INDIANA STATEWIDE FOREST STRATEGY

2010

Indiana Department of Natural Resources

DIVISON OF FORESTRY

Checklist for Statewide Forest Resource Assessments and Strategies
Requirements of the 2008 Farm Bill

The State Assessment and Strategy must be submitted to the USDA Forest Service, with this check list signed by the State Forester, by June 18, 2010. Federal review will focus on the requirements as outlined in the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill).

State: Indiana
Approved by the State Forester: John R. Seifert (Name) 6/18/2010 (Date)

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Statewide Forest Resource Assessment Includes:

*The conditions and trends of forest resources in the state ..... Yes ❑ No ❑
The threats to forest lands and resources in the state consistent with national priorities ..... Yes ❑ No ❑
Areas or regions of the state that are a priority ..... Yes ❑ No ❑
Any multi-state areas that are a regional priority ..... Yes ❑ No ❑

Statewide Forest Resource Strategy Includes:

Long-term strategies to address threats to forest resources in the state* ..... Yes ❑ No ❑
Description of resources necessary for state forester to address state-wide strategy* ..... Yes ❑ No ❑

**Can be presented in a strategies matrix with columns for (a) programs that contribute, (b) resources required, (c) national objective it supports, and (d) performance measure(s) that will be used for each strategy.*

Stakeholder Groups Coordinated with for the Statewide Assessment and Strategy:

Note: this could be identified in the body of the documents or as an appendix.

State Forest Stewardship Coordinating Committee (required) ..... Yes ❑ No ❑
State Wildlife Agency (required) ..... Yes ❑ No ❑
State Technical Committee (required) ..... Yes ❑ No ❑
Lead agency for the Forest Legacy Program (if not the state forestry agency) (required) ..... Yes ❑ No ❑
Applicable Federal land management agencies (required) ..... Yes ❑ No ❑

Other Plans Incorporated in Statewide Assessment and Strategy:

Community wildfire protection plans (required) ..... Yes ❑ No ❑
State wildlife action plans (required) ..... Yes ❑ No ❑
Other ..... Yes ❑ No ❑

Forest Legacy Assessment of Need (check the one box below that applies)

❑ Previously approved AON remains unchanged and is incorporated by reference

OR

❑ Required AON components are included in the Assessment and Strategy (Note: AON elements will be evaluated outside the assessment and strategy certification process)

❑ **Deemed to be sufficient (all requirements met)**
Comments:

❑ **Not deemed to be sufficient* (missing one or more requirements)**
*Indicate Corrective Action(s) Necessary to Meet Sufficiency Requirement:

Certified by Regional Forester/NA Director: _____ (Name) _____ (Date)

DECISION BY THE *DEPUTY CHIEF FOR STATE & PRIVATE FORESTRY*

Approve ____ Date _____
Disapprove ____

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Indiana Statewide Forest Strategy

The Indiana Statewide Forest Strategy is the result of consensus opinion from natural-resource professionals, landowners, conservationists, land stewards and forest stakeholders. It incorporates the 2010 Forest Stewardship & Conservation Forum, Statewide Forest Strategy Input & Survey process and "open door" website comments. Documentation of these events and processes as well as other detailed procedural information can be found on the Statewide Forest Assessment & Strategy webpage: http://www.in.gov/dnr/forestry/5436.htm.

This strategy recognizes a nearly unanimous understanding of the most important issues that increasingly threaten the sustainability and ecological capacity of Indiana's forests to provide the benefits of clean air, carbon sequestration, soil protection, wildlife habitat, wood products and other values, goods and services to all Hoosier citizens. The majority of these issues are not new. There are current programs in place and efforts underway that are making progress and should not be neglected. This strategy represents a focus on the most important new initiatives and areas to expand and develop.

The Indiana Statewide Forest Strategy is intended to be readable as a stand-alone document but should be understood as a companion to the Indiana Statewide Forest Assessment, and it is assumed throughout the text that readers have a thorough understanding of the forest issues described therein, including their drivers and geospatial component aspects.

This is a long-term plan that intends to address a limited forest base being broken into smaller and more disconnected pieces or being converted to other land uses, like subdivision housing, row crop agriculture and paved surfaces. Over the next five years this plan will enhance Indiana forests' ability to conserve soil and water resources by protecting existing targeted forest cover in watersheds and promoting reforestation along key streams and rivers. This strategy will guide and improve efforts to control and combat the economically and ecologically disastrous effects of invasive plants in woodlands and make dramatic strides in the preservation of biological diversity by assuring that increasingly simplified and one-dimensional forests become more diverse and connected with one another.

Natural-resource professionals and forest stakeholders are not often asked to step back from their management areas or local woodlands to consider all of Indiana's 5.1 million acres of forestland together, but with this landscape-scale view they recognize that Indiana's forests are at a turning point. For Hoosiers to continue to hear neo-tropical migratory birds in summer; use sustainable, locally harvested wood products; see oak seedlings rise to replace other oaks in the canopy; feel the drumming of the ruffed grouse in spring; and enjoy large contiguous tracts of private and public forestland in Indiana, this community of Hoosier forest stakeholders must

work together with the general public to voice desire for a future forest that grows from our common understanding.

It is helpful to reiterate that is a prioritized strategy for all Indiana's forestlands: public, private and urban. It is premised on cooperation and coordinated partnerships that will focus resources toward our most pressing issues and in the areas where they will do the most good. Thousands of survey responses, hundreds of verbal and written comments, and days of summit and forum deliberations have yielded the following consensus long-term strategies:

1.) Conserve, manage and protect existing forests, especially large forest patches
2.) Restore and connect forests, especially in riparian areas
3.) Expand Best Management Practices, with special attention to invasive species
4.) Coordinate education, training, and technical assistance, especially to develop strategic partnerships with land-use decision makers
5.) Maintain and expand markets for Indiana hardwoods, especially those that are sustainably certified and for local use

These strategies are consistent with the USDA Forest Service National Priorities: conserve and manage working-forest landscapes for multiple values and uses, protect forests from threats and enhance public benefits from trees and forests. These strategies also address High Priority Conservation Actions for Forests and Forest Riparian Areas/Streams from the Indiana Comprehensive Wildlife Strategy: land-use planning, succession control, habitat protection incentives, and habitat protection through regulation, corridor development/protection, habitat restoration incentives, and protection of adjacent buffer zone. Further information about these and other important statewide plans incorporated in this planning effort are located in the Statewide Forest Assessment.

There will be significant resources necessary for the implementation of this Strategy beyond the approximately $11 million annual budget of the Indiana Division of Forestry. Cooperative-partner resources expand capacity for achievement. Some of the action steps to obtain funding resources should be prioritized, since the amount and quality of resources available will directly impact the success of this Strategy. The USDA Forest Service State and Private Forestry has traditionally supplemented Division of Forestry's operating budget with $1.5 million in grants and matched funds for cooperative programs and competitive projects. The Division of Forestry, strategic partners and collaborative efforts will actively pursue and apply for grants from Federal agencies and from Federal, community and private foundations that can provide additional funding for this Strategy.

This Statewide Forest Strategy and the Strategic Forestland Conservation Program does not modify the Indiana Forest Legacy Program, which will continue to be funded by the US Forest Service, administered by the Division of Forestry and implemented according the Indiana Forest Legacy Program (FLP) Assessment of Need (AON), which was approved by the Secretary of Agriculture on Dec. 10, 1998, and which is hereby incorporated into this document by reference.

As discussed at the April 30, 2010, Forest Conservation & Stewardship Strategy Forum, there is a recognized need to update/review this AON, taking into consideration the 2010 Statewide Forest Assessment and Strategy. A subcommittee of the Forest Stewardship Coordinating Committee is being formed to complete this process in the next year. A copy of the Division of Forestry designation letter, the AON, and the AON approval letter can be found in the office of the Indiana Division of Forestry.

The Statewide Forest Strategy should be considered a living document. Further effort will be needed to prioritize, assign responsibility and determine timeframes and measurement criteria for various Action Steps in order to effectively implement the Strategy. Adaptation and evolution of this document are considered required and appropriate responses to changing conditions as measured in the Indiana Statewide Forest Assessment.

Strategy 1: Conserve, manage and protect existing forests, especially large forest patches

To ensure the long-term health and sustainability of Indiana's woodland resources, it is paramount that existing forests, especially large-tract forests, be conserved, managed and expanded. Particular emphasis is given to action steps that keep forests on the landscape, promote landscape-level diversity and address threats presented by invasive species.

The centerpiece of this strategy is the development of a Strategic Forestland Conservation Program with a directed focus on protecting tracts, forests, habitats and forest communities of especially high public benefit, as detailed in the accompanying map (see Figure 1). These forest patches reflect the 2010 Statewide Forest Assessment's Highest Priority Areas for Fragmentation, Soil & Water Conservation, Invasive Species Risk and Biological Diversity (see Figure 2) and have been refined to highlight stakeholder strategic-interest consensus on conserving large forest patches in less fragmented areas with a decreased risk of development.

The Strategic Forestland Conservation Program will develop a wide variety of action steps to establish and achieve percentage forest cover goals within each Target Forest Patch and varying percentages of protection by fee purchase land acquisition, conservation easement, Classified Forest and Wildlands Program enrollment, and increases in land under management. The Strategic Forestland Conservation Program should also measure success and set goals for changes in forest parcel sizes over time. Data to analyze the majority of counties' parcel-level data will soon be online (see Figure 3).

Component: Develop a Strategic Forestland Conservation Program and increase incentives to keep forests as forests

Action Steps

1.1 Establish Strategic Forestland Conservation Program overseen by the Forest Stewardship Coordinating Committee and the State Forester, with the mission of conserving, managing and protecting each Target Forest Patch according to a set of goals described above and using an area-specific set of conservation "tools," including those identified in action steps below. Descriptive information about the Strategic Forestland Conservation Program's Target Forest Patches is available in Appendix B.

1.2 Create an Indiana Forest Mitigation Bank that recognizes the societal cost of forestland disturbance or destruction and requiring mitigation for loss of forestland habitat in Indiana. A Forest Mitigation Bank holds and sells approved forestland credits associated with the ecological value of 1-acre forestland to developers. A Forest Mitigation Bank restores forests in priority areas (see Figure 1) to achieve broad goals. A percentage of

mitigation parcels will increase and connect public ownership in Target Forest Patches. Majority forest stakeholder interests are supported by the general public on measures relating to the loss of forest acreage in the State. According to the 2009 Indiana Residents' Perceptions of Woodland Management general public survey by Purdue University, 79% of Hoosiers disapprove of "cutting Indiana trees to make room for new homes." This action step requires State level legal or regulatory changes.

1.3 Increase economic incentives to keep land in forest, restore forests, slow parcelization and consolidate small tracts, with emphasis on and additional incentives for large tract forests. This action step includes targeted tax incentives, cost-share and conservation payments, and economic development for forest services and products other than lumber (see Strategy 5). Also, work with various commissions, counties and others to develop demand for lower quality hardwoods present in improvement cuts and urban wood "waste." This action step could require State or Federal level legal or regulatory changes.

1.4 Increase the number of woodland parcels that are under management as quantified by a management plan, cost-share practices, enrollment in Indiana Classified Forest & Wildlands or other type of assistance.

1.5 Increase ability to pass forests to next generation without parcelization by providing successional planning information, training and resources to landowners to facilitate a smooth and sustainable transition of property to the next generation, and offering similar training to financial advisors and attorneys. Tools such as conservation agreements/easements should be readily available.

