining assistance from a qualified engineer for specific site evaluation before you buy or build on previously mined land³⁹.

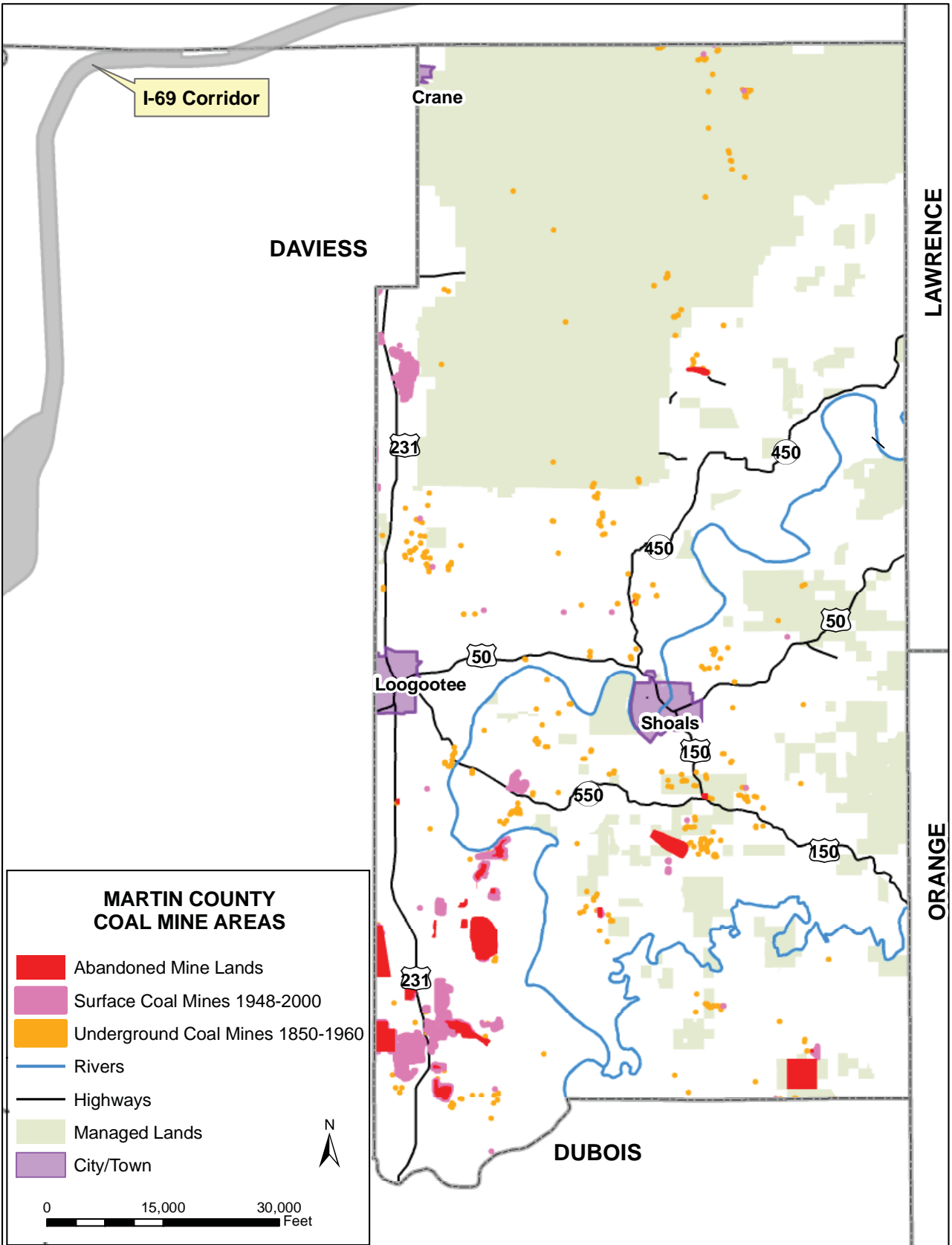
³⁷ Visit Martin County. Things to Do. http://www.visitmartincounty.org/things_to_do.htm

³⁸ Lark Ranch. Accessed 10/13/08. <http://www.larkranch.com/>

³⁹ IDNR. Division of Reclamation. What you need to know about living near Indiana Coal Mines. Accessed 07/28/09. http://www.in.gov/dnr/reclamation/files/what_you_need_to_know.pdf



Figure 18: Coal Mines





Data current to 2000 showed 397 underground mine areas in Martin County beginning in the mid-1800s and the last closing in 1966. Queries showed 61 surface mine areas beginning in 1939 to current times. Figure 19 shows the areas that had surface or underground coal mines and the location of known abandoned mine lands.

ii. Abandoned Mine Lands

Indiana has had a history of requiring reclamation of coal mined lands since 1941. Indiana was the second state to pass laws to regulate mining. However, these laws had varying requirements until the federal law was passed in 1977 that required reclamation to previous mined land conditions. Prior to 1941 and with some of the early laws, land was abandoned or not reclaimed in a manner that could support productive uses. These sites can be dangerous as well as a source of water pollution.

Modern laws prohibited a coal operator from abandoning a site and performance bond is held in the division until all reclamation is completed. Once in awhile an operator will not reclaim a site thus requiring the revocation of the permit and forfeiture of the bond so that the land can be reclaimed under private contract.

Abandoned sites may contain a variety of problem types including:

- Highwalls - A straight wall cut that is particularly dangerous if adjacent to public roads.
- Hazardous materials, coal processing wastes, or other toxic materials that may affect surface water or re-vegetation.
- Acid water, poor drainage control or undesirable surface water bodies.
- Open shafts or entries.
- Subsidence - an opening or depression that can affect buildings, roads or is dangerous to animals or humans caused by the collapse of an underground mine.
- Trash, abandoned structures or equipment.
- Barren spoil, unacceptable vegetative cover, severe erosion.
- Soil stockpiles.
- Non-productive or low productive farmlands.
- Hazardous or other adverse impacts on farming operations, residential areas or communities.⁴⁰

Data current to 2000 shows 30 AML sites in Martin County. Within these sites, the following hazardous features are present:

- One Dangerous Pile and Embankment
- Six Gob sites (Coarse-grained coal refuse material)
- Three Industrial / Residential Waste Sites
- Seven Spoil areas (Overburden material)
- One Subsidence area
- Ten Hazardous water bodies

Through May 2008, Seven sites have been reclaimed in the county at a cost of \$1,219,041⁴¹.

⁴⁰ Indiana Department of Natural Resources, Reclamation Division. About Abandoned Mines. Accessed 07/28/09. <http://www.in.gov/dnr/reclamation/2728.htm>

⁴¹ Indiana Department of Natural Resources, Reclamation Division. Accessed 07/28/09. http://www.state.in.us/dnr/files/AML_County_Report.pdf



b. GYPSUM

The geological composition of the soil in Martin County is ideal for gypsum material. Both National Gypsum and US Gypsum operate plants near Shoals⁴².

National Gypsum Company is a fully integrated building products manufacturer and one of the leading gypsum board producers in the world. National Gypsum also offers a full line of interior finishing products including joint compounds, tape, and textures. Its growing cement board product line has a strong customer base in the United States and several other countries. The company, headquartered in Charlotte, NC, has over 50 locations including, laboratories; mines and quarries; paper mills; gypsum board, interior finishing products, and cement board plants and sales regions⁴³.

For more than 100 years, Chicago-based USG has been a leader in producing innovative products and systems to build the environments in which we live, work and play. As the inventor of wallboard and mineral wool ceiling tile, USG created North America's building materials industry. Their flagship brands include SHEETROCK® Brand gypsum panels and DUROCK® Brand cement board, which are recognized around the world. USG is the world's leading producer of gypsum wallboard, joint compound and a vast array of related products for the construction and remodeling industries. USG has become a three billion dollar Fortune 500 company with 14,000 employees working in more than 30 countries⁴⁴.

c. Abandoned Sand and Gravel Pits and Quarries

Data from the Indiana Geologic Survey (2003) shows seven abandoned sand and gravel pits and five abandoned quarries. These are generally located across the middle of the county and are shown in Figure 20.

17. PERMITTED WASTE DISPOSAL AND STORAGE

i. Confined Feeding Operations

Confined feeding is the raising of animals for food, fur or recreation in lots, pens, ponds, sheds or buildings, where they are confined, fed and maintained for at least 45 days during any year, and where there is no ground cover or vegetation present over at least half of the animals' confinement area. Livestock markets and sale barns are generally excluded. Indiana law defines a confined feeding operation as any animal feeding operation engaged in the confined feeding of at least 300 cattle, or 600 swine or sheep, or 30,000 fowl, such as chickens, turkeys or other poultry.

The animals raised in confined feeding operations produce manure and wastewater which is collected and stored in pits, tanks, lagoons and other storage devices. The manure is then applied to area fields as fertilizer. When stored and applied properly, this beneficial reuse provides a natural source of nutrients for crop production. It also lessens the need for fuel and other resources that are used in the production of commercial fertilizer.

Confined feeding operations, however, can also pose environmental concerns, including the following:

- Manure can leak or spill from storage pits, lagoons or tanks
- Improper application of manure to the land can impair surface or ground water quality

The IDEM CFO/CAFO approval/permit program is based on the Confined Feeding Control Law administered through regulations adopted under the Water Pollution Control Board. The focus of the regulations is to protect water quality. The program is intended to provide an oversight process to assure that waste storage structures

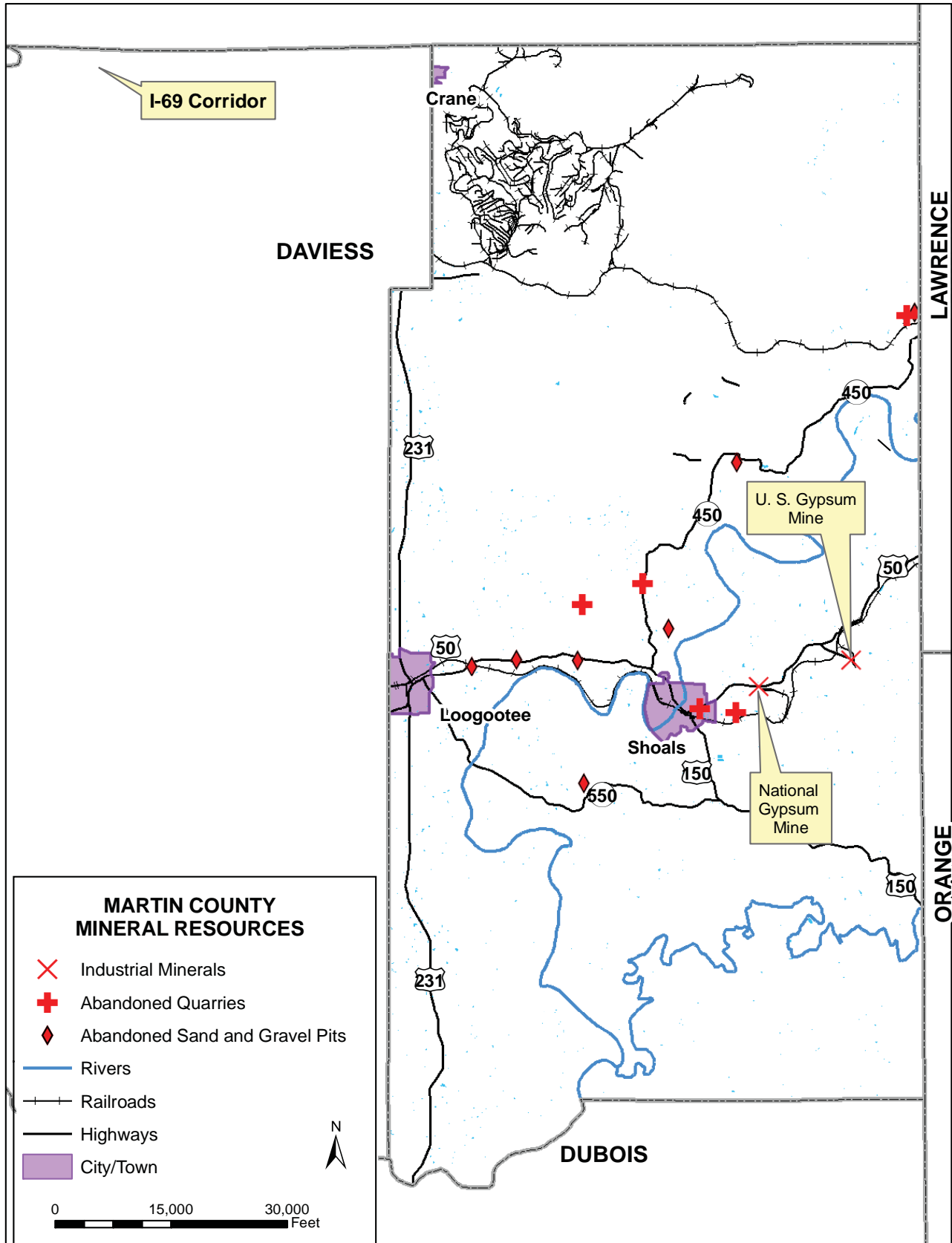
42 Visit Martin County Indiana. History. Accessed 10/13/08. http://www.visitmartincounty.org/history_and_legends.htm

43 National Gypsum. NGC Company Information. Accessed 07/28/09.. http://www.nationalgypsum.com/about/company_info/default.aspx

44 United States Gypsum. About USG. Accessed 07/28/09. http://www.usg.com/navigate.do?resource=/USG_Marketing_Content/usg.com/web_files/about_usg_landing_page.htm



Figure 19: Mineral Resources





are designed, constructed and maintained to be structurally sound and that manure is handled and land applied in an environmentally acceptable manner.

Data from the Indiana Department of Environmental Management (IDEM), Office of Land Quality, dated January 2007 showed 20 confined feeding operations in Martin County with active status (Figure 20). An additional seven operations were shown as voided, which means the farm was closed or numbers fell below the threshold for regulation. One operation was shown as expired, which means it failed to be built within two years of being permitted.

Due to the number of confined feeding operations, an animal waste management program may need to be considered in Martin County. An animal waste management plan looks at what type of animals are present, how much waste those animals produce, and what should be done to prevent water contamination and air quality concerns. Animal waste management plans typically consider both confined feeding operations and partially confined feeding operations. Confined feeding operations are discussed above, partially confined feeding operations; for example, look at barriers to keep cattle out of streams, and/or providing means of cooling for cattle to prevent them from using the nearby streams or lakes. The Purdue Extension website has general information on this topic, as well as provides animal manure solutions:

http://www.ces.purdue.edu/waterquality/Animal_Waste_Management.htm.

ii. Solid Waste Disposal

In Martin County, hazardous waste areas are located east of Shoals and on the Crane Naval Surface Warfare Center. East of Shoals, there are two restricted waste sites associated with National Gypsum (restricted waste areas accept only certain types of waste). Also east of Shoals, there is an open dump associated with Denver Craft. There are two permitted solid waste areas on the Crane Naval Surface Warfare Center. They are a landfill and a site for construction/demolition waste. Site information was collected from digital data from the Indiana Department of Environmental Management (IDEM), Office of Land Quality, dated January 2007.

iii. Underground Storage Tanks (USTs)

The IDEM, Underground Storage Tanks program is responsible for assuring that all regulated underground storage tanks meet the U.S. EPA's and Indiana's requirements for release detection, spill and overflow prevention and corrosion protection, and to insure that tanks not meeting those requirements are properly closed or upgraded. The section educates and assists underground storage tank owners and operators in order to encourage and promote voluntary compliance⁴⁵.

Digital records current to January 2007 indicate there are 19 USTs in Martin County, 14 of which are documented as leaking. Figure 20 shows the approximate location of each UST.

iv. National Pollution Discharge Elimination System (NPDES)

The purpose of the NPDES permit is to control the point source discharge of pollutants into the waters of the State such that the quality of the water of the State is maintained in accordance with the standards contained in 327 IAC 2. The NPDES permit requirements must ensure that, at a minimum, any new or existing point source must comply with technology-based treatment requirements that are contained in 327 IAC 5-5-2. According to 327 IAC 5-2-2, "Any discharge of pollutants into waters of the State as a point source discharge, except for exclusions made in 327 IAC 5-2-4, is prohibited unless in conformity with a valid NPDES permit obtained prior to discharge."⁴⁶

According to IDEM data dated January 2007, there are seven facilities that discharge pollutants to state waters.

45 Indiana Department of Environmental Management. Land Compliance. Underground Storage Tanks. Accessed 07/28/09. <http://www.in.gov/idem/4999.htm>

46 Indiana Department of Environmental Management. Permitting. Water Permits. Wastewater Permits. National Pollution Discharge Elimination (NPDES) Overview. Accessed 07/28/09. <http://www.in.gov/idem/4894.htm>



Figure 20: Environmental Concern Sites

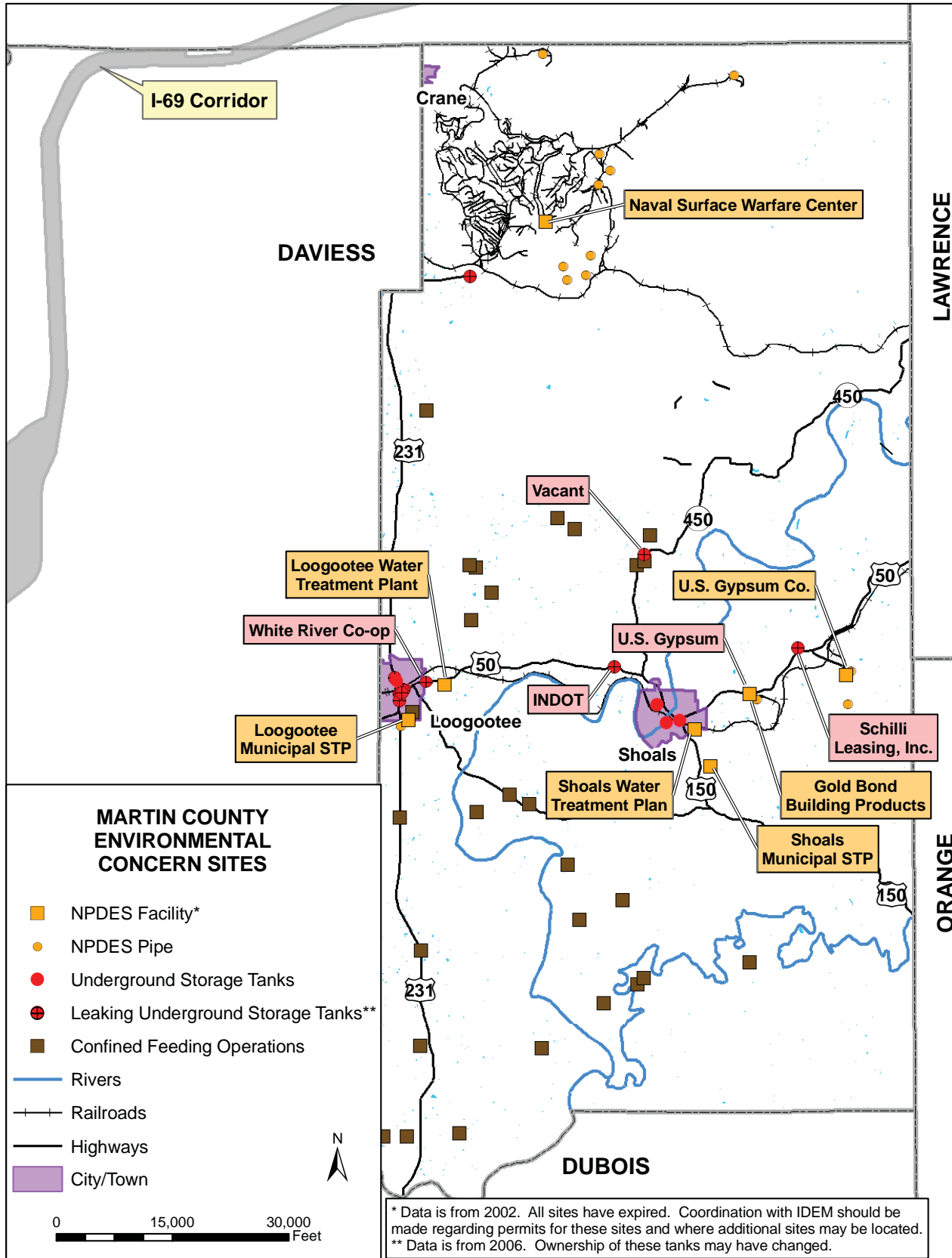
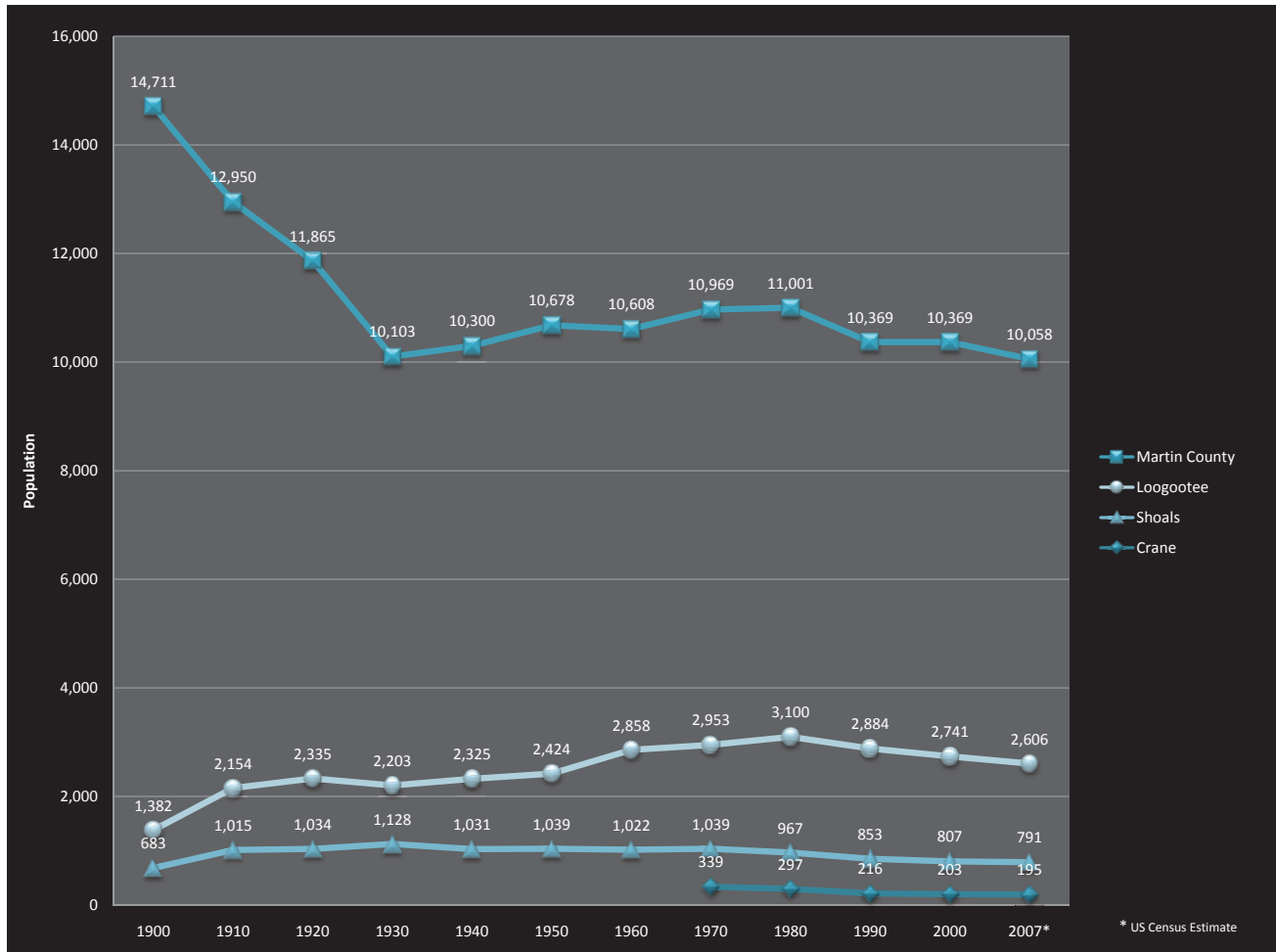




Figure 21: Population Trends



They are – East Fork Water Treatment Plant, Gold Bond Building Products, Loogootee Municipal Sewage Treatment Plant, Loogootee Water Treatment Plant, Naval Surface Warfare Center, Shoals Municipal Sewage Treatment Plant, U. S. Gypsum Company. These are shown in Figure 20.

D. SOCIAL CHARACTERISTICS

Population, housing and income characteristics are important considerations in determining the future land use and infrastructure needs of the county. These characteristics help determine the magnitude of future housing demand, the ability of residents to afford housing, and the ability of residents to support commercial activities.

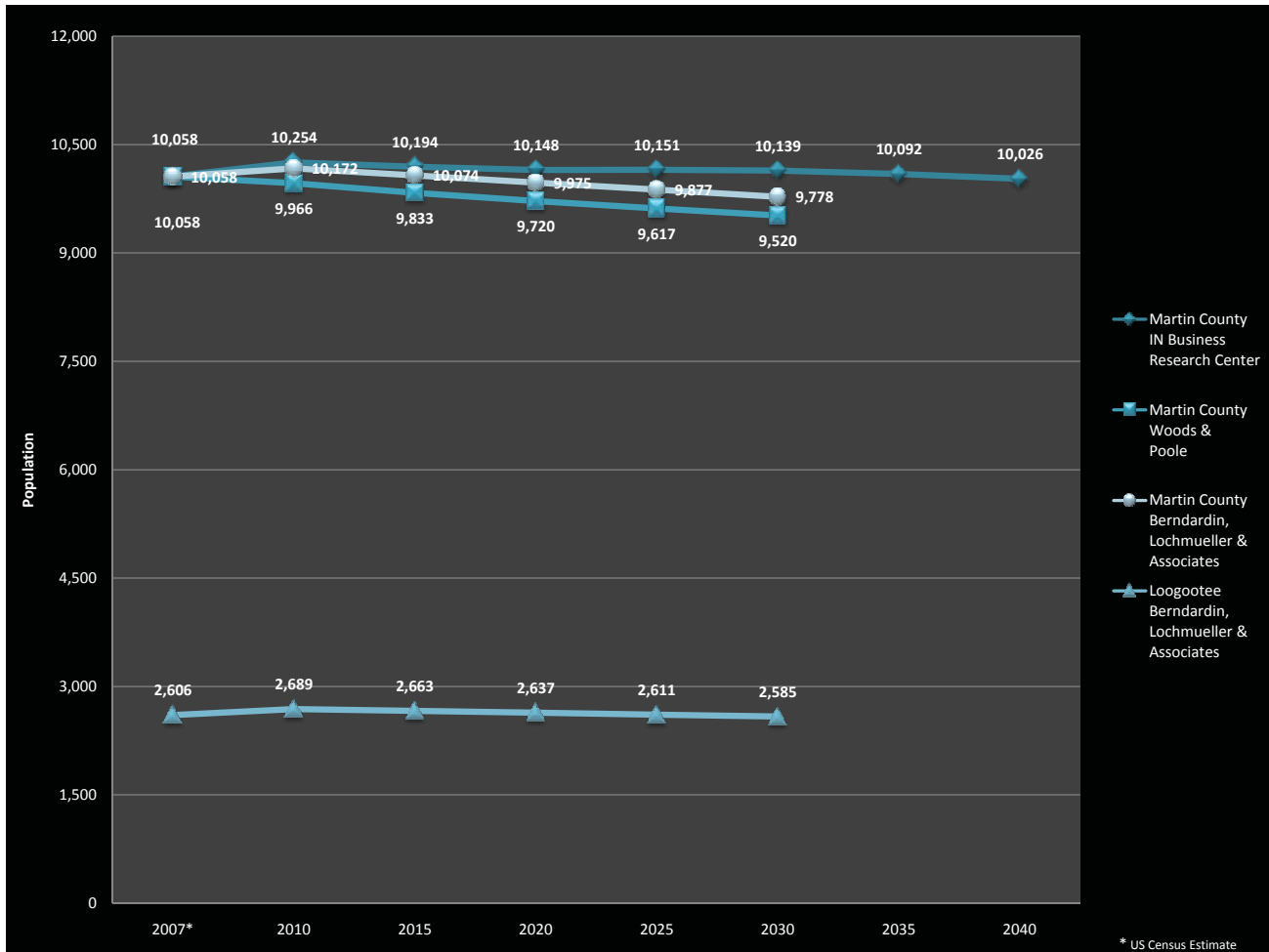
1. POPULATION CHARACTERISTICS

a. Existing Population

Martin County’s population has decreased by 4,342 people between 1900 and 2000. Martin County’s population shot down by 4,608 people between 1900 and 1930 to a population of 10,103 which was its lowest population between 1900 and 2000. The population in the county has fluctuated between 1930 and 2000. The population estimate from the U.S. Census for 2007 is 10,058 for Martin County, which is 311 people lower than the 2000 Census (10,369) shows. Figure 21 and Table A-1 in Appendix A show the population trends for Martin County and the incorporated communities since 1900.



Figure 22: Population Forecasts



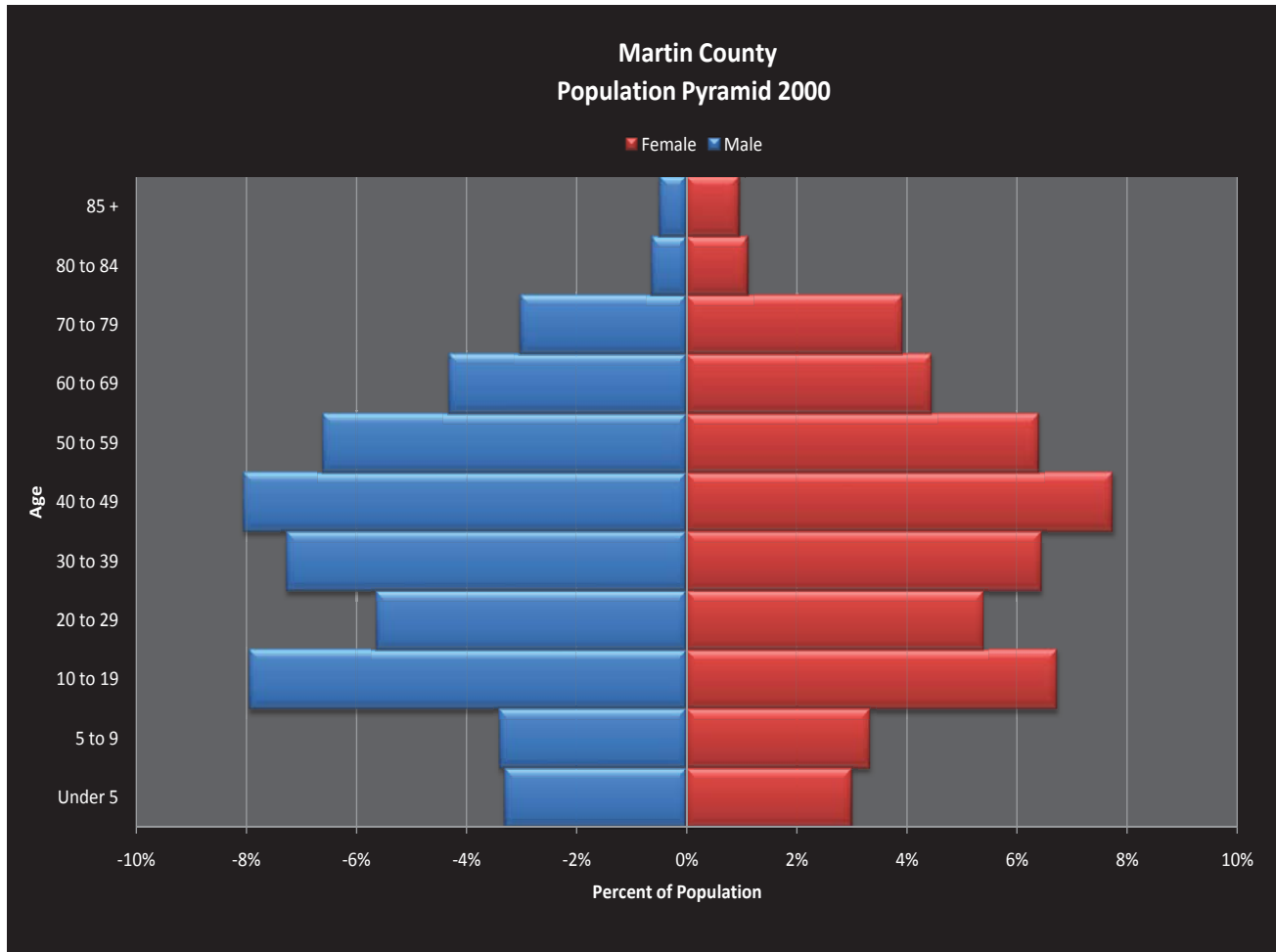
b. Projected Population

Population forecasts for Martin County and Loogootee were derived from the Interstate 69 Travel Demand Model Travel Analysis Zones (TAZ) layer developed by Bernardin, Lochmueller and Associates that includes induced growth resulting from I-69. Population forecasts from Woods and Poole Economics, the Indiana Business Research Center, and the Regional Economics Model, Incorporated were examined to determine population projections to the year 2030 for counties through which I-69 will travel as well as neighboring counties. Figure 22 and Table A-2 in Appendix A show projections for Martin County based on the I-69 TAZ layer, the Indiana Business Research Center, and Woods and Poole Economics. If employment at the WestGate @ Crane Technology Park reaches 3,000 jobs, Martin County’s proportional share of resident employees would result in 594 additional persons and 238 households.

The Indiana Business Research Center forecasts to the year 2040 and is based on a regression analysis of historical population counts; whereas, Woods and Poole forecasts to 2040 and is based on economic forecasts of the U.S. Bureau of Economic Analysis. The I-69 TAZ population forecast for Martin County lies between the forecasts by the Indiana Business Research Center and Woods and Poole. The TAZ layer has a population of 9,778 and 4,039 households for Martin County in the year 2030. All three sources show a decrease in population for Martin County. Woods and Poole has the lowest population projection for 2030 with 9,520 people. The Indiana Business Research Center expects a slower population decrease with a 2030 population



Figure 23: Population Age Pyramid



of 10,139. Woods and Poole and the Indiana Business Research Center both expect the population in Martin County to decrease further through the year 2040.

2. DEMOGRAPHIC CHARACTERISTICS

General demographic characteristics of the population are an indicator of the need for community facilities such as housing, education, and recreation. Table A-3 in Appendix A shows population, income and educational attainment data for Shoals, Loogootee, Crane, Martin County and Indiana for comparison.

a. Male/Female Population

In 2000, the male ratio in Martin County was 50.6 percent, slightly higher than the male ratio for Indiana (see Figure 23 and Table A-3), which was 49.0 percent. The female ratio in Martin County was 49.4 percent, slightly lower than the state female ratio which was 51.0 percent. Shoals was the only Martin County incorporated area that had a higher ratio of males to females. Shoals had a male and female population of 50.2 and 49.8 percent, respectively.

b. Age

Martin County had a higher median age (38.5 years) in 2000 than Indiana (35.2 years). They each have a



Figure 24: Educational Attainment



higher median age for females than males. In Martin County, the median age is 39.8 for females and 37.3 for males. All three of the incorporated communities in the county have a higher female median age than male median age except the Town of Crane. Shoals, Loogootee, and Crane all have a higher female median age (47.4, 44.0 and 41.5 respectively) than Martin County (39.8). Similarly, Shoals, Loogootee, and Crane all have a higher male median age (39.8, 37.6 and 46.5 respectively) than Martin County (37.3).

Fifty-two percent of the population that is less than 50 years old is male, making forty-eight percent of the same population group female. Almost 59.0 percent of the population that is 70 years or older is female, while only 41.0 percent of the same age group is male.

