





Appendix E-35: Early Forest Stage

**10.** Please rank the following threats to the HABITAT of the Wildlife in Early Forest Stage Forest Habitats in Indiana.

	<b>Critical threat</b>	<b>Serious threat</b>	<b>Somewhat of a threat</b>	<b>Slight threat</b>	<b>No threat</b>	<b>Unknown</b>	<b>Response Total</b>
Commercial or residential development (sprawl)	33% (1)	67% (2)	0% (0)	0% (0)	0% (0)	0% (0)	<b>3</b>
Counterproductive financial incentives or regulations	0% (0)	33% (1)	33% (1)	33% (1)	0% (0)	0% (0)	<b>3</b>
Invasive/non-native species	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	0% (0)	<b>3</b>
Nonpoint source pollution (sedimentation and nutrients)	0% (0)	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Habitat fragmentation	33% (1)	0% (0)	33% (1)	33% (1)	0% (0)	0% (0)	<b>3</b>
Successional change	100% (3)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	<b>3</b>
Diseases (of plants that create habitat)	0% (0)	0% (0)	33% (1)	0% (0)	33% (1)	33% (1)	<b>3</b>
Habitat degradation	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	0% (0)	<b>3</b>
Climate change	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	0% (0)	<b>3</b>
Stream channelization	0% (0)	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Impoundment of water/flow regulation	0% (0)	0% (0)	0% (0)	33% (1)	33% (1)	33% (1)	<b>3</b>
Agricultural/forestry practices	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	0% (0)	<b>3</b>
Residual contamination (persistent toxins)	0% (0)	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Point source pollution (continuing)	0% (0)	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Mining/acidification	0% (0)	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	<b>3</b>
Drainage practices (stormwater runoff)	0% (0)	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	<b>1</b>
Other (please specify below)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	<b>1</b>
							<b>Total Respondents</b>
							<b>3</b>

**11.** Other HABITAT threats to the Wildlife in Early Forest Stage Forest Habitats in Indiana.

Public resistance and acceptance of periodic vegetative disturbance (timber management) is necessary because the forest cover across the landscape no longer exists in the same continuum and natural forces no longer operate (or are allowed to operate, e.g. regional firestorms) as they did prior to settlement. The public needs to accept that man-made disturbances (e.g. even-age timber management) can be used to mimic natural disturbances on a smaller & controlled scale to create a diversity of habitats in the residual forested landscape where once such natural disturbances operated at a larger scale in a relatively continuous forested landscape assuring early successional forest species viability. Another threat is excessive environmental review and assessment which makes timber management on public lands so costly in agency resources that it is deemed unaffordable within budgeted resources and attracts public ire as being too costly.

**Total Respondents 1**

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(skipped this question) 2

**12.** Please briefly describe the top two HABITAT threats to the Wildlife in Early Forest Stage Forest Habitats in Indiana identified above.

1. This is somewhat repetitive of the previous questions but here we go again:  
 1) lack of active timber management that adequately opens or removes the overhead forest canopy and allows for natural regeneration back into a forest cover. 2) the lack of public understanding and acceptance of timber management, especially even-age timber management.
- 2) the lack of public understanding and acceptance that vegetative disturbance whether natural or man-made
2. loss of early successional forest habitats  
 fragmentation resulting in islands of habitat too far removed from others for immigration or emigration
3. The answers listed above indicate the absence of early successional habitat in forests, i.e. absence of clear-cutting, and other disturbance types in forested habitats is the major cause of ruffed grouse habitat declines. Forestry practices that do NOT lead to early successional habitat development are the problem. Grouse and many songbirds, need early forest successional stages and due to the current policies of the USFS and some state properties, the grouse is being "not-managed" to extirpation.