1.6 Assist in the development of Green Infrastructure Plans to determine which urban geographies are well suited for smart growth and which areas should be conserved as important green infrastructure. Work with regional government, counties, cities and developers to promote conservation, development in areas that are already developed and the use of existing infrastructure corridors. This action step could require regional, metropolitan, or county-level legal or regulatory changes.

1.7 Develop effective and efficient techniques to support and assist small acreage landowners (<10 acres of forest) in managing for woodland health and integrity, for example, develop a Legacy or Heritage Woodlands Program or awards for environmental quality achievements. This action step could require State-level legal or regulatory changes.

1.8 Increase State Division of Forestry funding to administer programs. Example of collecting, increasing, or redirecting Division of Forestry program monies (i.e., camping fee, gate fee, forester visit fee (IC 14-23-1-1-12B), other user fees; educational events). This action step may require State-level legal or regulatory changes.

1.9 Secure and appropriate funds for Indiana Heritage Trust to acquire land from willing sellers and protect Indiana's rich natural heritage. Consolidate public landholdings and develop partnership/conservation agreements with landowners adjoining public lands.

1.10 Develop a unique Agricultural Commodity Check Off program for timber to provide funds for management incentives (50%), research/education (25%), and product promotion (25%). Timber Check Off program will improve the quality of hardwoods grown in Indiana, expand existing markets, increase demand and create new uses and markets. (See Strategy 5)

1.11 Explore payments for ecosystem services, like water quality trading, biodiversity offsets (i.e., T&E mitigation) and others.

1.12 Explore the concepts of Conservation Bonding and Transferable Development Rights.

1.13 Monitor the effects of forestland tax assessment changes in the State.

Component: Increase the percent of forest in the age class of <19 and >100 years old

The U.S. Forest Service's Forest Inventory Analysis (FIA) shows that 90% of Indiana's forests are of a stand age class between 20 and 99 years (FIA, 2008). This presents a variety of issues for the sustainability of Indiana's forested ecosystems. The following action steps serve to create a greater balance across age classes to the benefit of those species and communities that require these habitat types and the greater vitality, diversity and adaptive capacity of the systems as a whole.

Action Steps

1.14 Use and develop forestry remote sensing to refine existing statewide stand-age and forest-type data to be compatible with high resolution GIS analysis as used in the 2010 Statewide Forest Assessment, and identify areas of under-represented age classes.

1.15 Increase the targeted and careful use of even-age management where appropriate on large landholdings across both public & private lands to develop landscape components of younger forests (<19 years). Encourage landowners and public agencies to manage forests collectively and in consideration of landscape-scale characteristics, such as age-class proximity and remaining populations of early successional dependent wildlife.

1.16 Provide incentives for landowners to allow properties to return to forest cover or incentives for forest restoration.

Component: Develop statewide Early Detection Rapid Response Program (EDRR) for forest invasive plants

Action Steps

1.17 Establish statewide inventory of forest invasive plants and an invasive species database and mapping protocol that allows many constituencies to add and retrieve data about invasive species in the state.

1.18 Coordinate with the Invasive Species Council (See Strategy 4) to establish organizational leadership and responsibility for EDRR, develop a list of partners for EDRR training and implementation. This coordination should also include prioritization of invasive species threats, recognizing that priorities may differ based on location and habitat.

1.19 Prioritize invasive species management and control for high conservation value forests.

1.20 Encourage the conservation and planting of native species, especially in urban areas and public natural areas.

Strategy 2: Restore and connect forests, especially in riparian areas

This strategy focuses on restoring forests to lands where their ecological services provide especially high public benefit. Riparian areas are particularly important in this regard as they offer enhanced potential for genetic exchange within species and reforestation, soil retention, water quality, pesticide and nutrient retention, and other benefits associated with limiting water impairment. Potential corridors between important forest patches are identified in the accompanying map (See Figure 4).

Component: Develop corridors to connect isolated forest patches and enhance dispersal and genetic integrity – create and restore forest where it does not exist.

Action Steps

2.1 Refine classification/identification of important forest corridors and connectivity areas and identify landowners for potential involvement.

2.2 Target landowner technical assistance and incentive funds to connect woodland patches, e.g., USDA's Conservation Reserve Enhancement Program (CREP). This action step requires Federal-level legal or regulatory changes.

2.3 Targeted land acquisitions and easements.

2.4 During restoration, use native tree species that will foster broad range of ecologic benefits.

Component: Increase forest cover in riparian areas.

Action Steps

2.5 Establish county-level forestation goals or minimum forest-cover levels (see Table 1).

2.6 Encourage forestation along stream and river corridors while using existing tools to prioritize placement of forested riparian buffers: watershed tool, Revised Universal Soil Loss Equation (RUSLE), Water and Environmental Programs (WEP).

2.7 Examine and modify where necessary Indiana drainage code as it relates to forest riparian areas and maintenance of soil and water quality. This action step could require State-level legal or regulatory changes.

2.8 Develop cost-share programs for forestry activities, like tree planting, along riparian corridors and develop informational materials highlighting benefits of forested riparian buffers.

Strategy 3: Expand Best Management Practices, with special attention to invasive species

The Indiana Logging and Forestry Best Management Practices (BMPs) resulted from the cooperative effort of representatives from logging, sawmilling, forestry, environmental, university, and regulatory agencies and interests and mainly focus on protecting soil and water resources during forestry activities. Stakeholders have identified the need for expanded guidance on more diverse issues, like invasive species control and other silvicultural practices.

Actions Steps

3.1 Expand BMPs to include invasive species, silviculture, and specialty situations, like urban forests and threatened and endangered species.

3.2 Review and revise Best Management Practices on 5-year cycle.

3.3 Promote and encourage the increased use of Forestry BMPs (see Strategy 4).

3.4 Broaden implementation of the 'Call Before You Cut' program to promote sound timber harvesting practices.

Strategy 4: Coordinate education, training, and technical assistance, especially to develop strategic partnerships

All the strategies in this document are achievable with cooperative effort from a variety of forest stakeholder organizations who understand the importance and value associated with retained and improved forest cover. All strategies will require unprecedented organization between partners across a variety of fronts.

Component: Develop strategic partnerships.

Action Steps

4.1 Partner with environmental, land trust, landowner, watershed, forest product industry, Federal and local government agencies, educational institutions, nature-based recreation organizations (including hunting, fishing, camping, etc.), non-profit

conservation organizations and urban forestry groups, especially in the implementation of strategies in this document.

4.2 Establish a private landowner database through GIS parcel information.

4.3 Use existing databases and directories to reach landowners, forest industry professionals, community decision makers and policy makers in general with special effort directed to groups and individuals involved in land-use change decision making. Demonstrate advantages of forested corridors to local officials.

4.4 Enhance CREP to include native forests as a conservation concern by changing Farm Bill. This action step requires Federal-level legal or regulatory changes.

Component: Promote forestry knowledge and understanding.

Action Steps

4.5 Support efforts that encourage outdoor learning experiences for children inside and outside of the public education system, especially as relates to the importance of trees and forests.

4.6 Increase public awareness of forest benefits like multiple habitats (and the management that creates it) and threats like invasive species as measured by the recurring Indiana Residents' Perceptions of Woodland Management survey.

4.7 Target promotions of forest management plans, sustainable certification programs, Forestry Best Management Practices (BMPs), cost-share programs, and the Classified Forest and Wildlands Program using GIS and updated county parcel information.

4.8 Enhance and expand training and education of private landowners with emphasis on field days, managing for woodland health and "conserving the family woodlands." Training should be planned in advance and advertised extensively for example in the Woodland Steward. This action step should include the use and expansion of the Indiana Demonstration Forest program. Written resources should be easily obtainable and presented in an easily understood format (e.g., Landowners Guide to Managing Family Woodlands).

4.9 Establish an accessible resource database on invasives (a control/management forum with searchable archive) and a website that serves as a clearinghouse for information on invasives and management of invasives. Develop inventory of invasives articles and research for educational uses.

4.10 Stress the importance of deer herd management in maintaining a healthy understory of native plants and trees. The effective management of the deer herd is of great importance relative to diverse forest-tree regeneration, diverse forest-floor vegetation, and control of invasive-species invasion. Deer management should be based on biological principals and long-term ecosystem health.

Component: Coordinate the delivery of forestry-related programming.

The U.S. Department of Agriculture's Natural Resources Conservation Service, U.S. Forest Service, Indiana Department of Natural Resources, Soil & Water Conservation Groups, Resource Conservation and Development Councils and Land Trusts are just a few of the many groups that deliver forestry related programming. Stakeholders identify benefits to coordination of these and other groups' efforts.

Action Steps

4.11 Coordinate data sharing, training and implementation of forest programs across agencies, non-governmental organizations, landowner or other groups.

4.12 Provide landowners and managers with training, tools, and technical assistance to assess forest health on their lands.

4.13 Work with the Invasive Species Council to develop forest invasive species education program with separate focuses for technical staff and landowners. Include information on economics of invasives in training and communicate info on emerging invasives to on-the-ground staff.

Strategy 5: Maintain and expand markets for Indiana hardwoods, especially those that are sustainably certified and for local use

Indiana forests and their management are dependent upon diverse and sustainable markets to ensure economic return for landowners.

Action Steps

5.1 Develop existing survey techniques and forestry remote sensing capabilities to assess forest composition and growing stock, especially the sustainability of traditionally high value species, among them: oak, walnut, cherry and maple.

5.2 Expand and improve the Indiana Forestry Exchange website to promote local exchange and interaction between market participants. Develop incentives and otherwise promote the use of Indiana forest products within the State, including the use of sustainably harvested Indiana hardwoods in LEED-certified building projects and the value-added benefits from secondary wood-product manufacturing.

5.3 Help to ensure that any harvest of biomass from Indiana's forests is conducted in a sustainable manner by establishing voluntary Biomass Harvesting Best Management Practices specific to the needs of Indiana's forests and incorporating third-party sustainable certification.

5.4 Develop a unique Agricultural Commodity Check Off program for timber to provide funds for management incentives (50%), research/education (25%), and product promotion

(25%). Timber Check Off program will improve the quality of hardwoods grown in Indiana, expand existing markets, increase demand and create new uses and markets.

5.5 Promote and refine proven practices of oak species regeneration.

5.6 Develop/expand effort to reliably label Indiana grown and manufactured (sustainable chain of custody) primary and secondary forest products to promote local use, demand, and branding associations with high quality products, possibly in conjunction with other Indiana agricultural products.

5.7 Develop an outreach program with specific focus on the benefits of Indiana forest products industry and its output that fosters a positive perception of Indiana's hardwood industry.

5.8 Promote the unique qualities of sustainably harvested Indiana hardwoods at international trade shows, on trade missions, or via "exchange" programs designed to increase exports and build long-term relationships. Also develop, translate and offer international brochures marketing Indiana's export products, species, sustainability and third-party certification to be used at trade shows, on trade missions or in other promotions.