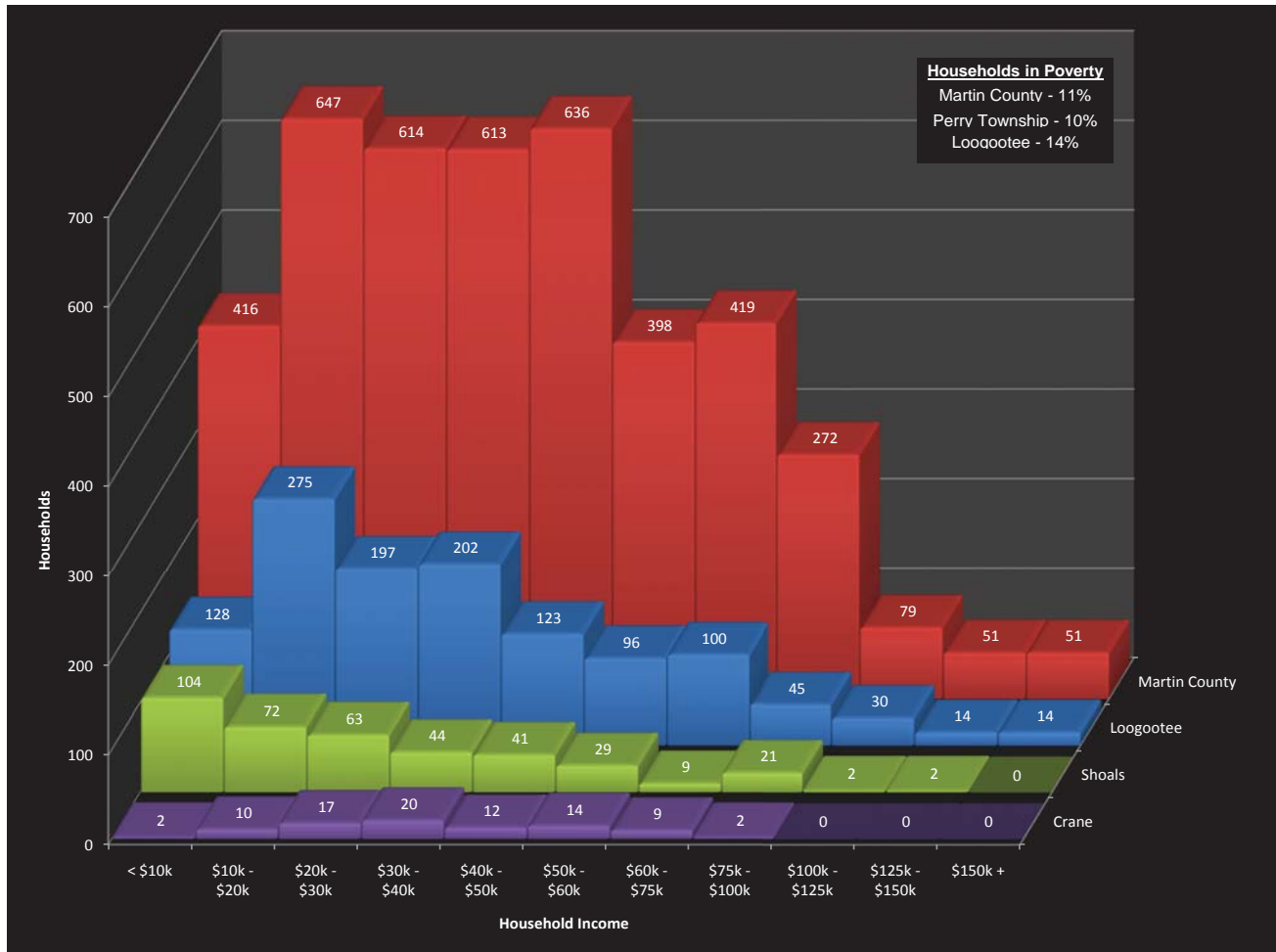
The age pyramid also shows a dramatically lower population between the ages of 20 and 29 than any other age group between ten and 49. For all of Indiana, the age group of 20 to 29 is also the lowest of the age group categories between ten and 49, but the difference is not as dramatic as in Martin County. This could be due to the number of college-aged students leaving the county for colleges and universities in other counties. It may also show that there are not enough job opportunities in Martin County to help keep young adults from leaving the county for jobs and housing.

c. Educational Attainment

The overall educational attainment for Martin County is slightly lower than that of Indiana. In Indiana, 82 percent of the population 25 years of age and older have at least a high school diploma. In Martin County, 74



Figure 25: Household Income



percent of those 25 and older have at least a high school diploma. Of the three incorporated communities in Martin County, Crane has the highest percentage (78 percent) of people with at least a high school diploma. Seventy-four percent of Loogootee residents and 67 percent of Shoals residents 25 and older have a high school diploma. Seventeen percent of Martin County residents over the age of 25 have at least an associate’s degree, compared to 25 percent of Indiana residents. Loogootee has the highest percentage of people with at least an associate’s degree (21 percent) of the incorporated communities in Martin County. Only 11 percent of Crane residents and eight percent of Shoals residents age 25 and older have at least an associate’s degree. Figure 24 shows the percent of educational attainment for Loogootee, Perry Township, Martin County, and the State of Indiana.

d. Ethnicity

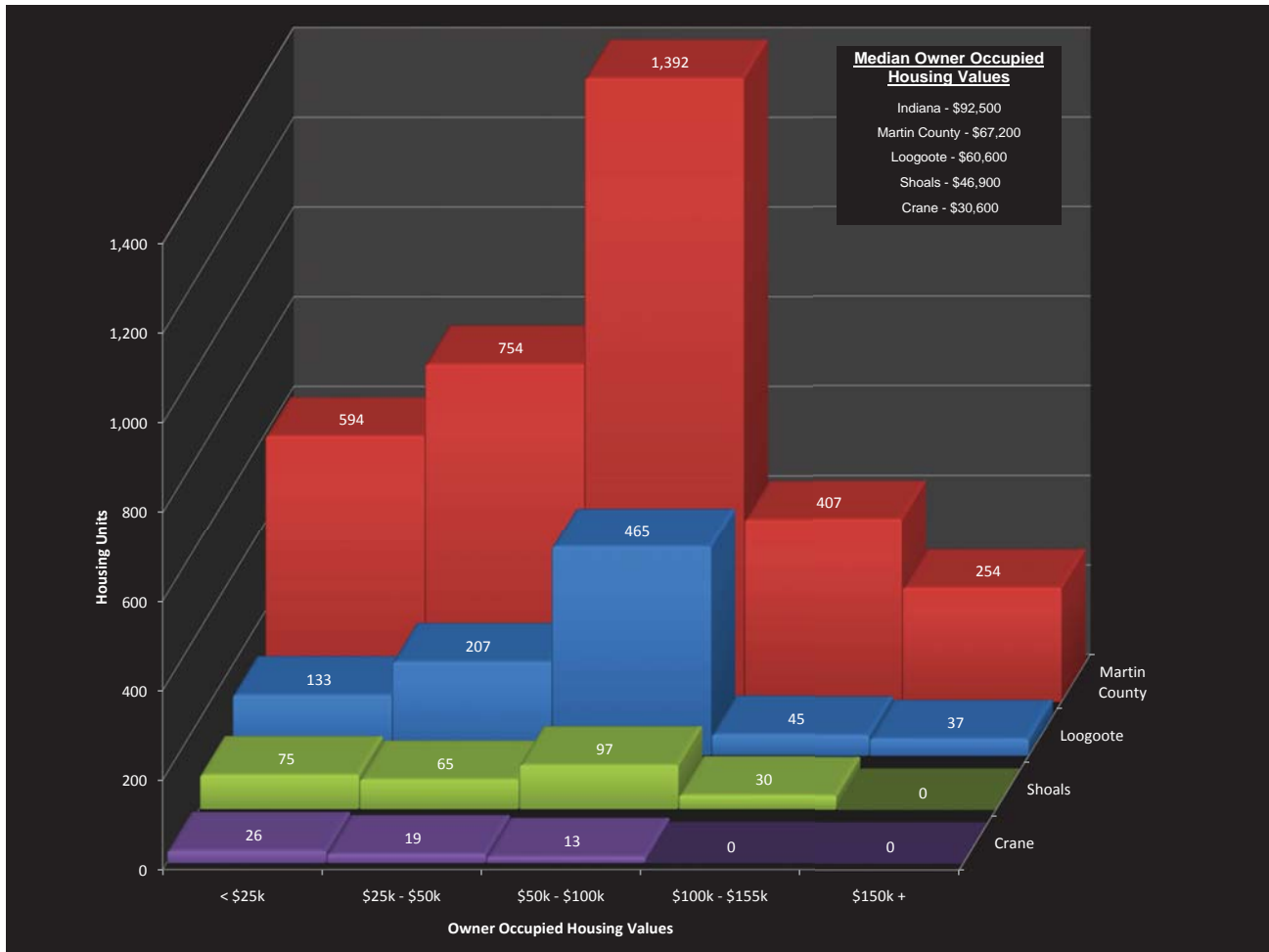
Martin County is not very diverse. In 2000, over 98 percent of the population was white. Of the 1.3 percent of the county that is not white, 38.5 percent are two or more races and 7.7 percent are American Indian or Alaska Native. Only 38.5 percent of the 1.3 percent that aren’t white are black. Of the incorporated areas, Shoals has the highest black population (2.5 percent). The other two communities have less than one percent.

3. INCOME CHARACTERISTICS

The median household income in 2000 for Martin County is \$36,411 which is lower than the median income for Indiana (\$41,567). Shoal’s median household income, \$23,750, is almost \$13,000 less than the median



Figure 26: Housing Value



household income for Martin County. Loogootee’s median household income (\$30,492) is also lower than that of Martin County. The median household income for Crane (\$36,250) is very similar to that of the county. The percentage of households considered to be in poverty in Martin County (11.4 percent) is greater than the percentage for Indiana (9.5 percent). Of the incorporated areas, Shoals has the highest percentage of households in poverty, followed by Loogootee and Crane (22.2 percent, 14.0 percent and 5.8 percent, respectively). Figure 25 shows the household income for Martin County, Loogootee, Shoals, and Crane.

In addition to household income, the U.S. Census also tabulates family income characteristics. Median family incomes are higher than median household incomes. Martin County’s median family income in 2000 is \$43,550 and is lower than the state’s median family income (\$50,261). The number of families below the poverty level is calculated based on family income and family size. According to the U.S. Census, 8.1 percent of the families in Martin County were below the poverty level. This is more than the 6.7 percent of the families in Indiana that are below the poverty level.

4. HOUSING CHARACTERISTICS

a. Existing Housing

Between 1990 and 2000, Martin County’s households and housing units all increased although the population (10,369) remained unchanged. The number of households increased by nine percent, from 3,836 households in 1990 to 4,183 households in 2000. A higher increase in households than population reveals that the number



of people per household is decreasing. In 1990, the Martin County household size was 2.64 people per household, dropping to 2.45 in 2000.

The vacancy rate for housing is an indicator of the strength of the housing market. In 1990, the vacancy rate for Martin County was 6.8 percent, and in 2000 it had increased to 11.5 percent. This is higher than the state-wide vacancy rate of 7.7 percent.

The median value of housing in 2000 was \$92,500 in Indiana and \$67,200 in Martin County. In Martin County, 81 percent of the homes were valued less than \$100,000 in 2000. Only seven percent are valued over \$150,000. In Indiana, 56 percent of the homes are valued at less than \$100,000 and 19 percent are valued at over \$150,000. Figure 26 shows housing values for Martin County, Loogootee, Shoals, and Crane.

In Martin County, 19 percent of the housing units are renter occupied. This is much lower than the percentage of renter occupied units in Indiana (29 percent). Of the incorporated areas, Loogootee has the lowest percentage of renter occupied houses (28 percent) and Crane has the highest (33 percent). The median monthly contract rent for Martin County is \$243, which is much lower than the state (\$432). Shoal's has the lowest median rent (\$204) of the incorporated communities while Crane has the highest (\$320).

The most significant variable explaining the lower median value of housing and lower median rent in Martin County versus other communities is the type of housing (see Table A-8 in Appendix A). Martin County, Loogootee and Shoals have a higher percentage of mobile homes than the state. While the housing mix in Indiana was 74 percent single-family, 19 percent multi-family and seven percent mobile home, Martin County's housing mix was 69 percent single-family, six percent multi-family, and 25 percent mobile homes. Shoal's has the highest percentage of mobile home units. Shoals housing mix was 52 percent single-family, 14 percent multi-family, and 34 percent mobile homes. The Loogootee housing mix was 65 percent single-family, 13 percent multi-family, and 22 percent mobile home units. Crane has the lowest percentage of mobile home units in Martin County (four percent), while Crane has the highest percentage of single-family homes (89 percent). Seven percent of Crane's housing units are multi-family.

The age of housing in a community is a reflection of the rate of growth of the community and is an indicator of the need for housing rehabilitation or housing replacement when rehabilitation is not economical. The median year housing was built in Martin County is 1968 compared to 1966 for Indiana. Crane had the earliest median year that housing was built (1951) followed by Shoals (1964) and Loogootee (1964). Martin County has a mix of old and new housing. Forty-seven percent of the homes have been built since 1970, while 53 percent were built prior to 1970. Sixteen percent were built prior to 1940, but 15 percent were built between 1990 and 2000. Figure 27 shows the breakdown of housing age for Martin County, Loogootee, Shoals, and Crane.

b. New Housing Permits

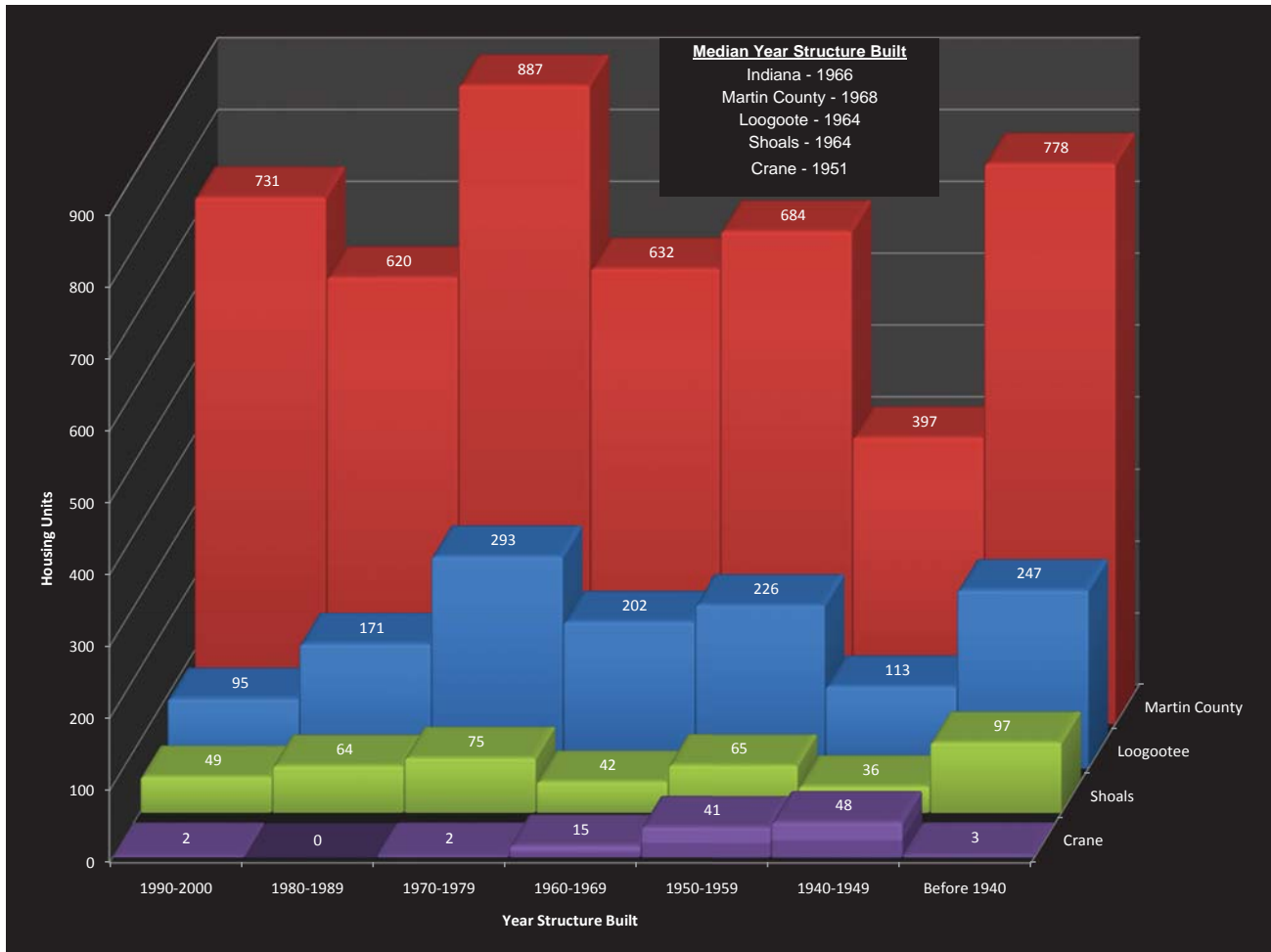
Because Martin County has never issued residential building permits, there is no record of new housing construction. Loogootee, Shoals, and Crane have never issued building permits either. However, 613 housing units were gained between 1990 and 2000. In that same time period, 266 additional housing units became vacant. Therefore, there are more vacant houses in 1990 than there were in 2000. This can be seen in the increase of the vacancy rate from 6.8 percent in 1990 to 11.5 percent in 2000.

c. Projected Housing Units

The population and household projections from the I-69 TAZ layer, described earlier under projected population, were used to determine projected housing units for Martin County. Assuming a constant vacancy rate between 2000 and 2030, projected housing units could be calculated using the vacancy rate and projected number of households from the I-69 TAZ layer. Using these numbers, a projection of 4,566 housing units is calculated for 2030. This is a decrease of 163 housing units from the year 2000. However, unless houses are demolished, the



Figure 27: Age of Housing



number of housing units should not decrease. See Table A-9 in Appendix A for more information on projected housing units.

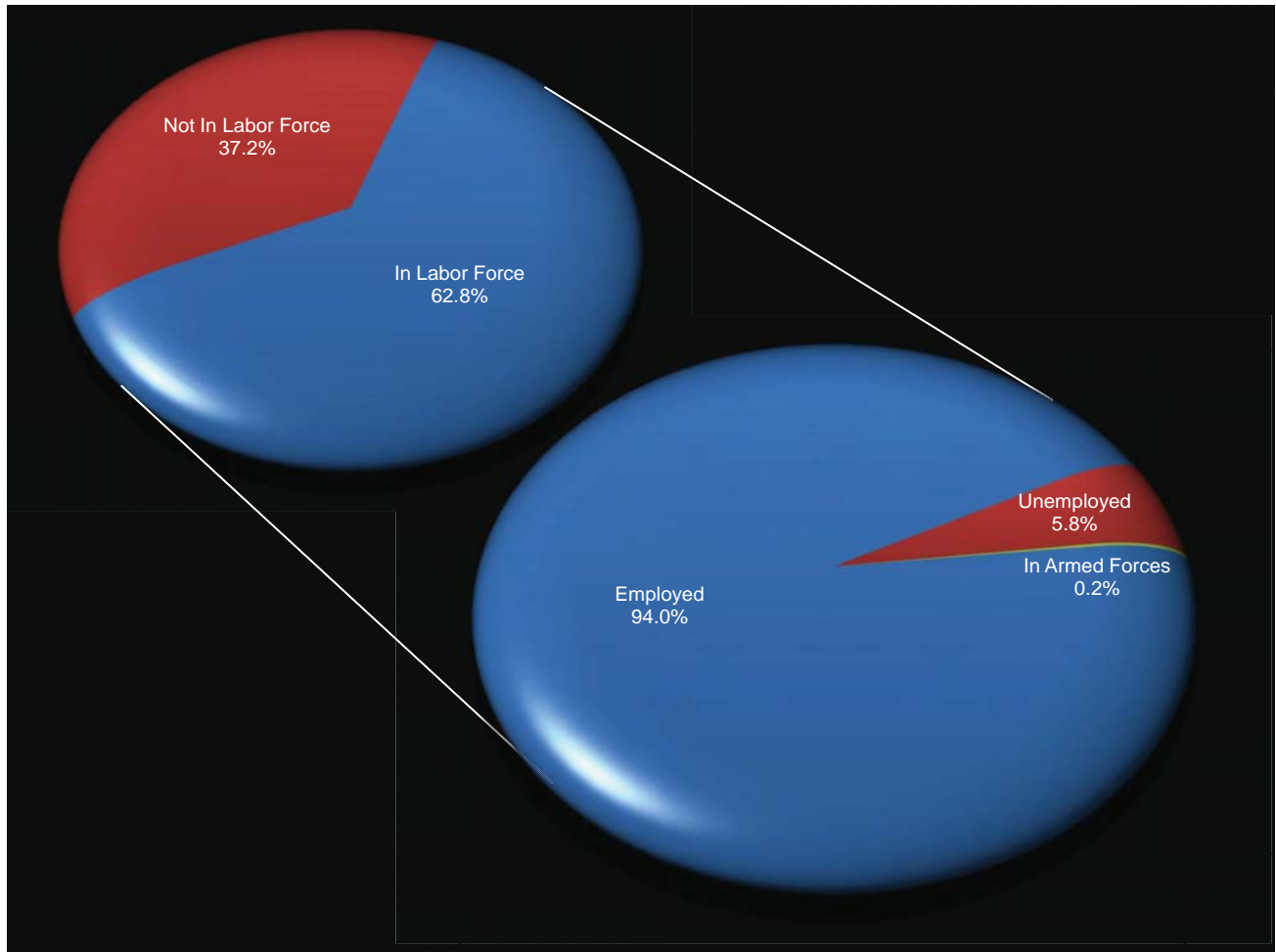
d. Housing Affordability

One way to look at affordable housing is to compare the median value of housing to the median household income. The median value of a house in Martin County (\$67,200) is 1.85 times higher than the median household income (\$36,411) according to the year 2000 U.S. Census. In Loogootee, the median value of a house (\$60,600) is 1.99 times higher than the median household income (\$30,492). In Shoals, the median value of a house (\$46,900) is 1.97 times higher than the median household income (\$23,750). In Crane, the median value of a house (\$30,600) is actually lower than the median household income (\$36,250). In Indiana, the median value of housing (\$92,500) is 2.23 times higher than the median household income (\$41,567). Therefore, it appears that homes in Martin County are more affordable to Martin County households than the Indiana average.

Another important aspect of affordability is home ownership. Over 81 percent of the occupied housing units in Martin County are owner occupied, which includes percentages of 69 percent in Shoals, 72 percent in Loogootee, and 67 percent in Crane. If the incorporated communities are removed, the home ownership in the unincorporated areas of Martin County would be 87.0 percent. With this high percentage of homeownership, there seems to be little concern about the ability for households to afford housing in the county.



Figure 28: Labor Force



In conclusion, it would appear that the housing market in Martin County is providing affordable housing needs for most residents in the county. Although the median household income in Martin County and the three incorporated communities is less than that of Indiana, the median value of housing is also lower. Homeownership is high, so housing must be affordable for the majority of citizens.

E. ECONOMIC CHARACTERISTICS

The economic overview of Martin County consists of two components including the workforce (labor market) and employment available (the job market). The characteristics of the labor force involve employment characteristics by place of residence that are derived from the U.S. Census. The characteristics of the employment market are reported in employment by place of work in the Complete Economic and Demographic Data Source (CEDDS) by Woods and Poole Economics, Inc. as well as employment studies.

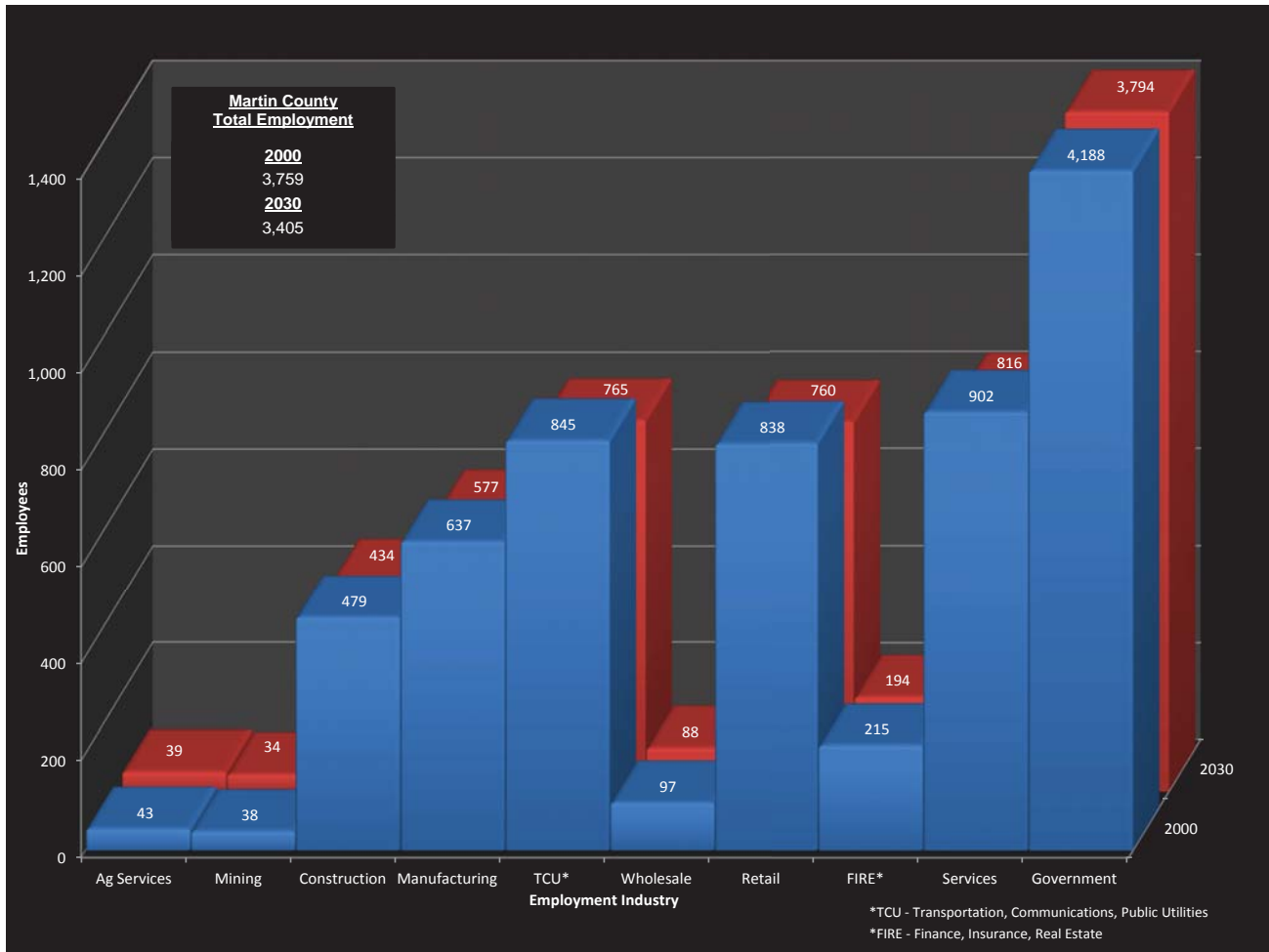
1. WORKFORCE CHARACTERISTICS

a. Existing Workforce

The labor force of a community is the community's population 16 years and older that is working or is seeking employment. In 2000, Martin County's labor force was 5,099 or 63 percent of the population 16 years and older



Figure 29: Employment by Major Sector



(see Figure 28). There were 11 people in the military in Martin County in 2000, according to the U.S. Census. The unemployment rate in Martin County in 2000 was 5.8 percent.

b. Projected Workforce

Between 1990 and 2000, the number of people 16 and older in the labor force in Martin County increased slightly from 62 percent to 63 percent. During this same time period, the unemployment rate increased slightly from 5.6 percent to 5.8 percent. The number of people in the labor force and the unemployment rate did not change significantly between 1990 and 2000. The number of people 16 and older in the labor force should continue to be just above 60 percent and the unemployment rate should stay between 5.5 and 6.0 percent.

2. EMPLOYERS/JOB

a. Existing Jobs

Employment reported by place of work from the I-69 TAZ layer is categorized by major industrial sectors in Table A-11 in Appendix A for Martin County. Martin County’s total employment in 2000 was 8,282. The Government sector employed the greatest number of people in Martin County in 2000 with 4,188 (50.6 percent). Employees at the Crane Naval Surface Warfare Center are in the Government sector, which makes up a majority of the county’s governmental employment. The Educational, Health and Social Services sector was the next largest,



employing 902 (10.9 percent). The Transportation, Communications, and Utilities sector employed 845 and the Retail Trade sector employed 838. (see Figure 29).

b. Projected Jobs

According to projections made in the I-69 TAZ layer, the Government sector will continue to be half of the employment in Martin County. A small decrease in employment is shown in the I-69 TAZ layer for every employment sector in Martin County. This coincides with the small population decrease expected in the county over the next 30 years. Although different sources show a decrease in manufacturing employment in Martin County over the next 30 years, development at the WestGate @ Crane Technology Park may increase manufacturing employment in the county by approximately 340 jobs (238 jobs at WestGate and 102 jobs due to additional resident households). However, there is very little land available in the WestGate @ Crane Technology Park that is actually in Martin County. The majority of available land is located west of Crane in Daviess County.

3. COMMUTING AND TRAVEL TIME

According to the 2000 U.S. Census, 56 percent of Martin County residents work in Martin County; therefore, 44 percent of Martin County residents work outside of the county. Forty-five percent of Martin County residents that work outside of Martin County work in Dubois County. Daviess County and Orange County receive the next highest number of Martin County commuters with 20 percent and eight percent, respectively.

There are approximately 3,285 residents from adjacent counties that travel into Martin County for work, including Daviess County, Dubois County, Greene County, Lawrence County, and Orange County. Overall, 4,472 workers commute into Martin County. The majority of these commuters come from Daviess County (25.2 percent), Lawrence County (22.2 percent) and Greene County (20.3 percent).

Figure 30 and Table A-12 in Appendix A show which counties Martin County residents commute to and which residents from surrounding counties commute into Martin County.

Table A-11 shows the percentage of commuters by travel time for Martin County. Fifty-six percent of commuters have less than a 30 minute drive to work and 25 percent have between a 30 and 45 minute commute to work. Only eight percent of the commuters travel more than an hour to work. Figures 31 through 33 show the approximate distance residents of Loogootee, Shoals and Crane can travel in 15, 30, 45 or 60 minutes.



Figure 30: Commuters To and From Martin County

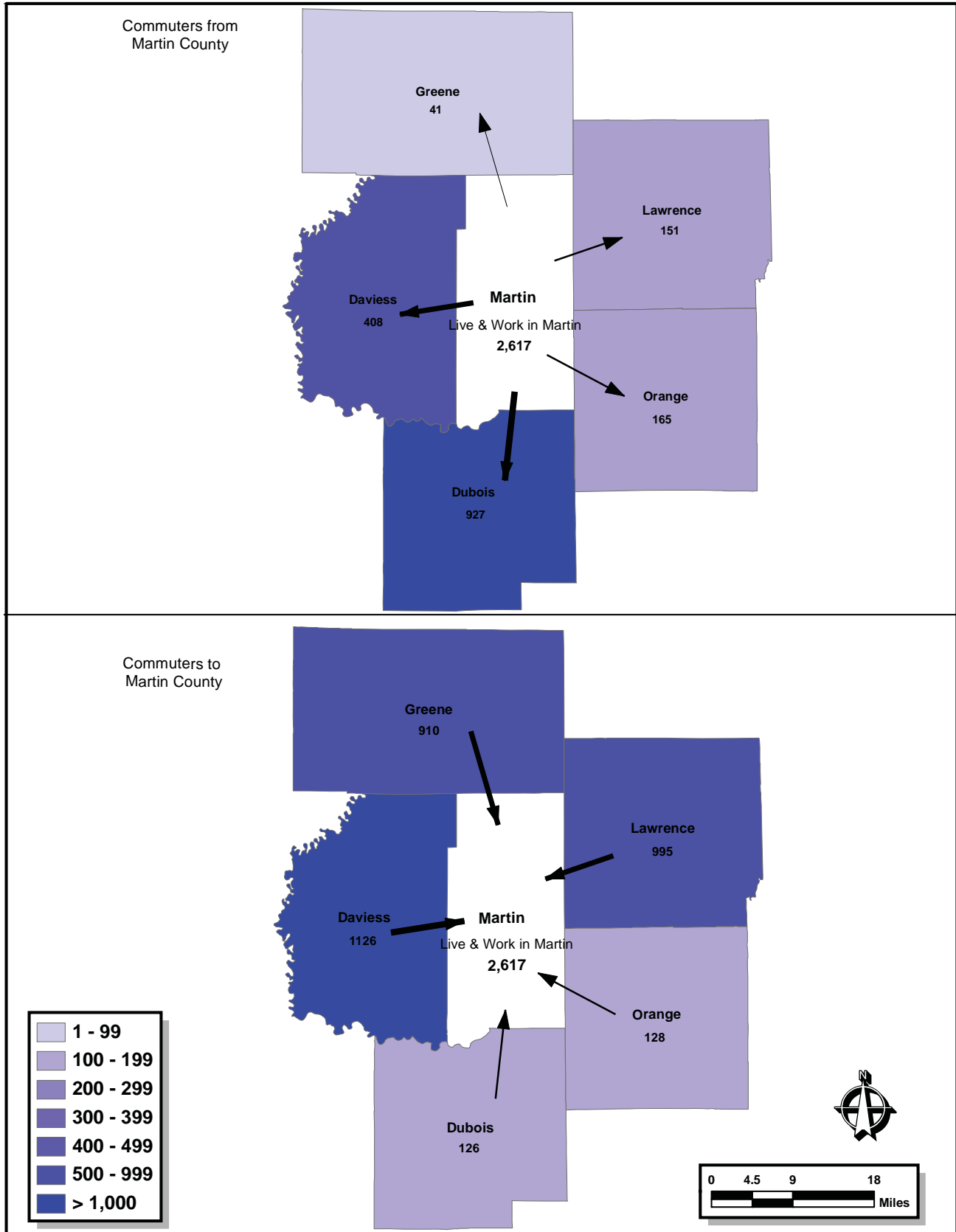




Figure 31: Loogootee Commuting Time

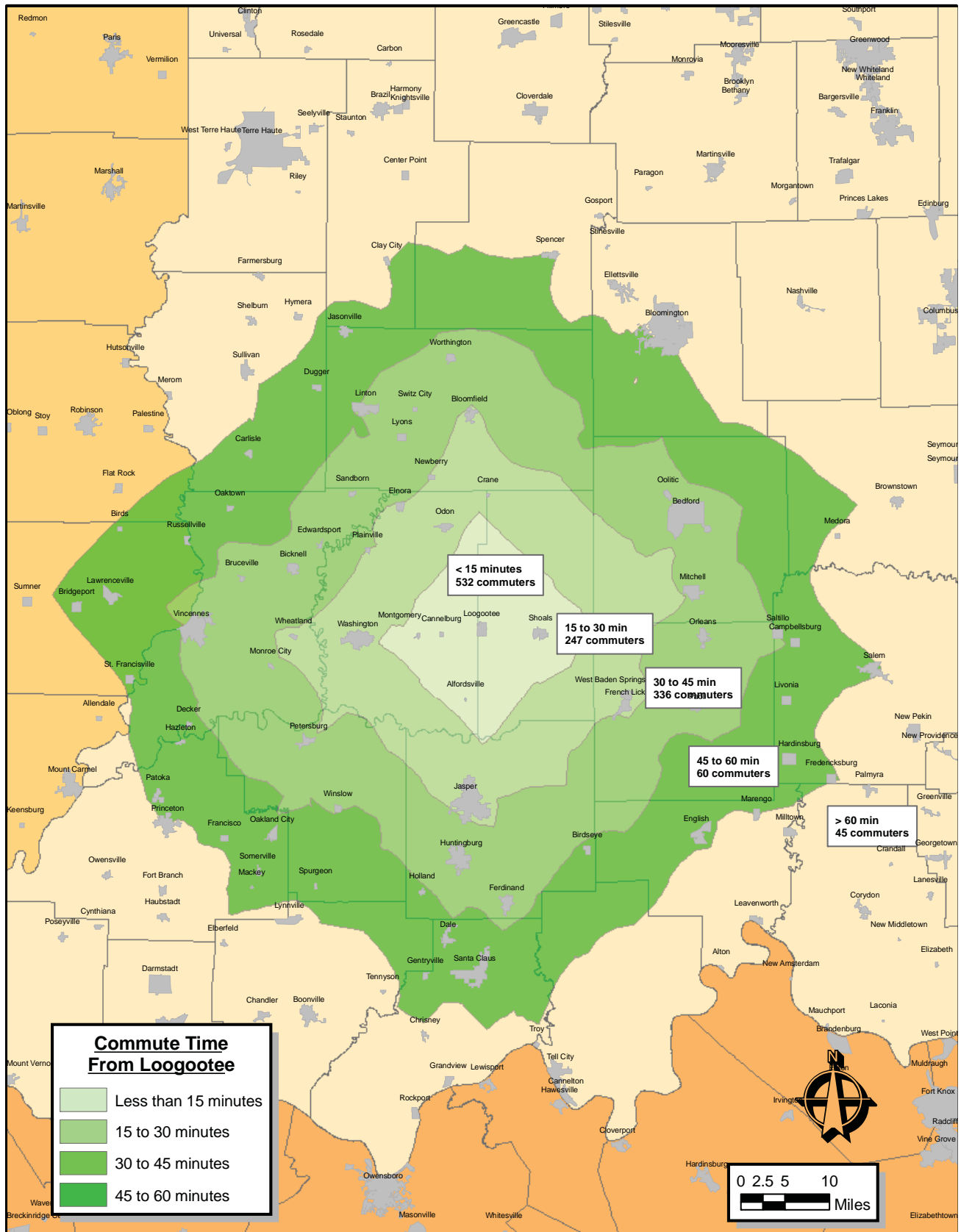




Figure 32: Crane Commuting Time

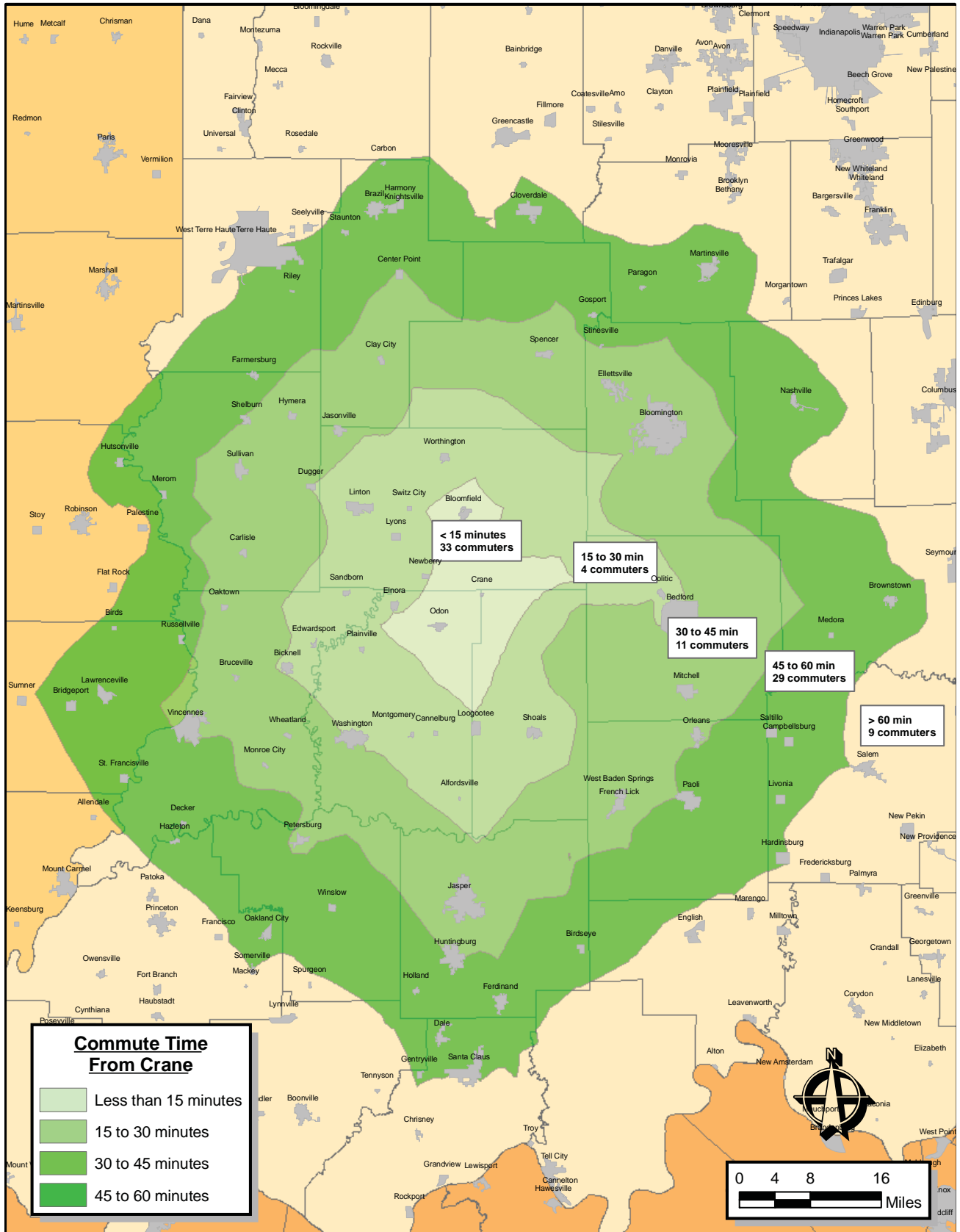
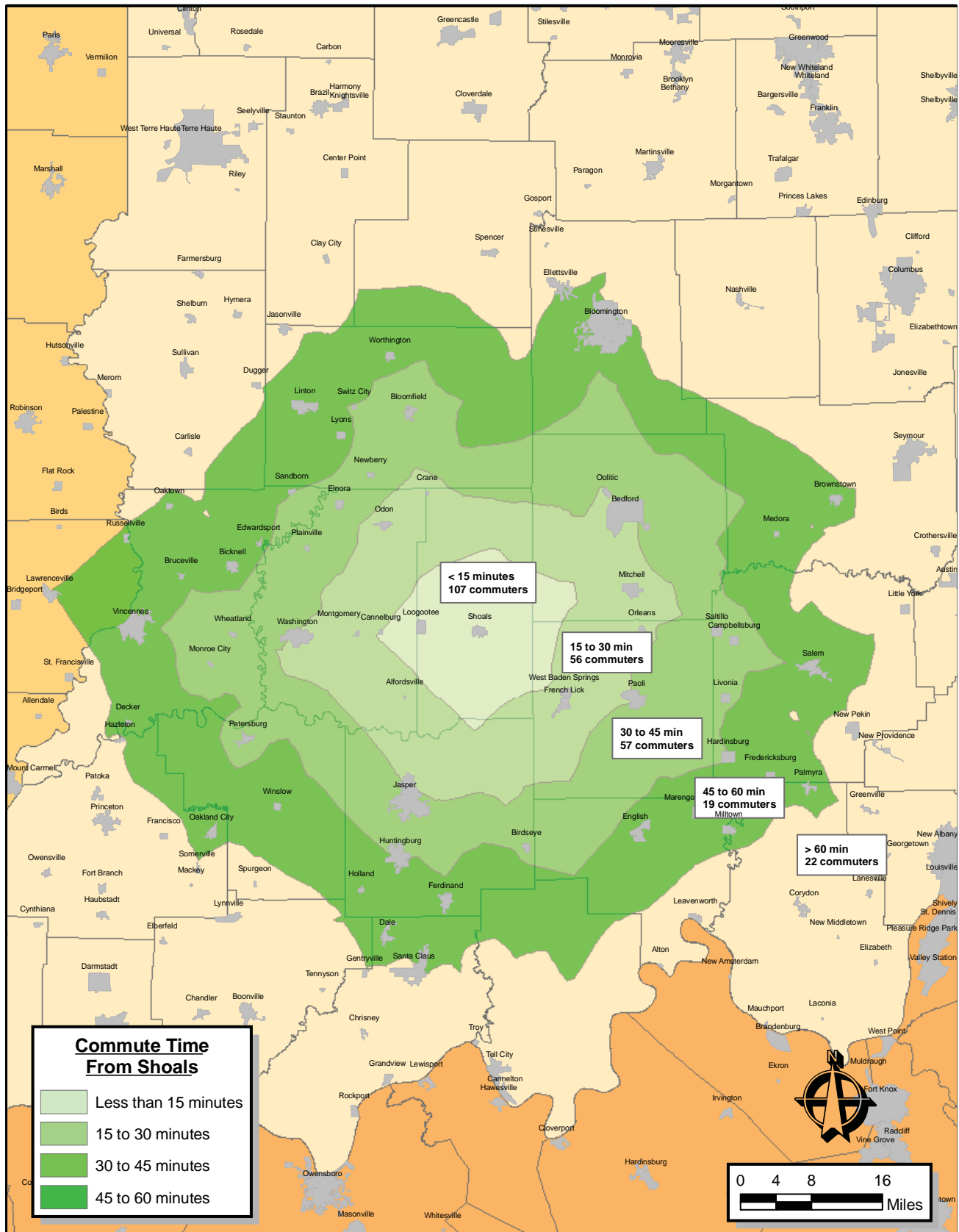




Figure 33: Shoals Commuting Time







Chapter 3: Assessment of Existing Conditions

A. LAND USE

1. EXISTING LAND USE

Using 2005 IndianaMap Natural Color Orthophotography of Martin County as a base map, an inventory of existing land use in the unincorporated areas of Martin County was completed. The 2005 IndianaMap Natural Color Orthophotography is a high resolution color aerial photograph used to locate structures in the county. Land uses were determined by the size of the structure, parking lots, and GIS layers that were created that identified the locations of existing churches, cemeteries, parks, and recreational areas.