**Total Respondents 3**

**13.** What current monitoring efforts by state agencies are you aware of for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Yes, these efforts occur</b>	<b>Not aware of these efforts occurring</b>	<b>Response Total</b>
Statewide year-round monitoring conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Statewide once a year monitoring conducted by state agencies	33% (1)	67% (2)	<b>3</b>
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Regional or local year-round monitoring conducted by state agencies	0% (0)	100% (2)	<b>2</b>
Regional or local once a year monitoring conducted by state agencies	100% (3)	0% (0)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (3)	<b>3</b>
		<b>Total Respondents</b>	<b>3</b>

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**14.** What current monitoring efforts by other organizations are you aware of for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Yes, these efforts occur</b>	<b>Not aware of these efforts occurring</b>	<b>Response Total</b>
Statewide year-round monitoring conducted by other organizations	0% (0)	100% (2)	<b>2</b>
Statewide once a year monitoring conducted by other organizations	33% (1)	67% (2)	<b>3</b>
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Regional or local year-round monitoring conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Regional or local once a year monitoring conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	33% (1)	67% (2)	<b>3</b>
	<b>Total Respondents</b>		<b>3</b>

**15.** How crucial are these monitoring efforts by state agencies for the conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Very crucial</b>	<b>Somewhat crucial</b>	<b>Slightly crucial</b>	<b>Not crucial</b>	<b>Unknown</b>	<b>Response Total</b>
Statewide year-round monitoring conducted by state agencies	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	<b>3</b>
Statewide once a year monitoring conducted by state agencies	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	<b>2</b>
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	<b>2</b>
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	<b>2</b>
Regional or local year-round monitoring conducted by state agencies	0% (0)	33% (1)	33% (1)	33% (1)	0% (0)	<b>3</b>
Regional or local once a year monitoring conducted by state agencies	33% (1)	33% (1)	33% (1)	0% (0)	0% (0)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	33% (1)	33% (1)	0% (0)	33% (1)	<b>3</b>

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Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	33% (1)	33% (1)	33% (1)	<b>3</b>
<b>Total Respondents</b>						<b>3</b>

**16.** How crucial are these monitoring efforts by other organizations for the conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Very crucial</b>	<b>Somewhat crucial</b>	<b>Slightly crucial</b>	<b>Not crucial</b>	<b>Unknown</b>	<b>Response Total</b>
Statewide year-round monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Statewide once a year monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Regional or local year-round monitoring conducted by other organizations	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	<b>3</b>
Regional or local once a year monitoring conducted by other organizations	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
<b>Total Respondents</b>						<b>3</b>

**17.** Regional or local state agency monitoring for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. 8 Roadside spring drumming survey (drumming indices) conducted in primarily in souhtcentral Indiana. Activity Center counts on the 900 acre Maumee Grouse Study Area in Jackson/Brown counties.
2. unknown
3. In southern Indiana in the unglaciated forested region.

**Total Respondents 3**

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**18.** Regional or local monitoring by other organizations for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. Incidental observations on Christmas Bird Counts (extremely minor)

Species occurrence noted during the Statewide Breeding Bird Atlas Project (only one ever done).

2. unknown

3. On state properties or USFS land where populations have been known to exist.

**Total Respondents 3**

**19.** Please list organizations that are monitoring the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. Audubon Christmas Bird Counts

2. unknown

3. IDNR, Div. Fish and Wildlife

**Total Respondents 3**

**20.** What are the current monitoring techniques for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	Frequently used	Occasionally used	Not used but possible with existing technology and data	Not used and not possible with existing technology and data	Not economically feasible	Unknown	Response Total
Radio telemetry and tracking	0% (0)	33% (1)	33% (1)	0% (0)	33% (1)	0% (0)	3
Modeling	0% (0)	100% (3)	0% (0)	0% (0)	0% (0)	0% (0)	3
Coverboard routes	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Spot mapping	0% (0)	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	3
Driving a survey route	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	0% (0)	3
Reporting from harvest, depredation, or unintentional take (road kill, bycatch)	0% (0)	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	3
Mark and recapture	0% (0)	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	2
Professional survey/census	67% (2)	33% (1)	0% (0)	0% (0)	0% (0)	0% (0)	3

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Volunteer survey/census	0% (0)	33% (1)	33% (1)	0% (0)	0% (0)	33% (1)	<b>3</b>
Trapping (by any technique)	0% (0)	0% (0)	67% (2)	0% (0)	33% (1)	0% (0)	<b>3</b>
Representative sites	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	<b>1</b>
Probabilistic sites	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	<b>1</b>
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	<b>0</b>
<b>Total Respondents</b>							<b>3</b>

### 21. Other monitoring techniques for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

No responses were entered for this question.