5.9 Provide incentives for the production and manufacture of certified sustainable wood products to Indiana businesses.

Appendix A – Figures and Tables

Figure 1: Named Target Forests

Figure 2: Strategic Target Forest Patches

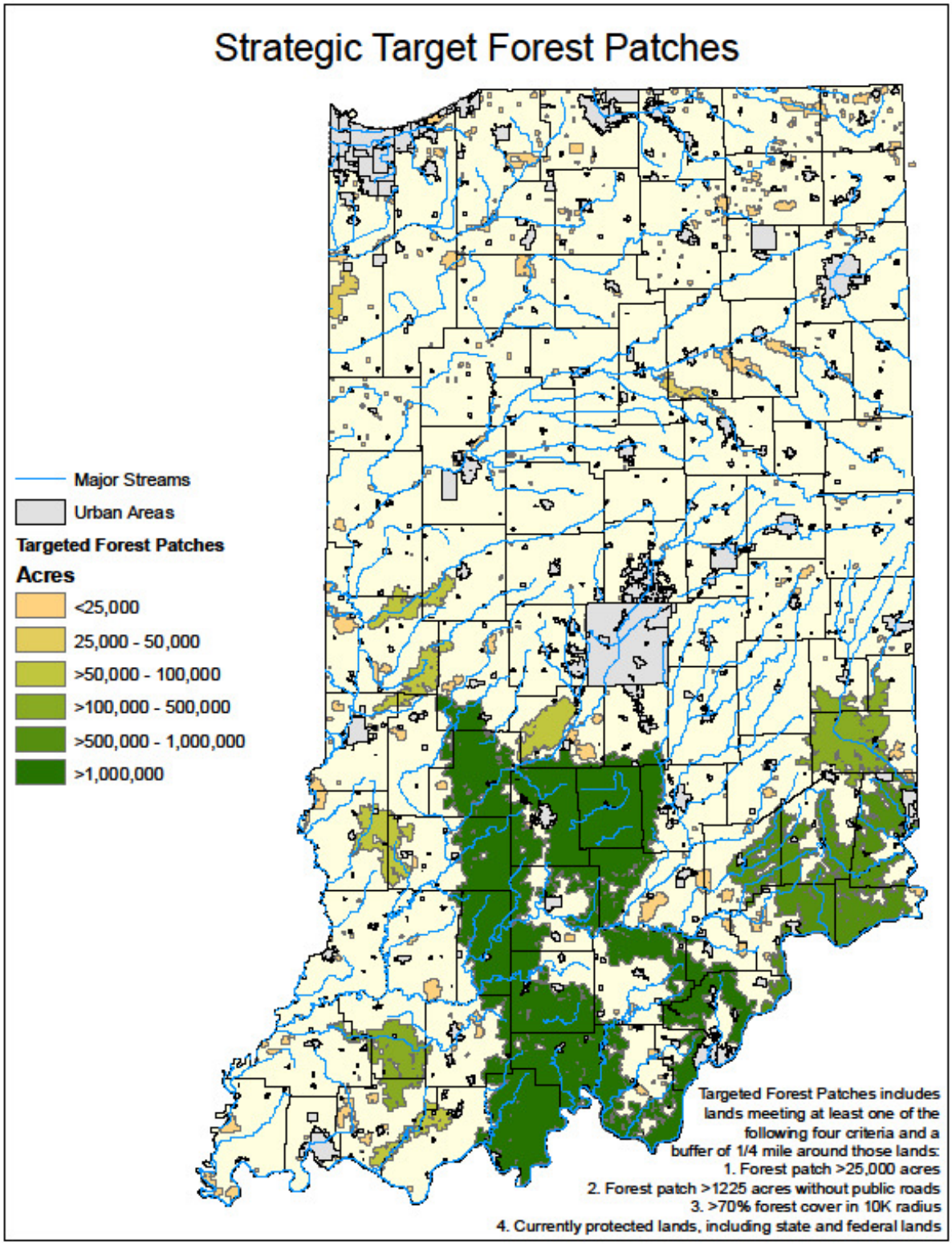


Figure 3: Indiana Statewide Forest Assessment – Composite Forest Priority Areas Map

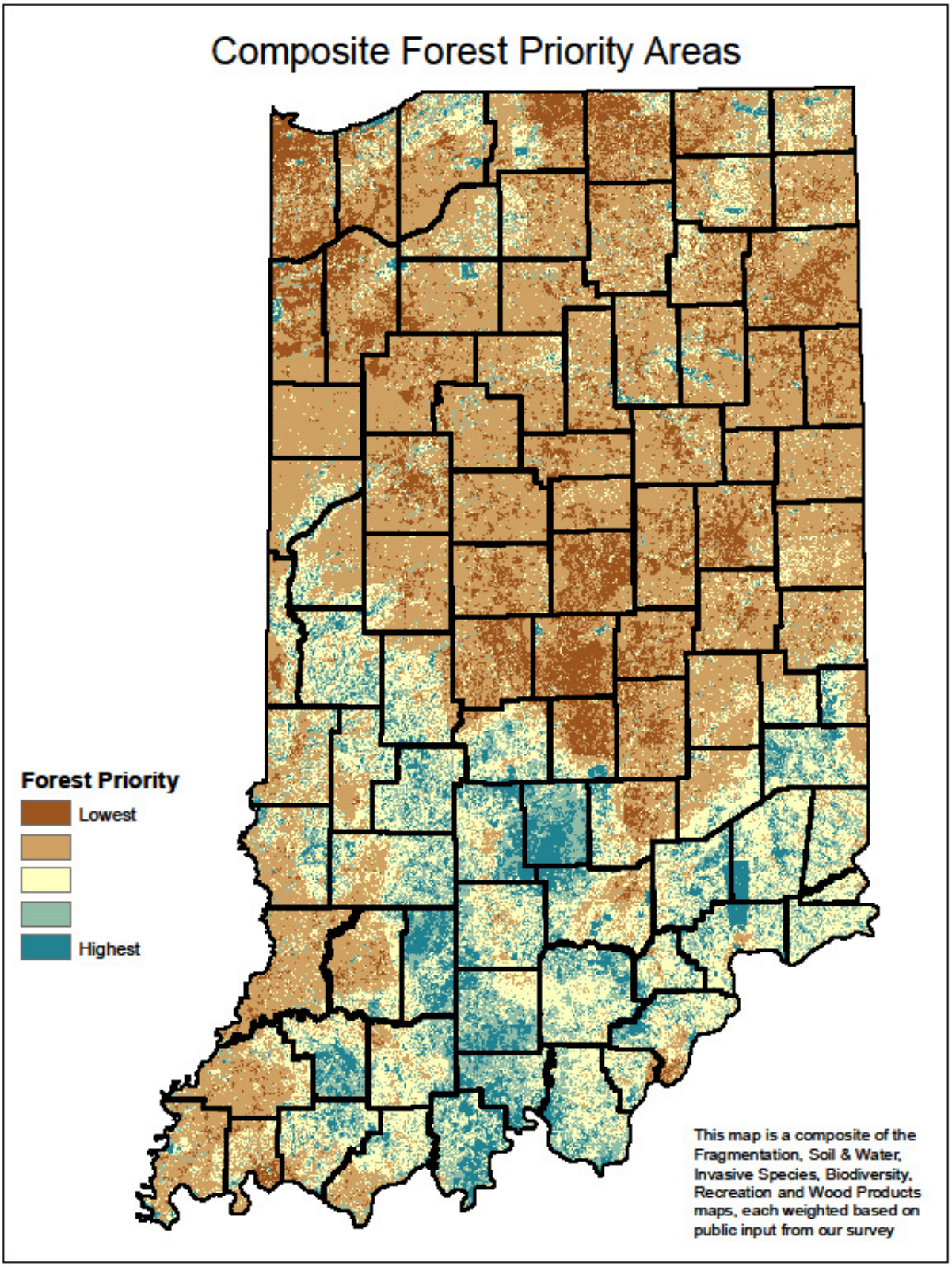


Figure 4: Indiana Counties with Agreements to Share GIS Parcel data
(http://www.igic.org/projects/indianamap/images/counties.jpg, last accessed April 19, 2011)