Figure 34 and Table 7 show the results of the inventory. Built urban land uses comprise 22,871 acres of the total 212,927 acres that make up the unincorporated area of Martin County (excludes roads, railroads, right-of-way, and incorporated communities).

a. Residential

The residential land use category includes single-family detached dwellings, mobile homes, and multiple-family attached dwellings. There are 3,905 acres of developed residential land use in Martin County which makes up 1.8 percent of the county's unincorporated area or 4.8 percent of the developed land uses (excludes agricultural, forest, and undeveloped land). Most of the homes in unincorporated Martin County are single-family detached homes. These include typical site-built homes, modular homes, and manufactured homes on a permanent foundation. However, there are several mobile homes located throughout Martin County. The county is one of just a few counties in the area that does not have any limitations on the placement of mobile homes.

A large portion of the residential land uses in Martin County are located near the county's incorporated communities, especially around Loogootee. There are several unincorporated communities that have concentrations of

Table 7: Unincorporated Martin County Existing Land Use

2008 Existing Land Use				
Land Use Category	Acreage*	Percent of Category	Percent of Developed Unincorporated Area°	Percent of Unincorporated County Area°
Residential	3,905		4.8%	1.8%
Commercial	23		0.0%	0.0%
Industrial	372		0.5%	0.2%
Public/Quasi-Public	77,420		94.7%	36.4%
Parks/Recreation	206	0.3%	0.3%	0.1%
State/Federal Managed Lands	77,110	99.6%	94.4%	36.2%
Churches/Cemeteries	88	0.1%	0.1%	0.0%
Other	16	0.0%	0.0%	0.0%
Developed Subtotal	81,720		100.0%	38.4%
Agricultural/Forest Land	131,207			61.6%
Total of Unincorporated County Area	212,927			100.0%
Incorporated Communities	2,100			1.0%
Total of County Area	215,027			101.0%

source: Bernardin, Lochmueller and Associates, Inc.

* Rounded to the nearest acre.

° Total of unincorporated county area and total of county area excludes roads, railroads and right-of-ways.



population as well. Bramble, Burns City, Cale, Dover Hill, Lacy, Mount Pleasant, Pleasant Valley, and Whitfield all have a group of residential uses surrounding them. Residential uses are also concentrated along the county's major highways, in particular US 231.

b. Commercial

The commercial land use category includes:

- Professional offices (doctors, dentists, optometrists, insurance agents, tax accountants, banks, real estate agents, engineers, surveyors),
- Retail/Services (retail stores including grocery stores, hardware stores, drug stores, gasoline stations, department or discount stores, drive-in businesses, motels, furniture stores, appliance stores, and businesses for motor vehicle, boat, trailer, mobile home and farm equipment sales; and services including hair and nail salons, barbershops, gyms, and businesses for motor vehicle, boat, trailer, mobile home and farm equipment repair),

There are 23 acres of developed commercial land use in Martin County which makes up less than 0.1 percent of the county's developed unincorporated area. Commercial uses in unincorporated Martin County mostly consist of small offices and small scale retail stores. Most of the commercial uses in unincorporated Martin County are located just outside of Loogootee along US 231, US 50/150, and SR 550. There are also a few businesses located outside of Shoals along US 50.

c. Industrial

The industrial land use category includes light industrial uses, heavy industrial uses, junk yards, landfills, and coal mines. Uses that involve the manufacturing of products from secondary parts and can be normally contained within a structure are generally considered light industrial uses. Thus, light industrial uses include warehousing, wholesaling, and manufacturing from parts supplied to the site.

Heavy industrial uses involve the manufacturing and processing of products from raw materials or the extraction and processing of raw materials. Heavy industrial uses involve the outdoor storage of raw materials and products.

Excluding the Crane NSWC, industrial uses cover 372 acres in Martin County which accounts for 0.2 percent of the county's unincorporated area or 0.5 percent of the developed land uses (excluding agricultural, forest and undeveloped land). Industrial uses are located south of Loogootee on US 231, between Loogootee and Shoals on US 50/150, and east of Shoals along US 50. There are also a few small industrial facilities located in other areas of the county. Industrial uses in Martin County primarily include manufacturing facilities, although there are several junk yards located in the county. US Gypsum and National Gypsum are the two largest industrial areas in Martin County excluding the Crane NSWC.

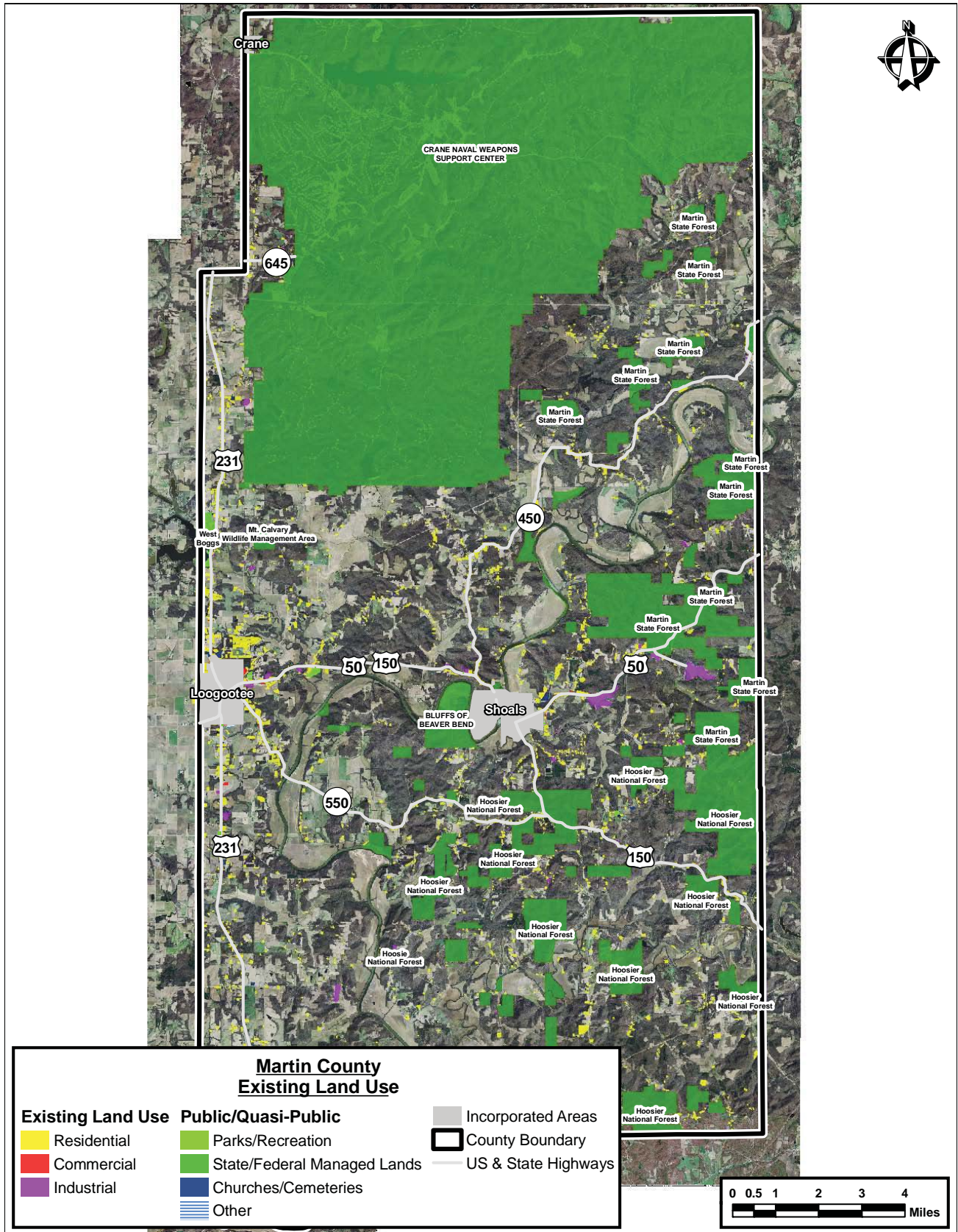
d. Public/Quasi-Public

The public/quasi-public land use category includes public and nonprofit community facilities that serve the community including churches, schools, medical facilities, recreational facilities, governmental uses, and other institutional facilities. These facilities cover 77,420 acres and make up 36 percent of the county's unincorporated area or 95 percent of the developed land uses in unincorporated Martin County (excluding agricultural, forest and undeveloped land).

Parks and recreational areas cover 206 acres of in unincorporated Martin County which make up 0.3 percent of the public/quasi-public land uses in Martin County. Most of this land is covered by the West Boggs Lake and surrounding park. The portion of the lake and surrounding park within Martin County covers 173 acres. Most of the lake and surrounding park are located in Daviess County. The Martin County 4-H Center to the east of



Figure 34: Existing Land Use





Loogootee on US 50/150 makes up a large portion of the rest of the parks and recreational land use. There is also a small park located south of the Martin County Solid Waste Management District Recycling Center to the east of Loogootee.

The state and federal managed lands subcategory covers the largest area in Martin County. This land use subcategory covers 77,420 acres and includes all land that is owned and managed by the state or federal government. This includes state and national forests, wildlife areas and nature preserves, and the Crane Naval Surface Warfare Center.

The Naval Surface Warfare Center (NSWC), Crane Division covers the largest portion of the state and federal managed lands subcategory. The Crane NSWC covers nearly 60,000 acres in northern Martin County. The NSWC also covers a small portion of land in Greene County and Lawrence County.

The Hoosier National Forest and Martin State Forest also cover a large portion of the state and federal managed lands. The Hoosier National Forest consists of federally managed land that covers nearly 9,600 acres in southeastern Martin County. The Hoosier National Forest covers approximately 200,000 acres in several counties in southern Indiana. The Martin State Forest is a state managed forest that covers over 7,100 acres. Most of the Martin State Forest is found in the eastern portion of the county.

The rest of the state and federal managed lands subcategory of about 1,500 acres is covered by the Bluffs of Beaver Bend Nature Preserve, Hindostan Falls Public Fishing Area, Jug Rock Nature Preserve, Mount Calvary Wildlife Management Area, Plaster Creek Seeps Nature Preserve, and a few conservation easements. Figures 19 and 38 show the location of these State and Federal Managed Lands areas.

Churches and cemeteries make up 88 acres of the public/quasi-public land use within Martin County which is 0.1 percent of the public/quasi-public land use category. Most of the churches in unincorporated Martin County are small churches and cover a wide range of denominations. Several of them are located just outside of Loogootee or Shoals. Cemeteries are scattered throughout the county. These cemeteries range from large cemeteries associated with these churches to very small historic cemeteries.

Other public/quasi-public land uses include those public/quasi-public uses that are not categorized under any of the previous land uses. This includes governmental facilities, educational facilities, utilities, and organized clubs. This category covers 16 acres in unincorporated Martin County. The Martin County Solid Waste Management District Recycling Center and American Legion west of Loogootee, the INDOT office south of Loogootee, and the fire station next to the Martin County 4-H Fairgrounds are all included in this category. Utilities throughout the county, such as cell phone towers and electrical substations are also included in this category.

e. Agricultural/Forest Land

The agricultural/forest land category includes all land used for farming and other agricultural purposes, land currently covered by trees, and any other land that is not currently built up or used for any of the previously listed land uses. This category covers over 131,207 acres in Martin County, which is just over 60 percent of the county's unincorporated total area.

2. EXISTING LAND USE CONTROLS

This comprehensive plan will be the first comprehensive plan if adopted for Martin County. The county has never adopted any type of land use controls, such as a zoning ordinance or subdivision control ordinance, nor do they currently require a building permit to build within the unincorporated area of the county. The incorporated communities of Loogootee, Shoals, and Crane have never implemented any type of comprehensive plan or land use controls.



3. PROJECTED LAND USE

Projected land use needs for the year 2030 for Martin County are derived from a review of past trends and demographic projections made in the Interstate 69 Travel Demand Model Travel Analysis Zones (TAZ) layer and the 2007 Complete Economic and Demographic Data Source by Woods & Poole Economics. With a projected decline in population, housing and employment, there is no projection for the conversion of land to urban uses in the future. Nevertheless, the conversion of land to urban uses in and about incorporated areas is likely to occur to accommodate replacement housing and the relocation and expansion of industrial and commercial uses. In and about incorporated areas and unincorporated Martin County, an estimate of the conversion of land to urban uses is about 257 acres for residential, 12 acres for commercial, 186 acres for industrial, 52 acres for public/quasi-public uses excluding recreation, and 100 acres for active recreation uses.

a. Residential

Between years 2008 and 2030, there is a projected loss of 120 dwelling units in Martin County based on a projected population decrease of 433 people, a continuing decline in household size, and a continued vacancy rate of 11.5 percent from the 2000 Census. All of the counties adjacent to Martin County are anticipated to increase in population over the next 20 to 30 years. Dubois County and Daviess County are expected to increase by ten to 20 percent in population between 2000 and 2030. Martin County and its communities should work to attract some of this residential development into the county. As approximately 35 new housing units are created each year, there will be an additional 770 housing units over the next 22 years. At three dwelling units per acre, 257 acres will be needed to accommodate this new housing throughout Martin County and its incorporated areas.

b. Commercial

Commercial land is occupied by retail/services and professional office uses. As is the case with future population, commercial jobs and overall employment are expected to decrease in Martin County between 2008 and 2030. Dubois and Daviess County are both expected to increase the number of commercial jobs between 2008 and 2030. Martin County and its communities should ensure that there is available land and utilities for potential commercial development and try to attract development into the county. Assuming the expansion and attraction of new commercial uses, about 12 acres are forecasted for Martin County and its incorporated areas.

Two major interchanges on the future I-69 are proposed near Martin County. An interchange at I-69 and US 231 will be located just north of Crane in Greene County and an interchange at US 50/150 will be located eight miles west of Loogootee near Washington. Traffic counts along US 231 and US 50/150 through Martin County are anticipated to increase as more vehicles travel these roads to reach I-69. These increased traffic volumes for the future are very attractive to potential businesses that cater to travelers.

c. Industrial

Industrial land is occupied by agricultural services, mining, construction, manufacturing, transportation/communication/ utility, and wholesale/warehouse uses. These uses average about 15 employees per acre or ten employees per net acre for sanitary sewer design. There are no additional industrial employees calculated for Martin County between 2008 and 2030. However, the general practice is to provide sufficient vacant industrial land to enable a 50 percent expansion of existing industrial uses to ensure their retainage plus acreage for expanded industrial employment. Since existing industrial uses cover about 372 acres, 186 acres would be needed to accommodate a 50 percent expansion and relocation of existing industrial uses.

Although there is no projected increase in industrial jobs for Martin County in the future, the county and incorporated cities should ensure that shovel-ready sites are available for industrial development. The major thoroughfares of US 231, US 50, and US 150 run through Martin County, and proposed I-69 interchanges are just a few miles from the county boundary. The county should work to attract industrial development to the county.



d. Public/Quasi-Public

The National Recreation and Park Association suggests that a community should have at least five to eight acres of parkland per 1,000 people. With a projected 2030 population of 9,778 people, Martin County would need 49 to 78 acres of parkland. There are 200 acres of recreational land currently in unincorporated Martin County. The Martin County portion of the West Boggs Lake and surrounding park make up nearly 175 acres of this land. The lake and park cover a much greater area than that, as most of the land is located in Daviess County. Nearly 25 acres of the parks and recreational land is found in the Martin County 4-H Fairgrounds. Although 200 acres of recreational land is adequate for the suggested parkland, additional recreational facilities or parkland should be considered in Martin County. The current parkland does not include facilities for field sports, court sports, or other recreational facilities. The county should consider adding about 100 total acres of parkland to different areas around Loogootee, Shoals, and Crane that supply soccer fields, baseball fields, basketball courts, volleyball courts, tennis courts, and other facilities for use by the general public.

Most of the other public/quasi public uses within Martin County should be sufficient for the projected 2030 population. With no population increase projected, existing schools, governmental facilities, and churches should be sufficient for the 2030 population. Nevertheless, about 52 acres of land may be converted to public/quasi-public uses (excluding recreation) as existing uses expand or relocate.

e. Conclusion

Multiple sources do not project an increase in population or employment for Martin County. Based on these projections, there is little demand for future land uses. However, the completion of I-69, with proposed interchanges at US 231 and US 50/150 just outside of the county, should increase traffic along these highways. Increased traffic through the county makes the county more attractive to businesses and industries. Shovel-ready sites should be made available along these major highways to draw development to the county. Nevertheless, new housing units will absorb about 256 acres of land, and commercial uses will convert 12 acres for expansion and relocation by the year 2030 throughout all of Martin County and its incorporated areas.

There is also a likely demand for 186 acres of industrial land uses to accommodate a 50 percent expansion and relocation of existing industrial uses. There is also a demand for 100 acres of additional parkland in the county to provide additional active recreational opportunities for county residents. Additional parks should be located outside of Loogootee, Shoals, and Crane. Finally, the expansion and relocation of public/quasi-public uses (excluding recreation) may absorb about 52 acres throughout all of Martin County and its incorporated areas.

Although the state and federal government own large pieces of land in Martin County, between the Crane NSWC, Hoosier National Forest, and Martin State Forest, there is plenty of land available for potential future development. Any residential development should first occur in the existing incorporated communities of Loogootee, Shoals, and Crane. Additional development may locate where existing water and sewer lines have been extended. Any future commercial or industrial development should first locate along US 231, US 50, and US 150, especially near Loogootee, Shoals, and Crane. Available land at the WestGate @ Crane Technology Park should be used before any other commercial or industrial land is publicly developed.

B. TRANSPORTATION

1. INTRODUCTION

The transportation system physically links the community to the land use activities within the community as well as activities outside of the community such as state and national activities. Only ground transportation is found in Martin County. The closest interstate to Martin County is currently I-64, which is located approximately 25 miles south of the county and can be accessed via US 231. However, once completed, I-69 will travel through the central part of Daviess County (adjacent to Martin County). As currently projected, I-69 would be approximately 11 miles west of Martin County via US 50, approximately eight miles west via SR 58, and about one mile to the north via US 231. I-69 will connect to I-64 and I-164 (approximately 30 miles of straight-line distance to the



southwest) and to I-465 (approximately 65 miles of straight-line distance to the northeast). There is no public bus system or any other type of transit within in Martin County. Depending on the starting location within the county, the nearest intercity bus service is Greyhound Bus Lines in either Terre Haute or Evansville, Indiana. There is no rail passenger service in Martin County. The nearest AMTRAK station is located in Indianapolis.

There are thirteen public use airports located within a one hour drive (approximately) from within Martin County, including: Lake Monroe Airport (Bloomington), Monroe County Airport (Bloomington), V.I. Grissom Municipal Airport (Bedford, Lawrence County), French Lick Municipal Airport, Patoka Reservoir Landing Area (Orange County), Paoli Municipal Airport (Orange County), Orleans Airport (Orange County), Salem Municipal Airport (Washington County), Perry County Municipal Airport (Tell City), Huntingburg Airport (Dubois County), Boonville Airport (Warrick County), Daviess County Airport (Washington), and Shawnee Field (Bloomfield, Greene County). Evansville Regional Airport is the closest airport which is certified to handle scheduled air passenger carrier operations. The nearest airport offering a full range of domestic and international flights is the Indianapolis International Airport.

2. HIGHWAY FUNCTIONAL CLASSIFICATION

The roadways in the street network are classified according to the function they perform. The primary functions of roadways are either to serve property or to carry traffic through properties. Streets are functionally classified as “local” if their primary purpose is to provide access to abutting properties. Streets are classified as “arterials” if their primary purpose is to carry traffic. If a street equally serves to provide access to abutting property and to carry traffic, it is functionally classified as a collector. These three primary functional classifications may be further stratified for planning and design purposes as described below. The functional class of a roadway is also important in determining federal and state funding eligibility, the amount of public right-of-way required, and the appropriate level of access control.

a. Major Arterials

Major Arterials include the interstates, freeways/expressways and principal arterials. The National Highway System of 155,000 miles includes the nation’s most important rural principal arterials in addition to interstates.

i. Interstates/Freeways/Expressways

Freeways and expressways are the highest category of arterial streets and serve the major portion of through-traffic entering and leaving metropolitan areas (i.e., inter-urban traffic). They carry the longest trips at the highest speeds and are designed to carry the highest volumes. In metropolitan areas, intra-urban traffic (such as between the central business district and outlying residential areas and between major inner-city communities or major urban centers) may also be served by streets of this class. Interstates are fully access-controlled facilities that are grade-separated from other roads and railroads, such as Interstate 64. All roadways that are on the nation’s interstate system of about 45,000 miles are fully grade-separated with full access control. Freeways are non-interstate, fully access-controlled facilities that are also grade-separated from all intersecting transportation facilities. Expressways are partially access-controlled facilities that may have occasional at-grade intersections, such as the Lloyd Expressway in Evansville or the US 41/US 50 Bypass in Vincennes.

ii. Principal Arterials

Principal arterials (sometimes termed other principal arterials under the Federal Functional Classification System) are the highest category of arterial streets without grade separation. This functional class complements the freeway/expressway system in serving through-traffic entering and leaving metropolitan areas. Within the metropolitan area, major intra-urban trips are served between the central business district and suburbs, and between major suburban activity centers. Although principal arterials may lack full access control, some level of access control is highly desirable, such as the minimum spacing of intersections with public roads and the control of driveway entrances. For principal arterials, maintaining traffic-carrying capacity for through-traffic is more important than providing access to abutting property.



b. Minor Arterials

Minor arterials, the lowest category of arterial streets, serve trips of moderate length and offer a lower level of mobility than principal arterials. This class augments the major arterials, distributing traffic to smaller geographic areas, and linking cities and towns to form an integrated network providing interstate highway and inter-county service. Minor arterials also provide urban connections to rural collectors.

c. Collector Streets

Collector streets serve as the link between local streets and the arterial system. Collector streets provide both access and traffic circulation within residential, commercial, and industrial areas. Moderate-to-low traffic volumes are characteristic of these streets. In rural areas, the major collectors provide service to county seats, larger towns (2,500 or more persons), and other major traffic generators that are not served by arterials. These roads serve the most important intra-county corridors. Minor collectors link local roads in rural areas and serve the smallest rural communities (fewer than 2,500 persons).

d. Local Streets

Local streets are composed of all streets not designated as collectors or arterials. Primarily serving abutting properties, local streets provide the lowest level of mobility and, therefore, exhibit the lowest traffic volumes. Through-traffic on local streets is deliberately discouraged. This class of street is not part of any city or county thoroughfare network and is not eligible for federal aid, with the exception of bridges and bikeway/walkway facilities.

3. THOROUGHFARE NETWORK

a. Martin County

There are two principal arterials in Martin County: US 231 and US 50. US 231 runs north-south through the western portion of the county tying to I-64 about 25 miles to the south and to proposed I-69 about one mile to the north. It connects to Kentucky (via a crossing of the Ohio River near Rockport in Spencer County) to the south, and it connects to Gary, Indiana to the north. US 50 runs east-west through the center of the county. It connects to Washington and Vincennes to the west and to Lawrenceburg to the east. US 50 will tie Martin County to proposed I-69 about 11 miles to the west.

The only minor arterial in Martin County is US 150. US 150 is classified as a minor arterial from the County Line northwest until its alignment coincides with US 50. US 150 generally runs east-west through the center of the county, connecting to Washington to the west and to Paoli to the east.

There are also several major collectors in Martin County, including SR 450, SR 550, SR 645, SR 650, and several other county roads. SR 450 travels northeast-southwest in the central portion of the county, from US 50 near Shoals northeast to the Lawrence County Line and Bedford. SR 550 travels east-west in the center of the county from US 50 at Loogootee to US 150 south of Shoals. SR 645 travels east-west a short distance in the northern portion of the county from Burns City west to US 231 and the Daviess County Line. SR 650 travels north-south a short distance in the central portion of the county from US 50 south to the US Gypsum Mine facility.

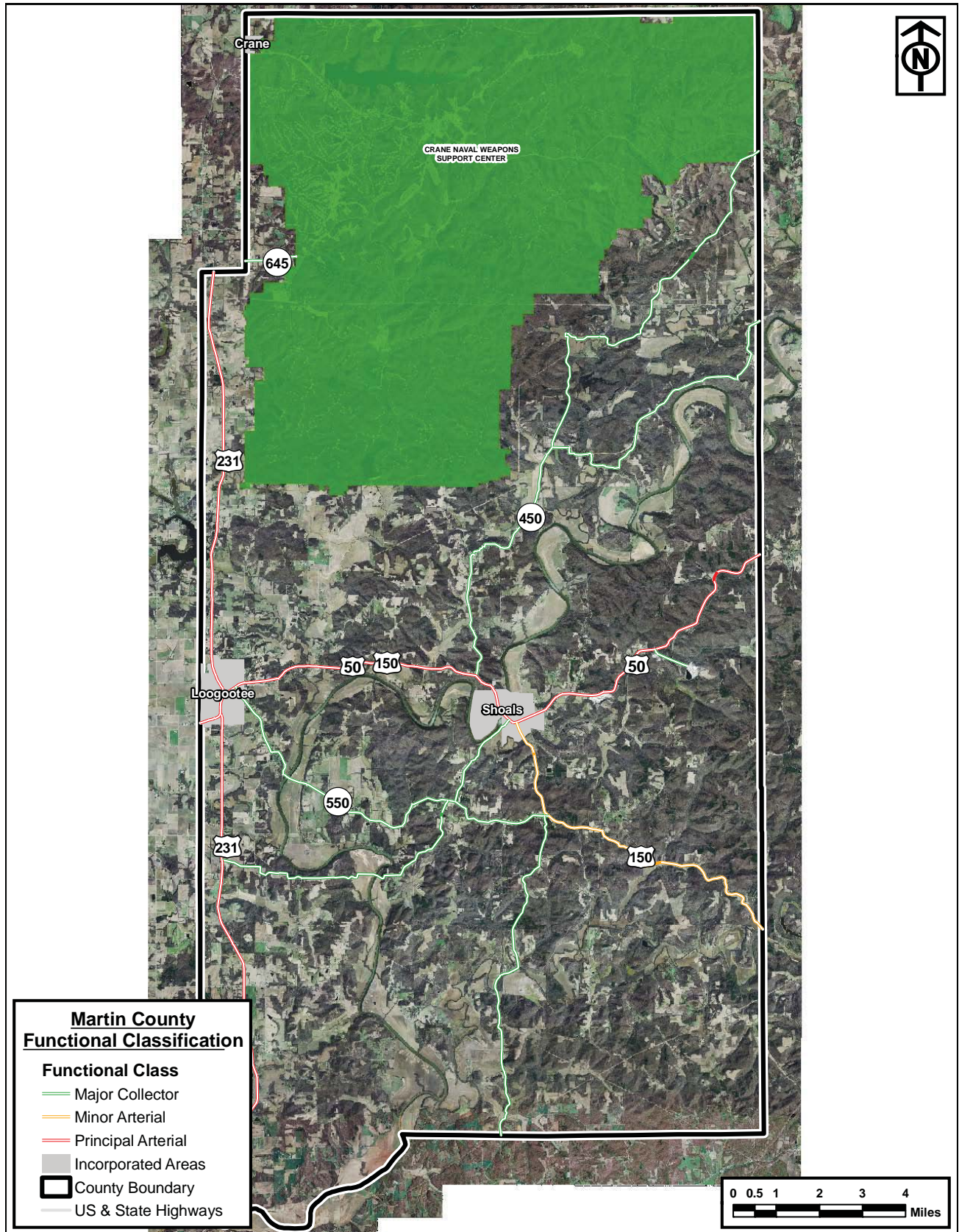
Figure 35 shows the functional classifications of roadways in Martin County. All of the roadways in Martin County are designated rural under the Federal Functional Classification System. There are no urban boundary areas within Martin County because there are no incorporated areas with 5,000 or more persons.

b. Maintenance Responsibility

Martin County maintains 377.45 center-line miles of roadway outside of any city/town limits in addition to



Figure 35: Functional Classification





maintaining 45 bridges. SR 450, SR 550, SR 558, SR 645, and SR 650 are all maintained by the Indiana Department of Transportation. All incorporated communities in Martin County are responsible for the maintenance of culverts and drainage ditches on non-state roads within their boundary limits. Martin County is responsible for the maintenance of culverts and drainage ditches on non-state roadways outside of incorporated areas. Martin County received \$964,743 from the Motor Vehicle Highway Fund, \$245,321 from Major Moves funding, \$105,806 from the Local Road and Street Fund, and \$69,077 from a special distribution funds in fiscal year 2006 (a distribution of proceeds, for two years from the lease of the Indiana Toll Road).

4. PHYSICAL CHARACTERISTICS

a. Roadways

The physical characteristics of a roadway system provide insight regarding the structural adequacy (pavement and bridge loading capacities), geometric adequacy (horizontal and vertical curves and turning radii at intersections), and functional adequacy (ability to handle traffic).

The roadway along US 231 through Martin County varies from a minimum width of 24 feet to a maximum width of 52 feet. There is curb and guttering and some sections with parking lanes within Loogootee. The US 231 right-of-way varies from a maximum of 80 feet to a minimum of 45 feet.

The roadway along US 50 through Martin County varies from a minimum width of 24 feet to a maximum width of 49 feet. There is curb and guttering on some sections within Loogootee and Shoals. The US 50 right-of-way varies from a maximum of 90 feet to a minimum of 56 feet.

The roadway width along US 150 through Martin County varies little, with a minimum width of 22 feet and a maximum width of 24 feet. There are no sections with curb and guttering. US 150 has a constant right-of-way width of 60 feet in Martin County.

The roadway width along SR 450 through Martin County is 22 feet. There are no sections with curb and guttering. SR 450 has a constant right-of-way width of 40 feet in Martin County.

The roadway width along SR 550 through Martin County varies little, with a minimum width of 18 feet and a maximum width of 22 feet. There are no sections with curb and guttering. The SR 550 right-of-way varies from a maximum of 60 feet to a minimum of 35 feet.

The roadway width along SR 645 through Martin County varies little, with a minimum width of 20 feet and a maximum width of 24 feet. There are no sections with curb and guttering. The SR 645 right-of-way varies from a maximum of 95 feet to a minimum of 60 feet.

The roadway width along SR 650 through Martin County is 22 feet. There are no sections with curb and guttering. SR 650 has a right-of-way width of 60 feet.

b. Bikeways/Walkways

There are no separate bikeways/walkways in Martin County except within the Martin State Forest. The areas within Loogootee and Shoals generally have sidewalks in the downtown areas and in older residential areas. Because of the traffic volumes and speeds on the major and minor arterials, bicycles and automobiles would not easily co-exist in Martin County.

5. TRAFFIC VOLUMES

Traffic counts in Martin County were completed by the Indiana Department of Transportation (INDOT) in 1997, 2001, and 2005. These counts covered all the federal and state roads in Martin County. The historic traffic volumes on US 231 tend to decrease within the city limits of Loogootee but increase outside of the city. The



traffic volumes on US 50 decrease from 1997 to 2001 and then increase from 2001 to 2005, though not, in most cases, to the levels seen in 1997. The change in traffic volumes on US 150 follows separate patterns inside and outside of Shoals: inside the Shoals area the traffic volumes increase from 1997 to 2001 before decreasing by 2005, and outside the Shoals area the traffic volumes decrease from 1997 to 2001 but then increase from 2001 to 2005. The traffic volumes on SR 450 and SR 550 both tend to show decreasing volumes over time. The traffic volumes on SR 645 tend to increase over time. The traffic volumes on SR 650 increase from 1997 to 2001 and then decrease from 2001 to 2005. Figure 36 shows the traffic counts at these locations.

6. ROADWAY IMPROVEMENTS

a. Improvement Types

Roadway improvements fall into two major categories: “preservation” projects and “expansion” projects. Preservation projects involve improvements to maintain the existing capacity of the roadway system such as:

- roadway resurfacing and bridge rehabilitation projects;
- safety projects like low-cost intersection improvements, minor horizontal and vertical realignments, signalization improvements, guardrail and marking improvements;
- pavement and bridge reconstruction/replacement projects; and
- transportation enhancement projects such as bikeways, walkways, landscaping and historic transportation structure preservation efforts.

Expansion projects are improvements that add capacity to the roadway system such as:

- major roadway widenings (adding lanes);
- new roadways and roadway extensions;
- major roadway re-alignments; and
- new freeway interchanges.

b. Planned Roadway Improvements

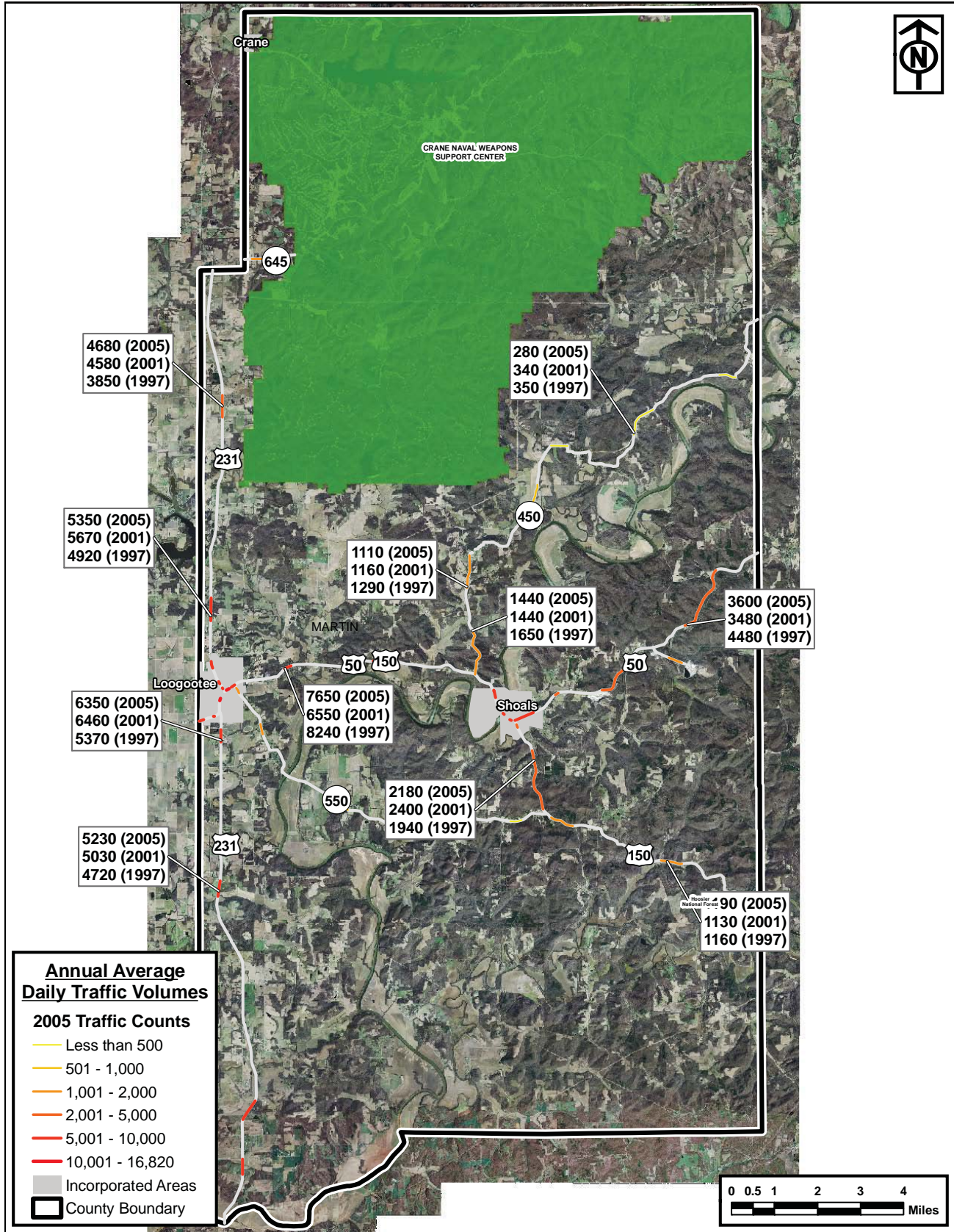
Planned roadway improvements are found in the Indiana 25-Year Long Range Transportation Plan that was updated in 2007 and the Major Moves 2006-2015 Construction Plan. The Long Range Transportation Plan focuses on expansion projects (i.e., added travel lanes, new road construction, interchange modifications, and new interchange construction). Major Moves includes new construction projects, major preservation projects, and resurfacing projects. For 2008 to 2011, The Indiana Statewide Transportation Improvement Program (INSTIP) draws individual expansion projects from the Long Range Transportation Plan and Major Moves, and identifies individual or groups of preservation projects.