**Total Respondents**      **0**

(skipped this question)      3

### 22. What one or two monitoring techniques would you recommend for effective conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

1. Roadside Drumming indices

2. Spring drumming routes - used nationally for spring breeding trend data.

On particular or "study areas", complete spring drumming counts for accurate breeding densities. Assumes a low # of non-drumming males and requires at least three opportunities, on good mornings, to hear a drumming bird in any portion of the study area

3. Driving routes, hunter bag surveys

**Total Respondents**      **3**

### 23. What current HABITAT inventory and assessment efforts or activities by state agencies are you aware of for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Yes, these efforts occur</b>	<b>No effort that I'm aware of</b>	<b>Response Total</b>
Statewide annual inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	67% (2)	33% (1)	<b>3</b>

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Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Regional or local once a year inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (3)	<b>3</b>
<b>Total Respondents</b>			<b>3</b>

<b>24. What current HABITAT inventory and assessment efforts or activities by other organizations are you aware of for the Wildlife in Early Forest Stage Forest Habitats in Indiana?</b>			
	<b>Yes, these efforts occur</b>	<b>No effort that I'm aware of</b>	<b>Response Total</b>
Statewide year-round inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Statewide once a year inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Regional or local year-round inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Regional or local once a year inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (3)	<b>3</b>
<b>Total Respondents</b>			<b>3</b>

<b>25. How crucial are these HABITAT efforts by state agencies for the conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?</b>						
	<b>These efforts are very crucial for this HABITAT</b>	<b>These efforts are somewhat crucial for this HABITAT</b>	<b>These efforts are slightly crucial for this HABITAT</b>	<b>These efforts are not crucial for this HABITAT</b>	<b>Unknown</b>	<b>Response Total</b>



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year and not regularly scheduled) inventory and assessment conducted by other organizations							
Regional or local year-round inventory and assessment conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)		<b>3</b>
Regional or local once a year inventory and assessment conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)		<b>3</b>
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)		<b>3</b>
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)		<b>3</b>
						<b>Total Respondents</b>	<b>3</b>

### 27. Regional or local state agency HABITAT inventory and assessment for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. The Continuous Statewide Forest Inventory jointly conducted by the US Forest Service and the Indiana Div. of Forestry, IDNR.

2. On state and national forest. There is no need to do habitat evaluations at this point. As a specialist species and tied very closely to early successional forest habitats, we know the reason for the decline in grouse populations, and we know nothing is being done to provide habitat for the ruffed grouse and other early forest successional species.

**Total Respondents** **2**

(skipped this question) **1**

### 28. Regional or local HABITAT inventory and assessment by other organizations for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

none

**Total Respondents** **1**

(skipped this question) **2**

### 29. Please list organizations that are monitoring this HABITAT for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

No responses were entered for this question.

**Total Respondents** **0**

(skipped this question) **3**

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**30.** What are the current monitoring techniques for the Wildlife in Early Forest Stage Forest Habitats in Indiana.  
 If a technique is not applicable to the Wildlife in Early Forest Stage Forest Habitats, do not select a response in that row.