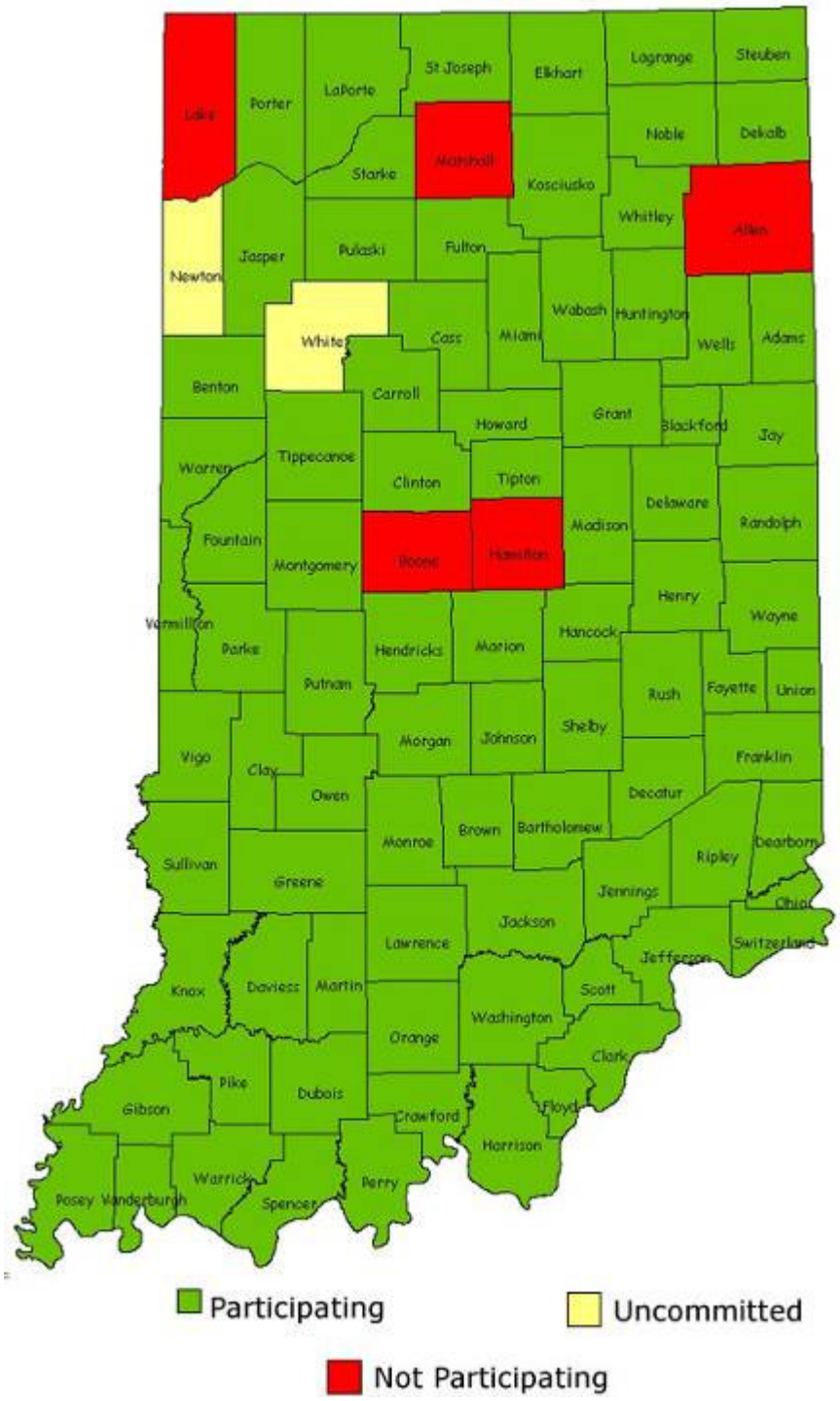


Figure 5: Corridor and Connectivity Potential

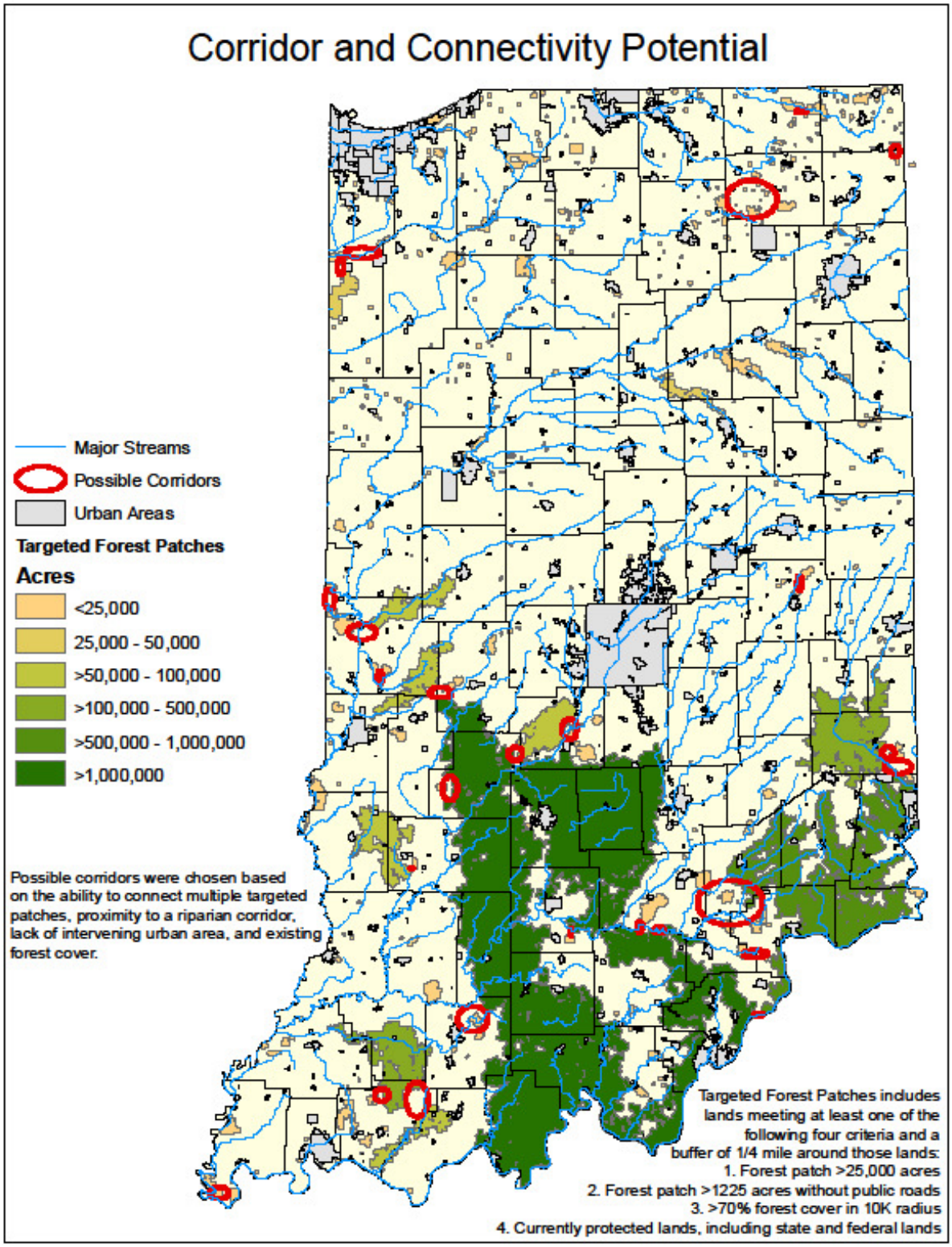


Table 1: County by County % Forest and Total Forest Acres

Indiana County[1]	Percentage Forested	State Rank in % Forest	Total Acres of Forest	State Rank in Total Acres of Forest
Brown	86%	1	174,149	1
Martin	68%	2	149,122	4
Perry	68%	3	168,126	2
Crawford	68%	4	133,239	9
Monroe	61%	5	161,545	3
Owen	56%	6	139,579	8
Switzerland	56%	7	79,901	25
Orange	54%	8	141,107	7
Dearborn	51%	9	100,389	19
Jefferson	50%	10	115,981	15
Ohio	49%	11	27,301	63
Franklin	47%	12	117,780	12
Floyd	47%	13	44,532	35
Harrison	46%	14	143,829	5
Lawrence	44%	15	128,470	11
Jennings	42%	16	100,846	18
Clark	41%	17	98,931	20
Greene	41%	18	143,078	6
Ripley	40%	19	115,999	14
Scott	40%	20	49,215	33
Morgan	39%	21	103,248	17
Pike	39%	22	85,689	24
Washington	39%	23	128,764	10
Parke	38%	24	109,041	16
Jackson	36%	25	117,036	13
Warrick	34%	26	85,902	23
Dubois	32%	27	90,321	22
Putnam	30%	28	91,962	21
Bartholomew	27%	29	69,397	27
Clay	26%	30	60,088	31
Vigo	26%	31	68,183	28
Spencer	26%	32	65,899	30
Fayette	23%	33	31,652	56
Sullivan	23%	34	66,574	29
Vermillion	23%	35	37,865	44
Vanderburgh	21%	36	31,173	57
Starke	20%	37	40,245	41
Steuben	20%	38	40,380	40
Porter	19%	39	51,707	32
Union	18%	40	19,418	71
Laporte	18%	41	69,610	26

(1) Counties in bold have greater than 100,000 acres of forestland.

Table 1 (Continued): County by County % Forest and Total Forest Acres

Indiana County[1]	Percentage Forested	State Rank in % Forest	Total Acres of Forest	State Rank in Total Acres of Forest
Fountain	17%	42	42,577	38
Lagrange	17%	43	41,149	39
Posey	16%	44	44,129	36
Noble	16%	45	43,330	37
Johnson	14%	46	29,795	61
Decatur	14%	47	33,651	50
Gibson	14%	48	44,765	34
Warren	14%	49	31,699	55
Daviess	13%	50	37,580	45
Wayne	13%	51	32,840	52
Marshall	13%	52	36,302	46
Wabash	12%	53	33,230	51
Tippecanoe	12%	54	39,121	43
DeKalb	12%	55	27,926	62
St. Joseph	12%	56	34,004	49
Kosciusko	11%	57	39,608	42
Whitley	11%	58	23,663	67
Pulaski	11%	59	30,405	59
Lake	11%	60	34,779	48
Elkhart	11%	61	32,158	54
Huntington	11%	62	26,386	65
Newton	10%	63	26,607	64
Miami	10%	64	23,582	68
Cass	10%	65	25,627	66
Montgomery	9%	66	29,969	60
Carroll	9%	67	22,076	69
Knox	9%	68	30,570	58
Jasper	9%	69	32,486	53
Allen	8%	70	35,253	47
Fulton	8%	71	19,783	70
Jay	8%	72	18,848	73
Hendricks	7%	73	18,869	72
Blackford	7%	74	7,587	90
Henry	7%	75	17,244	75
Grant	7%	76	18,110	74
Delaware	6%	77	16,179	78
Shelby	6%	78	16,278	77
Randolph	6%	79	16,303	76
Marion	6%	80	14,300	80
Wells	5%	81	12,359	83
Rush	5%	82	13,365	82
Madison	5%	83	14,339	79
Hamilton	4%	84	11,555	84
Howard	4%	85	8,374	89
Hancock	4%	86	8,375	88
Adams	4%	87	9,179	87
White	4%	88	13,383	81
Boone	4%	89	10,187	85
Clinton	4%	90	9,495	86
Tipton	2%	91	2,497	91
Benton	1%	92	2,149	92
(Average)/Total	(23%)		5,041,300	

Appendix B – Target Forest Patches

Strategic target forest patch names are shown above in Figure 1. For simplicity, county derived names are used in this section.

Developing, rationalizing and communicating priority locations for forestland protection, restoration and management is a key priority. As part of this Strategy development process Indiana Forest Stakeholders synthesized the scientific and geospatial data from the Statewide Forest Assessment and combined their regional experience to identify a prioritized set of focus criteria for conservation of forests across Indiana. This was a deliberative effort that combined broad and diverse forestry interests and opinions via survey, comment, suggestion and facilitated discussion at the 2010 Forest Conservation & Stewardship Forum in Indianapolis, IN.

Forest stakeholders identified prioritized conservation forests as those that are less fragmented by development, offer more intact forest cover, less threat from development by existing public roads and anchored by existing protected lands that might be connected or expanded upon. Forests were identified based on these criteria using computer modeling and geospatial analysis techniques. The Strategic Forestland Conservation program should further refine these areas and the scope of actions based on local conservation efforts, community directives, needs and capacities. The rationale and importance of this "targeting" process needs to be well-communicated to local communities and landowners.

The Strategic Forestland Conservation Program's Target Forest Patches will be a cooperative effort that will establish unique goals for forestland parcel size and percentages for:

- Forest cover
- Protection by conservation agreement/easement
- Public ownership
- Under management (i.e. mgmt. plan, incentive program, etc.)
- Classified Forest & Wildlands Program

Current measures for some of these items are provided in the table below.
Table 2: 2009 Target Forest Patch measures – size, forest cover, status relative to conversion, public ownership, and Classified Forest and Wildlands

Patch Location	Acres	% Forested	% Protected	% Public	% CFW
Shawnee/Brown County Hills	2,532,989	68%	22.0%	21.8%	9.5%
Southeast	645,169	60%	11.4%	11.2%	5.1%
Decatur/Franklin/Fayette/Union	222,108	59%	8.7%	8.6%	7.9%
Gibson/Pike/Warrick/Dubois	139,686	62%	15.9%	15.9%	7.1%
Sullivan/Greene	96,458	50%	32.5%	32.5%	2.5%
Owen/Morgan	72,151	69%	7.7%	5.8%	8.9%
Vigo/Clay/Parke/Putnam	67,283	51%	5.6%	5.6%	13.0%
Parke/Fountain/Montgomery	62,092	57%	11.5%	11.2%	17.9%
Warrick/Spencer	54,448	53%	8.6%	8.6%	8.2%