The 25-Year Long Range Transportation Plan (LRP) includes five unfunded long range plan projects in Martin County (which is in the INDOT Vincennes District). All five of these projects are for construction of new segments of US 50. The first section is from US 231 in Loogootee to East Fork White River (2.5 miles). The second section is from East Fork White River to 0.1 miles east of US 150 (5.11 miles). The third section is from 0.1 miles east of US 150 to 0.1 miles east of SR 650 (3.71 miles). The fourth section is from 0.1 miles east of SR 650 to 2.3 miles east of SR 650 (2.2 miles). The fifth section is from 2.3 miles east of SR 650 to 0.9 miles east of the Martin/Lawrence County Line (2.6 miles). The Ready-for-Construction date for all five sections is 2025. The LRP ID for the five sections are 334, 335, 336, 337, and 338.

There are no specific Major Moves projects listed for Martin County. However, there is a total of \$271,056.43 in Major Moves funding earmarked for areas within Martin County but not attached to specific projects. There are four areas to receiver earmarks:



Figure 36: Annual Average Daily Traffic Volumes





- Loogootee (\$18,805.52)
- Shoals (\$5,536.69)
- Crane (\$1,392.76)
- Martin County (\$245,321.47)

The Indiana Statewide Transportation Improvement Plan (INSTIP) for 2008 through 2011 includes six projects for Martin County that include two hot mix asphalt (HMA) pavement rehabilitations (one on SR 550 between US 50 and US 150 and the other on the Martin State Forest Main Road), two small structure replacements (one on US 50 and the other on SR 450), a bridge replacement on US 231 at Friends Creek, and an intersection improvement on US 50 in Loogootee.

C. UTILITIES

1. INTRODUCTION

The utility infrastructure of the community is essential to supporting urban activities in the community and includes the water treatment and distribution system, the liquid waste treatment and collection system, the stormwater collection, and the electric, gas, and communications utilities.

2. WATER TREATMENT AND DISTRIBUTION SYSTEM

a. Water Treatment and Existing Capacity

Water is supplied to all three incorporated communities in Martin County and the area surrounding those communities. Loogootee has a treatment plant located on Scenic Hill Drive with six wells that can withdraw 4,000 gallons per minute serving a population of 3,800. Shoals has a treatment plant adjacent to the White River with two wells that can withdraw 700 gallons per minute that serves 853 people. Crane receives its water from Eastern Heights Utilities, located in Bloomfield. Capacity is adequate for the existing population for all three communities. East Fork Water has three wells on the White River in Shoals that can withdraw 900 gallons per minute serving 3,267 rural customers.

b. Distribution System

Loogootee provides water to the entire city and approximately a mile of fringe area outside of the city. The service area of the Shoals' system is only for the incorporated area. The service area in Crane is within the town's limits only.

c. Water Storage

In Loogootee, water is stored in two towers. A 250,000 gallon tower is located in the southern part of the city on Grant Street. A 750,000 gallon tower is located in the northern part of the city at the intersection of Line Street and Brady Street.

d. Water System Improvements

There are no identified water system improvements for any of the water systems in Martin County. Loogootee just completed a four million dollar upgrade on both facilities.

e. Future Water Needs

There is no population or commercial growth anticipated for Martin County or any of its communities. Therefore,



the existing water treatment and distribution system should be adequate for the 2030 population. The individual water companies may wish to extend lines to areas that do not have water lines. Applying water lines to areas that currently lack water will increase development potential in those areas.

3. LIQUID WASTE TREATMENT AND COLLECTION

a. Sewage Treatment Plant and Capacity

The Loogootee sewage treatment plant is located south of the city on US 231. The maximum capacity of the treatment plant in Loogootee is one million gallons per day (MGD). The plant is currently using 500,000 gallons per day. The sewage treatment plant on the Crane Naval Surface Warfare Center supplies lines and treatment for the Town of Crane.

b. Sewage Collection System

The Loogootee sewage collection system covers the entire City of Loogootee, as well as a fringe area of about one mile. The Crane Naval Surface Warfare Center sewage treatment lines cover only the incorporated area of Crane.

c. Sanitary System Improvements

The only major issue with the waste water systems in Martin County is infiltration and inflow into the Loogootee system. The collection system includes old clay pipes. There are no planned improvements to any of the waste water systems in the county. The Loogootee treatment plant recently completed a four million dollar upgrade.

4. SEWAGE AND STORM WATER DRAINAGE

All of the communities in Martin County have separate sewage and storm water drainage.

5. OTHER UTILITIES

Natural gas service in Martin County is supplied by Vectren for the Loogootee, Shoals, and Crane areas and most of western Martin County. Portions of eastern and southern Martin County do not receive natural gas service. Duke Energy supplies electric service for all of Martin County. Suddenlink, Charter Communications, and Longview Cable and Data LLC all provide cable, high speed internet, and phone service in Martin County.

6. SOLID WASTE DISPOSAL

The Martin County Solid Waste Management District (SWMD) is located at 500 Industrial Park Drive in Loogootee, just off of US 50. The SWMD accepts all sorts of recycling, including newspapers, magazines, office paper, glass, plastic, tin, steel, aluminum, clothing, and electronics. The center can also recycle home appliances for a small fee, such as water heaters, washers, dryers, refrigerators, and scrap metals. Household hazardous wastes are also accepted at the recycling center. The SWMD also accepts regular trash. Garbage bags can be brought to the center at a charge of one dollar per 33 gallon bag. They also accept larger items at a cost.

D. COMMUNITY FACILITIES

1. INTRODUCTION

Community facilities are the recreation, education, government, medical, institutional, and cultural facilities that provide services and amenities to the residents of Martin County. These facilities provide essential services as well as other services that affect the quality of life in the county.



2. RECREATION FACILITIES

a. Existing Facilities

There are several recreational facilities located in Martin County. The West Boggs Lake Park is primarily used for camping, boating, fishing, and hunting waterfowl. The Martin State Forest offers a variety of hunting opportunities. The White River that runs through Martin County provides an adequate amount of fishing opportunities. Hindostan Falls, located along the White River, is a popular fishing area. The Hoosier National Forest covers the southwest corner of Martin County. The Hoosier National Forest, Martin State Forest, and West Boggs Lake Park offer facilities including hiking/biking trails, camping, hunting, and fishing. Overlook Park, Trinity Springs, and Mustering Elm Memorial Park are all considered passive recreation areas.

b. Park Land and Recreation Facilities Standards

Parks are functionally classified according to the population they serve: neighborhood, community, or regional.

Neighborhood parks are oriented toward the surrounding neighborhood, and provide a multi-purpose area with playground facilities for young children, court sports (e.g., basketball, tennis, volleyball) for older children, and picnic areas within walking distance of where they live. Neighborhood parks focus on active recreation facilities for abutting residential areas, but also address passive recreation activities such as walking, picnicking, sitting, and viewing. For neighborhood parks, the service area radius is one-quarter mile (1,320 feet) reflecting an acceptable or convenient walking distance for 85 percent of the people. For access by bicycle, the park service radius may be increased to one-half mile which is also the maximum walking distance. The National Recreation and Park Association suggests that a community should have at least 1.25 to 2.5 acres of neighborhood parkland per 1,000 people.

Community parks provide for the recreational needs of the larger community and include field sports facilities (e.g., baseball, softball, football and soccer fields) in addition to the facilities commonly found at neighborhood parks. Community parks also focus on active recreation facilities for the community, but may also have some passive recreation facilities. For community parks, the service area radius is one-quarter mile for playground and court sports facilities, and one to two miles for field sports activities. One-half mile is considered the upper limit for walking and is considered a convenient biking distance to recreational facilities. Greater distances involve the automobile as the primary means of access. Community parks may include community centers, indoor gyms, outdoor stages and swimming pools as well as major picnic facilities. The National Recreation and Park Association suggests that a community should have five to eight acres of community parkland per 1,000 people.

Regional or metropolitan parks address outdoor recreation activities such as picnicking, boating, fishing, swimming, camping and hiking. These parks concentrate on passive recreation facilities and active recreation facilities that are unique to the region. The primary means of access to regional parks is by automobile. Regional parks contain 200 or more acres and are required to have five to ten acres per 1,000 people. The National Recreation and Park Association suggests that a community should have 15 to 20 acres of regional/metro parkland per 1,000 people.

c. Park Land and Recreation Facility Adequacy

Neighborhood Parks and Community Parks should be provided by the incorporated communities of Loogootee, Shoals, and Crane. The county should supply enough regional parkland for all of the county's citizens. The existing fish and wildlife areas, forests, and West Boggs Lake Park provide a sufficient amount of regional parks that include passive recreational opportunities. These recreational facilities are located throughout Martin County. Additional regional parkland in the county should be considered to supply more active recreational opportunities, such as soccer fields, baseball fields, basketball courts, and other active recreational facilities. These parks



should be located away from existing facilities to provide recreational opportunities for other citizens. Areas outside of Loogootee, Shoals, and Crane should be considered for the addition of parkland.

3. EDUCATIONAL FACILITIES

Martin County includes two school districts. The Loogootee Community School Corporation is the larger of the two corporations in terms of students. According to preliminary counts by the Indiana Department of Education, there are 1,047 students enrolled for the 2008-2009 school year in the Loogootee Community School District. The corporation includes the Loogootee East Elementary School, Loogootee West Elementary School, and Loogootee Junior/Senior High School. All three of these schools are located within the corporate limits of Loogootee.

The Shoals Community School Corporation has a total student enrollment of 676 for the 2008-2009 school year according to preliminary counts by the Indiana Department of Education. This corporation includes the Shoals Community Elementary School and Shoals Junior/Senior High School. The elementary school and junior senior high school are located next to each other near the intersection of US 50 and Ironton Road on the east side of Shoals.

4. GOVERNMENTAL FACILITIES

Shoals is the county seat of Martin County. The Courthouse is located at 111 South Main Street between 1st Street and 2nd Street. The Martin County sheriff's office and jail are also located in Shoals at 318 South Capital Ave. The Martin County Highway Department office is also located in Shoals.

5. MEDICAL FACILITIES

Martin County does not have a hospital within its county boundary. Neighboring counties including Greene, Lawrence, Orange, Dubois, and Daviess offer hospitals that are within a reasonable distance to Martin County residents. The closest hospitals are located in Washington and Jasper. The Daviess Community Hospital in Washington is an 80-bed facility with an emergency room. Memorial Hospital and Health Care Center in Jasper has 104 beds and an emergency room. The two hospitals in Bedford, Dunn Memorial Hospital and Bedford Regional Medical Center, and one in Linton, Greene County General Hospital, which each have 25 beds. Bloomington has three hospitals, including Bloomington Hospital with 293 beds. Meadows Hospital, a psychiatric hospital with 52 beds, and Monroe Hospital, a short-term hospital with 32 beds, are also in Bloomington.

There are several small clinics and doctor's offices in both Loogootee and Shoals. Family practice doctors, chiropractors, and dentists can all be found in Loogootee and Shoals.



Chapter 4: Community Issues

A. LAND USE PLAN COMMITTEE MEETING

On Wednesday, September 10, 2008 urban planners from Bernardin, Lochmueller and Associates, Inc. met with the Martin County Land Use Plan Committee at the St. John's Center at St. John's Catholic Church in Loogootee. This meeting included a review of the comprehensive plan process, the content of the proposed plan and the schedule for preparation of the plan. Members of the Committee identified community leaders to be interviewed about community growth and development issues, and developed a community survey to be sent to citizens of Martin County. An exercise was also completed during the meeting to determine the growth and development issues of the county. Each committee member was given an opportunity to list the issues they believed were important to Martin County. The committee then scored these issues by importance. The top ten issues were included in the community survey, and additional issues were added as survey size permitted. The Plan Committee ranked these issues as follows: (Issues that were scored the same are given the same rank.)

- 1) County roads and bridges needed to be upgraded and maintained. But, lack of funding for County road and bridge projects. (score = 40)
- 2) Need economic growth through jobs. Any kind of job. (score = 39)
- 3) Lack of tax base due to large amount of State and Federal lands. (score = 37)
- 4) Lack of ambulance and 911 services. (score = 27)
- 5) Water and wastewater needs, either the facilities don't exist or the existing facilities are outdated. (score = 22)
- 6) Martin County should implement protective land use controls. (score = 17)
- 7) Attract good quality jobs, specific to West Gate, to Martin County. (score = 15)
- 8) Need better education of work force, continuing education for agricultural and vocational jobs through the Learning Center. (score = 14)
- 9) Raise awareness for recreational areas within the County. (score = 10)
- 10) Increase tourism within the County as a long-term goal. (score = 8)
- 11) Improve digital communication needs within the County. (score = 7)
- 12) Lack of quality housing within the County. (score = 5)
- 13) Retain youth in Martin County. (score = 4)
- 13) Upgrade Martin County governmental facilities. (score = 4)
- 14) Collect income from through-traffic on I-69. (score = 2)
- 15) Need flood coordination with other counties and State agencies. (score = 1)
- 15) Need in County entertainment (e.g., movie theater, etc.). (score = 1)
- 16) Secure trail funding between the Boggs and Hindostan Falls. (score = 0)
- 16) Draw retail stores within the County. (score = 0)
- 16) Lack of rental properties. (score = 0)
- 16) Medical facilities are needed. (score = 0)

B. COMMUNITY SURVEY

As part of the comprehensive plan process, 2,512 surveys were sent out to residents of Martin County by direct mailing to specific rural routes on Thursday, October 16, 2008. Residents were asked to fill out the survey and mail it back to Bernardin, Lochmueller and Associates, Inc. The completed surveys began arriving later that week and were collected through November 20, 2008. The results of the surveys were used to determine community issues that need to be addressed in the comprehensive plan. Nearly 10 percent (246) of the surveys were completed and returned. Table 6 shows a list of issues from the survey, composite scores and percent agreement with the issues.

C. COMMUNITY LEADER INTERVIEWS

In addition to the surveys, community leaders were interviewed by phone about current and future growth in Martin County. Community leaders are those persons representing one of eight interest groups including Business and Industry, Financial, Real Estate, Developers and Builders, Civic Leaders, Education, Religious and Other Interest Groups.



Of the leaders selected to be interviewed, seven people were available and agreed to discuss current and future growth in Martin County. In the various categories, the number of respondents equaled: zero (0) from Business and Industry, zero (0) from Banking and Financial, one (1) from Real Estate, one (1) from Developers and Builders, two (2) from Civic Leaders, one (1) from Education, zero (0) from Religious, and two (2) from Other Interest Groups.

1. CURRENT ASSETS TO GROWTH AND DEVELOPMENT

The natural setting of the county and the county's location were assets mentioned by multiple respondents. Loogootee's location at the crossroads of two major highways (US 231 and US 50), equal distance from Evansville, Indianapolis, Louisville and Terre Haute, and near several universities was also mentioned as an important asset. Half of the respondents felt that the Crane Naval Surface Warfare Center (NSWC) is a great asset, and the WestGate @ Crane Technology Park should help attract high-end jobs to the area. Several respondents mentioned that the Community Learning Center is a good tool; one respondent thought that the Learning Center needs to be marketed more. Most of the respondents thought that the county had great tourism and recreational opportunities, and facade and sidewalk grants have helped improve the community. One respondent stated that there are several good small businesses in the community.

2. CURRENT OBSTACLES TO GROWTH AND DEVELOPMENT

A few respondents mentioned that there is a resistance to growth and development in the community. Several development constraints were also pointed out. Two respondents mentioned the tax exempt status of Crane NSWC, West Boggs State Park and the Hoosier National Forest which all cover a large portion of the county's land. One respondent brought up floodplains and the county's terrain as obstacles. Infrastructure needs were also mentioned, including the need to expand wastewater systems in the county and upgrade county roads and bridges. A lack of existing employment opportunities was also viewed as an obstacle. One respondent thought that there is a need to clean up the county, because some areas detract from the natural beauty of the county.

3. DESIRES FOR FUTURE GROWTH

New employment opportunities was the most common response to desires for future growth. One respondent mentioned a need for both manufacturing and high-end jobs at the WestGate @ Crane Technology Park. An increase in recreational opportunities was mentioned in several ways by most of the respondents. More parks and recreational areas, a swimming pool, campgrounds and sidewalks were all mentioned as needs for the county. One respondent would like to see implementation of the parks and recreation plan, and another would like to see Martin County become an attraction for retired individuals. Another respondent thought that churches in the community need to be more welcoming to all individuals, which would help draw people into the county. Overall growth and development was also mentioned as a desire, through the creation of more recreational opportunities, new and upgraded infrastructure, new hotels and growth of the school system.



Table 8: Community Survey Results

	Composite Score	% Strongly Agree	% Somewhat Agree	% Somewhat Disagree	% Strongly Disagree	Did not Respond
Strongly Agree (1.0 - 1.5)						
Need economic growth through jobs, any kind of job.	1.4	68.7%	18.7%	5.3%	3.7%	3.7%
Martin County needs to do more to keep young people in the community.	1.4	65.9%	24.0%	4.5%	0.8%	4.9%
Attract good quality jobs, specific to Westgate at Crane Technology Park, to Martin County.	1.5	63.0%	23.6%	6.9%	2.8%	3.7%
There is a need for better coordination and education (all parties) regarding planning, economic development, etc.	1.5	58.5%	30.9%	3.3%	2.8%	4.5%
There is a need to change the attitude of the County from negative to positive.	1.5	64.2%	20.7%	6.1%	4.5%	4.5%
There is a need for a shared vision for the future of Martin County.	1.5	60.6%	26.0%	4.9%	3.7%	4.9%
There is a need for more public involvement.	1.5	58.9%	31.7%	3.7%	2.0%	3.7%
There is a lack of capital and business support to foster entrepreneurship/small businesses in Martin County.	1.5	56.9%	28.5%	4.9%	2.8%	6.9%
Somewhat Agree (1.6-2.4)						
County roads and bridges need to be upgraded and maintained. But, there is a lack of funding for County roads and bridge projects.	1.6	51.6%	32.9%	6.1%	4.5%	4.9%
Need better education of the work force, continuing education for agricultural and vocational jobs through the Learning Center.	1.6	53.3%	34.6%	5.7%	2.4%	4.1%
Lack of tax base due to a large amount of State and Federal Tax-exempt lands.	1.7	50.4%	24.8%	9.3%	7.7%	7.7%
Increase tourism within the County as a long-term goal.	1.7	51.6%	28.9%	11.0%	5.3%	3.3%
Improve digital communication needs within the County.	1.7	48.0%	36.2%	7.7%	4.1%	4.1%
Martin County needs to be all inclusive in planning.	1.7	44.7%	34.6%	9.8%	1.6%	9.3%
Martin County lacks funding to complete projects.	1.7	51.6%	31.3%	5.3%	6.9%	4.9%
Martin County needs more housing for the elderly.	1.7	43.5%	36.6%	11.4%	3.3%	5.5%
Raise public awareness of recreational areas within the County.	1.8	50.0%	32.9%	9.3%	3.7%	3.7%
There is a lack of communication and cooperation between government agencies in Martin County.	1.8	43.1%	34.1%	12.2%	4.5%	6.1%
There is a need for additional recreational facilities in Martin County.	1.8	40.7%	36.2%	14.6%	3.7%	4.9%
There is a need for more affordable housing in Martin County.	1.8	39.0%	37.4%	11.0%	5.7%	6.9%
Martin County should encourage new home building.	1.9	39.8%	34.1%	17.1%	4.9%	4.1%
Lack of ambulance and other 911 emergency services.	2.0	33.3%	36.2%	17.9%	7.7%	4.9%
Martin County needs to develop an industrial park.	2.0	34.6%	36.2%	13.0%	9.3%	6.9%
There are water and wastewater facility needs, either the facilities do not exist or the existing facilities are outdated.	2.1	23.2%	39.4%	22.4%	6.1%	8.9%
Martin County should implement protective land use controls.	2.2	22.8%	34.6%	19.9%	11.4%	11.4%
Somewhat Disagree (2.5-3.0)						
Martin County effectively promotes its assets to encourage economic development and tourism.	2.7	10.2%	27.6%	36.2%	18.3%	7.7%





Chapter 5: Future Vision

A. INTRODUCTION

1. FUTURE VISION

The future vision for the physical development of Martin County for the year 2030 is reflected in the policy and objectives statements (and associated development review guidelines) of the community. These policies, objectives and guidelines serve as the basis for developing and evaluating future land use patterns for the community, and as the basis, in conjunction with the Future Land Use Map, for determining consistency of proposed development and infrastructure investments with the comprehensive plan.

2. DEVELOPMENT OF THE VISION

With the assistance of the Land Use Plan Steering Committee, the future vision for Martin County was developed through a community survey, interviews of community leaders, a general public meeting, and written public comment. The initial input of the Land Use Steering Committee, community survey and community leader interviews helped identify growth and development issues of concern unique to Martin County. These are documented in Chapter 4 of the comprehensive plan.

3. VISION STATEMENT

Martin County strives to be a great place to live, work and visit by embracing change that fosters economic development opportunities. Preserving historic, natural and rural features that foster a unique living environment, increasing quality employment opportunities, and promoting tourism are all high priorities.

B. POLICIES AND OBJECTIVE STATEMENTS

Many people think of a comprehensive plan as only a Future Land Use Map. While a Future Land Use Map may be one of the end products of the comprehensive plan, it is not the foundation of the plan. Throughout the Midwest (including Indiana and surrounding states), the foundation for the comprehensive plan is the future vision for the community as expressed in goals, objectives, principles, policies or guidelines. The State of Indiana enabling legislation for comprehensive planning (I.C. 36-7-4-500) implicitly recognizes that a plan must be more than a map.

A well-designed plan is based on a set of objectives and policies. It is this collection of objectives and policies that is essential to good planning, not the map. Indiana's planning enabling statute recognizes this fact by requiring only three elements in a comprehensive plan. Indiana Code 36-7-4-502 states:

"A comprehensive plan must contain at least the following elements:

- 1. A statement of objectives for the future development of the jurisdiction.*
- 2. A statement of policy for the land use development of the jurisdiction.*
- 3. A statement of policy for the development of public ways, public places, public lands, public structures and public utilities."*

Governed by a well-enunciated set of objectives and policies, development decisions will be made in a predictable, orderly manner. While these objectives and policies are the foundation for the Martin County Comprehensive Plan, the plan includes several other elements (including a land use development plan or Future Land Use Map, a transportation/thoroughfare plan, a utilities plan, a community facilities plan, an open space and recreation plan, and an environmental plan) to assist in the interpretation and application of the objectives and policies. These additional elements of the comprehensive plan are expressly permitted by Indiana Code 36-7-4-502 and 506.



In determining consistency of a development proposal with the Comprehensive Plan, the Martin County Comprehensive Plan establishes two tests: Consistency with the Future Land Use Map and consistency with development guidelines. If the first test fails, the second test becomes paramount as the development guidelines are an expression of the development objectives and policies of the community.

The development policies and objectives that follow have been drafted to reflect the input of the community as expressed by the community survey, community leadership interviews, Land Use Plan Steering Committee and public comments expressed through workshops and hearings during the process.

1. LAND USE DEVELOPMENT POLICY

In implementing this comprehensive plan, the land use development policy of Martin County is to foster orderly growth and development that expands future employment opportunities and meets living needs of all people while maintaining the integrity of Martin County as a rural county and protecting its unique natural and man-made environmental assets. Economic development opportunities will be encouraged to expand job opportunities throughout Martin County, building on the transportation assets of US 231, US 50/US 150, rail and the future I-69. This policy will encourage the establishment and expansion of commercial facilities in an orderly and safe manner. This policy will promote land use practices designed to continue development of Martin County as a desirable place to live and work. Further, it fosters revitalization, rehabilitation, reuse and redevelopment of residential and commercial properties where appropriate, to improve property values, stabilize public revenues and enhance the visual appearance of the county. This policy encourages residential development that provides the appropriate mix of housing opportunities for all ages and incomes. Development will be encouraged to make the most efficient use of existing and planned infrastructure. The unique historic and natural assets of the community will be preserved and enhanced for the enjoyment of the community and to strengthen associated economic development opportunities, including tourism.

2. COMMUNITY INFRASTRUCTURE POLICY

In implementing this comprehensive plan, the community infrastructure policy of Martin County is to develop public ways, public places, public lands, public structures and public utilities necessary to assure orderly and cost-effective development and to ensure the continued high quality of life for all citizens while protecting Martin County's historic heritage and its natural and scenic beauty. Develop the potential for enhanced or new transportation routes. This policy promotes infrastructure improvement practices that emphasize maintenance and enhancement of existing facilities, and the expansion of facilities only when such an expansion addresses a specific need (such as the creation of marketable commercial and industrial sites for expanded employment opportunities) and improves the overall cost-effectiveness of the particular public infrastructure system (whether roads, sewers, waterlines, stormwater drainage, recreation facilities, etc.). Adequate infrastructure is necessary for all new and expanded development, and new development is to bear the cost of infrastructure improvements that it necessitates whenever possible.

3. GOALS AND OBJECTIVES FOR FUTURE DEVELOPMENT

Goal 1 (Growth Management):

Promote appropriate and orderly development and growth throughout Martin County.

Objective 1.1: Encourage appropriate future commercial and industrial development to locate near the future I-69/US 231 interchange, especially in the WestGate @ Crane Technology Park, and around Loogootee and Shoals.

Objective 1.2: Consider the creation of land use controls (zoning and subdivision control ordinances) to protect investment in properties and infrastructure and to preserve the revenue base of the community.



Goal 2 (Economic Development):

Enhance economic development opportunities in areas appropriate for the expansion of commercial and industrial uses.

- Objective 2.1:** Provide more job opportunities and improve the overall economy in Martin County by attracting new quality industry and businesses through public incentives.
- Objective 2.2:** Provide incentive opportunities to encourage the reuse of vacant industrial and commercial structures and properties in Martin County, and especially in Loogootee and Shoals, in a manner compatible with surrounding uses.
- Objective 2.3:** Promote planning and economic development coordination and education.
- Objective 2.4:** Provide adequate infrastructure to existing and proposed industrial, commercial and residential sites to ensure suitable sites for immediate development (shovel ready sites).
- Objective 2.5:** Provide increased business support and capital opportunities to foster entrepreneurship/small businesses in Martin County.
- Objective 2.6:** Provide incentive opportunities to retain and assist in the expansion of existing businesses in Martin County.
- Objective 2.7:** Provide incentive opportunities to attract and encourage new business and industry in Martin County and the WestGate @ Crane Technology Park.
- Objective 2.8:** Encourage the development of additional retail businesses and personal services so that residents do not have to shop outside Martin County for common necessities.
- Objective 2.9:** Encourage workforce education and continuing education for agricultural and vocational jobs through the Learning Center that specifically reflect local business needs.
- Objective 2.10:** Encourage the payments by state and federal government in lieu of tax payments due to state and federal tax-exempt lands in order to increase the revenue base of Martin County.
- Objective 2.11:** Develop a program that assists Martin County in promoting economic development and tourism.

Goal 3 (Housing):

Ensure residential development that is compatible with existing residential areas, consistent with the rural county character, preserves property values, provides opportunities for affordable housing and serves all age and income groups.

- Objective 3.1:** Address decaying and blighted residential properties through a combination of incentive opportunities (such as low cost housing rehabilitation loans) and enforcement (such as building and property condition enforcement targeted at absentee property owners) while ensuring sensitivity to the economic capacity of the property owner.
- Objective 3.2:** Encourage the development of additional moderately priced housing in Martin County.



Objective 3.3: Encourage new housing development by permitting innovative housing types and designs that encourage infill housing on vacant lots and that are compatible with surrounding land uses.

Objective 3.4: Encourage new residential development that will enable retired and low income persons to remain in Martin County and the expansion of existing elderly living residences such as assisted living and independent living dwellings in Martin County.

Goal 4 (Environment):

Protect man-made and natural environmental features in Martin County that contribute to the historic, natural and rural county character.

Objective 4.1: Determine the status of ownership of blighted/decaying properties and work with owners to enhance the appearance of these properties.

Objective 4.2: Identify and preserve the economically viable historic structures in Martin County.

Objective 4.3: Facilitate the adaptive reuse of blighted/decaying historic structures, through incentive opportunities (low interest rehabilitation loans, historic structure tax reductions, infrastructure improvements) while ensuring the reuse is compatible with surrounding land use.

Objective 4.4: Discourage development in areas subject to severe environmental constraints (floodplains, steep slopes, wetlands, significant natural wildlife habitats, etc.) and ensure any development in such areas minimize adverse environmental impacts.

Goal 5 (Transportation):

Preserve and enhance existing transportation corridors in Martin County while providing new corridors to address congestion, to facilitate goods movement and to stimulate economic growth.

Objective 5.1: Improve truck traffic flow to improve safety and to relieve congestion.

Objective 5.2: Consider the improvement of existing roads or the construction of new roads in Martin County to provide easier access.

Objective 5.3: Consider increasing transportation project funding to improve and upgrade county roads and bridges.

Objective 5.4: Consider highway improvements within Martin County that could be needed due to I-69 traffic.

Goal 6 (Utilities):

Ensure adequate availability of a sanitary sewer system, water distribution system, stormwater facilities and other utilities for existing development while taking advantage of new growth opportunities that strengthen the economic performance of the public utilities and that support economic development initiatives.

Objective 6.1: Ensure that all areas of the county have appropriate natural or man-made drainage systems to adequately accommodate stormwater flows.

Objective 6.2: Consider alternative sewer lines and systems that are more compatible with the rural character of the county and with the location of existing sewer lines.



Objective 6.3: Encourage all sanitary sewer systems in Martin County to examine their financial policies regarding sanitary sewer tap-ins and lateral line extensions to ensure new development pays its own way and examine their rates on an annual basis to ensure sufficient revenues to operate and maintain existing capital investments.

Objective 6.4: Encourage all water distribution systems in Martin County to adequately maintain water filtration plants and distribution lines for existing development while taking advantage of new development tap-ins and minor main extensions that improve the economic performance of drinking water systems.

Objective 6.5: Encourage the improvement of digital communication technologies for Martin County.

Goal 7 (Recreation):

Preserve and enhance the parks and recreational facilities serving the residents of Martin County.

Objective 7.1: Encourage businesses that provide quality recreational activities such as skating, miniature-golf, a movie theater, an additional public golf course, etc.

Objective 7.2: Consider the addition of more parks and public areas in Martin County to offer visitors more recreational opportunities.

Objective 7.3: Encourage development of bicycle, walkway and trail connections between communities and community facilities.

Objective 7.4: Consider the addition of new facilities and activities at existing parks to meet Indiana Outdoor Recreation Standards.

Objective 7.5: Adequately maintain, rehabilitate and replace recreation facilities at existing parks.

Objective 7.6: Promote public awareness of Martin County recreational areas.

Goal 8 (Community):

Ensure adequate availability of entertainment, recreation, education and medical services to meet all necessities for all residents and visitors of Martin County.

Objective 8.1: Find and create an economic development niche that will attract people and set Martin County apart from other counties.

Objective 8.2: Encourage a higher county morale and unification of Martin County communities and citizens through public involvement and increased communication with government agencies.

Objective 8.3: Increase and unify the community volunteer efforts in Martin County.

Objective 8.4: Consider the addition of more medical care providers and urgent care facilities.

Objective 8.5: Consider the possibility of a community college or small university, such as Ivy Tech, in Martin County to bring post-secondary education opportunities closer to residents.

Objective 8.6: Retain younger populations by increasing high-quality job opportunities and amenities in Martin County.



- Objective 8.7:** Increase activities and events in Martin County to make the community more attractive for long-term residents and short-term tourists.
- Objective 8.8:** Develop a cooperative, continuing and comprehensive economic development program to retain and attract businesses to Martin County.
- Objective 8.9:** Promote tourism that capitalizes on local recreational areas such as Martin State Forest or the Hoosier National Forest, West Boggs Creek Reservoir Park and Hindostan Falls State Fish and Wildlife Area.
- Objective 8.10:** Promote tourism that emphasizes Martin County's natural geological formations.

Goal 9 (Government):

Encourage greater communication between county and local governments, and residents of Martin County to ensure the accomplishment of future goals.

- Objective 9.1:** Increase the coordination of community planning efforts in Martin County.
- Objective 9.2:** Consider the enforcement of building codes to ensure existing and future buildings are safe and appropriate for residents.
- Objective 9.3:** Consider the creation of development standards such as zoning and subdivision regulations.
- Objective 9.4:** Improve and maintain an adequate tax base to support public expenditures.
- Objective 9.5:** Encourage communication between local governments.

C. GUIDELINES

In addition to the Land Use Development Policy Statement, the Public Infrastructure Policy Statement and the Development Objectives, the following guidelines are to be used to determine consistency of the proposed development and infrastructure investment with the comprehensive plan.

1. LAND USE DEVELOPMENT

a. Residential Uses

R-1: Ensure new residential development is compatible with existing, abutting residential or non-residential development in size, height (not to exceed two stories), mass and scale.

R-2: Ensure adequate buffering and screening (fences, walls or other physical barriers, vegetation, or physical separation) or other techniques (location of structure, windows and balconies) that mitigate nuisances (automobile lights, outdoor lighting, illuminated signs, loud noises, vibration, dust, vehicle fumes, junk, outdoor storage, parking lots, etc.) when new residential development adjoins existing higher density residential uses or existing non-residential uses.

R-3: Encourage the design of new residential development to provide adequate lot sizes and shapes for housing, to preserve natural tree stands to the extent practical, to use natural drainage channels where possible, to discourage speeding and through-traffic on streets, and to provide amenities such as walkways, curbs, trees and vegetation.



R-4: Evaluate residential development on the basis of the following gross densities:

Low: Up to four dwelling units per acre.

Medium: Greater than four and up to eight dwelling units per acre.

High: Greater than eight and up to ten dwelling units per acre.

R-5: Limit residential development to the “low density” category when major access is not from a “collector” or “arterial” street, or is located in areas with karst topographic features or “high quality natural communities”, or primary access passes through a “low density” residential area.

R-6: Limit residential development to the “medium” or “low” density category when the site has environmental constraints (wetlands, floodplains, steep slopes) other severe environmental limitations or a “collector” street is the highest available functional class for primary access to the site.

R-7: Locate “high” density residential development only where the major access point is to an “arterial” street and where the site is not affected by wetlands or within a floodplain, on steep slopes or affected by any other severe environmental limitations.

R-8: Discourage dwelling unit densities in excess of ten dwelling units per acre and structures in excess of two stories.

R-9: Limit “medium” and “high” density residential structure types to no more than ten dwelling units per structure.

R-10: Prohibit new residential development in the 100-year floodplain.

R-13: Encourage innovative residential developments that mix housing types and densities with appropriate screening and buffering to ensure compatibility with surrounding land uses.

R-14: Permit innovative housing types and designs that enable infill housing on vacant lots while remaining compatible with adjacent residential uses.

b. Office Uses

O-1: Encourage the location of offices in planned commercial centers and planned office centers, and as transitional uses from residential to retail uses when the office use involves the conversion of a residential structure or any new structure that has the character of the abutting residential use relative to size (not to exceed 10,000 square feet), height (not to exceed two stories), mass, scale, yards and parking to the rear or side.

O-2: Ensure office development is compatible with existing, abutting residential or other non-residential development in size, height (not to exceed two stories outside downtown), mass and scale.

O-3: Ensure adequate buffering and screening (fences, walls or other physical barriers, vegetation, or physical separation) or other techniques (location of structure, windows and balconies) that mitigate nuisances (automobile lights, outdoor lighting, illuminated signs, loud noises, vibration, dust, vehicle fumes, junk, outdoor storage, parking lots, etc.) when new office development adjoins existing residential uses or residentially zoned areas, or adjoins other existing non-residential uses.

O-4: Ensure office building setbacks from all property lines, with parking location, signing and lighting that are compatible with any adjoining residential use.



c. Commercial Uses

C-1: Encourage the location of new commercial uses in planned centers, permit the expansion of existing commercial uses as long as the expansion is compatible with abutting uses, and permit the conversion of non-commercial structures to retail uses as long as the converted structure is compatible in character with abutting residential uses.

C-2: Encourage commercial uses serving residential areas (such as nondurable and convenient goods sales and personal services) to be located within or adjacent to residential areas.

C-3: Encourage commercial uses serving the greater community (such as durable goods sales, land-extensive uses, structures over 10,000 square feet and auto-oriented retail uses) to be located on “arterial” streets.

C-4: Ensure retail development is compatible with existing, abutting residential development or residentially zoned areas in size (10,000 square feet), height (not to exceed two stories), mass and scale.

C-5: Ensure adequate buffering and screening (fences, walls or other physical barriers, vegetation, or physical separation) or other techniques (location of structure, windows and balconies) that mitigate nuisances (automobile lights, outdoor lighting, illuminated signs, loud noises, vibration, dust, vehicle fumes, junk, outdoor storage, parking lots, etc.) when new or expanded commercial development adjoins existing residential uses or adjoins office uses.

C-6: Ensure commercial building setbacks from all property lines, with parking location, signing and lighting that are compatible with any adjoining residential use.

C-7: Limit outdoor storage and displays when commercial uses are adjacent to residential, office and other commercial uses.

C-8: Prohibit non-premises signs (i.e., billboards) in commercial areas.

C-10: Confine adult entertainment or the sale of adult materials to industrial areas with adequate separation from residential, public recreation uses (parks and playgrounds), educational uses (schools and daycare centers) and institutional uses (libraries, museums, churches, etc.).

C-11: Provide financial incentive opportunities and regulatory waivers to encourage the reuse and occupancy of structures in the downtowns of incorporated areas in Martin County.

d. Industrial Uses

I-1: Encourage the location of new industrial uses in planned industrial centers or adjacent to existing industrial areas; and permit the expansion of existing industrial uses as long as the expansion is compatible with abutting uses.

I-2: Ensure adequate buffering and screening (fences, walls or other physical barriers, vegetation, or physical separation) or other techniques (location of structure, windows and balconies) that mitigate nuisances (automobile lights, outdoor lighting, illuminated signs, loud noises, vibration, dust, vehicle fumes, junk, outdoor storage, parking lots, etc.) when new or expanded industrial development adjoins existing residential uses or residentially zoned areas, or adjoins other existing non-residential uses.

I-3: Ensure industrial building setbacks from all property lines, with parking location, signing and lighting that are compatible with any adjoining non-industrial use.

I-4: Prohibit the outdoor display or storage of materials in areas zoned for light industrial use.



I-5: Encourage placement of commercial sale, repair and storage of trucks, trailers, modular homes, boats and farm equipment to industrial areas.

e. Public/Quasi-Public Uses

P-1: Locate or expand public and quasi-public facilities where there is a demonstrated need.

P-2: Ensure public/quasi-public development is compatible with existing, abutting residential development in size, height (not to exceed two stories), mass and scale.

P-3: Ensure adequate buffering and screening (fences, walls or other physical barriers, vegetation, or physical separation) or other techniques (location of structure, windows and balconies) that mitigate nuisances (automobile lights, outdoor lighting, illuminated signs, loud noises, vibration, dust, vehicle fumes, junk, outdoor storage, parking lots, etc.) when new or expanded public/quasi-public uses adjoin existing residential uses.

P-4: Ensure public/quasi-public building setbacks from all property lines, with parking location, signing and lighting that are compatible with any adjoining residential use.

P-5: Give priority to the maintenance and improvement of recreation facilities at existing parks before acquiring additional park land.

P-6: Ensure the improvement of recreation facilities with a demonstrated need that serves the residents of Martin County and that does not duplicate other facilities in Martin County.

P-7: Improve pedestrian and bicycle access to and within existing parks, historic and nature areas.

P-8: Emphasize the expansion of existing parks over the acquisition of new parks to address the recreation needs of Martin County residents.

P-9: Take advantage of opportunities to expand parkland when such parcels become available adjacent to existing parks, provided such parkland meets a demonstrated need and can be adequately developed and maintained.

P-10: Provide neighborhood parks in incorporated areas that are accessible (1/4-mile walking radius and 1/2-mile biking radius) to community residents ensuring the parks are of a minimum size (at least two acres) to accommodate typical neighborhood recreational facilities and to facilitate park maintenance.

P-11: Consider the reuse of playgrounds and parks in incorporated areas that lack sufficient size to accommodate typical neighborhood recreational facilities and are poorly located relative to the residential areas being served.

2. DEVELOPMENT INFRASTRUCTURE

a. Transportation

T-1: Ensure all development and land use changes are served by adequate streets that have the capacity to accommodate the site-generated traffic.

T-2: Provide for the movement of pedestrians in incorporated areas through the provision of walkways and sidewalks for all new development; and enhance pedestrian access to educational and recreational facilities, to neighborhood serving retail and office uses, and to churches and other institutional uses.



T-3: Provide adequate right-of-way to accommodate required and anticipated roadway, walkway and bikeway improvements, utilities and landscaping through dedication; and is consistent with the functional designation and roadway cross section as defined by the thoroughfare plan.

T-4: Provide adequate access to, from and through development for the proper functioning of streets, walkways and bikeways, and for emergency vehicles.

T-5: Avoid the creation of streets or traffic flows for higher intensity uses through low intensity use areas.

T-6: Ensure adequate access control, location and design of driveways along arterial streets to reduce vehicle conflicts and to preserve traffic carrying capacity while providing access to abutting properties.

T-7: Provide adequate off-street parking and loading for the type and intensity of proposed uses and for the mode of access to the development.

T-8: Give preference to the preservation of existing transportation facilities over the construction of new, extended or expanded transportation facilities.

T-9: Give priority to the provision of roadway infrastructure to areas of vacant industrial structures or land when projects that involve new or expanded transportation facilities are evaluated.

T-10: Emphasize low-cost capital improvements to roads to improve safety and facilitate the flow of delivery and service trucks such as minor widenings of thoroughfares and pavement widenings at corners.

T-11: Confine through-trucks to collector and arterial streets.

T-12: Develop a strategy to preserve and construct new roadway corridors to relieve congestion, facilitate goods movement and foster economic growth.

b. Sewage Treatment and Collection System

S-1: Maintain the existing sewage treatment plant and sewage collection systems of incorporated areas so that they can adequately accommodate existing development.

S-2: Ensure all development and land use changes in and contiguous to incorporated areas are served by an adequate centralized sanitary sewer system that has the capacity to accommodate the magnitude and type of the site-generated liquid waste effluent.

S-3: Take advantage of opportunities to strengthen the economic performance of the sewage treatment and collection system in incorporated areas through new development tap-ins and minor trunk line extensions.

S-4: Examine the rate structure of the sanitary sewer systems on an annual basis to ensure sufficient revenues to operate and maintain the system.

S-5: Examine the financial policies regarding sanitary sewer tap-ins and lateral line extensions to ensure new development pays its own way.

S-6: Prohibit any new development involving on-site sewage treatment systems (septic tanks with lateral field, holding pits, etc.) with the exception of industrial pretreatment facilities and residential subdivisions of less than thirty (30) lots that are not within or contiguous to incorporated areas.

S-7: Examine financial assistance programs for any low- and moderate-income households on septic systems to connect to a centralized sewer system of an adjacent incorporated area.



S-8: Examine alternatives to a centralized sewer system with a traditional wastewater treatment plant for unincorporated with population concentrations and failing on-lot septic systems.

S-9: Prohibit the connection of stormwater drains to the sanitary sewer systems.

c. Potable Water Treatment and Distribution System

W-1: Ensure the water filtration plants and distribution lines are adequately maintained for existing development while taking advantage of new development tap-ins and minor main extensions that improve the economic performance of the drinking water system.

W-2: Examine the rate structure of the water treatment and distribution systems on an annual basis to ensure sufficient revenues to operate and maintain the system.

W-3: Ensure all development and land use changes are served by adequate potable water facilities that have the capacity to accommodate the domestic and fire needs of the proposed development.

d. Stormwater Drainage

D-1: Explore the management structures, capital costs and financing mechanisms associated with the improvement of natural and man-made drainage systems to adequately accommodate storm water flows.

D-2: Ensure adequate stormwater retention/detention facilities in conjunction with any new or expanded development to prevent increased water flows onto abutting property.

D-3: Examine the adequacy of flood protection facilities and define appropriate actions to address deficiencies.

3. ENVIRONMENTAL

E-1: Restrict development in the 100-year floodplain by prohibiting new or expanded structures except when no increase in flood elevation and velocity will result and when the area of floodwater storage will not be reduced.

E-2: Prohibit new residential dwellings in the 100-year floodplain unless the first occupied floor is above the 100-year flood elevation, utilities to the house have appropriate flood proof design, and year around access is available to the dwelling above the 100-year flood elevation.

E-3: Avoid alterations or significant modifications to natural stream channels unless flooding is reduced, any increase in erosion or flood velocity will not affect other areas, and only minor impacts will occur to wetlands or endangered species.

E-4: Use best management practices for erosion and sedimentation control during and after site preparation.

E-5: Buffer streams and lakes to prevent water quality degradation.

E-6: Protect, to the extent economically feasible, historic structures that have recognized historic, cultural and architectural value.

E-7: Protect, to the extent possible, areas with karst topographic features, areas of endangered species (such as "high quality natural communities"), wetlands, public parks, unique natural areas and other areas with significant natural features.



4. GOVERNMENT

G-1: Develop a comprehensive, coordinated and continuing economic development program for Martin County for the retention and attraction of businesses.

G-1: Support the creation of more skilled and high-tech jobs in Martin County by targeting basic industries with skilled and high-tech jobs and by providing the infrastructure and trained labor force to support such industries.

G-2: Promote effective communication between city and county governments, chambers of commerce and economic development organizations to market available and potential industrial and commercial sites for business retention and attraction.

G-3: Provide financial incentive opportunities (low interest loans, public infrastructure improvements and tax incentives) to encourage the reuse of vacant industrial, commercial and office commercial structures and properties in Martin County.

G-4: Develop appropriate marketing strategies to promote the assets of Martin County to encourage economic development and to promote tourism.

G-5: Develop a program to provide adequate infrastructure to existing and proposed industrial and commercial sites to ensure suitable sites for immediate occupancy.

G-6: Work with educational institutions in the region to develop educational programs to train and retrain the labor force to match the workforce needs of emerging businesses.

G-7: Provide incentive opportunities (such as low cost rehabilitation loans) and enforcement (such as building and property condition enforcement targeted at absentee property owners) to address decaying, blighted, deteriorated or abandoned properties while ensuring sensitivity to the economic capacity of the residential property owner.

G-9: Determine the status of ownership of blighted/decaying properties and work with owners to enhance the appearance of these properties.

G-10: Provide incentive opportunities (low interest rehabilitation loans, historic structure tax reductions, infrastructure improvements, etc.) to encourage adaptive reuse of historic structures.

G-11: Provide incentive opportunities (such low cost interest loans and public infrastructure improvements) to improve the maintenance of older building exteriors.

G-12: Continue to implement programs to assist in housing maintenance, rehabilitation and new construction for low- and moderate-income families, the disabled and the aging population.



Chapter 6: Recommendations

A. LAND USE DEVELOPMENT PLAN

1. LAND USE DEVELOPMENT RECOMMENDATIONS

Before land use recommendations could be developed, existing land use had to be determined. An Existing Land Use Map was created to identify all developed land and undeveloped land in unincorporated Martin County. Potential future land uses for these undeveloped areas were determined based on projected future land use needs and the goals and objectives of the community. A Future Land Use Alternatives Map was generated from recommendations identified during the potential future land use analysis. The map also considered appropriate changes in the existing land use, such as replacing single-family residential uses located between commercial uses with more commercial uses. On February 26, 2009, the Land Use Plan Committee reviewed and edited the Future Land Use Alternatives Map. The Future Land Use Alternatives Map was also presented to the public on March 18, 2009, at an open house at the St. Johns Catholic Church to receive additional comments. Figure 37 shows existing land uses and Figure 38 shows potential future land uses for the vacant/undeveloped land in unincorporated Martin County.

A Future Land Use Map was created based on the Future Land Use Alternatives Map and comments made during the meeting on February 26th and the open house on March 18th. Based on the Committee's knowledge of site conditions, surrounding land uses, available development infrastructure, and the Future Vision for Martin County (Chapter 5), the committee reviewed and made edits to the Future Land Use Map during the committee's final meeting on April 23, 2009. While the Committee validated many of the suggestions on future land use potential (as displayed in Figure 27), it also indicated a preference among the future land use potential options. The resulting future land use designations are found in Figure 39.

The future land use pattern designates major land uses within Martin County and the immediate surrounding area to accommodate the future land use needs of the county consistent with the Future Vision (goals and objectives) for development. The adopted version of the future land use pattern is shown in the Future Land Use Map. This map will be used in conjunction with goals, objectives and development review guidelines to determine consistency of a proposed development or infrastructure improvement with the comprehensive plan.

The future land use pattern generally reflects the existing land use pattern of developed properties and designates appropriate future urban uses for properties with existing vacant or agricultural uses. Because the predominant land use pattern is shown for existing land uses, isolated uses may not always be identified, such as small commercial uses surrounded by a single-family housing development. Figure 43 shows the Future Land Use Map for land in unincorporated Martin County.

The future land use pattern consists of nine future land use designations: one agricultural/forest land category, one residential category, one commercial category, one industrial category, and five public/quasi public categories. The map also labels the location of the Crane Naval Surface Warfare Center, Martin State Forest and other state and federal managed lands.

a. Agricultural/Forest Land

The Future Land Use Maps show one agricultural/forest land designation. The agricultural/forest land designation is applied to areas in unincorporated Martin County that are a) currently used for agricultural purposes and are likely to continue as such to the year 2030, b) covered by trees, c) in the 100-year floodplain, and d) contain wetlands.

Existing agricultural areas around Loogootee, Shoals, Burns City and Bramble, with no development constraints, would be the most practical areas to support single-family residential development in the event that future growth necessitates such development. Future industrial and commercial growth in Martin County will more than likely occur around Loogootee. Figure 40 shows the future land use of existing agricultural uses in unincorporated Martin County.



b. Residential

The Future Land Use Map shows one residential designation for three categories of residential use: single-family, multiple-family, and mobile home. A mobile home is defined as a dwelling unit on a chassis not more than 16 feet in width, with or without a permanent foundation. A single-family unit is defined as a site built, manufactured or modular home with a width of at least 23 feet on a permanent foundation. If the map designates an area for “single-family” use, mobile homes and apartments are generally not appropriate. On the other hand, if the map designates an area for “multi-family” use, single-family uses and mobile homes may be appropriate.

Single-Family areas permit single-family detached dwelling units. Single-family lots range from medium-density (starting at 5,000 square feet) in areas around Loogootee, Shoals, and Crane and in unincorporated communities such as Bramble, Burns City, and Hindostan Falls to low-density (several acres) in the more rural areas of the county. Currently, single-family lots can include site-built homes, mobile homes, manufactured homes, and modular homes.

Most of the new residential development in the future in unincorporated Martin County will be single-family detached housing units. Before residential development occurs in unincorporated Martin County, new single-family detached housing units should first fill in vacant lots located in incorporated communities in the future. New single-family subdivisions should be located adjacent to existing single-family developments around incorporated and unincorporated communities, rather than on agricultural land in isolated areas of the county. The Future Land Use Map identifies a few areas adjacent to the city limits of Loogootee for future single-family development. Due to the floodplains and hilly terrain around Shoals and the Crane Naval Surface Warfare Center adjacent to the Town of Crane, there is very little room for single-family development outside of these two communities. Single-family development in unincorporated Martin County should fill in areas where there are few constraints, such as floodplains, hilly terrain, or forests. The Alternative Future Land Use Map shows several areas for infill residential, which are outlined in red on the Future Land Use Map. These are areas with very few constraints and would be the best location for future single-family development.

Multiple-Family areas permit multiple-family attached dwelling units with a density of up to ten units per acre. These areas may include duplexes, four-plexes, and apartments. Most multiple-family dwelling units in Martin County are located in Loogootee.

New multiple-family development is very unlikely in unincorporated Martin County in the future. Multiple-family development may occur just outside of the city limits of Loogootee, but is more likely to occur within the city.

Mobile home areas permit densities up to ten dwelling units per acre. There are mobile homes currently located in mobile home parks in incorporated communities and on individual lots throughout unincorporated Martin County. Martin County does not currently have a zoning ordinance or any other ordinance prohibiting mobile homes in specific areas. Therefore, mobile homes may be located on individual lots anywhere in unincorporated Martin County.

Because mobile homes currently exist on individual lots, new mobile homes may locate in areas designated single-family or multiple-family on the Future Land Use Map. Mobile homes brought into the county should first be placed in mobile home parks. Mobile homes on individual lots are acceptable, but they should be compatible with adjacent single-family homes. Manufactured homes on a permanent foundation should be encouraged on individual lots before the placement of mobile homes.

c. Commercial

The Future Land Use Map shows one commercial designation for two categories of commercial use: professional office and retail/personal services. If an area is designated for “retail” use, less intensive uses (such as offices, residential uses, and public/quasi-public uses) are permissible.

The professional office designation includes doctors, dentists, insurance agents, tax accountants, banks, real



Figure 39: Existing Land Use

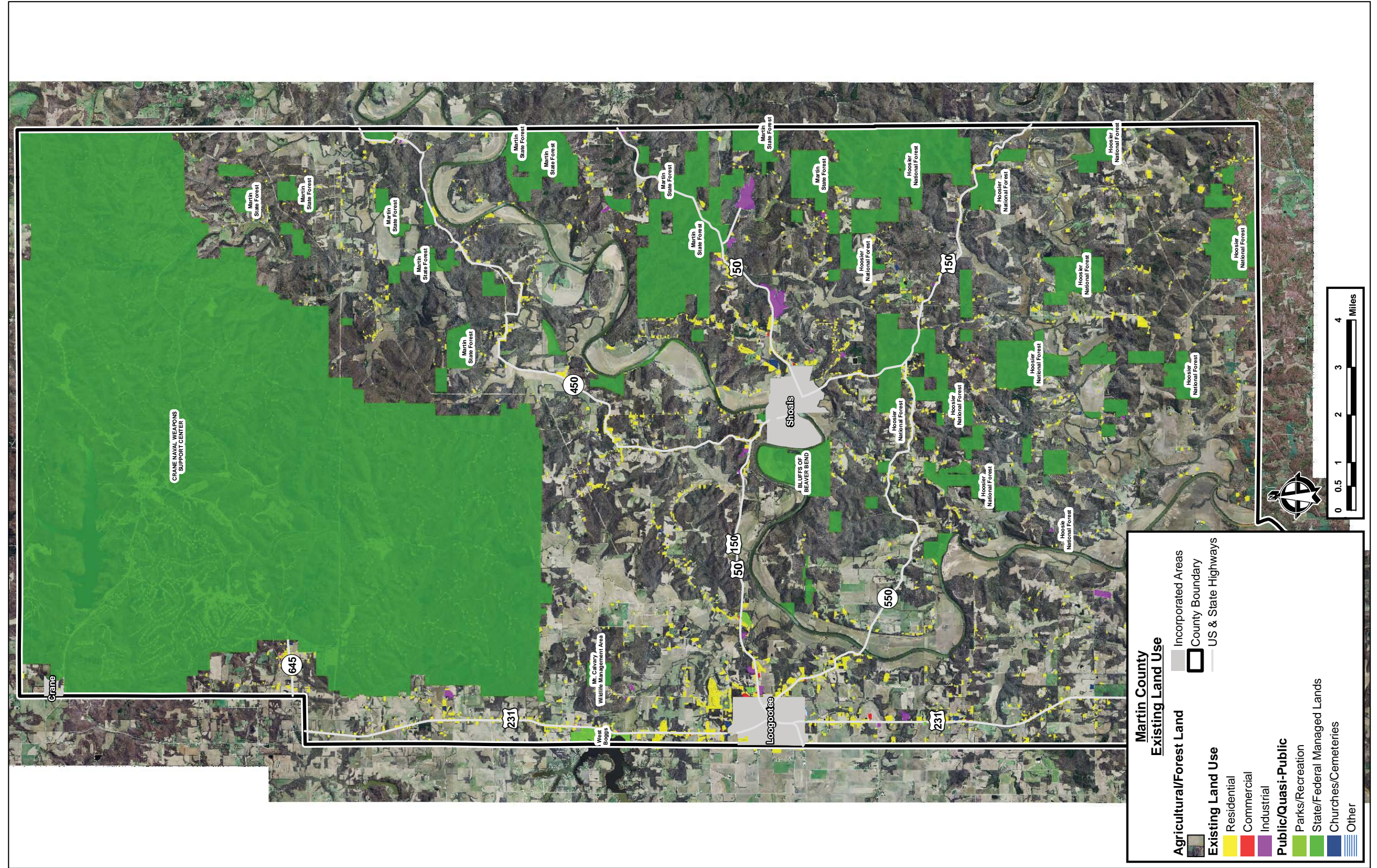




Figure 40: Potential Land Use

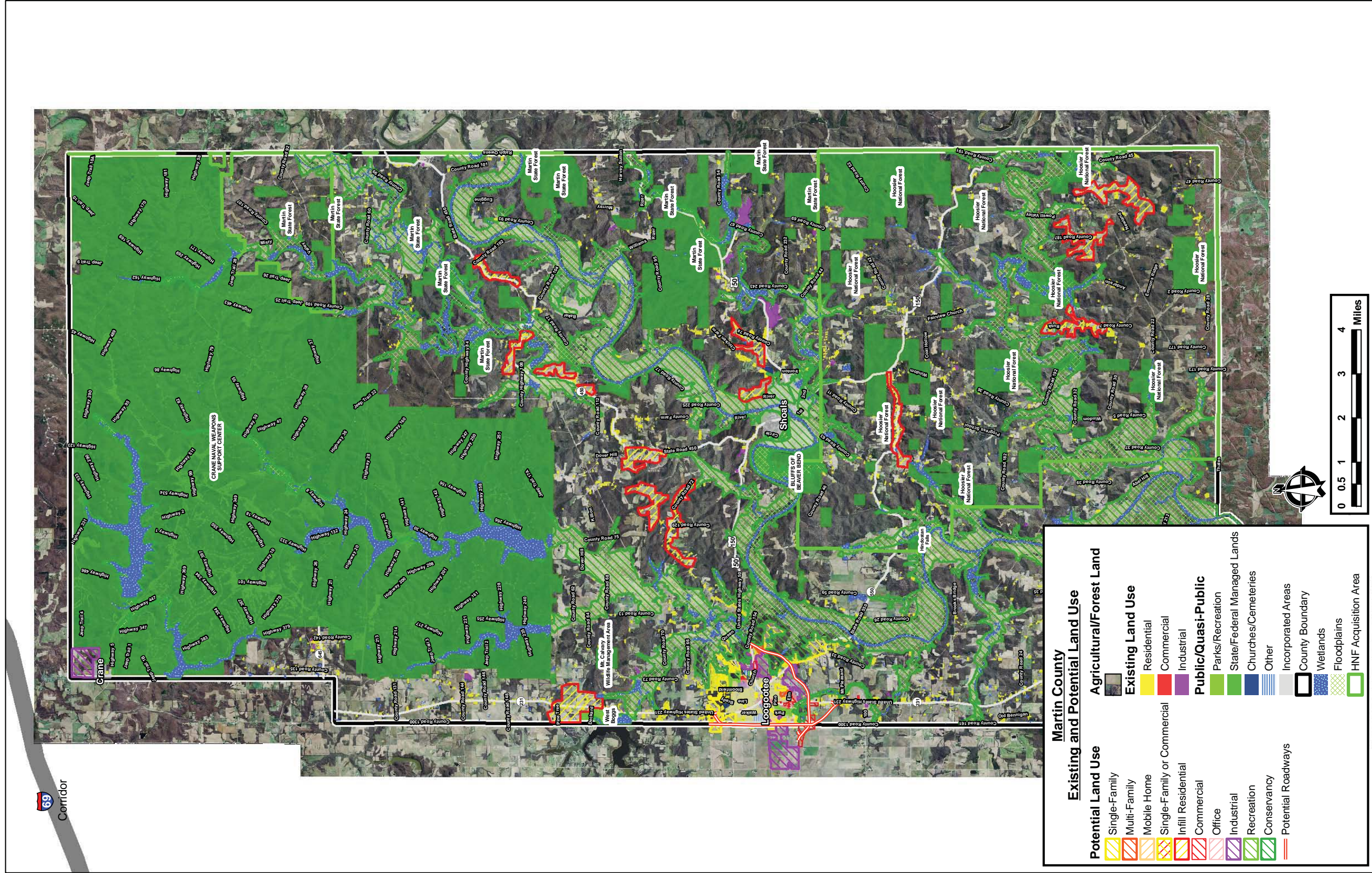
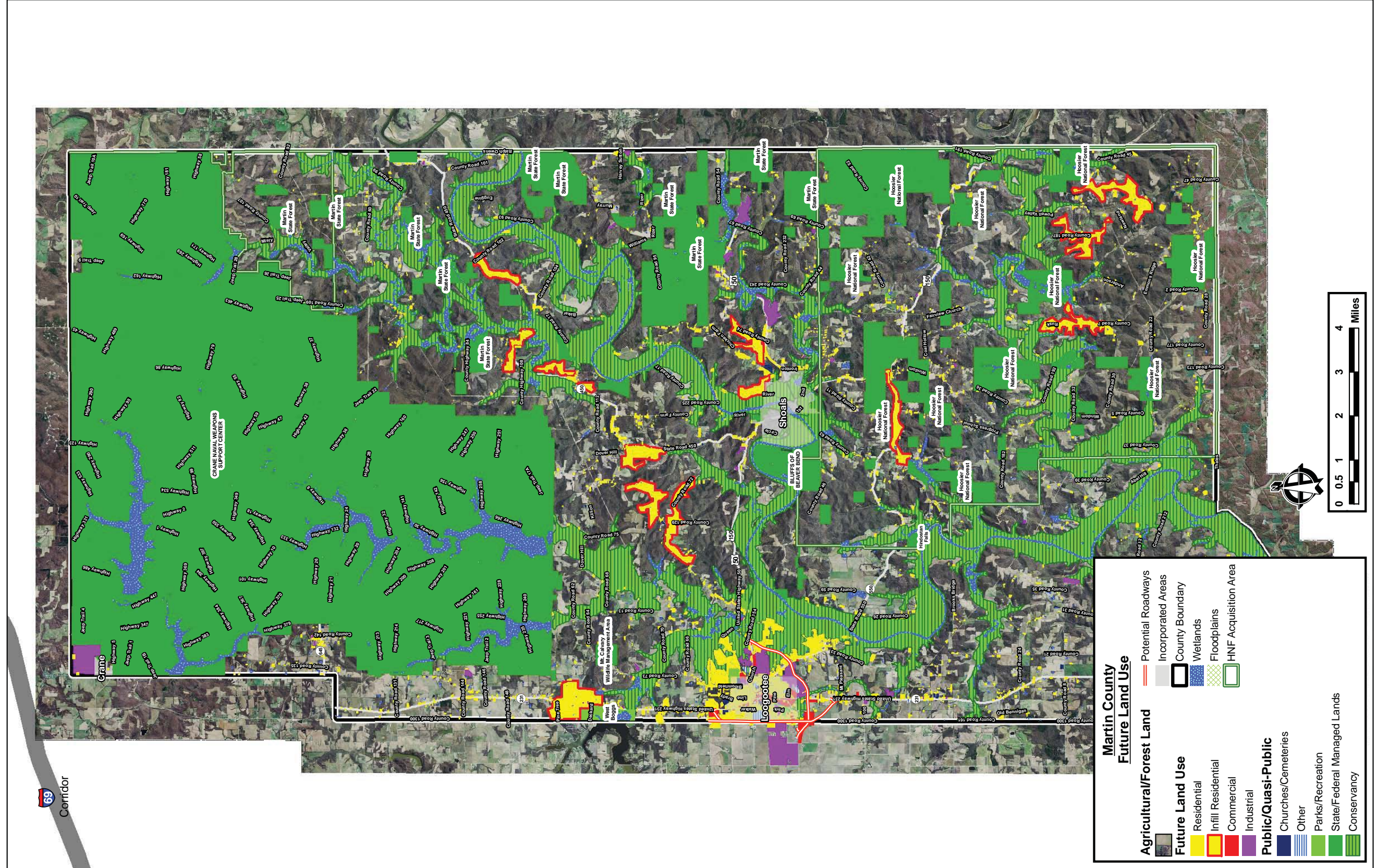




Figure 41: Future Land Use







estate agents, engineers, and surveyors. Existing office uses in Martin County are located in the incorporated communities of Loogootee, Shoals, and Crane. Limited personal service businesses (such as barber and beauty shops, business services, mailing and reproduction services) may also be permitted in this designation. This designation is considered appropriate for the transition between residential and retail uses.

The retail/personal services designation includes general office and retail activities such as grocery stores, hardware stores, drug stores, restaurants, gasoline stations, department or discount stores, drive-in businesses, motels, furniture stores, appliance stores, and businesses for motor vehicle, boat, trailer, mobile home and farm equipment sales and repair.

Future professional office, retail and personal service land uses should first locate in Loogootee, Shoals and Crane in the future. The Future Land Use Map includes a few areas of commercial growth in unincorporated Martin County. These areas are all located just outside of the city limits of Loogootee. Although these are the only additional commercial uses shown of the Future Land Use Map, small retail uses, such as a convenience store or gas station may be appropriate near residential areas in unincorporated areas.

d. Industrial

The Future Land Use Map shows one industrial designation for two categories of industrial use: light and heavy. The appropriateness of light industrial use versus heavy industrial use is dependent upon compliance with industrial development guidelines (see Chapter 5). While very limited retail and office uses may be permitted in industrial areas, extensive retail and office uses, public/quasi-public uses and residential uses are inappropriate due to the nuisances typically associated with industrial development.

A light industrial use includes wholesaling; warehousing; truck, mobile home and boat sales, storage and repair; lumber yards; and fabrication activities. Most of these activities are conducted in interior buildings. No general storage is visible from the public way or from non-industrial properties. However, the display of trucks, mobile homes and boats for sale may be visible from the public way and other non-residential properties. In general, this industrial category involves the processing of products from secondary materials rather than raw materials.

A heavy industrial use permits the full range of industrial uses, rail yards and utilities. Active coal mines fall in this category. This category permits manufacturing involving raw materials in outside buildings. However, outdoor processing and materials must be screened from the public way and adjacent non-industrial purposes.

The only future industrial growth anticipated in unincorporated Martin County is just outside of Loogootee. Industrial development will more than likely occur along US 50/150 just east and west of Loogootee and between US 231 and SR 550 south of Loogootee. The development opportunities for future industrial uses will increase if a US 50/150 bypass is created to the south of Loogootee. This bypass would connect US 50/150 on the west of Loogootee, US 231 and SR 550 on the south, and US 50/150 on the east.

e. Public/Quasi-Public

The Future Land Use Map places publicly owned uses, as well as institutional uses in the public/quasi-public use designation. The five public/quasi-public designations are parks/recreation, state/federal managed lands, conservancy, churches/cemeteries, and other uses. In general, these uses are also permitted in areas designated for residential or commercial uses, but are undesirable in areas designated for industrial use.

The public use designation includes governmental uses and educational uses. Most of the governmental uses and educational uses are all located in Loogootee and Shoals. Shoals, the county seat of Martin County, includes both county and local governmental structures. Loogootee includes city owned governmental uses. All of the educational uses in Martin County are in Shoals or Loogootee. The Loogootee Community School Corporation includes Loogootee West Elementary School, Loogootee East Elementary School, and Loogootee Junior/Senior High School. The Shoals Community School Corporation includes Shoals Community Elementary School and Shoals Community Junior/Senior High School.



The quasi-public use designation includes churches/cemeteries, utilities, and other institutional uses. The churches/cemeteries subcategory includes all places of worship, associated offices, cemeteries, and funeral homes/mortuaries. Utilities includes both public and private utility uses, such as recycling centers, water and wastewater treatment plants, electrical substations, and cell phone towers. Other institutional uses include all other public/quasi-public uses that are not categorized in any other category, such as clubs and social organizations.

There are no areas that have been identified on the Future Land Use Map for additional public/quasi-public land uses. Other public/quasi-public land uses in the future may be located throughout Martin County in areas designated for commercial, residential, or agricultural uses.

The public/quasi-public category also includes parks/recreational areas, state/federally managed lands, and conservancy areas. Parks and recreational uses can be either public or quasi-public, depending on whether they are publicly or privately owned. In general, recreational uses are permitted in areas designated for residential or commercial uses, but are undesirable in areas designated for industrial use. There have been no additional parks or recreational areas identified on the Future Land Use Map in unincorporated Martin County.

State and federally managed lands are areas owned and managed by either the State of Indiana or the federal government. There are over 77,000 acres of managed lands existing in Martin County. This includes the Hoosier National Forest, Martin State Forest, Bluffs of Beaver Bend, and Mt. Calvary Wildlife Management Area, and the Crane Naval Surface Warfare Center (NSWC). The Crane NSWC covers nearly 60,000 acres in northern Martin County. There have been no additional managed land areas shown on the Future Land Use Map in unincorporated Martin County. However, the map does include the Hoosier National Forest (HNF) Acquisition Area. Property in this area may be purchased in the future for the expansion of the Hoosier National Forest. The acquisition area covers a large portion of southeastern Martin County and a small area in the northeastern part of the county, adjacent to Crane NSWC.

The Future Land Use Map also includes conservancy areas. These areas include land that is currently covered by wetlands, within the 100-year floodplain, or may have other environmental constraints. Although some of this area could be developed with the proper permits if is so desired, it is recommended that these areas are protected from any development in the future.

2. LAND USE DEVELOPMENT IMPLEMENTATION

The Future Land Use Map (Figure 6.3) designates major land uses within Martin County to accommodate the future land use needs of the county consistent with the future vision (goals and objectives) for development. The Future Land Use Map is incorporated into the recommendations of the comprehensive plan. If Martin County decides to adopt this comprehensive plan, they could create land use regulations (zoning and/or subdivision control ordinances) in the future. If they were to create these regulations, the Future Land Use Map and goals and objectives should be considered when making any development reviews. The Future Land Use Map and goals and objectives should be reflected in the development of zoning and subdivision regulations, if the county chooses to create these ordinances.

B. TRANSPORTATION/THOROUGHFARE

1. TRANSPORTATION/THOROUGHFARE RECOMMENDATIONS

a. Definition of Thoroughfare Plan

The Transportation Element of this comprehensive plan fulfills the requirements of a thoroughfare plan under state legislation (IC 36-7-4-506) if adopted as the community's comprehensive plan under state statute. The thoroughfare plan establishes the general location of new, extended, widened or narrowed public ways. For the Martin County Thoroughfare Plan, thoroughfares are those streets functionally classified as arterials or



collectors. In general, the thoroughfare plan defines functional classes, appropriate cross sections and access control requirements, and major street improvements.

b. Purpose of the Thoroughfare Plan

The thoroughfare plan addresses the use and improvement of the street system within and around Martin County. Overall, the thoroughfare plan serves four purposes:

1. Preservation of right-of-way to accommodate existing and future transportation needs. It establishes right-of-way requirements according to the functional classification of the street, application of urban (i.e., curb and gutter) versus rural (i.e., side ditches or swales) design standards, and location on existing versus new alignment.
2. Continuity of the functional, physical and aesthetic character of each functional class of street. It defines typical cross-sections for thoroughfares (arterials and collectors) by functional class to serve as initial design parameters for new, widened or reconstructed streets.
3. Preservation of thoroughfare capacity through access control. It describes appropriate access management policies by functional class.
4. Identification of transportation improvements to address existing and future transportation needs.

c. Functional Classification

Overview: The roadways in the street network are classified according to the function they perform. The primary functions of roadways are either to serve property or to carry through traffic. Roads are functionally classified as local if their primary purpose is to provide access to abutting properties. Roads are classified as arterials if their primary purpose is to carry traffic. If a road equally serves to provide access to abutting property and to carry traffic, it is functionally classified as a collector. These three primary functional classifications may be further stratified for planning and design purposes. The functional class of a roadway is also important in determining federal and state funding eligibility, the amount of public right-of-way required, and the appropriate level of access control.

The functional classification of roadways is broken down into several categories. Major arterials include interstates, freeways/expressway, and principal arterials. The National Highway System of 155,000 miles includes the nation's most important rural principal arterials in addition to interstates, and links metropolitan areas (50,000 or more persons) and most urban areas over 25,000 persons. Minor arterials, the lowest category of arterial streets, serve trips of moderate length, offer a lower level of mobility than principal arterials, and link larger towns to the arterial system. Collector roads serve as the link between local roads and the arterial system. They provide both access and traffic circulation within residential, commercial and industrial areas. Moderate to low traffic volumes are characteristic of these roads. In rural areas, major collectors link county seats and larger towns (2,500 or more persons) to the arterial system, and minor collectors link the smallest towns (under 2,500 persons) and unincorporated areas to the arterial system. Local roads are composed of all roads not designated as collectors or arterials. Primarily serving abutting properties, local roads provide the lowest level of mobility and, therefore, exhibit the lowest traffic volumes. More detail on functional classification can be found in the Transportation section of Chapter 3.

Martin County Functional Classification: There are two arterials located in Martin County: US 231 and US 50. US 231, a rural principal arterial, runs north-south through Martin County and through the middle of Loogootee. US 231 is the rural principal arterial that falls between two other rural principal arterials -- US 41 along the west edge of Indiana and I-65 through the center of Indiana (which superseded US 31). Interstate 69 will supersede SR 57 south of US 50 and SR 37 north of Bloomington as a rural principal arterial. US 231 passes southward from Martin County through Jasper and Huntingburg to Interstate 64 and continues southward to the Owensboro (KY) metropolitan area. INDOT has been upgrading US 231 from Owensboro to Jasper as divided four-lane limited access facility.



US 231 will interchange with Interstate 69 on the northwest edge of US 231, and continues north to I-70 at Cloverdale and to I-65 in the Lafayette metropolitan area.

US 50, a rural principal arterial, runs east-west through the central portion of Martin County, and is the rural principal arterial falling between I-64 and I-70. US 50 runs westward 10.5 miles to I-69, and continues through the Washington and Vincennes urban areas to St. Louis (MO). Eastward, US 50 passes through the Bedford, Seymour, North Vernon, Aurora and Lawrenceburg urban areas to Cincinnati (OH). In previous INDOT Long Range Transportation Plans, INDOT had proposed the reconstruction of US 50 across Indiana as a divided four-lane limited access facility. However, as a result of fiscal constraints, the portion of US 50 from Washington through Martin County to Bedford fell into the unfunded category with the 2007 Update to the INDOT Long Range Transportation Plan.

Other functionally classified roads on the state highway system in Martin County include:

- US 150 – Rural Minor Arterial
- SR 450 – Rural Major Collector
- SR 550 – Rural Major Collector
- SR 645 – Rural Major Collector
- SR 650 – Rural Major Collector

Martin County also maintains a few rural major and minor collectors:

- Windom Road (CR 5) from US 150 to Dubois County – Rural Major Collector
- Brooks Bridge Road (CR 6) from US 231 to SR 550 – Rural Major Collector
- Spout Springs Road (CR 63) from SR 550 to US 50/US 150 – Rural Major Collector
- Dover Hill-Indian Springs Road (CR 81) from SR 450 to Indian Springs – Rural Major Collector
- Indian Springs-Cale-Silverville Road from Indiana Springs through Cale to Lawrence County – Rural Major Collector
- CR 30/CR 7/CR 4 (Anderson Road) from Windom Road (CR 5) to Powell Valley Road – Rural Minor Collector
- Powell Valley Road (CR 49) from Anderson Road (CR 4) to US 150 – Rural Minor Collector
- Emmons Ridge Road (CR 43/CR 47) from Anderson Road (CR 4) and Powell Valley Road (CR 49) south to Dubois County – Rural Minor Collector
- Ironton Road (CR 44) and Shurfick School-Mill Road (CR 42) from US 50 to Orange County – Rural Minor Collector
- Dover Hill-Loogootee Road (CR 15) from US 50/US 150 to SR 450 – Rural Minor Collector
- CR 79 from SR 450 at Dover Hill northward into the Crane Naval Surface Warfare Center – Rural Minor Collector
- CR 20, CR 162, CR 172, CR 136, CR 144 and CR 131 from US 231 westward into Daviess County – Rural Minor Collector

All new roads created in Martin County must conform in width and alignment to the comprehensive plan and any official thoroughfare plan (if adopted). If Martin County were to create a subdivision control ordinance in the future, new streets would also have to conform to the requirements in that ordinance.