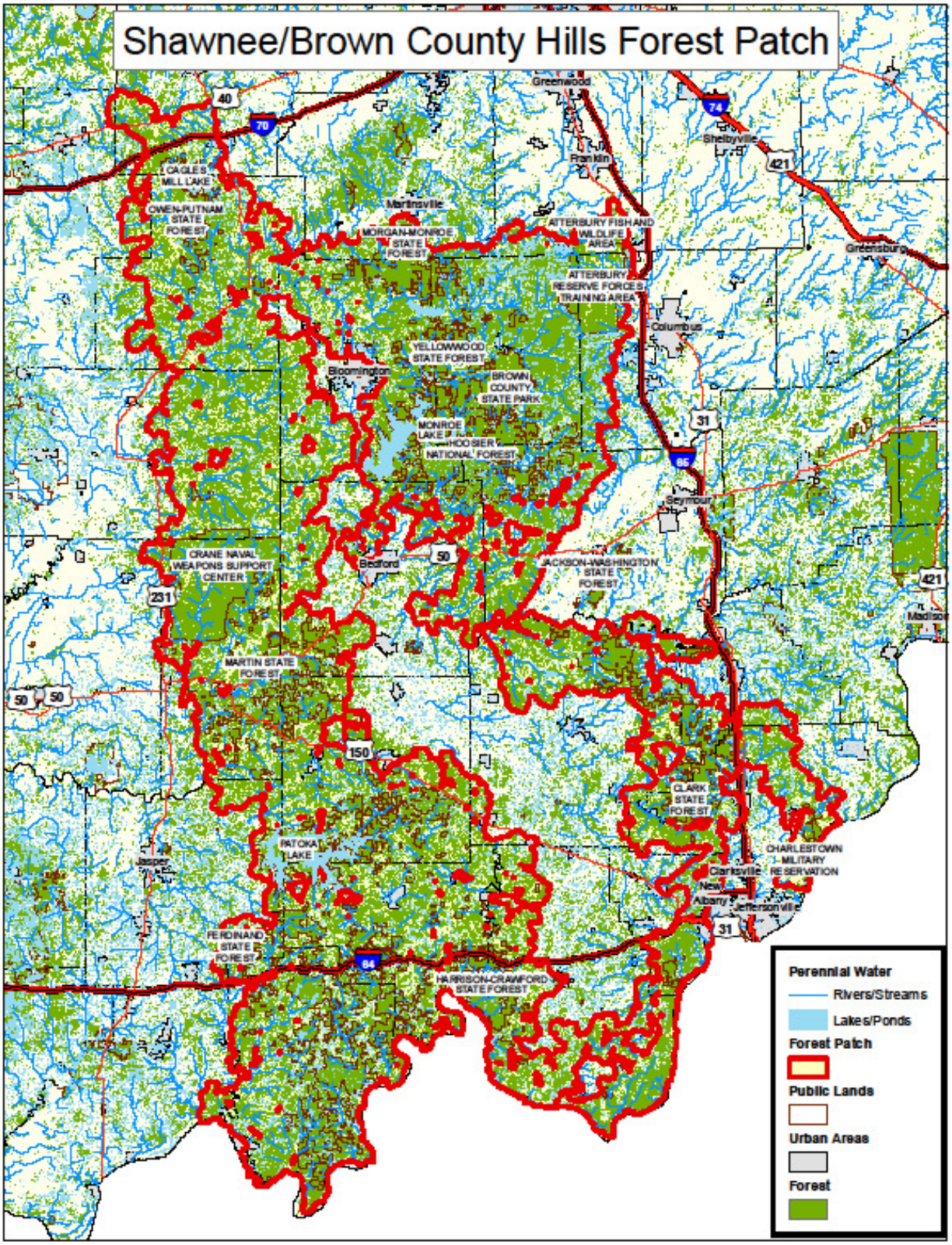
Target Forest Patches are based on 2009 high resolution satellite imagery and existing geospatial data sets where areas are: greater than 25,000 acres in contiguous forest, greater than 1,225 acre contiguous "roadless" forest, greater than 70% forest cover in a 10K radius, or currently protected lands, including Federal and State properties. The methodology and statewide data sets can be reviewed in the Statewide Forest Assessment. These lands are buffered by ¼ mile.

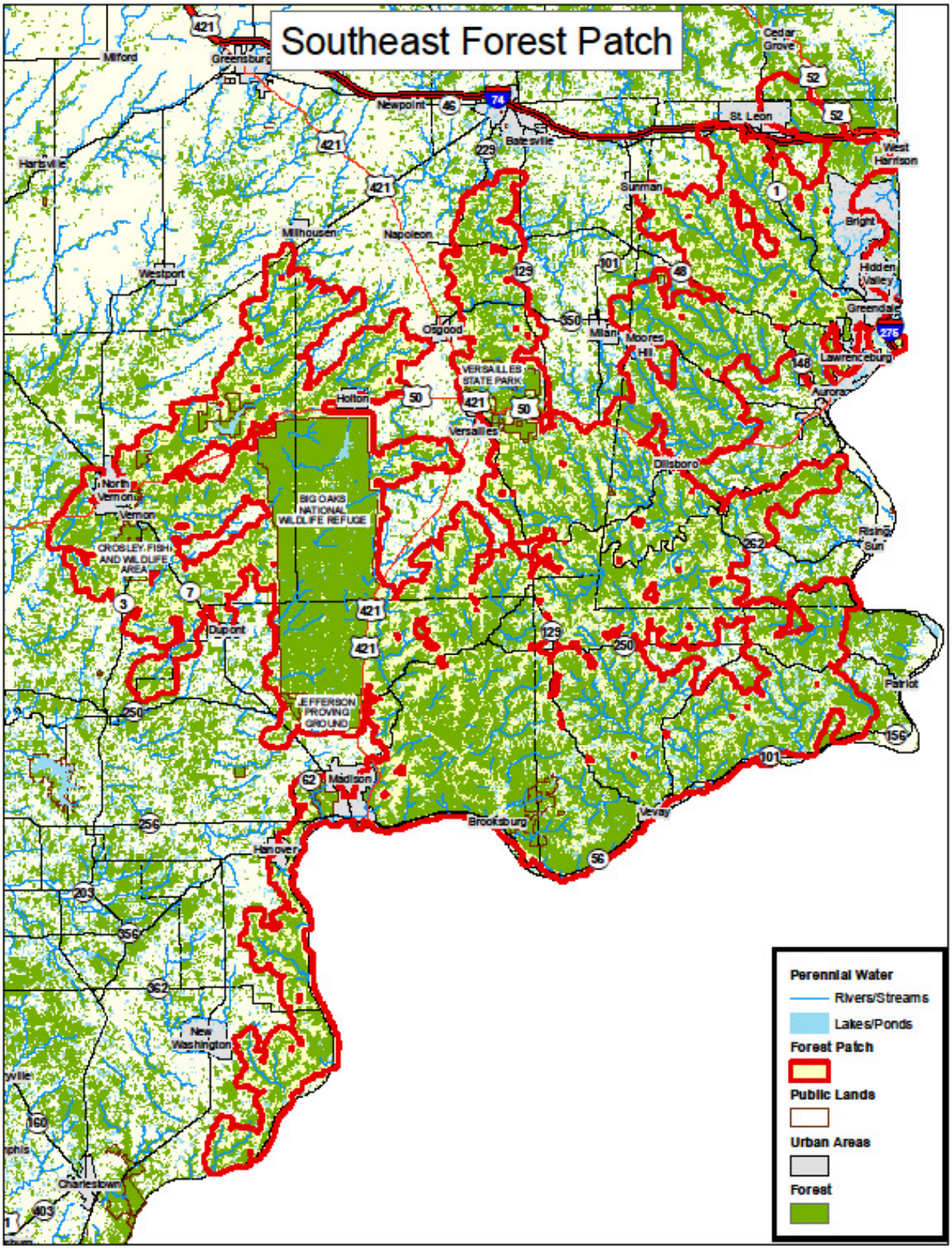
These forest patches are complementary of many strategic conservation efforts in Indiana. They are generally a subset the 2010 Statewide Forest Assessment's Highest Priority Areas for Fragmentation, Soil & Water Conservation, Invasive Species Risk and Biological Diversity, and overlay with commonality against other regional and statewide conservation plans, such as The Nature Conservancy in Indiana's Ecoregional Portfolio Sites and Central Indiana Land Trust's Green Infrastructure Plan, among others.

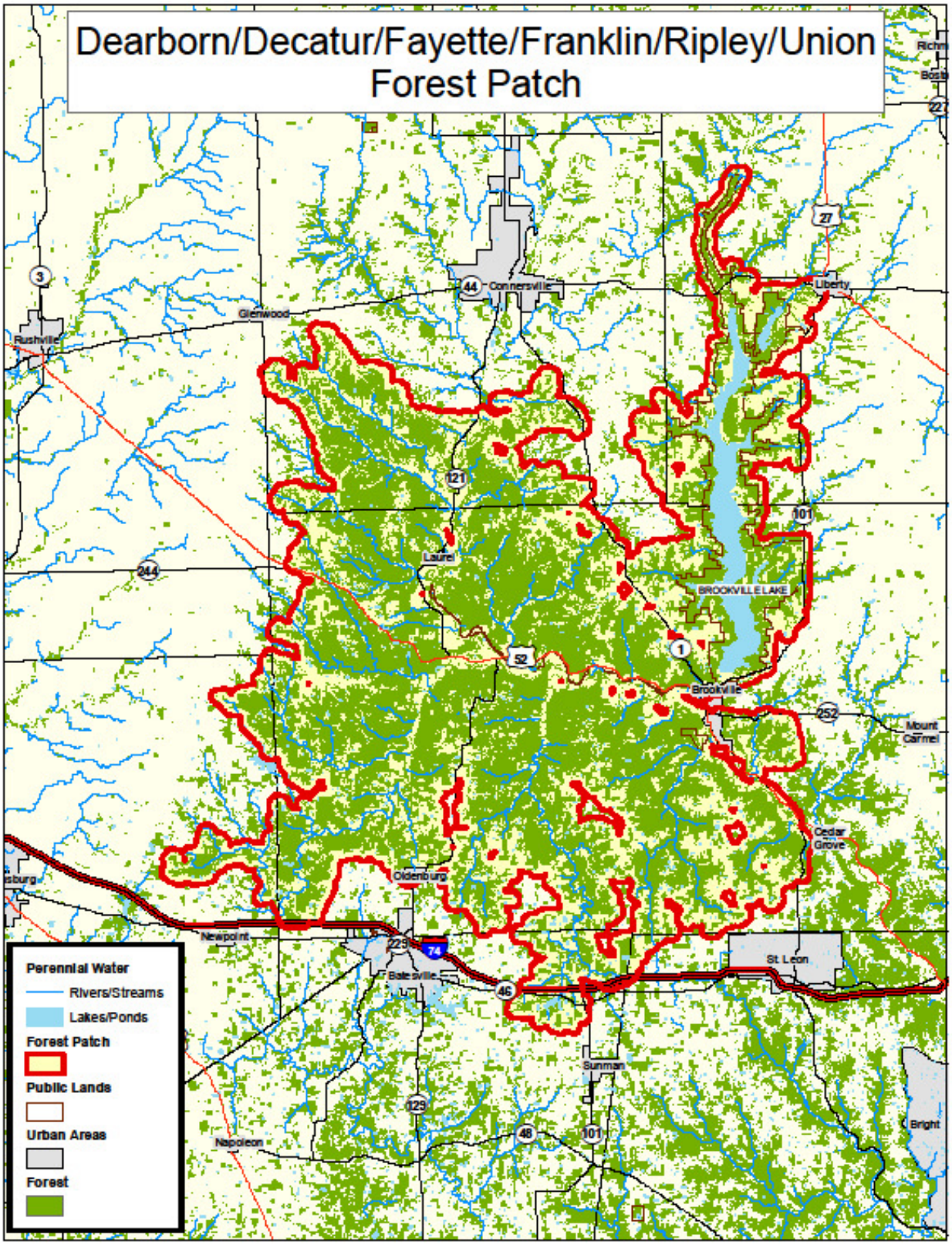
Target Forest Patches are an important component of the Strategic Forestland Conservation Program developed in this Statewide Forest Strategy. Prioritization among Target Forest Patches will occur based on regional interests and identification of additional forest patches is possible, while recognizing that important wooded areas in Northern Indiana will benefit from similar techniques that may be initially focused on re-establishing forests as described in Strategy 2.