Requirements in a subdivision control ordinance would apply to local roads, collectors and arterials, and should be consistent with the thoroughfare plan. A subdivision control ordinance would also specify vertical and horizontal design requirements and pavement design standards for all locally maintained roadways. The Indiana Department of Transportation (INDOT) and Martin County maintained roadways may require more or less right-of-way based on their adopted policies, procedures, and practices.



d. Thoroughfare Typical Cross-Sections

Purpose. To address existing and future mobility needs, the appropriate cross-section for initial design of thoroughfare improvements should consider the following:

- The physical roadway standards (i.e., right-of-way, lane width, median, curb and gutter) necessary to support anticipated truck and automobile traffic volumes and vehicular maneuvers, to accommodate bicycle and pedestrian movements, and for design speed.
- The capacity standards of different street types in terms of traffic-carrying capacity.
- Continuity of urban design considering the need for bicycle and pedestrian facilities and the appropriateness of an urban (curb and gutter) versus rural (swales) design.
- The accommodation of utilities.
- Right-of-way constraints for widenings versus new alignments.

Non-Motorized Vehicles. Martin County currently has 4.5 miles of trails; however, they are all located in the Martin State Forest (northeast of Shoals). Traffic volume and speed are low enough in many of the unincorporated communities to permit the co-existence of automobile traffic with bicycles and pedestrians.

If a jurisdiction were to add bike lanes to existing roads or right-of-way, a bike lane sharing the travel-way must be at least six feet wide when the speed limit is over 35 miles per hour and at least four feet when the speed limit is at or below 35 miles per hour. If the two-foot curb and gutter section is continuous and bicycles can pass over storm grates, the bike lane requirements can be reduced by one foot. A separate bikeway facility (either sharing right-of-way with a street or on independent right-of-way) must be at least ten feet wide with one-foot shoulders for two-way bike travel. If horse-drawn vehicle traffic is significant on any functionally classified facility (particularly a major collector or arterial), a ten-foot shoulder (eight-foot paved and two-foot gravel) is needed to accommodate the buggy.

Sidewalks are appropriate along arterials and collectors as well as local streets in incorporated areas and possibly unincorporated communities. In residential areas along major or minor arterials, sidewalks should be at least five feet in width when the border area (distance between sidewalk and back of curb) is at least four feet. In residential areas along major and minor collectors, sidewalks should be at least four feet in width when the border area is at least four feet, and six feet wide when there is no border area. Handicapped ramps are required for sidewalks at all intersections. Border areas of less than four feet are strongly discouraged because they lack inadequate width for vegetation (trees or bushes) and are inefficient for grass maintenance.

Urban Cross-Sections. Typical cross-sections are illustrated for urban roads in Figure 40 and Figure 41. Figure 40 shows a typical cross-section for an “urban place” for short streets, short cul-de-sacs and short frontage roads with no anticipated on-street parking. This would be appropriate where there are no more than five or three small businesses, where severe right-of-way constraints exist due pre-existing lots, topography or environmental constraints, or where continuity is desirable for pre-existing narrow right-of-way of 40 feet. The typical cross section for an “urban local street” may use a two-foot integral roll-curb-and-gutter rather than a barrier-curb-and-gutter so that the pavement width to the back of curb is 28 feet. This “urban local street” cross section can be accomplished within a minimum of 50 feet to match existing 50 foot right-of-ways or to reduce development costs for new streets, and can be used for secondary streets in most residential subdivisions. Fitting within the maximum 60 feet of right-of-way found in most built-up communities, the “urban minor collector” street typical cross section permits parking for primary streets in most residential subdivisions, and can be configured with a left-turn lane or continuous center left-turn lane in lieu of the parking lane to accommodate left-turns at major intersections or frequent driveways into commercial establishments in commercial and industrial areas. In high density residential areas where on-street parking is likely on both sides of the street and through travel in both directions must be maintained, the “urban minor arterial/urban major collector” cross-section with two parking lanes may be appropriate as shown in Figure 40. The typical cross section for the “urban minor arterial/urban major collector” handles moderate traffic volume streets where heavy left-turn movements occur



at major cross streets or into frequent commercial and industrial driveways. It also fits within the maximum right-of-way widths found in most incorporated areas.

Figure 41 shows a typical cross-section for an “urban minor arterial/urban major collector” with parking on both sides. Due to the minimum right-of-way width of 70 feet, this may only be applicable in new suburban areas. The “urban principal arterial” is intended for high traffic volume streets with heavy left-turn movements at crossroads and into frequent commercial and industrial driveways and for posted speeds of more than 35 mph. The last typical cross-section is for a divided, urban principal arterial. Experience has shown that four-lane undivided facilities do not function as well as a two-lane facility with a continuous center left-turn lane.

Rural Cross-Sections. These urban typical cross-sections may be converted to a rural typical cross-section by replacing the two-foot standard curb-and-gutter by a paved or gravel shoulder, and replacing the sidewalk and border area with a side ditch swale. For a rural “place” or “local street”, the shoulder would be two to three feet (paved or compacted aggregate); the front slope to the ditch would be 3:1; the ditch would be at least two feet wide and 1-foot deep; and the back slope would be 2:1. For a rural “minor collector”, the eight-foot parking lane would be dropped if on-street parking were prohibited, and the shoulder would be four to six feet (compacted aggregate or bituminous paved or combination thereof); the front slope to the ditch would be 3:1; the ditch would be at least two feet wide and one-foot deep; and the back slope would be 2:1. Where on-street parking is likely for a “minor collector” through a residential subdivision, an eight-foot parking lane must be added to each side where the residential subdivision exists or is proposed (similar to the “minor arterial of Figure 45). If a bike lane is proposed, the shoulder must be six-foot paved plus one-foot compacted gravel. If a horse-drawn vehicle lane is proposed, the shoulder must be eight-foot paved plus one-foot compacted gravel.

For a rural “minor arterial street” or “rural major collector” in Figure 42, the shoulder would be eight to ten feet (compacted aggregate or bituminous paved or combination thereof); the front slope to the ditch would be 4:1 the ditch would be at least two feet wide and one-foot deep; and the back slope would be 3:1. If a bike lane is proposed, the shoulder must be six-foot or eight-foot paved plus two-foot compacted gravel. If a horse-drawn vehicle lane is proposed, the shoulder must be eight-foot paved plus two-foot compacted gravel. In rural areas where left-turning activity is minimal, the center left-turn lane may be dropped in Figure 42 and the on-street parking dropped in Figure 41.

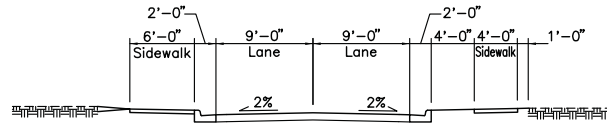
While Figure 41 shows typical cross-sections for an “undivided principal arterial” and a “divided principal arterial”, a rural principal arterial is more likely to be a state-maintained facility rather than a locally maintained facility in Martin County. Figure 42 shows the INDOT design standards of typical cross sections for rural interstates, arterials and collectors.

e. Access Management

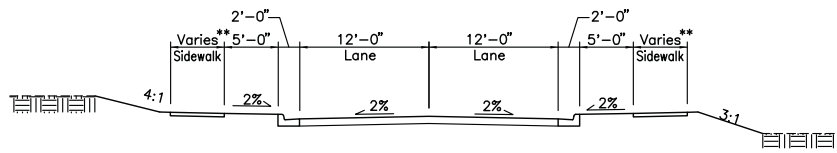
The purpose of access control management is to preserve the through-traffic carrying capacity of roadways and to ensure safe and properly functioning exits and entrances to property. The higher the functional class, the greater concern for access control management. In the case of freeways, access is permitted only at freeway interchanges with public cross roads. In the case of major arterials, access is considered appropriate only at public cross roads with exceptions for regional commercial and employment centers, and the desirable spacing between intersections is 1,320 feet and not less than 1,000 feet. For minor arterials, access is usually managed through the location, spacing and design of driveways. To the extent possible, design practices to minimize entrances and exits to minor arterials are encouraged including frontage or service roads, joint driveway entrances, access from cross roads, and rear access to properties. In the case of collectors, access is usually managed through the location and design of entrances. Entrances are located where there is adequate sight distance; and are designed so that the driveway is not less than 20 feet nor more than 30 feet for commercial properties, the curb radii do not cross over side property lines, there is a relatively flat (one or two percent slope) vehicle landing area before entering the road when the driveway is sloped, the driveway drains toward the property, and the driveway is paved from the edge of street pavement to the property line. The jurisdiction maintaining the street or road is responsible for access control. Thus, access to US 231, US 50, US 150, SR 450, SR 550, SR 645 and SR 650 is under the authority of INDOT. Access to other streets within the corporate



Figure 40: Suggested Martin County Urban Typical Cross Sections

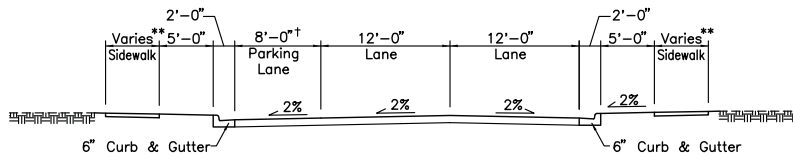


TYPICAL CROSS SECTION
URBAN PLACE
(40' MINIMUM RIGHT-OF-WAY WIDTH)



TYPICAL CROSS SECTION
URBAN LOCAL STREET
(50' MINIMUM RIGHT-OF-WAY WIDTH)

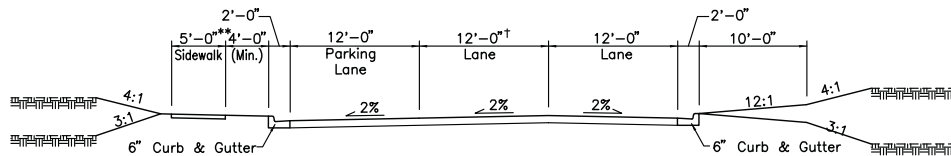
**4'-0" in Residential Area
5'-0" in Commercial Area
6'-0" When Sidewalk adjacent to curb



TYPICAL CROSS SECTION
URBAN MINOR COLLECTOR
(60' MINIMUM RIGHT-OF-WAY WIDTH)

† 12'-0" in Commercial and Industrial Areas

**4'-0" in Residential Area
5'-0" in Commercial Area
6'-0" When Sidewalk adjacent to curb



TYPICAL CROSS SECTION
URBAN, MINOR ARTERIAL OR MAJOR COLLECTOR
ONE PARKING LANE OR CENTER LEFT-TURN LANE
(60' MINIMUM RIGHT-OF-WAY WIDTH)

† Width Varies, 12'-0" (Min) to 14'-0"

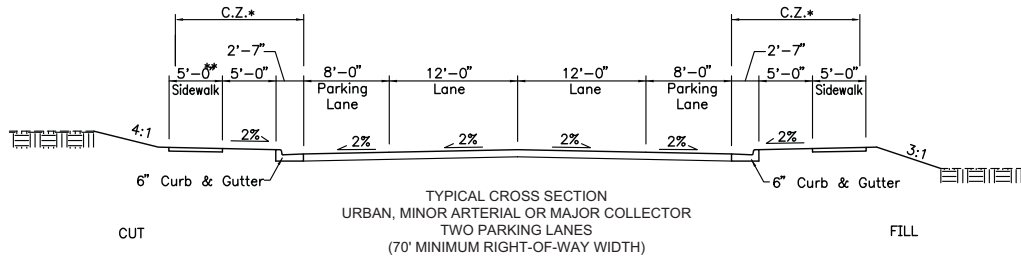
**6'-0" When Sidewalk adjacent to curb

* Per INDOT Design Manual

C.Z. - Denotes Clear Zone

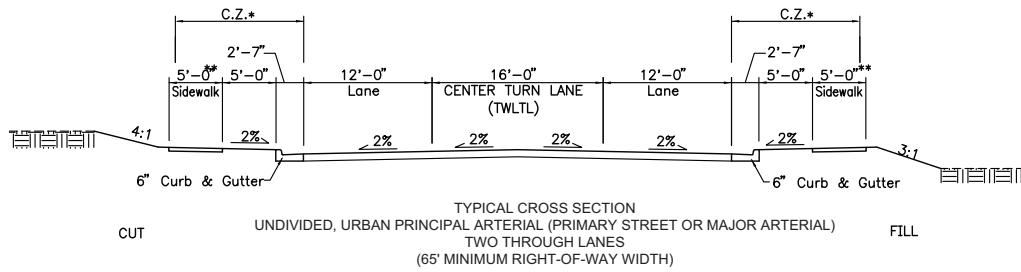


Figure 41: Suggested Martin County Urban Typical Cross Sections

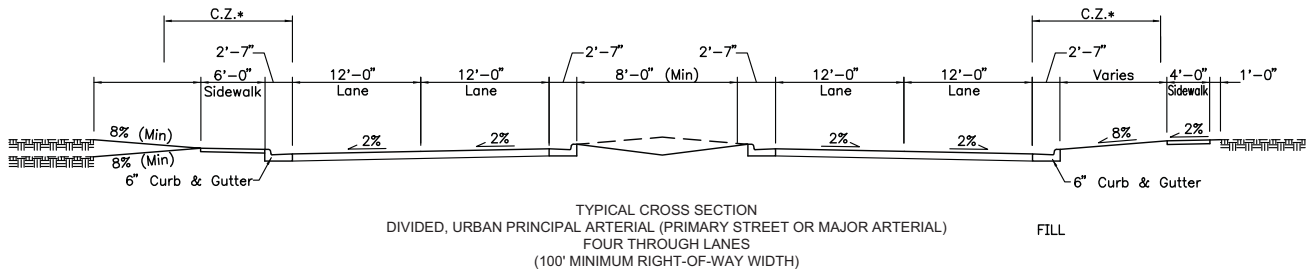


† Width Varies, 10'-0" (Min) to 12'-6"

**6'-0" When Sidewalk adjacent to curb



**6'-0" When Sidewalk adjacent to curb

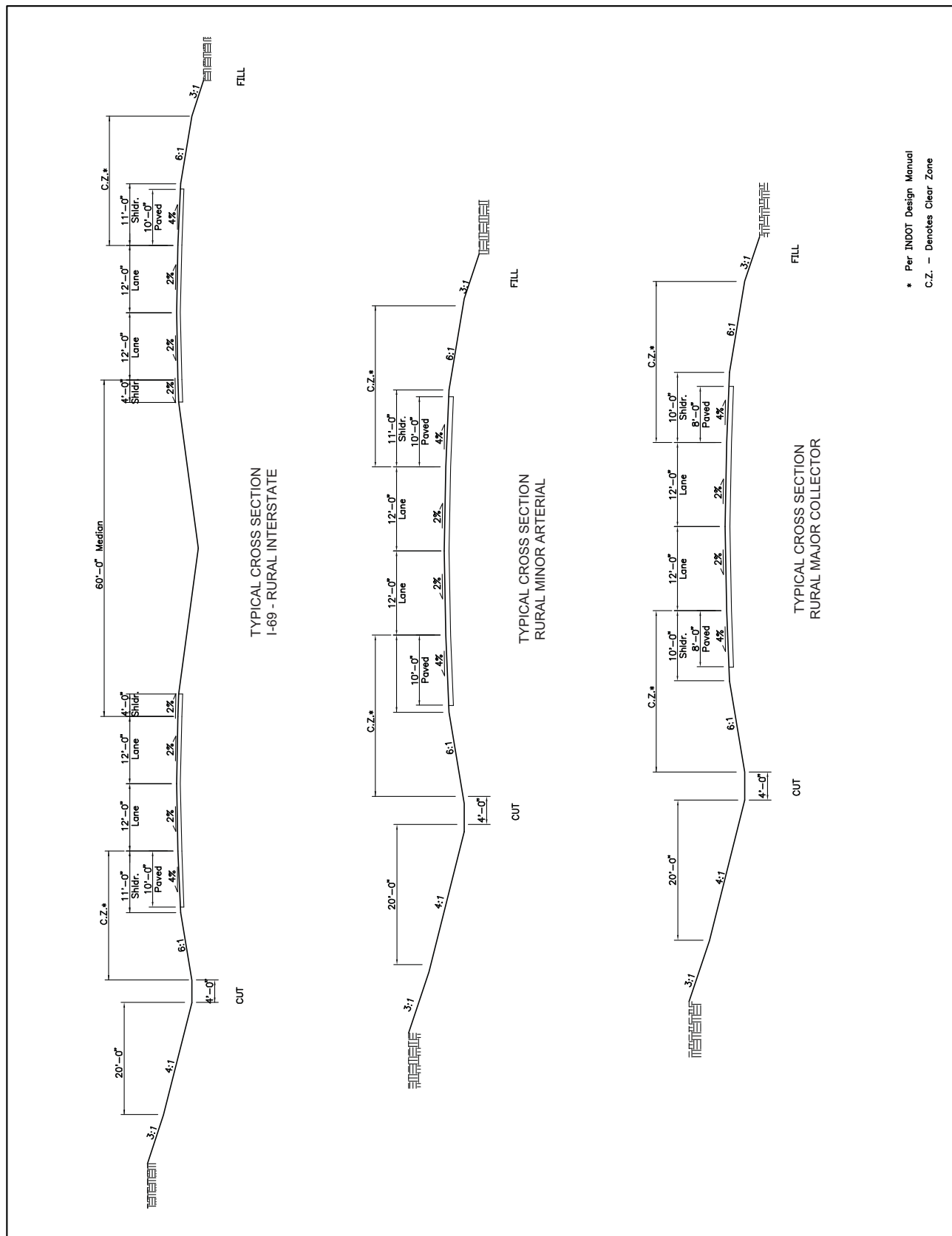


* Per INDOT Design Manual

C.Z. - Denotes Clear Zone



Figure 42: INDOT Design Standards for Rural Typical Cross Sections





limits of Loogootee, Shoals, and Crane is controlled by those communities, and access to other streets in unincorporated Martin County is controlled by the county. The “Indiana Statewide Access Management Study” was completed in August of 2006, and includes the “INDOT Access Management Guide” that provides guidelines for access management by INDOT and local jurisdictions. (This is available on INDOT’s website.)

f. Thoroughfare Improvements

i. Improvement Types

Roadway improvements fall into two major categories: “preservation” projects and “expansion” projects. Preservation projects involve improvements to maintain the existing capacity of the roadway system such as:

- roadway resurfacing and bridge rehabilitation projects;
- safety projects like low-cost intersection improvements, minor horizontal and vertical realignments, signalization improvements, guardrail and marking improvements;
- pavement and bridge reconstruction/replacement projects; and
- transportation enhancement projects such as bikeways, walkways, landscaping and historic transportation structure preservation efforts.

Expansion projects are improvements that add capacity to the roadway system such as:

- major roadway widenings (adding lanes);
- new roadways and roadway extensions;
- major roadway alignments; and
- new freeway interchanges.

ii. Proposed I-69

Proposed Interstate 69 passes through the center of Daviess County (to the west of Martin County) and the southeast corner of Greene County (to the north of Martin County). Serving central Martin County, US 50 will interchange with I-69 on the east side of Washington, about 11 miles west of Loogootee. Serving the west side of Martin County, US 231 will interchange with I-69 about one mile north of the Martin County Line near the intersection with SR 45/58. This interchange will serve the Martin County portion of the WestGate @ Crane Technology Park being within two miles of the Town of Crane and the main gate to the Crane Naval Surface Warfare Center. An I-69 interchange is also programmed for SR 58 between Elnora and Odon in Daviess County, about seven miles west of US 231 and eight miles west of the Martin County Line. There is also a possibility of an I-69 interchange with SR 45 about five miles north of Martin County that would serve the north gate of the Crane Naval Surface Warfare Center.

For Section 1 of I-69 from I-64 to SR 64, construction began on the first segment from I-64 to SR 68 (1.77 miles) on July 16, 2008. The balance of Section 1 from SR 68 to SR 64 near Oakland City is currently under design, and funding is programmed for construction by 2010 according to the Indiana Department of Transportation (INDOT) 2030 Long Range Transportation Plan.

Section 2 of I-69 (from SR 64 near Oakland City through Pike County and south Daviess County to US 50 near Washington) and Section 3 of I-69 (from US 50 through Daviess County and southern Greene County to US 231) have been programmed for construction by the year 2015. “The Draft Environment Impact Statements for these two sections were released on February 9, 2009 for public hearings on March 19 and March 26, 2009, respectively. The Federal Record of Decision on the Final Environmental Statements for these two sections is anticipated later in 2009 and design should begin soon thereafter. Thus, I-69 should be open to traffic from I-64 to US 231 soon after the year 2015 with interchanges at US 50, SR 58 and US 231 serving Martin County.



Section 4 of I-69 from US 231 to SR 37 (with possible intermediate interchanges at SR 45 and the Greene-Monroe County Line) is included in the INDOT 2030 Long Range Transportation Plan, but funding has not yet been identified for construction as of April of 2009.

iii. Roadway Improvements

Planned roadway improvements are found in the Indiana 25-Year Long Range Transportation Plan that was updated in 2007 (2006-2030) and the Major Moves 2006-2015 Construction Plan. The Long Range Transportation Plan focuses on expansion projects (i.e. added travel lanes, new road construction, interchange modifications and new interchange construction). Major Moves includes new construction projects, major preservation projects and resurfacing projects. The Indiana Statewide Transportation Improvement Program (INSTIP) draws individual expansion projects from the Long Range Transportation Plan and Major Moves, and identifies individual or groups of preservation projects.

The 25-Year Long Range Transportation Plan includes five unfunded long range plan projects in Martin County. The unfunded projects are the five segments of US 50 reported as “new road construction” (Project Numbers 333, 334, 335, 336, and 338) – 13.5 miles at \$255 million for construction in Martin County.

No Major Moves projects were listed for Martin County. However, there is a total of \$271,056.43 earmarked for areas within Martin County but are not attached to specific projects.

The comprehensive plan recognizes the need to improve US 50 through Martin County and shows a US 50 connector on the south side of Loogootee from US 50 about 0.5 mile of the Daviess-Martin County Line to US 50 about 0.5 mile west of the CSX railroad grade separation. The comprehensive plan also envisions the possible future improvement of US 231 on the west side of Loogootee from US 231 at Mt. Pleasant Road (CR 156 south of Loogootee) to US 231 at CR 132 (north of Loogootee) along the Daviess-Martin County Line. Because US 50 and US 213 are both rural principal arterials, these facilities are proposed as ultimate divided four-lane limited access facilities. If these are initially built as two-lane facilities, adequate right-of-way should be acquired initially for an eventual four-lane facility. Further, while the US 231 Connector may not be initially built as a relocation of US 231, the extension of the County Line Road (Martin County Road 151 or Daviess County Road 1300E) from Park Street (Daviess County Road 75N) across the CSX Railroad to CR 132 (Daviess County Road 250N) is proposed to provide a continuous north-south facility on the west side of Loogootee that provides improved access to the Loogootee Community School Complex (Loogootee High School, Loogootee Junior High School and Loogootee West Elementary School).

The INSTIP for 2008 through 2011 lists six projects for Martin County that include two hot mix asphalt pavement rehabilitations, two small structure replacements, a bridge replacement and an intersection improvement project:

- Martin State Forest Main Road – pavement overlay in 2008
- SR 450 small structure replacement over Beech Creek in 2010
- SR 550 from US 50 to US 150 – pavement overlay in 2009
- US 231 bridge replacement over Friends Creek in 2009
- US 50 small structure replacement 3.38 miles east of SR 650 in 2008
- US 50 at Pine Street in Loogootee – install traffic loop detector in 2008

Municipalities in Martin County should continue to maintain roads and extend roads where necessary. The Future Land Use Map and development trends should be used to determine the best location for the extension of roads to accommodate new residential and commercial development. Municipalities in Martin County should work with the county and developers to ensure that roads in the incorporated areas are constructed appropriately.



Annual maintenance costs for Martin County's 377 miles of roadway are approximately \$1,885,000 (at \$5,000 per lane-mile in 2008). Total resurfacing costs for Martin County's roadways are approximately \$30,160,000 (at \$80,000 per lane-mile in 2008). If resurfacing is completed every 16 years, the average cost would be approximately \$1,885,000 (2008 dollars) per year. If resurfacing is completed every 20 years, the average cost would be approximately \$1,508,000 (2008 dollars) per year.

Martin County received \$1,384,947 from the Local Road and Street Fund for roadway maintenance and resurfacing in fiscal year 2007. The average roadway maintenance and resurfacing on a twenty-year cycle, current state-aid covers about 83 percent of the cost.

iv. Other Improvements

The Indiana State Trails, Greenways and Bikeways Plan (also known as Hoosiers on the Move) was completed in July 2006 by the Indiana Department of Natural Resources (DNR) Division of Outdoor Recreation. The plan includes future and visionary trails for the entire state. One of the priority visionary trails mapped in the plan follows the I-69 Corridor from Evansville to Indianapolis. The entire trail is not feasible as part of the I-69 Evansville to Indianapolis Tier 2 studies; however, further coordination with the Indiana DNR is encouraged for the possible development of the trail linking Daviess, Greene and Martin County.

Many counties and communities throughout Indiana are creating trails connecting parks/recreational areas, community buildings, and other public use spaces. Although not included in the Future Land Use Map, consideration should be made to creating trails connecting protected natural areas such as Martin State Forest, West Boggs Lake and other recreational facilities throughout the county. Trails connecting the incorporated areas with one another would create additional recreational opportunities as well.

In addition to trails connecting public use spaces within a community, many counties are considering trails that connect different cities and towns. The county could consider working with Loogootee and other incorporated communities within the county to create trails connecting communities within the county.

2. TRANSPORTATION/THOROUGHFARE IMPLEMENTATION

Those projects listed in the State's 25-year Long Range Plan, Major Moves, and INSTIP are all funded by the state. INDOT completes any construction and maintenance of roads listed in these plans. The incorporated communities of the county are responsible for the maintenance, resurfacing and reconstruction of all locally maintained roads. The state maintains all state roads, state highways and interstates. The county is responsible for maintaining the rest of the roads in the county and all bridges off the state system. When roadway surfaces and curbs deteriorate beyond repair accomplished through maintenance or resurfacing, the road must be reconstructed. Roadway reconstruction may also be necessary to accommodate significant commercial and industrial development in the future. Martin County and its incorporated areas are each eligible for the Federal Surface Transportation Program Group IV Funds up to \$2.5 million each year with a 20 percent match.

The INDOT Long Range Transportation Plan lists new road construction for US 50 through Martin County for 13.5 miles at an estimated \$255 million for construction in 2007 dollars. The segment of the US 50 Connector around the south side of Loogootee is estimated to be about \$38 million for about 3.0 miles in 2008 dollars. The US 231 Connector around the west side of Loogootee is estimated to cost about \$48 million for 3.4 miles with a railroad grade separation in 2008 dollars. If the US 231 Connector were built as a two-lane rural collector from Park Street to CR 132, the estimated project cost would be about \$9.8 million for 1.75 miles.

Although funds for roadway maintenance and resurfacing may be low, there is a tool that counties can use to make the most of existing funds. Pavement management systems are being used by many counties to help extend the life of roadways. Pavement management is a tool to help counties determine which roads are most in need of repair and what work is needed on those roads. Using this data, a priority list of maintenance and resurfacing projects can be prepared. Counties use this to determine which roads need to be repaired within the calendar year and which can be delayed to another year. This saves counties from putting money



into roadway projects that are not currently necessary. There are several companies that provide pavement management systems to counties.

In addition to roadway improvements, the transportation thoroughfare plan may also include the locations of new pedestrian/bicycle paths. The Indiana Trails Summit has a goal of a trail within 15 minutes (measured by 7.5 miles) of every Hoosier by 2016. There are currently no major trail systems located in Martin County. As mentioned previously, the county may want to consider the creation of trails connecting Martin State Forest, West Boggs Lake and incorporated communities.

One alternative for funding trails would be to use funds from the Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU). There are three programs under the Act that aid in the development of trails: the Transportation Enhancement Program, the Safe Routes to School Program, and the Recreational Trails Program. The Transportation Enhancement Program and Safe Routes to School Program are administered by the Indiana Department of Transportation (INDOT). The Indiana Department of Natural Resources' Division of Outdoor Recreation administers the monies available from Indiana's share of funds from the Recreational Trails Program to help government agencies and not-for-profit organizations develop recreational trail facilities for public use. Grant money from these programs can be used to design, acquire land and build bikeways and trails. The Transportation Enhancement Program and Recreational Trails Program require a local match of 20 percent, but have different eligibility requirements and grant limitations. There is no required local or state match for the Safe Routes to School Program.

C. UTILITIES

1. UTILITIES RECOMMENDATIONS

All of the water and sewer providers in Martin County should continue to upgrade their facilities to serve existing customers and expand their services to accommodate. The City of Loogootee and the Town of Shoals provide water and sewer services within their incorporated areas. The Town of Crane and the Crane Naval Surface Warfare Center are served by Eastern Heights Utilities of Bloomfield for water and the Crane Naval Surface Warfare Center wastewater sewage treatment plant.

The City of Loogootee will have to extend its water and sewer systems to accommodate new development on the edge of the city. Future industrial sites are possible along US 50 east of Loogootee and between US 231 and SR 550 southeast of the city. The industrial sites along US 50 have the greatest potential for industrial park development if utilities are extended to create a shovel-ready industrial park. While the industrial area southeast of Loogootee is adjacent to the Loogootee wastewater treatment plant, significant roadway improvements are needed to make the site accessible to US 231 and SR 550.

Due to the floodplain of the East Fork of the White River, Shoals would have to extend water and sewer lines several miles to the northeast along US 50 to serve potential areas of residential development.

Because of the limited ability of the Crane Naval Surface Warfare Center wastewater sewage treatment plant to serve private development, sewage system improvements will be needed in northwest Martin County to serve its portion of the WestGate @ Crane Technology Park.

In the case of unincorporated areas with large concentrations of on-site septic systems, Martin County should consider working with the residents of these areas to explore cost-effective centralized sewage treatment options such as eco-systems and other innovative lower cost technologies. By continuing to expand all systems in the county, a county-wide water and sewer system would be possible in the future.

The municipal water and sewer treatment plants should be monitored on a regular basis to determine if the capacities of the plants are adequate for current use and if they would be able to accommodate future growth. Martin County should consider implementing a full inventory of existing utilities, service areas, current capabilities and potential for expansion. This should include water, sewer, electric, storm water and broadband continuity.



Economic development opportunities associated with Interstate 69 with US 231 can be taken advantage of by developing sewage treatment facilities for the Martin County portion of the WestGate @ Crane Technology Park and improving water lines to serve the park. To take advantage of increased accessibility to national markets through the proposed I-69 interchange at US 50 to the west and interchange at US 231 to the north, Loogootee will have to move forward with the creation of its own shovel ready industrial park. New industries and commercial structures will likely be drawn to I-69 interchanges and will be looking for locations with all available utilities. If extending sewer lines is not economically feasible, other innovative approaches to wastewater treatment, such as package treatment plants or treatment through the use of constructed wetlands need to be investigated.

2. UTILITIES PLAN IMPLEMENTATION

The Indiana Department of Environmental Management provides a few funding options for water and sewer projects. Most of these grants are for pollution prevention and water quality impairment projects. The State Revolving Fund Wastewater and Drinking Water Loan Program provides low interest loans for planning, design, construction, renovation, improvement, or expansion of water and sewer systems. The loans could be used to develop water and sewer systems to serve the Martin County portion of WestGate @ Crane Technology Park and to create a shovel ready industrial park at Loogootee.

The Office of Community and Rural Affairs (OCRA) also provides funding for water, sewer, and storm drainage projects through the Community Development Block Grant Program. The Community Focus Fund can be used towards utility projects that assist in long-term community development. The area served by these projects must have a substantial low- and moderate-income population for a community to be eligible for the grant. The Planning Grant can be used for water system, sewer system, and storm drainage plans. The United States Department of Agriculture's Rural Affairs Program also provides grants and loans for sanitary sewer, water and drainage systems improvements for low and moderate income areas.

D. COMMUNITY FACILITIES AND SERVICES

1. COMMUNITY FACILITIES AND SERVICES RECOMMENDATIONS

County-wide governmental services and buildings in Martin County appear to be adequate for future use. It is vital to ensure that fire and ambulance services are available to all residents. An emergency services facility may be needed to accommodate future service demands. It is also important to make sure that existing fire stations have enough resources to accommodate any new development in the county.

2. COMMUNITY FACILITIES AND SERVICES IMPLEMENTATION

The Community Focus Fund (a \$500,000 grant), which is part of the Community Development Block Grant Program, from the Office of Community and Rural Affairs (OCRA) can be used towards community facilities and services projects. The funds can be used for senior centers, daycare centers, community centers, downtown revitalization, libraries, healthcare centers, and fire stations. The area served by the project must have a substantial low- and moderate-income population.

E. OPEN SPACE AND RECREATION

1. OPEN SPACE AND RECREATION RECOMMENDATIONS

The National Recreation and Park Association suggests a community should have 15 to 20 acres of regional parkland per 1,000 people. With a projected 2030 population of 9,778 people, the county would need 150 to 200 acres of regional parkland. The county currently has 206 acres of parkland, most of which is in the West Boggs Park north of Loogootee.



The existing fish and wildlife areas, forests, and West Boggs Lake Park provide a sufficient amount of regional parks that include passive recreational opportunities. These recreational facilities are located throughout Martin County. Additional regional parkland in the county should be considered to supply more active recreational opportunities, such as soccer fields, baseball fields, basketball courts, and other active recreational facilities. These parks should be located away from existing facilities to provide recreational opportunities for other citizens. Areas outside of Loogootee, Shoals, and Crane should be considered for the addition of parkland.

2. OPEN SPACE AND RECREATION IMPLEMENTATION

The Daviess-Martin Joint County Parks and Recreation Department should consider adding other facilities in Martin County in addition to West Boggs Park. Although the park includes several recreational opportunities, such as camping, boating, fishing, swimming, and trails for walking and biking, there are no parks in unincorporated Martin County that include soccer fields, baseball fields, basketball courts, and other active recreational facilities. These facilities could be added near West Boggs Lake or around Loogootee and/or Shoals.

The Daviess-Martin Joint County Parks and Recreation Department should also meet with representatives of each of the state parks within Martin County on a regular basis. Possible discussion items could include the potential for expanding recreational opportunities or improving and/or adding facilities within the existing park system, as well as acquisition of additional properties to grow existing state parks.

Recreational facilities in Martin County are adequate for the future population. The Future Land Use Map does not include any additional park space in the county, but unincorporated communities could benefit from adding parkland. New subdivisions and planned unit developments in unincorporated Martin County should include some parkland or open space in the development to provide recreational opportunities for those residents.

The county should investigate federal Open Space and Recreation Grant programs, the Federal Rural Affairs Program, and other possibilities for the acquisition of parkland and for the addition of recreation facilities. The Land and Water Conservation Fund is a federal fund that can be used for land acquisition and/or outdoor recreation facility construction or renovation. This fund requires a 50 percent match and is eligible to communities with a park board and five year park and recreation master plan.

F. ENVIRONMENTAL

1. ENVIRONMENTAL RECOMMENDATIONS

The environmental plan covers the protection of both man-made and natural resources. Man-made resources include historic structures (buildings and bridges), geological and archaeological sites. As a result of the combination of steep slopes, floodplains, wetlands and forests, Martin County has one of the greatest concentrations of “high quality natural communities” in southwest Indiana rivaled only by Perry County and Crawford County. The combination of the Crane Naval Surface Warfare Center, Hoosier National Forest and Martin State Forest results in managed lands encompassing nearly 40 percent of the land area in the County and assuring the public protection of the significant environmental assets of the county. If the Hoosier National Forest Acquisition boundaries (which include lands still in private ownership) are considered, nearly 60 percent of the county land area has the potential to be in public ownership. Due to the significant environmental features and publicly managed lands, Martin County encounters extensive environmental constraints to urban development. Figure 43 is an environmental composite map.

a. Historic Buildings

The Indiana Department of Natural Resources and Historic Landmarks Foundation of Indiana have jointly conducted historic structure inventories throughout the state. Martin County is one of only eight counties in Indiana for which no inventory has been completed.



The Martin County Courthouse in Shoals is the only property in Martin County listed in the National Register of Historic. A special inventory of historic structures was conducted as a part of the I-69 environmental studies that identified fifteen potentially eligible historic sites for the National Register in the corridor. The Martin County Historical Society identifies four historic structures of significance – the Old County Courthouse in Shoals, the Old County Jail in Dover Hill, and the Houghton House and Routt House along SR 550. The Society also lists five historic sites – the Mustering Elm in Trinity Springs that is currently within a public park, Hindostan Falls within the Hoosier National Forest, Overlook Park at the intersection of US 50 and SR 450, Martin State Forest and West Boggs Lake. They also list five significant geological sites – Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock.

Although a complete historic inventory has not been conducted in Martin County and its communities, there are undoubtedly other structures that may be eligible for the National and State Register of Historic Landmarks throughout Martin County and particularly its incorporated areas. Figure 3 refers to historic sites and structures in Martin County.

b. Archaeological Sites

One archaeological site has been identified in Martin County in the vicinity of the I-69 Corridor.

c. Prime Agricultural Lands

The prime farmland is displayed in Figure 4. Prime farmland is scattered along the upper slopes of rivers and streams where the soil is adequately drained and not subject to flooding. Thus, prime farmland is found along the East Fork of the White River and the Lost River and its tributaries. However, only 12 percent of the farmland in Martin County is considered prime farmland, and another 15 percent of the farmland may be considered prime if drained and protected from floods during the growing season. The greatest concentration of prime farmland is south of Loogootee, west of the East Fork of the White River.

d. Forestlands

Figure 6 shows the forest land in Martin County. The forest lands are generally concentrated in the Crane Naval Surface Warfare Center, Martin State Forest and east of the East Fork of the White River. Approximately 62 percent of total land area in Martin County is accessible forest.

e. Steep Slopes

Figure 7 shows the rugged hills and steep stream valleys in Martin County. These slopes are generally associated with the Crawford Upland. The Crawford Upland region covers most of Martin County except for a strip of the Wabash Lowland region encompassing Loogootee and the land west of US 231. These steep slopes of the Crawford Upland region coincide with the concentration of forestlands in the eastern portion of the county (east of a line formed by the West Fork of the White River and Boggs Creek and northern portion of the county with the Crane Naval Surface Warfare Center, and karst land features located in the eastern half of the county. Thus, steep slopes pose an environmental constraint to urban development in most of Martin County except Loogootee and the US 231 corridor.

f. Karst Topography

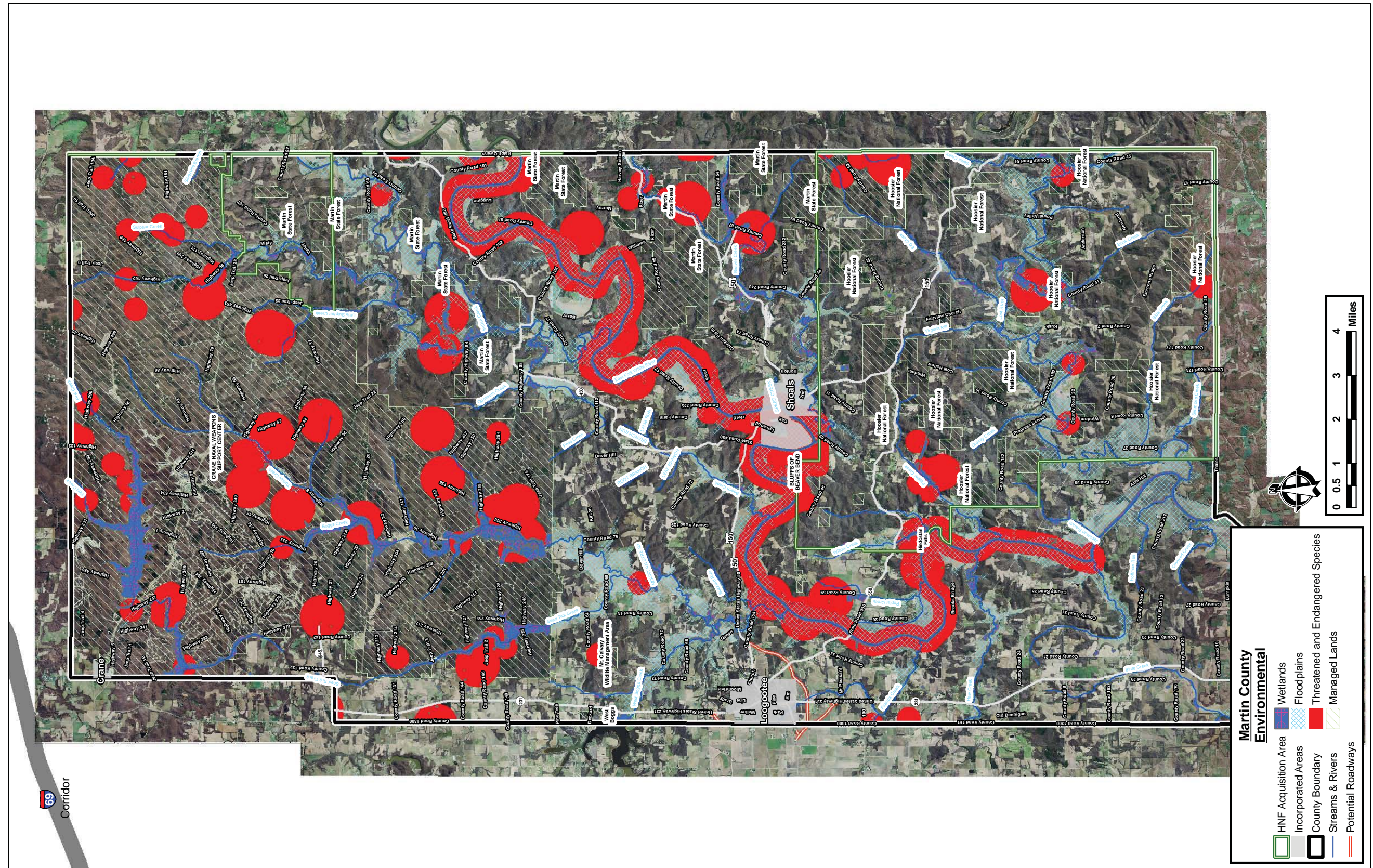
Karst topography is found mostly in the eastern portion of Martin County as shown in Figure 8. The Crawford Upland is characterized by karst topography. The Indiana Geological Survey databases have identified 69 caves and 17 karst springs in this region.

g. Streams, Stream Corridors and Floodplains

Figure 12 shows the floodplains and streams in Martin County. These include the East Fork White River,



Figure 47: Martin County Composite Environmental Map







and its tributaries (Barn Run, Beaver Creek, Beech Creek Boggs Creek Cedar Brook, Crooked Creek, Flood Run, Freemans Spring Branch, Friends Creek, Haw Creek, Hickory Run, Hoffman Run, House Rock Branch, Indian Creek, Jackman Branch, Nubbin Ridge Branch, Overlook Drain, Plaster Creek, Poplar Creek, River Drain, Speel Creek and Willow Creek); the Lost River and its tributaries (Big Creek, Blue Creek, Buck Creek, Grassy Creek, Sams Creek, Simmons Creek, and Virginia Rill). The extensive floodplains of the East Fork of the White River, Lost River, Beaver Creek, Indian Creek and Boggs Creek place environmental constraints on urban development in the valleys of Martin County with the exception of the City of Loogootee and the US 231 corridor. The Town of Shoals is constrained by floodplains on all but the northwest side where steep slopes constrain urban development.

h. Wetlands

Figure 14 shows wetlands. The 89 percent of wetlands in Martin County are associated with forested areas near rivers and streams associated with the East Fork of the White River, Lost River, Beaver Creek, Indiana Creek and Boggs Creek. Nine percent of wetlands are emergent wetlands and are also scattered throughout Martin County in Floodplains. Scrub Shrub wetlands, approximately two percent of all wetlands in Martin County, are located mostly in the northern half of the county.

i. Ground Water Resources

The Indiana Department of Environmental Management database contains records for 731 groundwater wells and six active Drinking Water Facilities in Martin County. Only one of the facilities uses surface water for its primary water source, Crane Naval Surface Warfare Center. The water wells of the City of Loogootee are located at the confluence of Boggs Creek and the East Fork of the White River. The water wells of the East Fork Utilities and Shoals Water Company are located on the edge of the East Fork of the White River south of US 50. The Town of Crane purchases water from Eastern Heights Utilities out of Bloomfield.

j. Wildlife Habitats, Preserved Natural Areas and High Quality Natural Communities

Figure 16 displays the location of sighted endangered species in Martin County. Most endangered species sightings and “high quality natural communities” are located:

- along the East Fork of the White River near Hindostan Falls protected in large part by federal holdings the Hoosier National Forest;
- along the bend of the East Fork of the White River at Shoals protected in large part by the Bluffs of Beaver Bend and Bluffs of Beaver Bend Nature Preserve;
- along the bend of the East Fork of the White River due east of Dover Hill which is partially protected by a conservation easement;
- Beaver Creek near the Martin-Lawrence County Line that falls in the main Martin State Forest park;
- within the Crane Naval Surface Warfare Center; and
- within other tracts of the Martin State Forest and Hoosier National Forest.

A comparison of Figure 16 showing wildlife areas with Figure 19 showing managed lands demonstrates that most the significant wildlife areas and “high quality natural communities” are protected by public ownership of the lands or conservation easements.

Fanshell mussel beds are found in several bends of the East Fork of the White River and were once exploited for button manufacturing until 1947.

k. Locally-Defined Natural Resources

The Martin County Historical Society reports five significant geological sites – Spout Spring, Pinnacle Rock,



House Rock, Bluffs of Beaver Bend and Jug Rock. These appear in Figures 3 and 20. Other natural geological features are reported in Figure 19. Again, Figure 17 shows that many of the significant geological sites fall within managed lands such as the Jug Rock Nature Preserve, Bluffs of Beaver Bend Nature Preserve, the Crane Navel Weapons Support Center, and tracts of the Hoosier National Forest and Martin State Forest.

Coal mineral resources are found throughout portions of Southern Martin County as shown in Figure 19. The greatest concentration of coal resources is found on US 231 near the community of South Martin. Of state and national significance, the most unique mineral resource in Martin County is gypsum. The gypsum mines of the National Gypsum Company and US Gypsum Company have been active for more than a century off US 50 in eastern Martin County.

I. Permitted Waste Disposal and Storage

Figure 21 shows the underground storage tanks (USTs) in Martin County. According to IDEM records there are 19 USTs in Martin County, 14 of which are documented as leaking. With the exception of one site near the Crane area, these sites are concentrated along US 50.

2. ENVIRONMENTAL IMPLEMENTATION

a. Historic Buildings

It is important to maintain the historic structures in Martin County to preserve the historic heritage and character of the community. With the exception of the Martin County Courthouse in Shoals which has protection as a National Register structure, other historic structures are not subject to an identifiable protection mechanism. The county should not favor any significant changes to historic structures that would destroy their historic integrity, but encourage appropriate maintenance, rehabilitation and reuse. The county could assist in educating citizens and organizations about the potential grants and tax incentives for historic home maintenance and the rehabilitation of historic commercial properties. The county should also work with the Indiana Department of Natural Resources and Historic Landmarks Foundation to complete an inventory of historic structures in Martin County so that there is a record of those structures worthy of protection.

The Housing Rehabilitation Grant and Loan Programs for all types of housing are applicable to historic homes as well. The primary sources for funding such programs are the Federal Community Development Block Grant Programs for grants and loans through the Indiana Housing and Community Development Authority, as well as several grant and loan programs of the US Department of Agriculture's Rural Development Program. The Community Focus Fund Program of the Indiana Office of Community and Rural Affairs (OCRA) may be used to fund historic preservation projects, and tax incentives are available for the dedication of historic façades in the case of commercial structures.

Unless historic properties are placed on a local, State or National Register of historic properties (such as the Martin County Courthouse), there are no restrictions on the use, rehabilitation or demolition of such properties above applicable building code requirements and any land use controls that may be imposed in the future. However, the National Environmental Policy Act and National Historic Preservation Act would generally protect these structures from the adverse impact of federally funded improvement projects. Planning grants are available from OCRA to develop an historic preservation program and the administrative capacity for historic preservation such as an inventory of historic places. In addition, historic preservation education grants are available through the Indiana Humanities Council, and the Historic Landmarks Foundation of Indiana also has the Indiana Preservation Grants Fund to assist nonprofit preservation entity programs and the Statewide Revolving Loan Fund to assist nonprofit preservation entities to saved significant endangered historic structures.

With the decline in population of most communities in Martin County since 1980 and the concentration of major retail and medical facilities in metropolitan areas and larger urban areas such as Washington, Jasper and Bedford, the role of the downtown's of these communities has been relegated to providing disposable goods retail services and personal services to the surrounding residential area and the community. Yet, the



downtowns of these communities are the likely concentration of historic structures, and the continuation of these historic structures is in part dependent on long-term economic viability. Nevertheless, the rehabilitation of historic structures in downtown can be a major step toward revitalization of downtown to improve economic viability as has been demonstrated by the efforts in Loogootee. In addition to the historic preservation grant and loan programs described above, there are many grant and loan programs applicable downtown revitalization that would also help preserve historic structures:

- The Indiana Main Street Program of OCRA for technical assistance in developing and implementing downtown programs.
- The Federal Community Development Action Grant programs from the Indiana Economic Development Corporation to assist in administration capacity and program development for economic development commissions, redevelopment commissions, community or neighborhood corporations, and similar entities.
- Loans and grants to improve building façades and rehabilitate commercial buildings from OCRA's Downtown Enhancement grants and Community Focus Fund Grants and from the Historic Landmarks Foundation of Indiana's Statewide Revolving Loan Fund.
- Hazardous material cleanup from the Indiana Development Authority's Brownfields grants.
- Sidewalk and streetscape improvements from the OCRA Community Focus Fund grants and the Transportation Enhancement Program administered by INDOT under the Federal Surface Transportation Program.

b. Archaeological Sites

One archeological site has been identified in Martin County in the vicinity of the I-69 Corridor. If federal funds are proposed for any new infrastructure in the vicinity of I-69, an archeological records check should be made to determine if site may be affected, and appropriate remediation measures should be taken.

c. Prime Agricultural Lands

Since 1900, Martin County has seen a decline in population and the population has remained around 10,500 persons since 1930. Thus, the county has seen little physical growth beyond the increase in scattered private homes in the unincorporated areas and minor growth of residential areas adjacent to Loogootee. Accordingly, the impact on prime farmland has been minimal in the past 100 years in Martin County. Further, as only 12 percent of the farmlands are considered prime farmland, the loss of prime farmland is not an issue except for the concentration of prime farmland south of Loogootee on US 231. Anticipated growth in Martin County is anticipated to be focused contiguous to Loogootee where little prime farmland exists.

In general, the future land use pattern for Martin County encourages infill development of vacant and agricultural lands inside and adjacent to the City of Loogootee, on US 231 north of the West Boggs Lake, the WestGate @ Crane Technology Park and scattered flat ridges in eastern Martin County. This also ensures that the greatest concentration of future urban development is served by a centralized sanitary sewer system. Further, the comprehensive plan development review guidelines encourage centralized sanitary sewer system service for most new development and prohibit on-site sewage treatment systems except for industrial pretreatment and homes in remote rural areas on large lots. This is to help ensure higher density residential development that makes the provision of centralized sanitary sewers more economical and reduces the amount of agriculture land that must be converted to support housing growth. Thus, the proposed future land use pattern and development review guidelines are intended to minimize the impact on prime agricultural lands.

d. Forest Lands

Relative to the protection of major forested areas that also correlate to wildlife habitat areas, the continued public purchase of land within the Hoosier National Forest purchase boundary is the most effective way to



preserve these forestlands and wildlife habitats. Except for possible residential development on flat ridge tops in open areas without forests (that are currently the focus of existing residential development), the future land map recommends no new urban uses adjacent to existing publicly purchased lands of the Hoosier National Forest or Martin State Forest.

Over time, protection of major forested areas and wildlife habitat areas should be considered through the continued public purchase of land or the denotation of conservation easements. However, the suggested conservation easements are concentrated along the floodplains and associated wetlands of major rivers and streams that tend to have only scattered forest lands.

e. Steep slopes

Except for the City of Loogootee and the US 231 corridor, most of Martin County falls in the Crawford Upland region with slopes of ten percent or more. The valleys of the rivers and streams with more gradual slopes east of US 231 are subject to flooding and are therefore not appropriate for urban development. Thus, the only areas with gradual slopes are around Loogootee, along the US 231 corridor and scattered flat ridge tops of open areas without forests. Accordingly, the Future Land Use Map does not recommend future development on steep slopes. Although areas with steep slopes are not likely to be converted to urban uses, the fact remains that much of Martin County has steep slopes. Thus, special hillside/steep slopes provisions should be included in any proposed zoning ordinance (if ever developed); and basic requirements for site preparation and construction materials in the event of steep slopes are suggested for any zoning and subdivision controls regulations that may be prepared in the future for the community. While INDEM Rule 5 concerning erosion and sedimentation control may catch larger developments, local regulations may be desirable to address development that fall below the INDEM Rule 5 threshold.

f. Streams, Stream Corridors and Floodplains

The Future Land Use Map recommends no growth along the major stream corridors and floodplains of Martin County – East Fork of the White River, Lost River, Beaver Creek, Indian Creek and Boggs Creek. In fact conservation easements are suggested along the floodplains of these major stream corridors to protect wetlands and wildlife habitats and discourage urban development within the floodplains.

Further, the comprehensive plan includes a series of development review guidelines that prohibit new residential development in the floodplain unless the first floor is elevated above the 100-year flood elevation and the site has year around access unencumbered by seasonal flooding, require best management practices for erosion and sedimentation control during site preparation, and require stream buffers.

For the time being, IDEM rules requiring permits for erosion and sedimentation control (Rule 5) when sites of five acres or more are disturbed and for filling in the 100-year floodplain should prevent abuse of the 100-year floodplain. If a subdivision control ordinance or local erosion and sedimentation control ordinance were developed, development sites below five acres may be subject to erosion and sedimentation controls. As the conversion to urban uses occur, it is also possible that any floodplains or stream corridors be dedicated as drainage easements or be given as conservation easements to a non-profit entity with tax credits going to the property owner.

g. Wetlands

The Future Land Use Map does not propose future development in or near the major wetland concentrations of Martin County along the East Fork of the White River, Lost River, Beaver Creek, Indian Creek or Boggs Creek. In fact the floodplains and associated wetland of major stream corridors are suggested as conservation easements created through private dedication or voluntary purchase by public entities.

The comprehensive plan includes development review guidelines that encourage the avoidance of wetlands during site construction and require the establishment of appropriate buffers between the construction site and



wetlands. Again, IDEM Rule 5 requiring a permit for erosion and sedimentation control for sites of five acres or more is the most effective means of protecting wetlands at this point in time until local subdivision controls or local erosion and sedimentation controls are adopted or updated. As previously, noted, it is also possible that the wetlands be dedicated as drainage easements or be given as conservation easements to a non-profit entity with tax credits accruing to the property owner.

h. Ground Water Resources

Future development is not recommended in the vicinity of the ground water wells of the Loogootee Water Works, the Shoals Water Company and the East Fork Water Utilities. In fact, these three well-head areas fall within suggested conservation areas along the East Fork of the White River floodplains.

i. Wildlife Habitats, Preserved Natural Areas and High Quality Natural Communities

Most significant wildlife habitats and “high quality natural communities” fall within the publicly managed lands of the Hoosier National Forest, Martin State Forest, Crane Naval Surface Warfare Center and other existing nature preserves in Martin County. The continuing acquisition of private property with the Hoosier National Forest Purchase Boundary will provide further protection of wildlife habits. Most wildlife areas not presently covered by publicly managed lands are along major stream corridors. Thus, the Future Land Use Map identifies suggested conservation areas along major stream corridors (East Fork of White River, Lost River, Beaver Creek, Indian Creek and Boggs Creek) that correspond with fanshell mussel beds and wildlife habitats in and around the floodplains and associated wetlands. These conservation areas may be created through the private dedication of property or the voluntary acquisition of such property by non-profit entities.

The comprehensive plan development review guidelines protect unique natural areas, and other areas with significant natural features. The best method of preserving a “high quality natural community” is through the private dedication of conservation easements with tax advantages accruing to the private property owner, voluntary acquisition of private property through special funding established by state entities such as INDOT or Indiana Department of Natural Resources or by federal entities through the Federal Land and Conservation Fund. The US Department of Agriculture (USDA) has also established a Wildlife Habitat Incentives Program to protect wildlife habitats, and wildlife organizations (such as Quail Unlimited and Ducks Unlimited) have used the program to protect wildlife sites.

j. Locally-Defined Natural Resources

Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock are the recognized locally defined geological resource. These and other natural geological features (shown in Figures 3 and 20) fall within existing publicly managed lands such as the Jug Rock Nature Preserve, Bluffs of Beaver Bend Nature Preserve, the Crane Navel Weapons Support Center, and tracts of the Hoosier National Forest and Martin State Forest. If other locally identified natural resources are identified, the development review guidelines of the comprehensive plan encourage protection. Relative to gypsum and coal mineral resources, no unique protection actions are proposed.

G. ECONOMIC DEVELOPMENT

1. ECONOMIC DEVELOPMENT RECOMMENDATIONS

The community survey question with the highest percentage of people who strongly agreed stated that Martin County needs economic growth through the creation of all types of jobs. As part of the Future Vision for Martin County, the objectives for expanding employment opportunities included:

- Provide more job opportunities and improve the overall economy in Martin County by attracting new quality industry and businesses through public incentives.



- Provide incentive opportunities to encourage the reuse of vacant industrial and commercial structures and properties in Martin County, and especially in Loogootee and Shoals, in a manner compatible with surrounding uses.
- Promote planning and economic development coordination and education.
- Provide adequate infrastructure to existing and proposed industrial, commercial and residential sites to ensure suitable sites for immediate development (shovel ready sites).
- Provide increased business support and capital opportunities to foster entrepreneurship/small businesses in Martin County.
- Provide incentive opportunities to retain and assist in the expansion of existing businesses in Martin County.
- Provide incentive opportunities to attract and encourage new business and industry in Martin County and the WestGate @ Crane Technology Park.
- Encourage the development of additional retail businesses and personal services so that residents do not have to shop outside Martin County for common necessities.
- Encourage workforce education and continuing education for agricultural and vocational jobs through the Learning Center that specifically reflect local business needs.
- Encourage the payments by state and federal government in lieu of tax payments due to state and federal tax-exempt lands in order to increase the revenue base of Martin County.
- Develop a program that assists Martin County in promoting economic development and tourism.

An economic development strategy and action program for Martin County should translate the previous objectives into an effective implementation program. The essential ingredients of a comprehensive economic development program include:

- Identifying the assets of Martin County relative to --
 - Infrastructure such as the residual sanitary sewer and water capacity; an inventory of these along with electricity capacity, storm water drainage and broadband continuity throughout the county would be valuable.
 - Access to multiple forms of transportation including US 231, US 50, US 150, SR 645, SR 450, SR 550, and the future I-69.
 - A well educated and skilled workforce.
 - Amenities such as small community atmosphere, strong primary and secondary educational system, natural and recreational amenities, affordable housing, etc.
 - Proximity to strong colleges and universities.
- Identifying emerging business sectors --
 - Targeting those businesses for which Martin County has a competitive advantage.
- Developing a business retention and attraction program --
 - Annual surveys of existing businesses to determine concerns that government can address to make them more competitive.
 - Examination of emerging businesses to find out their needs and location decision criteria.
- Developing and marketing existing and potential sites --
 - Creating an inventory of shovel-ready sites and immediate move-in structures.
 - Removing environmental constraints to sites such as removal of environmental contamination, provision of adequate storm drainage, elevation of site above 100-year floodplain, etc.
 - Providing roadway access, sanitary sewers, waterlines and other utilities to the perimeter of shovel-ready sites.



- Developing financial and technical assistance programs for small business development -
 - Business incubators.
 - Retired executive's corps.
 - Business venture capital programs.
- Developing financial resources for government assistance and incentives for businesses --
 - Tax increment financing for infrastructure improvements.
 - Revenue bonds and tax abatement programs for businesses.
 - Employee training programs for businesses.
- Building relationships with other economic development entities at the county and state levels for the marketing of available sites and buildings, infrastructure improvement programs, financial and technical assistance programs and technical training programs.
- Developing a regional economic development approach in which all economic development organizations within Martin County and neighboring counties, the Southern Indiana Development Commission and county officials from counties within the region are working together to promote economic development regionally.
- Recognize new commercial and industrial development to benefit counties and communities within a one-hour driving radius.
- Maintain a good working relationship with the Southern Indiana Development Commission so they can stay abreast of potential funding opportunities.

2. ECONOMIC DEVELOPMENT IMPLEMENTATION

A variety of federal, state, and nonprofit programs are available to assist Martin County in developing and implementing an economic development program. The Community Development Block Grant Program from the Indiana Office of Community and Rural Affairs includes funding opportunities for economic development. The Planning Grant provides funding for a community to create a Downtown Revitalization Plan or Economic Development Plan. The program also includes the Community Economic Development Fund which provides funding for a variety of job creation or retention activities.

The incorporated areas in the county should continue to work with the Martin County Economic Development Corporation and the Southern Indiana Development Commission. These groups should not only stay informed of and understand the projects that each are working towards in Martin County, they should also work together to make the most of funding opportunities and limited staff resources.

Efforts such as these will better position Martin County as it strives to capitalize on economic development opportunities that may come from the construction of Interstate 69.

H. HOUSING

1. HOUSING RECOMMENDATIONS

Martin County and the county's individual communities should consider developing a dilapidated housing program that requires individual home owners to repair or remove dilapidated housing. The program would be used to identify housing that is in such poor condition that it causes health and safety concerns. The communities or county can contact homeowners and present a timeline for the house to be repaired or removed. If no changes are made or the homeowner does not respond to messages by the community or county, they can declare the structure unsafe for habitation, demolish the structure, and place a lien against the property for demolition. If the homeowner fails to pay property taxes, the property may be seized and auctioned off at a sheriff's sale for delinquent taxes.



2. HOUSING IMPLEMENTATION

There are several sources of funding and support for housing rehabilitation programs including the Indiana Affordable Housing Fund and several programs from the Indiana Housing and Community Development Authority, including Community Development Block Grants for housing rehabilitation, the Home Investment Partnership Program, and the Neighborhood Assistance Program. Some of these grants are geared toward the assistance of not-for-profit organizations. Grants for economic development use, downtown revitalization, utilities, and community facilities and services can all be used to directly or indirectly improve neighborhoods within a community.

I. CONCLUSION

1. COMPREHENSIVE PLAN IMPLEMENTATION

If Martin County wishes to use this comprehensive plan, there are specific actions to adopt a comprehensive plan, including:

- Adoption of the comprehensive plan by the Martin County Advisory Plan Commission and Martin County Commissioners, and
- Recording of the comprehensive plan at the Martin County Recorder's Office.

In conclusion, the effectiveness of the comprehensive plan depends on the extent to which it is integrated into the development review and infrastructure planning and programming processes. Because the economy and county demographics are always changing, the comprehensive plan is a work in progress. Elements of this comprehensive plan may be out of date a few years after completion. To ensure the continued relevance to the decision-making process, the plan should be reviewed at least every five years and should be updated at least every ten years to reflect changing economic conditions in order to keep the comprehensive plan on course to achieve the desired future vision for Martin County.

2. FINANCIAL ASSISTANCE PROGRAMS

To assist in the implementation of the comprehensive plan, there are a variety of technical and financial assistance programs to address a variety of issues in Martin County including:

- economic development,
- commercial and residential structure preservation and rehabilitation,
- recreation facility preservation and new construction,
- bicycle, pedestrian and trail facilities,
- landscaping, signing and lighting,
- sanitary sewer, potable water and stormwater drainage programs and facilities, and
- natural resource preservation programs for wetlands and floodplains.

This comprehensive plan will provide the documentation for a wide variety of community needs that will place Martin County at a competitive advantage for grants for all kinds of federal, state and private programs. Martin County should continue to stay in contact with economic development and regional planning organizations to stay informed of potential funding opportunities for these projects. The Martin County Economic Development Corporation and the Southern Indiana Development Commission provide Economic Development and Planning Assistance in Martin County. Working through the Southern Indiana Development Commission, the county should also keep in contact with the South Central District of the Indiana Office of Community and Rural Affairs



for funding opportunities. For further information on financial assistance and implementation tools, refer to the Ball State University “Center for Economic and Community Development: Toolbox Guide” (www.bsu.edu/cecd/toolbox) and the INDOT “I-69 Planning Toolbox” (www.in.gov/indot/projects/i69planningtoolbox).

3. PRIORITIZATION

Prioritizing the many potential projects that have been listed in this comprehensive plan is essential to ensuring that they are completed efficiently. In Martin County, the highest priority projects should include any projects that enhance the natural features of the county. The county should continue to work with the Indiana Department of Natural Resources to ensure protection of the protected natural areas of the county, including the Martin State Forest, Hoosier State Forest, and West Boggs Lake. The county should also protect the county’s wetlands and floodplains. The county should protect these areas and discourage development in the immediate vicinity of these natural features.

Another high priority project is to continue work on economic growth in the county. The Martin County Economic Development Corporation should continue to enhance economic development opportunities and market Martin County as a great location to start a business. The Development Corporation should work with local utilities to ensure that all necessary utilities are made available at potential development sites (shovel ready sites).





Socioeconomic Tables



Table A-1: Population Trends

	1900	1910	1920	1930	1940	1950
Martin County	14,711	12,950	11,865	10,103	10,300	10,678
Crane	N/A	N/A	N/A	N/A	N/A	N/A
Loogootee	1,382	2,154	2,335	2,203	2,325	2,424
Shoals	683	1,015	1,034	1,128	1,031	1,039
	1960	1970	1980	1990	2000	2007*
Martin County	10,608	10,969	11,001	10,369	10,369	10,058
Crane	N/A	339	297	216	203	195
Loogootee	2,858	2,953	3,100	2,884	2,741	2,606
Shoals	1,022	1,039	967	853	807	791

Source: Indiana Business Research Center

*U.S. Census Bureau Estimate

Table A-2: Population Forecast

Year	2007*	2010	2015	2020	2025	2030	2035	2040
Indiana Business Research Center (IBRC)								
Martin County	10,058	10,254	10,194	10,148	10,151	10,139	10,092	10,026
Woods & Poole Economics, Inc.								
Martin County	10,058	9,966	9,833	9,720	9,617	9,520	9,426	9,336
BLA								
Martin County	10,058	10,172	10,074	9,975	9,877	9,778	**	**
Loogootee	2,606	2,689	2,663	2,637	2,611	2,585	**	**

Source: Indiana Business Research Center; Woods & Poole Economics

*U.S. Census Bureau Estimate

**data were not available



Table A-3: Demographic Characteristics

	2000*					
	Crane	Loogootee	Shoals	Perry Township	Martin County	Indiana
Total Population	203	2,741	807	4,960	10,369	6,080,485
Sex						
Male	96	1,319	405	2,464	5,248	2,982,474
Female	107	1,422	402	2,496	5,121	3,098,011
Age						
Under 5 years	9	171	36	322	654	423,215
5 to 9 years	21	172	43	338	697	443,273
10 to 19 years	27	336	82	697	1,520	896,898
20 to 29 years	10	309	109	516	1,140	834,766
30 to 39 years	24	355	92	678	1,420	900,297
40 to 49 years	28	413	110	778	1,636	919,618
50 to 59 years	29	337	101	628	1,347	673,912
60 to 69 years	27	243	104	427	908	439,412
70 to 79 years	21	257	87	390	719	351,489
80 to 84 years	5	72	24	99	180	106,047
85 years and over	2	76	19	87	148	91,558
Income						
Households Reporting	86	1,224	387	2,058	4,196	2,337,229
Less than \$10,000	2	128	104	155	416	188,408
\$10,000 to \$19,999	10	275	72	343	647	298,127
\$20,000 to \$29,999	17	197	63	320	614	323,872
\$30,000 to \$39,999	20	202	44	313	613	306,163
\$40,000 to \$49,999	12	123	41	269	636	269,532
\$50,000 to \$59,999	14	96	29	192	398	235,515
\$60,000 to \$74,999	9	100	9	258	419	264,202
\$75,000 to \$99,999	2	45	21	95	272	237,299
\$100,000 to \$124,999	0	30	2	59	79	104,007
\$125,000 to \$149,999	0	14	2	34	51	43,838
\$150,000 or more	0	14	0	20	51	66,266
Median HH income	\$36,250	\$30,492	\$23,750	\$37,331	\$36,411	\$41,567
Poverty						
Households Reporting	86	1,224	387	2,058	4,196	2,337,229
Households in poverty	5	171	86	209	479	221,437
Family Households	52	709	206	1,361	2,892	1,611,045
Families in poverty	5	93	30	122	234	107,789
Education (highest grade completed)						
Age 25 and older	137	1,940	597	3,411	7,066	3,893,278
High School Graduate	33.6%	37.7%	43.4%	38.6%	42.3%	37.2%
Some College (no degree)	33.6%	14.9%	15.2%	17.5%	15.0%	19.7%
Associate Degree	3.6%	10.1%	3.7%	10.2%	8.0%	5.8%
Bachelor's Degree	2.9%	5.1%	1.5%	6.0%	4.5%	12.2%
Graduate or Professional Degree	4.4%	5.7%	2.8%	6.9%	4.3%	7.2%

Source: U.S. Census Bureau Census 1990 and 2000

Total Pop, Sex, Age from SF 1

Income, Poverty, Education from SF 3



Table A-4: Family Income

	Crane	Loogootee	Shoals	Perry Township	Martin County	Indiana
Total Families	52	709	206	1,361	2892	1611045
Less than \$10,000	2	36	24	53	124	70076
\$10,000 to \$14,999	3	83	12	106	191	55878
\$15,000 to \$19,999	1	71	8	78	168	74725
\$20,000 to \$24,999	5	42	14	68	184	90833
\$25,000 to \$29,999	4	50	34	87	177	99153
\$30,000 to \$34,999	5	59	16	95	241	103094
\$35,000 to \$39,999	2	61	12	95	178	103060
\$40,000 to \$44,999	2	22	16	69	259	105287
\$45,000 to \$49,999	8	54	12	125	264	97422
\$50,000 to \$59,999	9	67	24	165	330	188847
\$60,000 to \$74,999	9	88	9	239	373	223516
\$75,000 to \$99,999	2	38	21	88	250	208347
\$100,000 to \$124,999	0	18	2	47	67	93088
\$125,000 to \$149,999	0	14	2	34	51	39419
\$150,000 to \$199,999	0	0	0	6	24	28225
\$200,000 or more	0	6	0	6	11	30075
Median Family Income in 1999	\$45,625	\$37,625	\$31,964	\$45,858	\$43,550	\$50,261
Families with income in 1999 below poverty level (%)	9.6%	13.1%	14.6%	9.0%	8.1%	6.7%
Individuals with income in 1999 below poverty level (%)	5.8%	14.0%	22.2%	10.2%	11.4%	9.5%



Table A-5: Housing Characteristics

	2000					
	Crane	Loogoote	Shoals	Perry Township	Martin County	Indiana
Total Population	193	2,793	797	4,968	10,369	6,080,485
Group Quarters Population	0	56	48	59	107	178,321
Household Population	193	2,737	749	4,909	10,262	5,902,164
Households	87	1,235	386	2,040	4,183	2,336,306
Household Size (persons)	2.22	2.22	1.94	2.41	2.45	2.53
Total Housing Units	111	1,347	428	2,246	4,729	2,532,319
Vacant Housing Units	24	112	42	206	546	196,013
Percent Vacant Units	21.6%	8.3%	9.8%	9.2%	11.5%	7.7%
Occupied Housing Units	87	1,235	386	2,040	4,183	2,336,306
Percent Occupied Units	78.4%	91.7%	90.2%	90.8%	88.5%	92.3%
Owner Occupied	58	887	267	1,606	3,401	1,669,083
Percent Owner Occupied Units	66.7%	71.8%	69.2%	78.7%	81.3%	71.4%
Renter Occupied Housing Units	29	348	119	434	782	667,223
Percent Renter Occupied Units	33.3%	28.2%	30.8%	21.3%	18.7%	28.6%
Owner Occupied Housing Value						
Total Units Reported	58	887	267	1,606	3,401	1,669,083
Less than \$25,000	26	133	75	216	594	93,736
\$25,000 to \$49,999	19	207	65	326	754	168,811
\$50,000 to \$99,999	13	465	97	757	1,392	677,173
\$100,000 to \$149,999	0	45	30	174	407	407,895
\$150,000 or more	0	37	0	133	254	321,468
Median Value	\$30,600	\$60,600	\$46,900	\$60,700	\$67,200	\$92,500
Monthly Contract Rent						
Total Units Reported (with cash rent)	24	298	111	346	542	618,575
Less than \$200	2	80	54	88	169	59,829
\$200 to \$399	18	196	54	232	337	199,136
\$400 to \$599	4	14	3	18	28	250,142
\$600 or more	0	8	0	8	8	109,468
Median Rent	\$320	\$263	\$204	\$260	\$243	\$432
Units in Structure						
Total Housing Units	111	1,347	428	2,246	4,729	2,532,319
1 Unit, Detached	94	859	215	1,623	3,206	1,802,259
1 Unit, Attached	5	11	6	16	37	74,224
2 to 4 Units, Attached	6	140	32	148	195	185,707
5 to 9 Units, Attached	0	23	14	23	62	115,303
10 or More Units, Attached	2	17	15	19	45	186,316
Mobile Home	4	297	146	417	1,176	166,733
Other	0	0	0	0	8	1,777
Age of Structure						
Total Housing Units	111	1,347	428	2,246	4,729	2,532,319
1990 to March 2000	2	95	49	210	731	437,347
1980 to 1989	0	171	64	275	620	286,089
1970 to 1979	2	293	75	439	887	415,562
1960 to 1969	15	202	42	389	632	345,252
1950 to 1959	41	226	65	331	684	330,958
1940 to 1949	48	113	36	249	397	204,354
Before 1940	3	247	97	353	778	512,757
Median Year Built	1951	1964	1964	1965	1968	1966

Source: U.S. Census Bureau Census 2000, SF 3



Table A-6: Housing Forecasts

Year	2007*	2010	2015	2020	2025	2030	2035	2040
Indiana Business Research Center (IBRC)								
Martin County	10,058	10,254	10,194	10,148	10,151	10,139	10,092	10,026
Woods & Poole Economics, Inc.								
Martin County	10,058	9,966	9,833	9,720	9,617	9,520	9,426	9,336
BLA								
Martin County	10,058	10,172	10,074	9,975	9,877	9,778	**	**
Loogootee	2,606	2,689	2,663	2,637	2,611	2,585	**	**

Source: Indiana Business Research Center; Woods & Poole Economics

*U.S. Census Bureau Estimate

**data were not available



Table A-7: Labor Force

	2000		1990	
	Martin County	Loogootee	Martin County	Loogootee
Population 16 & older	8,115	2,221	0	0
Labor Force	5,099	1,410	0	0
Civilian Labor Force	5,088	1,410	0	0
Unemployed	295	101	0	0
Employed Civilians	4,793	1,309	0	0

Source: U.S. Census Bureau Census 2000, SF 3

Table A-8: Employment

	2000				2030			
	Loogootee		Martin County		Loogootee		Martin County	
Agriculture Services	43	1.1%	43	0.5%	39	1.1%	39	0.5%
Mining	0	0.0%	38	0.5%	0	0.0%	34	0.5%
Construction	479	12.7%	479	5.8%	434	12.7%	434	5.8%
Manufacturing	619	16.5%	637	7.7%	561	16.5%	577	7.7%
Transportation/Communication/Utilities	845	22.5%	845	10.2%	765	22.5%	765	10.2%
Wholesale Trade	97	2.6%	97	1.2%	88	2.6%	88	1.2%
Retail Trade	736	19.6%	838	10.1%	667	19.6%	760	10.1%
Finance/Insurance/Real Estate	199	5.3%	215	2.6%	180	5.3%	194	2.6%
Services	741	19.7%	902	10.9%	671	19.7%	816	10.9%
Government	0	0.0%	4,188	50.6%	0	0.0%	3,794	50.6%
Total	3,759	100.0%	8,282	100.0%	3,405	100.0%	7,501	100.0%

Source: Bernardin, Lochmueller & Associates



Table A-9: Commuters

	From Martin County to:	Into Martin County from:
Greene Co. IN	41	910
Vanderburgh Co. IN	45	34
Pike Co. IN	46	33
Knox Co. IN	56	100
Monroe Co. IN	136	720
Lawrence Co. IN	151	995
Orange Co. IN	165	128
Daviess Co. IN	408	1,126
Dubois Co. IN	927	126
Other Indiana Counties	76	253
Outside of IN	30	47
Total	2,081	4,472
Live & Work in Martin Co.	2,617	

Source: U.S. Census Bureau

Count: Number of workers 16 years old and over in the commuter flow.

Table A-10: Travel Time

Travel Time	2000			
	Martin	% Commuters	Loogootee	% Commuters
less than 15 minutes	1,467	32%	532	44%
15 to 29 minutes	1,101	24%	247	20%
30 to 44 minutes	1,153	25%	336	7%
45 to 59 minutes	447	10%	60	1%
60 or more minutes	357	8%	45	1%

Source: U.S. Census Bureau Census 2000, SF 3



Land Use Plan Survey



Dear Resident:

Martin County is striving to attract new jobs and promote population growth. Thus, a land use plan is being prepared to guide future growth and development. The Plan is being funded through the Interstate 69 Community Planning Grant Program created by the Indiana Department of Transportation to aid local communities along the proposed I-69 corridor in planning for their future.