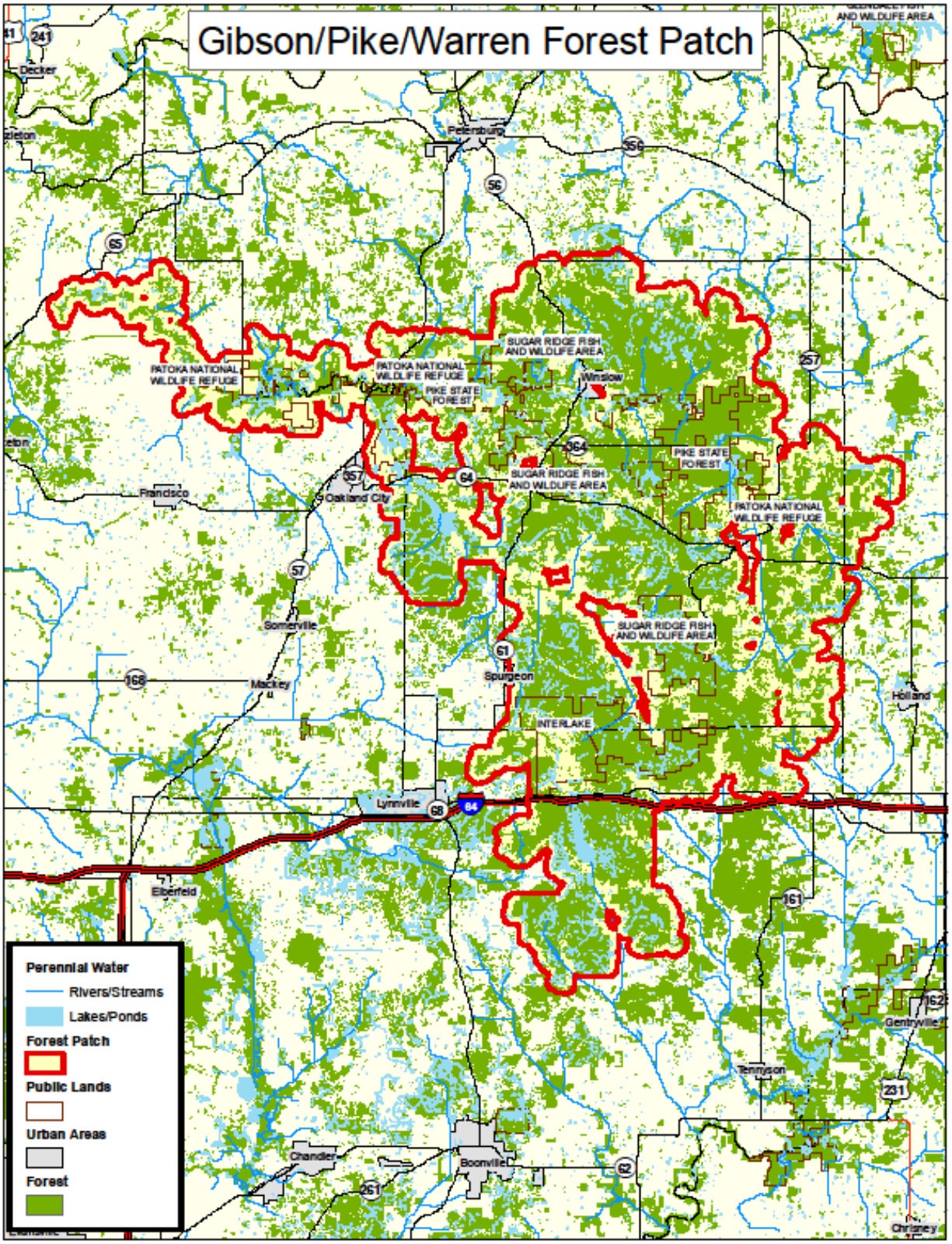
It is expected that the State Forester and Forest Stewardship Coordinating Committee will assist cooperative efforts toward Target Forest Patch conservation and provide guidance relating to regional forest history, characteristics and other information that will aid in developing achievable targets. For example, data should be provided such that the Shawnee/Brown County Hills Forest Patch can plan for the effects of the planned I-69 corridor, where it is estimated that 650-700 acres of forest will be lost based on a 60-meter-wide Interstate corridor (Brett Martin, Division of Forestry 2010). Further, the Forest Stewardship Coordinating Committee should assist efforts to develop multi-state areas where applicable along adjoining Target Forest Patch portions of Ohio and Kentucky.

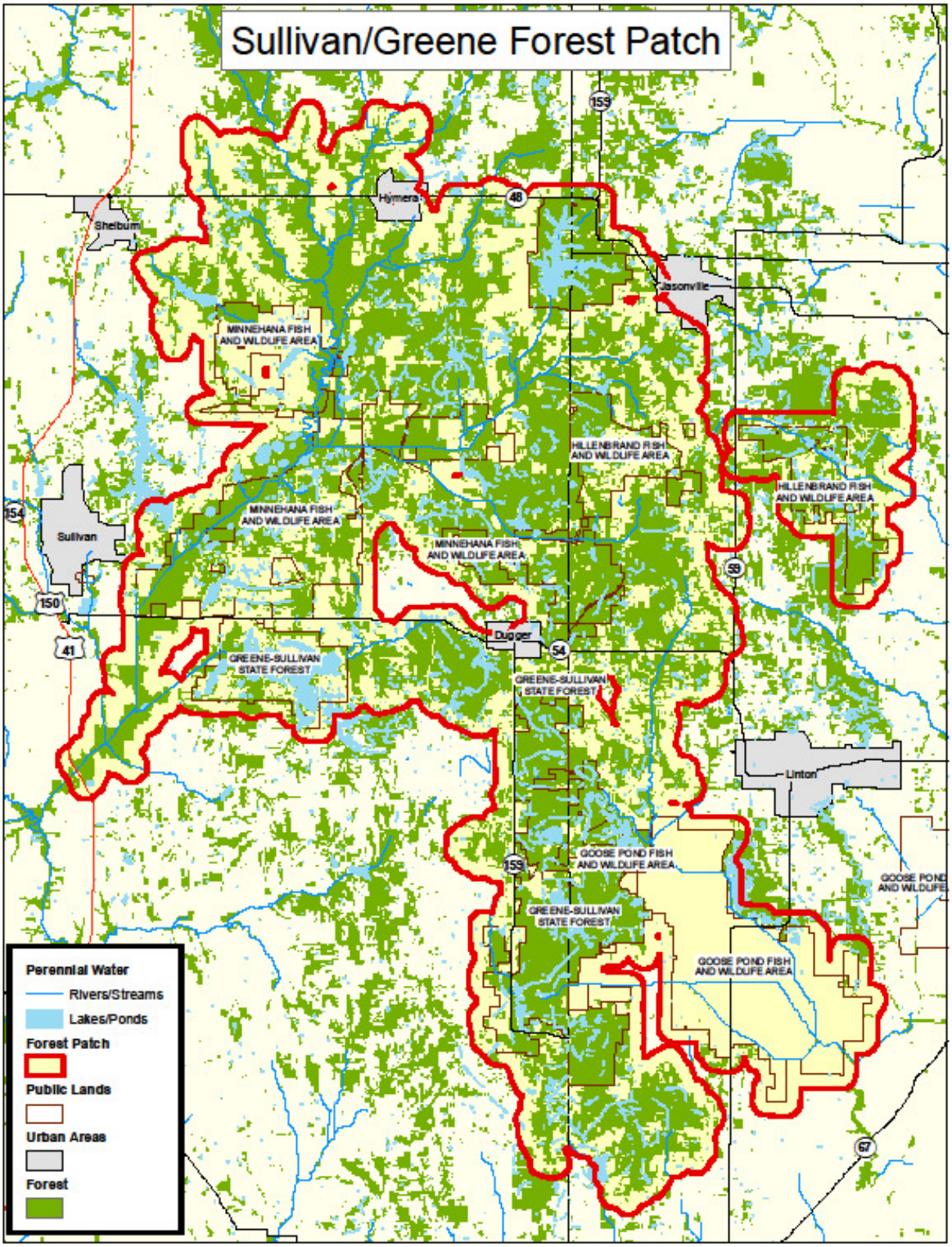
Target Forest Patch maps by size:

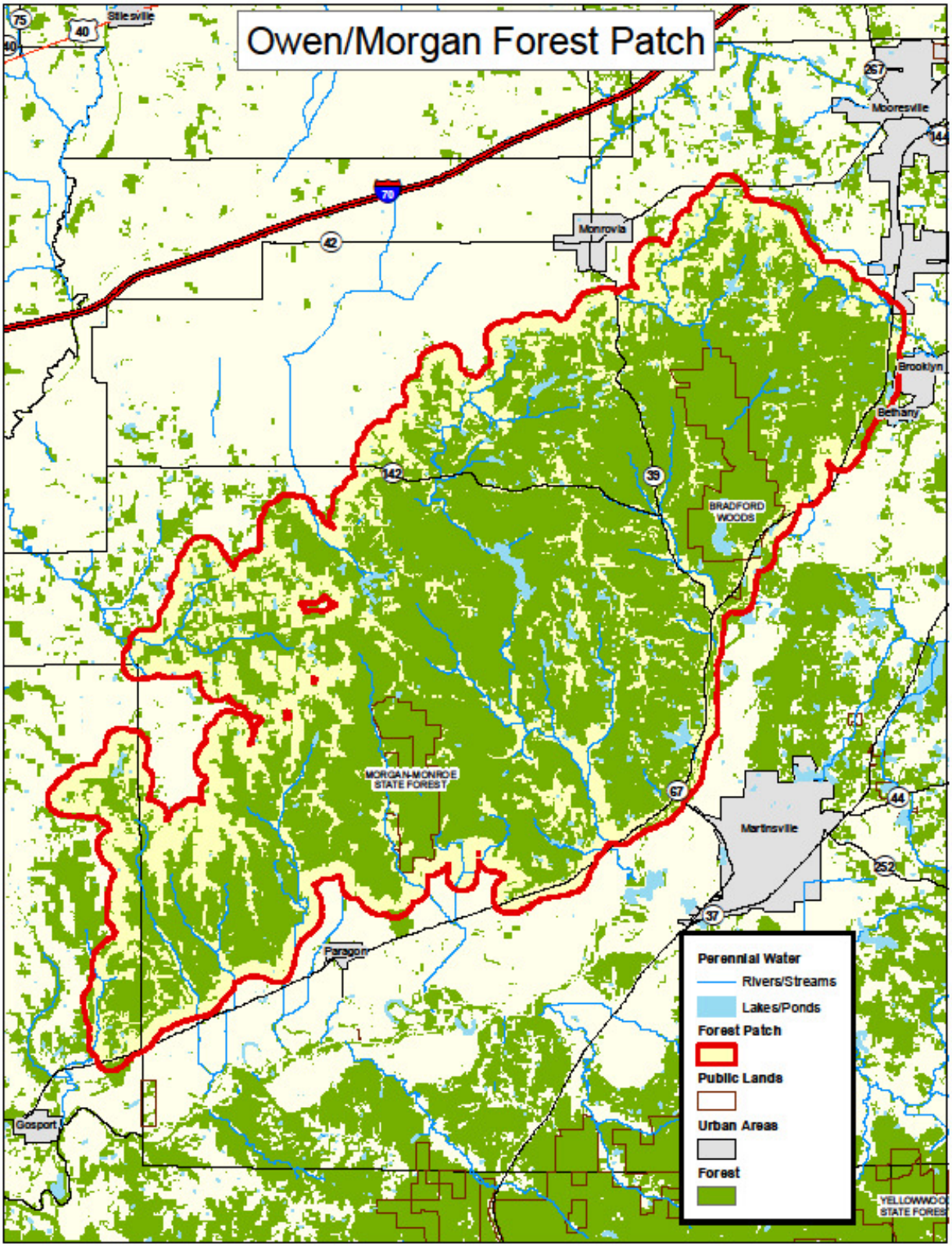


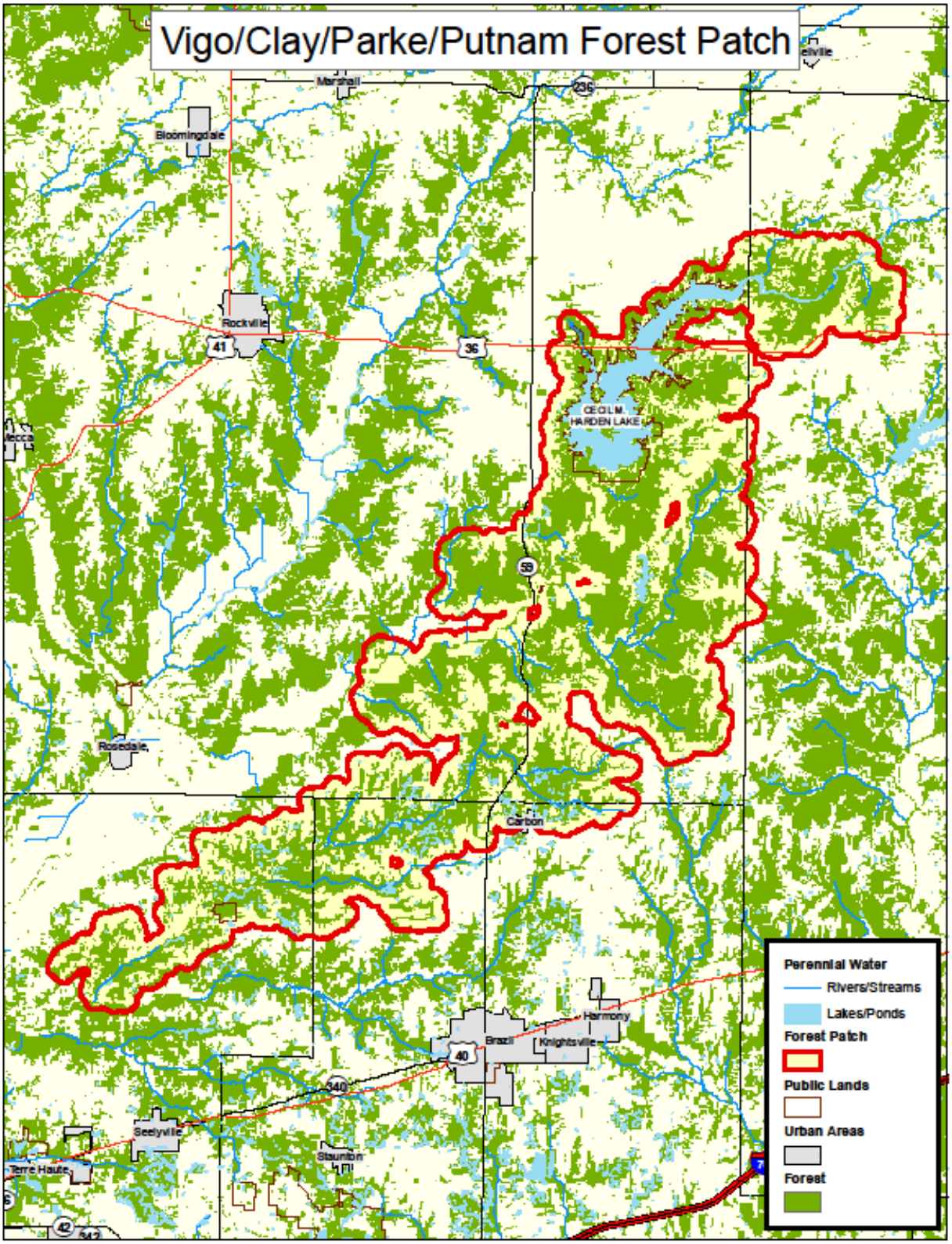

Southeast Forest Patch
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest
Milford
Greensburg
Newpoint
Batesville
Cedar Grove
St. Leon
West Harrison
Harrisville
Sunman
Bright
Milhousen
Napoleon
Hidden Valley
Westport
Greendale
Osgood
Milan
Moores Hill
Lawrenceburg
VERSAILLES STATE PARK
Holton
Versailles
Aurora
Dillsboro
North Vernon
Vernon
BIG OAKS NATIONAL WILDLIFE REFUGE
CROSLEY FISH AND WILDLIFE AREA
Rising Sun
Dupont
JEFFERSON PROVING GROUND
Patriot
Madison
Brookburg
Vevay
Hanover
New Washington
Charlestown

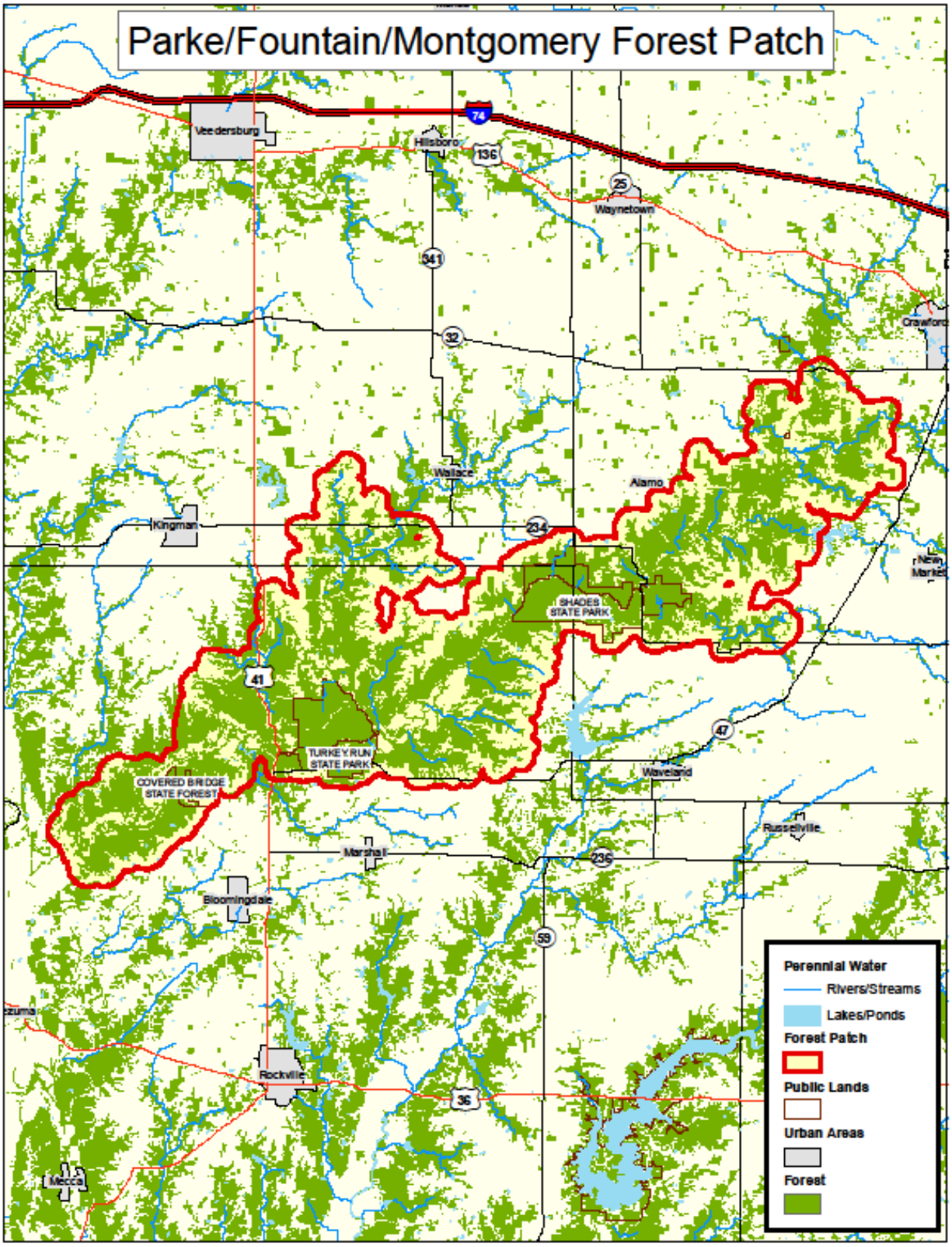

Dearborn/Decatur/Fayette/Franklin/Ripley/Union
Forest Patch
Connersville
Glenwood
Rushville
Liberty
Laurel
BROOKVILLE LAKE
Brookville
Mount Carmel
Cedar Grove
Oldenburg
Newpoint
Batesville
St. Leon
Sunman
Napoleon
Bright
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest

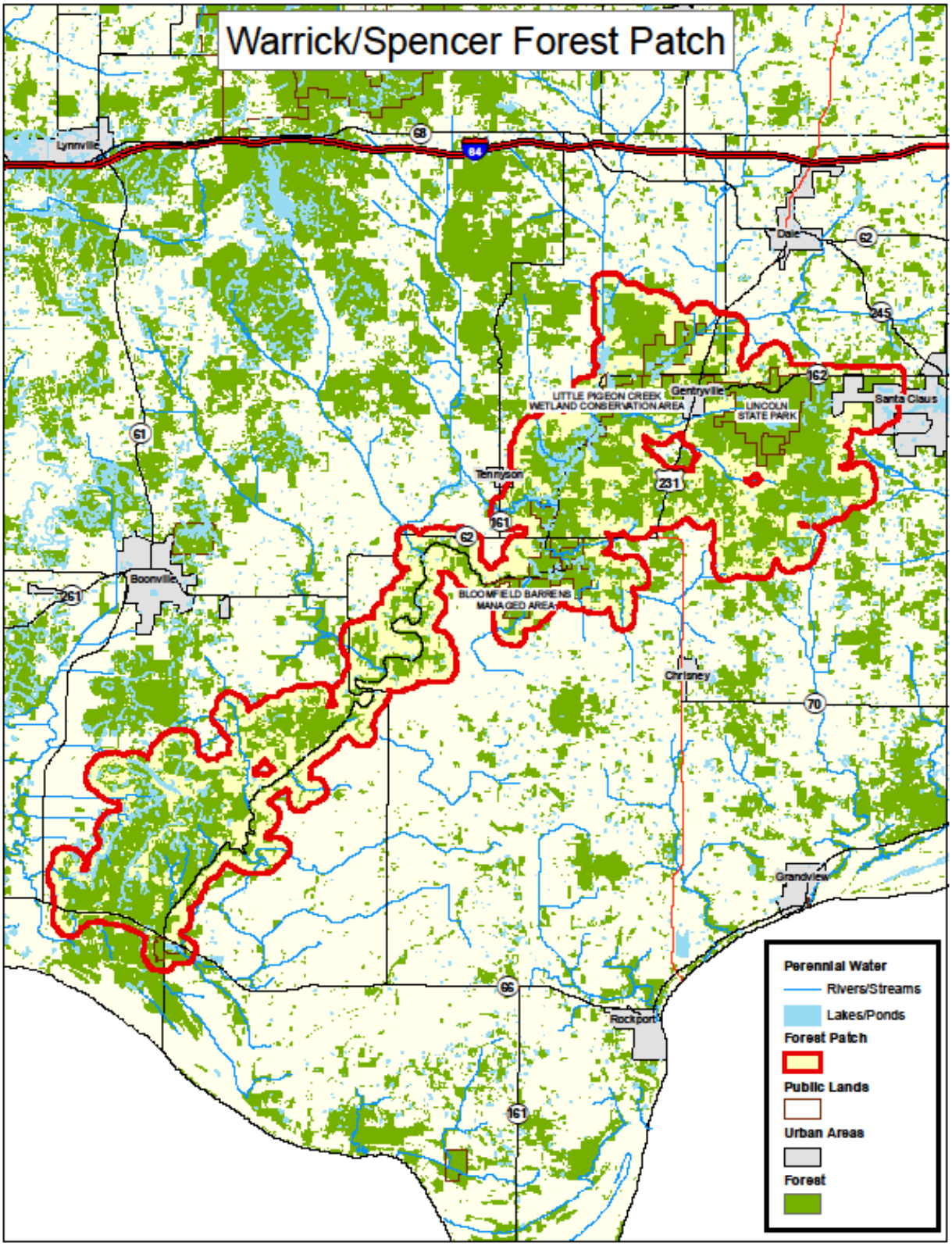

Gibson/Pike/Warren Forest Patch
Decker
Petersburg
PATOKA NATIONAL WILDLIFE REFUGE
SUGAR RIDGE FISH AND WILDLIFE AREA
PIKE STATE FOREST
Winslow
Francisco
Oakland City
Somerville
Mackey
Spurgeon
INTERLAKE
Holland
Lynnville
Elberfeld
Gentryville
Tennyson
Chandler
Boonville
Chrisney
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest


Sullivan/Greene Forest Patch
Shelburn
Hymera
Jasonville
Sullivan
Dugger
Linton
MINNEHANA FISH AND WILDLIFE AREA
HILLENBRAND FISH AND WILDLIFE AREA
GREENE-SULLIVAN STATE FOREST
GOOSE POND FISH AND WILDLIFE AREA
159
48
54
150
41
59
67
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest


Owen/Morgan Forest Patch
Stilesville
Mooresville
Monrovia
Brooklyn
Bethany
BRADFORD WOODS
MORGAN-MONROE STATE FOREST
Martinsville
Paragon
Gosport
YELLOWWOOD STATE FOREST
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest


Vigo/Clay/Parke/Putnam Forest Patch
Marshall
236
Bloomingdale
Rockville
41
36
CECIL M. HARDEN LAKE
59
Rosedale
Carbon
Harmony
Brazil
Knightsville
40
340
Seelyville
Staunton
Terre Haute
42
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest


Parke/Fountain/Montgomery Forest Patch
Veedersburg
Hillsboro
Waynetown
Crawford
Wallace
Alamo
Kingman
New Market
SHADES STATE PARK
TURKEY RUN STATE PARK
COVERED BRIDGE STATE FOREST
Waveland
Russellville
Marshall
Bloomingdale
Rockville
Mecca
74
136
25
541
32
234
41
47
236
59
36
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest


Warrick/Spencer Forest Patch
Lynnville
68
64
Dale
62
245
162
Santa Claus
Gentryville
LITTLE PIGEON CREEK WETLAND CONSERVATION AREA
LINCOLN STATE PARK
61
Tennyson
231
161
62
Boonville
261
BLOOMFIELD BARRENS MANAGED AREA
Chrisney
70
Grandview
Rockport
66
161
Perennial Water
Rivers/Streams
Lakes/Ponds
Forest Patch
Public Lands
Urban Areas
Forest

Appendix C – Partnership & Collaboration

Stakeholder coordination has extended from the Statewide Forest Assessment to the development of this document, and many individuals and organizations have participated throughout the process. Stakeholders were asked to outline partnership and collaborative interest for specific Action Steps as part of the final public document review process. Many individuals and organizations responded, even given the narrow timeframe allotted, and many expressed partnership interests via comments on draft and survey responses. Previous stakeholder comment and input will be used to contact organizations and add to the list below.

The following organizations demonstrated support for *specific* Action Steps and expressed interest in partnership and collaboration by filling out and returning a Partnership & Collaboration form between May 28 and June 11, 2010:

1.) Conserve, manage and protect existing forests, especially large forest patches

1.1 USDA-NRCS, Hoosier National Forest, Hoosier Environmental Council, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

1.2 USDA-NRCS, Indiana Department of Transportation, The Nature Conservancy in Indiana

1.3 Indiana Forestry & Woodland Owners Association (IFWOA), Purdue University – Dept. of Forestry & Natural Resources, Hoosier Environmental Council, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council, Indiana Land Protection Alliance

1.4 Purdue University – Dept. of Forestry & Natural Resources, Indiana State Department of Agriculture, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

1.5 Indiana Forestry & Woodland Owners Association (IFWOA), Purdue University – Dept. of Forestry & Natural Resources, Indiana Land Protection Alliance

1.6 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Carmel Urban Forestry Committee, Purdue University – Dept. of Forestry & Natural Resources, Hoosier Heartland RC&D Council, Inc., Hoosier Environmental Council, Indiana Land Protection Alliance

1.7 Indiana Association of Soil and Water Conservation Districts, Indiana Forestry & Woodland Owners Association (IFWOA)

1.8 Indiana Forestry & Woodland Owners Association (IFWOA)

1.9 Indiana Association of Soil and Water Conservation Districts, Hoosier National Forest, The Nature Conservancy in Indiana, Hoosier Environmental Council, Indiana Land Protection Alliance

1.10 Hardwood Tree Improvement and Regeneration Center (HTIRC), USDA-NRCS, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council
1.11 Hoosier Environmental Council
1.12 Purdue University – Dept. of Forestry & Natural Resources
1.13 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Purdue University – Dept. of Forestry & Natural Resources
1.14 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Purdue University – Dept. of Forestry & Natural Resources, Hoosier National Forest, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council
1.15 Purdue University – Dept. of Forestry & Natural Resources, Hoosier National Forest, National Wild Turkey Federation
1.16 Indiana Association of Soil and Water Conservation Districts, Purdue University – Dept. of Forestry & Natural Resources, Indiana State Department of Agriculture, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council
1.17 USDA-NRCS, Hoosier National Forest
1.18 Hoosier Heartland RC&D Council, Inc.
1.19 Hoosier National Forest, The Nature Conservancy in Indiana
1.20 Indiana Association of Soil and Water Conservation Districts, Carmel Urban Forestry Committee, Hoosier Heartland RC&D Council, Inc., Indiana Urban Forest Council, Keep Indianapolis Beautiful

2.) Restore and connect forests, especially in riparian areas

2.1 Indiana Department of Transportation, Hoosier National Forest, Hoosier Environmental Council, Carmel Urban Forestry Committee, Indiana Urban Forest Council
2.2 Indiana State Department of Agriculture, Hoosier Environmental Council, Carmel Urban Forestry Committee, Indiana Urban Forest Council, Indiana Land Protection Alliance
2.3 Carmel Urban Forestry Committee, Hoosier National Forest, Hoosier Environmental Council, Indiana Urban Forest Council, Indiana Land Protection Alliance
2.4 Hoosier National Forest, Hoosier Environmental Council, Carmel Urban Forestry Committee, Indiana Urban Forest Council, Keep Indianapolis Beautiful
2.5 Indiana Association of Soil and Water Conservation Districts, Hoosier National Forest, Hoosier Environmental Council, Carmel Urban Forestry Committee
2.6 Indiana Department of Transportation, Hoosier National Forest, Indiana State Department of Agriculture, Hoosier Environmental Council, Carmel Urban Forestry Committee, Keep Indianapolis Beautiful
2.7 Indiana Association of Soil and Water Conservation Districts, Purdue University – Dept. of Forestry & Natural Resources, Indiana Department of Transportation, Hoosier Environmental Council, Carmel Urban Forestry Committee

2.8 Hoosier Heartland RC&D Council, Inc., Indiana State Department of Agriculture, Hoosier Environmental Council, Carmel Urban Forestry Committee, Keep Indianapolis Beautiful

3.) Expand Best Management Practices, with special attention to invasive species

3.1 Carmel Urban Forestry Committee, Indiana Forestry & Woodland Owners Association (IFWOA), Hoosier Heartland RC&D Council, Inc., Hoosier National Forest, The Nature Conservancy in Indiana, Gregg Forest Services, Indiana Urban Forest Council, Keep Indianapolis Beautiful

3.2 Indiana Forestry & Woodland Owners Association (IFWOA), Hoosier National Forest, Gregg Forest Services

3.3 Indiana Forestry & Woodland Owners Association (IFWOA), Gregg Forest Services

3.4 Indiana Forestry & Woodland Owners Association (IFWOA), Gregg Forest Services

4.) Coordinate education, training, and technical assistance, especially to develop strategic partnerships with land-use decision makers

4.1 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Indiana Forestry & Woodland Owners Association (IFWOA), Hoosier National Forest, The Nature Conservancy in Indiana, Hoosier Environmental Council, Gregg Forest Services, Indiana Urban Forest Council

4.2 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Hoosier Heartland RC&D Council, Inc., Gregg Forest Services

4.3 Indiana University - Center for the Study of Institutions, Population and Environmental Change, Carmel Urban Forestry Committee, Hoosier Environmental Council, Gregg Forest Services

4.4 Indiana State Department of Agriculture, Gregg Forest Services

4.5 Indiana Forestry & Woodland Owners Association (IFWOA), Hoosier Heartland RC&D Council, Inc., Hoosier National Forest, Gregg Forest Services, Indiana Conservation Education Working Group, Keep Indianapolis Beautiful

4.6 Indiana Association of Soil and Water Conservation Districts, Indiana Forestry & Woodland Owners Association (IFWOA), Hoosier Heartland RC&D Council, Inc., Gregg Forest Services, Keep Indianapolis Beautiful

4.7 Hoosier National Forest, Gregg Forest Services

4.8 Indiana Forestry & Woodland Owners Association (IFWOA), Purdue University – Dept. of Forestry & Natural Resources, Hoosier Heartland RC&D Council, Inc., The Nature Conservancy in Indiana, Gregg Forest Services

4.9 Gregg Forest Services

4.10 Indiana Forestry & Woodland Owners Association (IFWOA), Gregg Forest Services

4.11 Carmel Urban Forestry Committee, USDA-NRCS, Purdue University – Dept. of Forestry & Natural Resources, Hoosier Heartland RC&D Council, Inc., Hoosier National Forest, Indiana State Department of Agriculture, Gregg Forest Services, Indiana Urban Forest Council

4.12 Hoosier Heartland RC&D Council, Inc., Gregg Forest Services

4.13 USDA-NRCS, Hoosier Heartland RC&D Council, Inc., The Nature Conservancy in Indiana, Indiana State Department of Agriculture, Gregg Forest Services

5.) Maintain and expand markets for Indiana hardwoods, especially those that are sustainably certified and for local use

5.1 Gregg Forest Services, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

5.2 Gregg Forest Services, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

5.3 Hoosier Heartland RC&D Council, Inc., Gregg Forest Services, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

5.4 Hardwood Tree Improvement and Regeneration Center (HTIRC), Indiana Forestry & Woodland Owners Association (IFWOA), Gregg Forest Services, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

5.5 Gregg Forest Services, Indiana Forestry & Woodland Owners Association (IFWOA), Purdue University – Dept. of Forestry & Natural Resources, Gregg Forest Services, Indiana Hardwood Lumbermen's Association & Indiana Forest Industry Council

Please contact the Indiana Division of Forestry to provide contact information and details about organizational interest in partnering and collaborating on specific Action Steps and to be made aware of developments and opportunities relating to these strategic objectives. Private landowners and individuals have also identified partnership and collaborative interest.