The Land Use Plan is being prepared under the direction of the Martin County Board of Commissioners. As part of the process of developing this plan, this survey was created to better understand your ideas for how growth should occur in our community. Your participation is greatly appreciated.

Sincerely, 

Mike Dant
 President
 Martin County Board of Commissioners

Where do you live? Unincorporated Martin County Crane Loogootee Shoals

Please circle the response that best describes your feelings about the following statements:	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
1. County roads and bridges need to be upgraded and maintained. But, there is a lack of funding for County roads and bridge projects.	1	2	3	4
2. Need economic growth through jobs, any kind of job.	1	2	3	4
3. Lack of tax base due to a large amount of State and Federal tax-exempt lands.	1	2	3	4
4. Lack of ambulance and other 911 emergency services.	1	2	3	4
5. There are water and wastewater facility needs, either the facilities do not exist or the existing facilities are outdated.	1	2	3	4
6. Martin County should implement protective land use controls.	1	2	3	4
7. Attract good quality jobs, specific to Westgate at Crane Technology Park, to Martin County.	1	2	3	4
8. Need better education of the work force, continuing education for agricultural and vocational jobs through the Learning Center.	1	2	3	4
9. Raise public awareness of recreational areas within the County.	1	2	3	4
10. Increase tourism within the County as a long-term goal.	1	2	3	4
11. Improve digital communication needs within the County.	1	2	3	4
12. Martin County needs to develop an industrial park.	1	2	3	4
13. There is a need to be all inclusive in planning.	1	2	3	4
14. There is a need for better coordination and education (all parties) regarding planning, economic development, etc.	1	2	3	4
15. There is a need to change the attitude of the County from negative to positive.	1	2	3	4
16. There is a lack of communication and cooperation between government agencies in Martin County.	1	2	3	4
17. There is a need for a shared vision for the future of Martin County.	1	2	3	4
18. There is a need for more public involvement.	1	2	3	4
19. Martin County lacks funding to complete projects.	1	2	3	4
20. Martin County effectively promotes its assets to encourage economic development and tourism.	1	2	3	4
21. Martin County should encourage new home building.	1	2	3	4



Please circle the response that best describes your feelings about the following statements:	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
22. Martin County needs to do more to keep young people in the community.	1	2	3	4
23. Martin County needs more housing for the elderly.	1	2	3	4
24. There is a need for additional recreational facilities in Martin County.	1	2	3	4
25. There is a lack of capital and business support to foster entrepreneurship/small businesses in Martin County.	1	2	3	4
26. There is a need for more affordable housing in Martin County.	1	2	3	4

----- fold here -----

Do you have any comments on the future of Martin County? Write your comments here. Attach additional paper if needed.

The Martin County Board of Commissioners thank you for taking the time to share your ideas for the future growth and development of the county. Please **fold** the survey so the return address shows, using a piece of **tape** to secure the top, and **mail** the form back to: Bernardin, Lochmueller & Associates, Inc.

PUBLIC MEETING FOR THE LAND USE PLAN
 The first public meeting to discuss the Martin County Land Use Plan will be in late January of 2009. Please look for the meeting notice in your local paper. The results of this survey and the future of Martin County will be discussed.

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Sign-In Sheets





SIGN-IN SHEET

Martin County Steering Committee: Workshop No. 1 on Martin County Land Use Plan
St. John's Center at St. John's Catholic Church, 405 Church St., Loogootee, Indiana 47553
6:30 PM September 10, 2008

- | Name |
|---------------------------------|
| 1. <u>Walt Wagner</u> |
| 2. <u>David Strange</u> |
| 3. <u>Jonathan Stevens</u> |
| 4. <u>Gene Shaw</u> |
| 5. <u>Call- Bernard Butcher</u> |
| 6. <u>Parrell Courtight</u> |
| 7. <u>Matt Sward</u> |
| 8. <u>Paul Dandora</u> |
| 9. <u>Paul R George</u> |
| 10. <u>Eric Swickard</u> |
| 11. <u>David Ripple</u> |
| 12. _____ |
| 13. _____ |
| 14. _____ |

SIGN-IN SHEET

Martin County Steering Committee: Workshop No. 2 on Martin County Land Use Plan
St. John's Center at St. John's Catholic Church, 405 Church St., Loogootee, Indiana 47553
6:30 PM December 4, 2008

Name _____

1. *Samuel Butcher*
2. *Darrell Cartwright*
3. *Aaron Jones*
4. *GENE SHAW*
5. *Floyd Lomre Hawkins*
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____





SIGN-IN SHEET

Future Vision for Martin County – Public Open House #1
St. John's Catholic Church, 405 Church Street, Loogootee
Thursday, January 15, 2009
6:30 – 8:00 PM

Name (Please Print)

1. Walt Waggoner
2. Doc Hardy
3. ~~* Aaron Jones~~
4. Darrell Conright
5. JIM HENRY
6. DAN GREGORY
7. Josue Jones
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

SIGN-IN SHEET

Future Vision for Martin County – Public Open House #1
St. John's Catholic Church, 405 Church Street, Loogootee
Thursday, January 15, 2009
6:30 – 8:00 PM

Name (Please Print)

Jonathan Stewart

- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.
- 24.
- 25.
- 26.
- 27.
- 28.





SIGN-IN SHEET

Martin County Steering Committee: Workshop No. 3 on Martin County Land Use Plan
4-H Center, US 50 East., Loogootee, Indiana 47553
6:30 PM February 26, 2009

- | | Name |
|-----|---------------|
| 1. | Walt Waggoner |
| 2. | Greg S. Hurd |
| 3. | Alcon Jones |
| 4. | Walt Swickard |
| 5. | DAN GREGORY |
| 6. | David Ripple |
| 7. | Eric Swickard |
| 8. | |
| 9. | |
| 10. | |
| 11. | |
| 12. | |
| 13. | |



MARTIN COUNTY SIGN-IN SHEET

Alternative Future Land Use for Martin County – Public Open House
Martin County 4-H Fairgrounds, 2264 US Highway 50, Loogootee
Wednesday, March 18, 2009
6:30 – 8:30 PM

Name (Please Print)

1. GRIDE SHAW
2. Quinn Brewer
3. JENNIE NORRIS
4. Rick Norris
5. Danell Cartwright
6. DAN GREGORY
7. Don Banting
8. Scott H. Ford
9. Steve Gaudes
10. Sha Clark
11. David Ripple
12. Eric Swickard
13. _____
14. _____
15. _____



SIGN-IN SHEET

Martin County Steering Committee: Workshop No. 4 on Martin County Land Use Plan
4-H Center, US 50 East, Loogootee, Indiana 47553
6:30 PM April 23, 2009

Name

1. DAN GREGORY
2. Walt Waggoner
3. GREG SHAW
4. KENNETH H. FLOYE
5. Matt Sward
6. Jonathan Stevens
7. David Ripple ALA
8. Eric Swickard ALA
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____





Public Hearing and Written Comments





Martin County Advisory Plan Commission
Public Hearing
July 23, 2009, 7:00 PM
Martin County Community Center
Loogootee, Indiana

Minutes

Present: Ethan Jones, Aaron Jones, Robin Haulk, Greg Jones, Karie Heathcoat-Kieffer, Nathan Albright, Louise Parsons, John D. Stoll, Nancy Steiner, Andy Ringwald, Jonathan Stevens, Walt Waggoner, Kim Showalter, Kathy Collins, Anthony E. Nonte, David Ripple, Dan J. Gregory, and Eric Swickard.

President Dan J. Gregory opened the meeting by explaining this public meeting is a requirement by statute and asked the attendees to listen and then ask questions. He emphasized this Plan has nothing to do with zoning and it will help in obtaining grants by achieving more points by having it. He then introduced Dr. David Ripple and Eric Swickard of Bernardin, Lochmiller & Associates, Inc.

A presentation was given by Eric Swickard on the findings of the research done on Martin County. Examples given were the location, historic value, the natural environment, social characteristics, and economic characteristics. He gave the assessments of the use of the land, current and future transportation possibilities, utilities, and recreational facilities. Mr. Swickard also gave a future vision report on what Martin County could accomplish with this Plan.

The Comprehensive Land Use Plan will need to be accepted by the Martin County Commissioners by way of a County Resolution. A Resolution is a guideline, not a law and it has nothing to do with zoning.

Following the public hearing, a meeting was conducted by President Gregory. Robin Haulk made a motion to recommend to the Martin County Commissioners to adopt the Comprehensive Land Use Plan. The motion was seconded by Jonathan Stevens. All seven board members present voted yes. The motion passed.

The meeting was adjourned by a motion made by John D. Stoll and seconded by Louise Parsons. All were in favor and the motion passed.



RESOLUTION NO. 2009-16
A RESOLUTION ESTABLISHING THE MARTIN
COUNTY ADVISORY PLAN COMMISSION

WHEREAS, on September 18, 2007, the Martin County Board of Commissioners entered into an Inter-Governmental Cooperation Agreement with the City of Loogootee, Indiana, under which the County sought and subsequently obtained grant funds from the State of Indiana to develop a County-wide Land Use Plan and a Land Use Plan specific to the City of Loogootee; and

WHEREAS, in order for the Board of Commissioners to consider the adoption of a County-wide Land Use Plan as a Comprehensive Plan under IC 36-7-4-500 seq., it is necessary for an Advisory Plan Commission to be formed; and

WHEREAS, the adoption of a comprehensive plan will assist Martin County in competing for federal funds available for infrastructure projects within Martin County, promoting economic development in Martin County, and planning for future development in Martin County; and

WHEREAS, the Board of Commissioners has determined that it is in the best interests of the citizens of Martin County, Indiana, that a county advisory plan commission be established.

NOW THEREFORE, BE IT ORDAINED by the Board of Commissioners of Martin County, Indiana, as follows:

Section 1. Establishment of the Martin County Advisory Plan Commission. The Board of Commissioners hereby establishes the Martin County Advisory Plan Commission ("Plan Commission").



Section 2. Members. The Plan Commission shall consist of Nine (9) members, who shall be appointed as follows: (a) One (1) member appointed by the Board of Commissioners from its membership; (b) One (1) member appointed by the Martin County Council from its membership; (c) the Martin County Surveyor or his designee; (d) the Martin County Agricultural Extension Educator; (e) and Five (5) citizens members appointed by the Board of Commissioners, of whom not more than three (3) may be of the same political party.

Section 3. Qualifications of Citizen Members. Citizen members must be residents of unincorporated areas of Martin County. Each citizen member shall be appointed because of the member's knowledge and experience in community affairs, the member's awareness of the social, economic, agricultural, and industrial problems of the area, and the member's interest in the development and integration of the area. A citizen member may not hold other elective or appointive office in municipal, county, or state government.

Section 4. Term. (A) The term of office of a member who is appointed from the membership of the Board of Commissioners or the Martin County Council is coextensive with the member's term of office unless the Board of Council appoints another member to serve as its representative at its first regular meeting in any year.

(B) The citizen members shall initially be appointed for the following terms of office: One (1) member for a term of one (1) year; One (1) member for a term of two (2) years; One (1) member for a term of three (3) years; and Two (2) members for a term of four (4) years. Each member's term expires on the first Monday of January of the first, second, third, or fourth year, respectively, after the year of the member's appointment. When an initial term of office of a citizen member expires, each new appointment of a citizen member is for a term of four (4) years. A citizen member serves until his successor is appointed and qualified. A citizen member is eligible for reappointment.



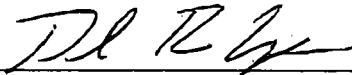
Section 5. Removal of Citizen Members. The Board of Commissioners may remove a citizen member of the plan commission for cause. The Board of Commissioners must mail notice of the removal, along with written reasons for the removal, to the citizen member at his residence of address. A citizen member who is removed may, within thirty (30) days after receiving notice of the removal, appeal the removal to the circuit or superior court of the county. The court may, pending the outcome of the appeal, order the removal or stay the removal of the citizen member.

Section 6. Vacancies. If a vacancy occurs among the plan commission members who are appointed, then the appointing authority shall appoint a member for the unexpired term of the vacating member.

Section 7. Statutory Provisions Incorporated by Reference. The provisions of IC 36-7-4 governing the powers, duties and procedures of county advisory plan commissions, and as may be amended from time to time, are herein incorporated by reference.

ADOPTED this 12 day of MAY, 2009.

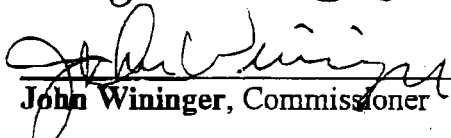
**THE BOARD OF COMMISSIONERS
OF MARTIN COUNTY, INDIANA**



Paul R. George, President

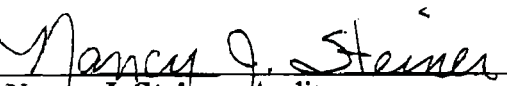


Dan J. Gregory, Commissioner



John Wininger, Commissioner

ATTEST:



Nancy J. Steiner, Auditor



SIGN-IN SHEET

Martin County Advisory Plan Commission: Public Hearing on Martin County Comprehensive Plan
Martin County 4-H Fairgrounds Community Center – 2264 US Highway 50, Loogootee, Indiana 47553
7:00 PM July 23, 2009

- Name
1. Ernan Jones
 2. Aaren Jones
 3. Robin Hawk
 4. Greg Jones
 5. KARIE HEATUGAT.K
 6. Nathan Albright
 7. Levin Pargone
 8. John D. Holt
 9. Aancy Staines
 10. ANDY BENEWAL
 11. Jonathan Stevens
 12. Walt Waggoner
 13. Spice Stecker
 14. Kathy Collins

SIGN-IN SHEET

Martin County Advisory Plan Commission: Public Hearing on Martin County Comprehensive Plan
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7:00 PM July 23, 2009

Name

- 15. Anthony E. Monte
- 16. David Ripple
- 17. Don DeLoach
- 18. Eric Swickard
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____
- 26. _____
- 27. _____
- 28. _____





***Comprehensive Plan
for Martin County, Indiana***

Presentation

Martin County Advisory Plan Commission
Martin County 4-H Fairground Community Center
2264 US Highway 50
Loogootee, Indiana 47553

July 22, 2009
at 7:00 PM

 **BERMARDIN • LOCHMULLER & ASSOCIATES, INC.**
PLANNING • SURVEYING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL SERVICES

OUTLINE

- A. What is it?
- B. What does it include?
- C. What brought it about?
- D. What geographic area does it cover?
- E. What did the plan find?
- F. How was it developed?
- G. What are the plan recommendations?
- H. What commitments are needed?
- I. Why act now?

A. What is it?

1. Framework for future physical development of the community
2. Addresses:
 - Land use to accommodate future activities
 - Infrastructure (roads and utilities) to sustain development
 - Provision of community and recreation facilities to meet the needs of residents
 - Preservation of the historic and natural amenities to protect the community heritage
3. Recommendations in fringe area of Loogootee reflected in both Loogootee and Martin County Comprehensive Plans

A. What is it? (continued)

5. Vision Statement – “Martin County strives to be a great place to live, work and visit by embracing change that fosters economic development opportunities. Preserving historic, natural and rural features that foster a unique living environment, increasing quality employment opportunities, and promoting tourism are all high priorities.”

B. What does it include?

1. A community profile →
 - Inventory of historic structures
 - Information on housing characteristics
 - Description of environmental features – prime farmlands, forests, karst topographic features, steep slopes, ground water resources, streams, floodplains, wetlands, nature areas, wildlife habitats, managed lands and natural areas, recreation, tourism, mineral resources and waste disposal
 - Generation of existing and projected demographic and economic characteristics
 - Assessment of existing and projected land use and infrastructure
 - Identification of development issues through the Steering Committee, a communitywide survey and community leader interviews
2. A future vision → Development Goals and Guidelines
3. Recommendations →
 - Land use development
 - Transportation, utilities, and community facilities and services
 - Open space and recreation, and environmental protection
 - Economic Development, housing preservation and
 - Comprehensive plan implementation

C. What brought it about?

1. INDOT I-69 Community Planning grants to Martin County and Loogootee to address economic development and growth opportunities induced by I-69 and to protect natural resources
2. Collaborative Effort Between Martin County and Loogootee →
 - New comprehensive plans for each with consistent future land use and infrastructure recommendations on the fringe of Loogootee



D. What geographic area does it cover?

1. Unincorporated Martin County only



E. What did the plan find?

1. Rich historic heritage →
 - Historic structures -- Old County Courthouse (National Register), Old County Jail, Houghton House and Routt House
 - Historic sites -- Mustering Elem Hindostan Falls, Overlook Park, Martin Forest and West Boggs Lake
 - Significant geological features -- Spout Spring, Pinnacle Rock, House Rock, Bluffs of Beaver Bend and Jug Rock
2. Very limited prime farmland -- west of White River/US 231 -- 12% of total county
3. Poor soils for on-site septic fields
4. Predominance of forestlands -- Crane and east of White River -- 62% of total county
5. Karst features in eastern Martin -- 69 caves and 17 springs
6. Steep slopes throughout county except west of US 231 and Loogootee

E. What did the plan find?

7. Wellhead protection areas along White River east of Loogootee and south of Shoals and along Boggs Creek in Crane
8. Major wetlands (98%) located in floodplains of White River East Fork, Lost River, Beaver Creek, Indian Creek and Boggs Creek
9. Wildlife habitats concentrated along →
 - White River East Fork → Hindostan Falls, Bluffs of Beaver Bend, Dover Hill
 - Beaver Creek near the Martin-Lawrence County Line
 - Crane Naval Base, Martin State Forest and Hoosier National Forest
 - Most protected by publicly managed lands and conservation easements
10. Most managed lands in a county except Perry and Crawford Counties (nearly 40% land area exempt from property taxes)
11. Gypsum mines unique to Indiana

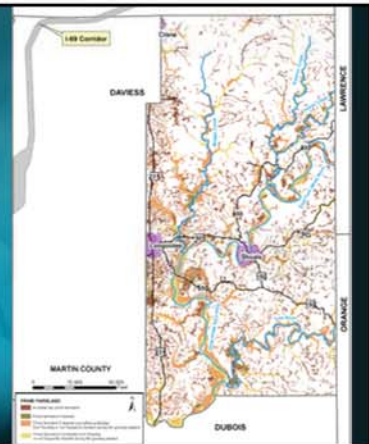
E. What did the plan find?

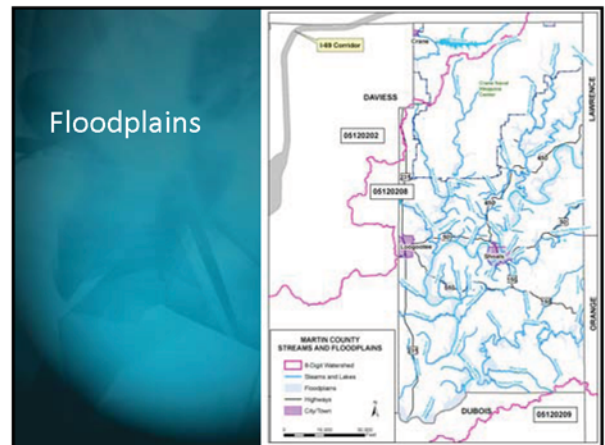
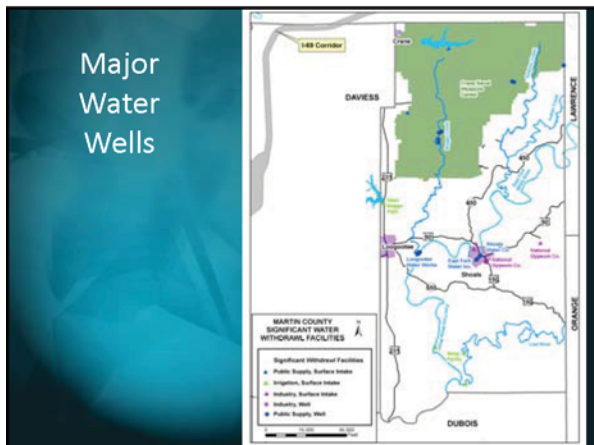
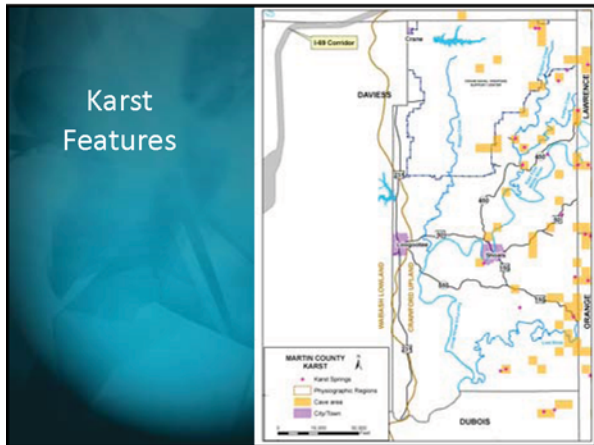
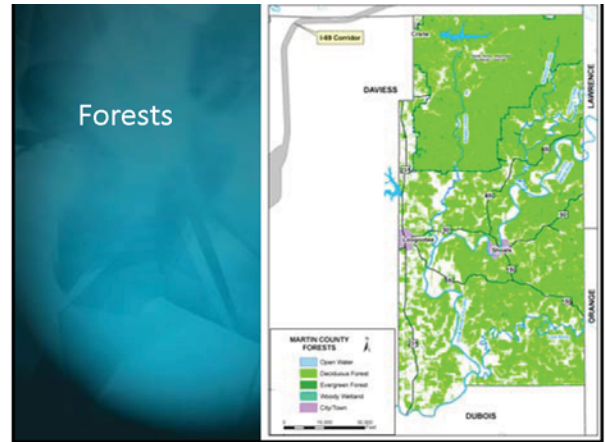
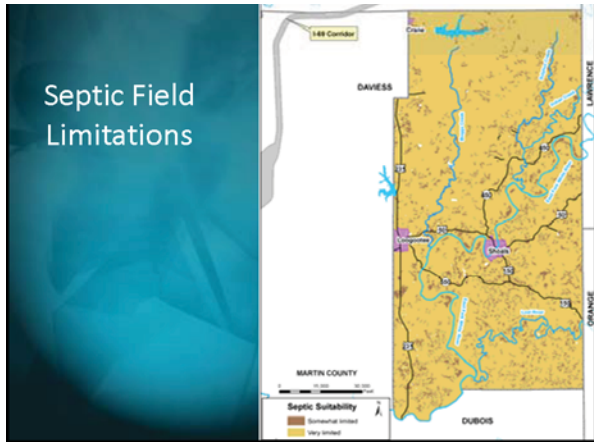
12. Severe environmental constraints to expanded urban growth east of US 231 →
 - Rugged terrain with steep slopes and forests
 - Narrow valleys with floodplains and wetlands
 - Karst topographic features (caves and springs) due to underlying limestone
 - Extensive wildlife habitats along the major rivers and in the forests that contain threatened and endangered species such as the Indiana Bat and the Fanshell Mussell

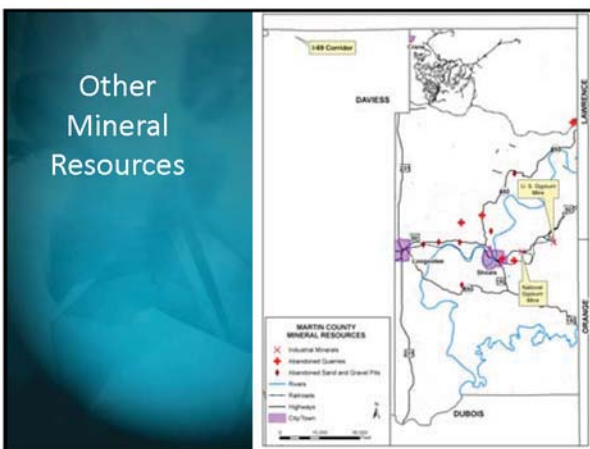
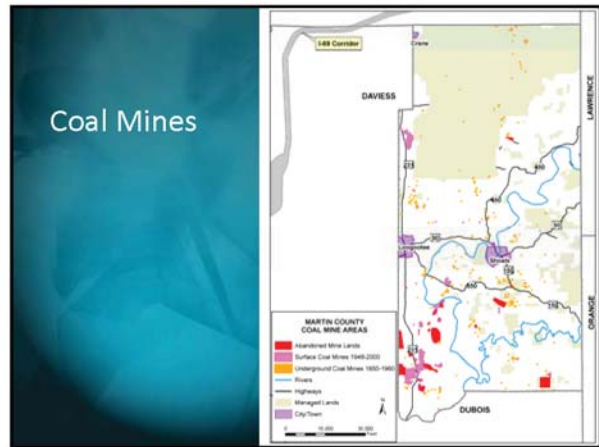
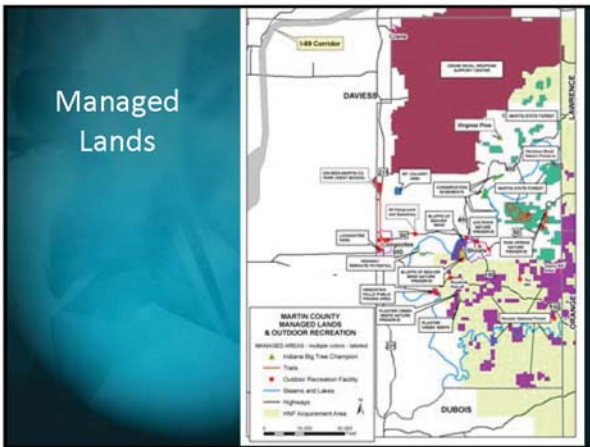
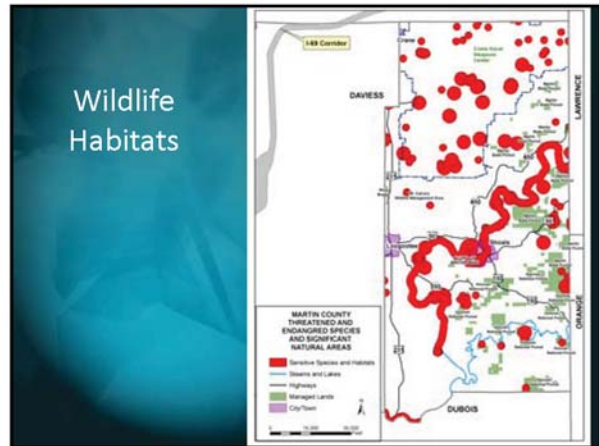
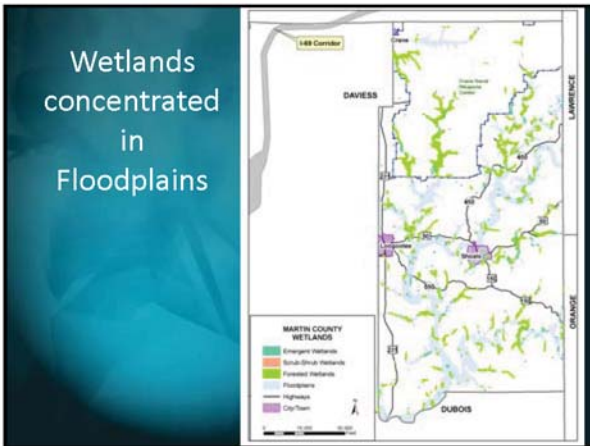
Historic Structures



Prime Farmland

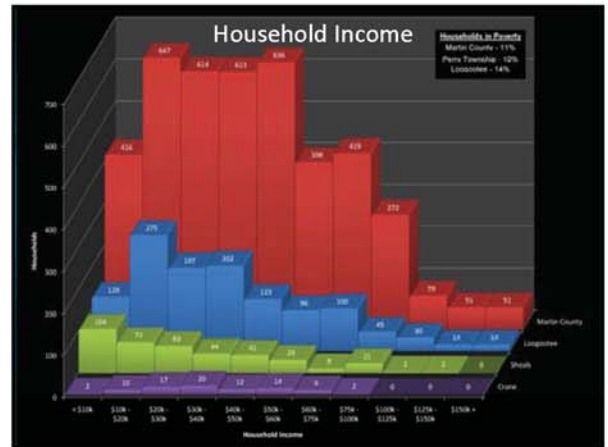
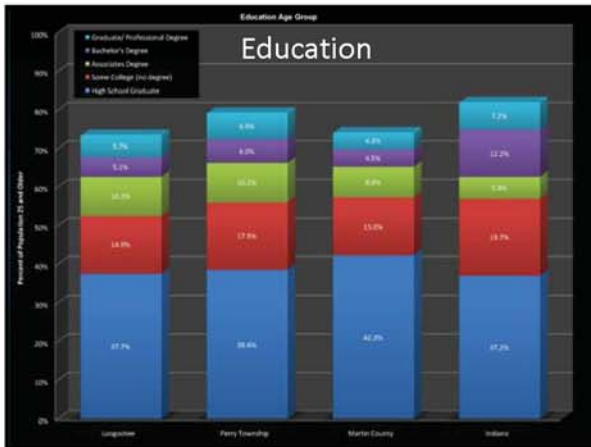
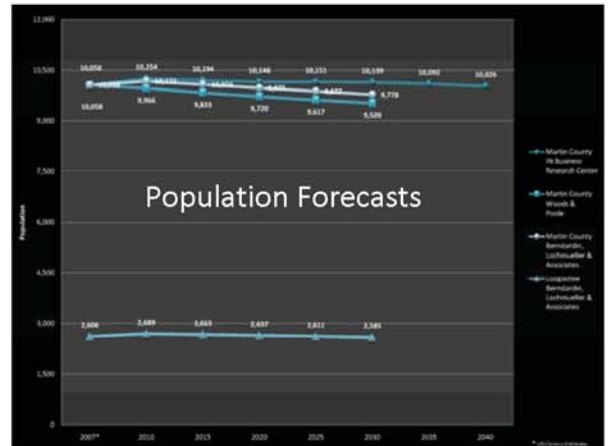
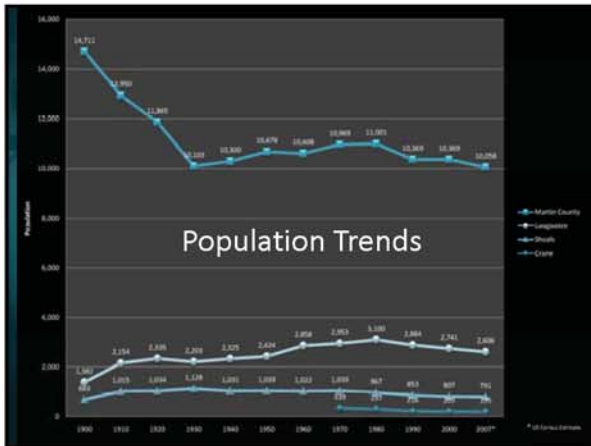






E. What did the plan find?

13. No population growth → 280 person loss to year 2030 → offset by 594 persons with WestGate @Crane Tech Park
14. Median age of 39 years, greater than Indiana at 35 years
15. Lower education attainment than Indiana as whole
16. Median household income 87% Indiana and higher percent of household poverty than Indiana
17. Higher percent of people living in mobile homes at 25% compared to 9% statewide
18. Aging housing stock → nearly half the homes over 40 years old
19. Projected decrease of 163 housing units from 2000 to 2030 → offset by 238 housing units with WestGate @ Crane Tech Park
20. Projected decrease of 354 jobs between 2000 and 2030 → offset by 340 jobs with WestGate@Crane Tech Park





E. What did the plan find?

21. Projected demand for 257 acres to accommodate growth to year 2030 → plus 92 more acres for residential and support retail/services for WestGate @ Crane Tech Park employees living in Martin County → **Insufficient vacant land suitable for development inside incorporated areas**
22. No major roadway improvements as relocation of US 50 unfunded → although projects underway for resurfacing, bridge replacement, intersection improvements and sidewalk improvements
23. Generally adequate water systems inside incorporated areas → but systems must be extended to accommodate growth
24. Wastewater systems at capacity due to storm events and must be expanded to accommodate growth
25. Adequate recreation areas → but facility improvements needed
26. No identified new schools → but improvements to existing schools likely to be needs over the next decades

Existing and Future Land Use Demand

2008 Existing Land Use				
Land Use Category	Acres ¹	Percent of Category	Percent of Developed Unincorporated Area*	Percent of Unincorporated County Area*
Residential	3,505		11.7%	11.7%
Commercial	23		0.0%	0.0%
Industrial	372		0.5%	0.2%
Public/Quasi-Public	77,420		94.7%	36.4%
Parks/Recreation	206	0.3%	0.3%	0.1%
State/Federal/Managed Lands	77,113	99.6%	94.4%	35.2%
Churches/Commeicals	88	0.1%	0.1%	0.0%
Other	18	0.0%	0.0%	0.0%
Developed Subtotal	81,720		100.0%	38.4%
Agricultural/Forest Land	137,207			61.6%
Total of Unincorporated County Area	218,927			100.0%
Incorporated Unincorporated	2,100			1.0%
Total of County Area	215,027			101.0%

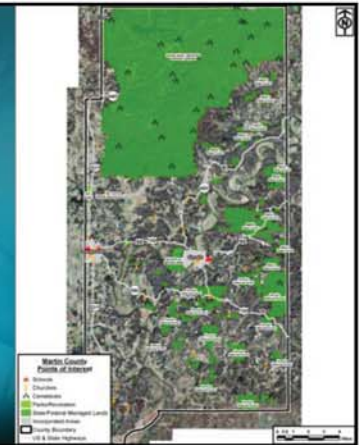
Source: Bennett, Lottmoller and Associates, Inc.
¹ Rounded to the nearest acre.
 * Total of unincorporated county area and total of county area excludes roads, utilities and right-of-way.

+ 257 acres for normal demand
 + 92 more acres for WestGate @ Crane
 Not enough vacant land in incorporated areas

Existing Land Use



Community Facilities



F. How was it developed?

1. Four meetings of the two Steering Committees
 - Identify issues, develop communitywide survey and identify leaders to be interviewed (9/10/2008)
 - Develop future vision (12/04/2008)
 - Develop future alternatives (2/26/2009)
 - Develop recommendations (4/23/2009)
2. Steering Committees met jointly to address common issues
3. Two rounds of public information meetings
 - Review background information and the future vision (1/15/2009)
 - Review future land use/transportation alternatives (3/18/2009)
4. Steering Committee → Issues identification
5. Communitywide survey
6. Interviews of community leaders

G. What are the plan recommendations?

1. Stated Priorities:
 - Projects enhancing the natural features of Martin County
 - Continuing to work on economic growth through the provision of utilities to create shovel ready development sites



G. What are the plan recommendations?

2. Future Land Use:

- Locations for future land use opportunities around Loogootee, along US 231 north of West Boggs Lake and north of the Town of Crane
 - Future industrial areas → WestGate @ Crane Tech Park, along US 50 east of Loogootee, and southeast side of Loogootee between US 231 and US 50
 - Future commercial areas → US 50 Connector/US 231 Connector southwest of Loogootee and US 231 Connector/existing US 231 north of Loogootee
 - New residential areas along → along US 231 north and south of Loogootee and north of West Boggs Lake and scattered un-forested flat-ridges in eastern Martin County
 - Potential conservation areas → along floodplains of White River East Fork, Lost River, Beaver Creek and Indian Creek

Existing and Potential Land Use

Future Land Use

G. What are the plan recommendations?

3. Transportation/Thoroughfare Plan

- Typical cross sections for design and right-of-way preservation for county thoroughfares
- Need to improve US 50 through Martin County with US 50 Connector around south side of Loogootee
- Possible improvement of US 231 along the county line on the west side of Loogootee from Mt. Pleasant Road to CR 132
- Extension of County Line Road from Park Street across CSX RR to CR 132 to provide continuous route west of Loogootee for school complex
- Trails connecting incorporated communities and major recreation areas such as Martin State Forest and West Boggs Lake

Typical Roadway Cross Sections

US 50 Connector and US 231 Connector



G. What are the plan recommendations?

4. Utilities Plan
 - Monitoring water and wastewater treatment plants to ensure adequate capacity for growth
 - Provision of sanitary sewers to industrial sites at WestGate@ Crane, along US 50 east of Loogootee and southeast of Loogootee from US 231 to US 50
 - Extension of water lines to serve industrial sites east and southeast of Loogootee
 - Exploration of innovative sewage treatment systems for unincorporated
5. Community Facilities/Services Plan and Open Space/Recreation Plan
 - Addition of more active recreation facilities at existing recreation areas

G. What are the plan recommendations?

6. Environmental Plan
 - Complete inventory of historic structures in Martin County
 - Protection of historic properties through grants and tax incentives
 - Check archaeological records for major construction projects
 - Minimum prime farmland impacts by focusing future development adjacent to Loogootee where centralized sanitary sewers can be extended
 - Create conservation areas → private dedication or voluntary acquisition → along floodplains of White River, Lost River, Beaver Creek and Indian Creek → to protect wetlands and wildlife habitats not presently within managed lands
 - Continue voluntary acquisition of lands with the Hoosier National Forest Acquisition Areas in southeast and northeast Martin County → to protect karst caves and springs, forests, significant wildlife areas and high quality natural communities not presently within managed lands
 - Follow IDEM rules to protect floodplains, wetlands and steep slopes

Environmental Composite



G. What are the plan recommendations?

7. Economic Development Plan →
 - Improving economic development opportunities →
 - Incentives for new businesses, reuse of vacant properties, retaining businesses, and attracting businesses to WestGate @ Crane
 - Economic development planning and coordination
 - Providing adequate infrastructure for shovel ready development sites
 - Small business support and capital
 - Encourage new retail and personal services
 - Workforce development and continuing education
 - State and federal payments in lieu of taxes for publicly owned lands
 - Develop a program promoting tourism and economic development
 - Preparing an economic development strategy

G. What are the plan recommendations?

8. Housing Preservation Plan →
 - Developing a dilapidated housing program to return abandoned properties to tax rolls, pursuing federal and state programs for housing rehabilitation loans
9. Implementation Program
 - Adopt new comprehensive plan to better compete with other communities for State and Federal grants

H. What commitments are needed?

1. Adoption of Plan by Plan Commission after public hearing and recommendation to Board of Commissioners
2. Adoption of Plan by Board of Commissioners through a resolution (resolution = guidance) not ordinance (ordinance = law) → Does not affect land use rights



I. Why act now?

1. Guides public and private decisions relative to land use development and infrastructure improvements to **capture the development opportunities** of I-69 and WestGate @ Crane
2. Enables the town to **better compete** with other communities for State and Federal grants and loans
3. Establishes the foundation under State statute for planning to **avoid starting over again** from scratch in the future

Thank You!



BERNARDIN LOCHMULLER & ASSOCIATES, INC.
Engineering • Surveying • Planning • Environmental Studies • Water & Wastewater