	Frequently used	Occasionally used	Not used but possible with existing technology and data	Not used and not possible with existing technology and data	Not economically feasible	Unknown	Response Total
GIS mapping	0% (0)	0% (0)	33% (1)	33% (1)	0% (0)	33% (1)	<b>3</b>
Aerial photography and analysis	0% (0)	0% (0)	33% (1)	33% (1)	0% (0)	33% (1)	<b>3</b>
Systematic sampling	33% (1)	33% (1)	0% (0)	0% (0)	0% (0)	33% (1)	<b>3</b>
Property tax estimates	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	<b>2</b>
State revenue data	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (3)	<b>3</b>
Regulatory information	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	<b>2</b>
Participation in landuse programs	0% (0)	33% (1)	33% (1)	0% (0)	0% (0)	33% (1)	<b>3</b>
Modeling	0% (0)	100% (3)	0% (0)	0% (0)	0% (0)	0% (0)	<b>3</b>
Voluntary landowner reporting	0% (0)	0% (0)	33% (1)	0% (0)	0% (0)	67% (2)	<b>3</b>
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	<b>1</b>
<b>Total Respondents</b>							<b>3</b>

**31.** Other HABITAT inventory and assessment techniques for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

No responses were entered for this question.

**Total Respondents 0**

(skipped this question) 3

**32.** What one or two HABITAT inventory and assessment techniques would you recommend for effective conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

1. Statewide Forest Inventory
2. GIS and current aerial photos

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	<b>Total Respondents</b>	<b>2</b>
	(skipped this question)	1

**33.** What is the current body of science for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

		Response Total	Response Percent
Complete, up to date and extensive		1	33%
Adequate		2	67%
Inadequate		0	0%
Nonexistent		0	0%
Other (please explain below)		0	0%
	<b>Total Respondents</b>	<b>3</b>	

**34.** Please provide a citation (title, author, date, publisher) that would give the best overview of the Wildlife in Early Forest Stage Forest Habitats in Indiana, if available. This resource may be used if further detail is needed.

		Response Total	Response Percent
Title	Population status of ruffed grouse in Indiana; Ruffed Grouse Restoration in IN;	2	100%
Author	Steven E. Backs; Steve Backs;	2	100%
Date	Annual Progress Reports; 1984;	2	100%
Publisher	Indiana Div. Fish and Wildlife N. Central Section of the Wildlife Soc.	2	100%
	<b>Total Respondents</b>	<b>2</b>	
	(skipped this question)		1

**35.** If possible, please provide a second citation (title, author, date, publisher) that would give another good overview of the Wildlife in Early Forest Stage Forest Habitats in Indiana. This resource may also be used if further detail is needed.

		Response Total	Response Percent
Title	The historic and present distribution of ruffed grouse in Indiana; Characteristics of Drumming Habitat of Grouse in IN;	2	100%
Author	Steven E. Backs; Backs, Kelly, Major, Miller;	2	100%
Date	1984; 1984;	2	100%

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Publisher	Ind. Acad. Sci. 93:161-166. Proceedings of Indiana Academy of Science: 94:227-230	2	100%
		<b>Total Respondents</b>	<b>2</b>
		(skipped this question)	1

**36.** What is the current HABITAT body of science for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

		Response Total	Response Percent
Complete, up to date and extensive		0	0%
Adequate		2	67%
Inadequate		1	33%
Nonexistent		0	0%
Other (please explain below)		0	0%
		<b>Total Respondents</b>	<b>3</b>

**37.** Please provide a citation (title, author, date, publisher) that would give the best HABITAT overview of the Wildlife in Early Forest Stage Forest Habitats in Indiana, if available. This resource may be used if further detail is needed.

		Response Total	Response Percent
Title	Statewide Forest Inventory;	2	100%
Author	?;	1	50%
Date	periodic;	1	50%
Publisher	US Forest Service/IDNR	1	50%
		<b>Total Respondents</b>	<b>2</b>
		(skipped this question)	1

**38.** If possible, please provide a second citation (title, author, date, publisher) that would give another good HABITAT overview of the Wildlife in Early Forest Stage Forest Habitats in Indiana. This resource may also be used if further detail is needed.

		Response Total	Response Percent
Title		0	0%
Author		1	100%
Date		0	0%
Publisher		0	0%
		<b>Total Respondents</b>	<b>1</b>

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(skipped this question)

2

### 39. What are the research needs for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Urgently needed</b>	<b>Greatly needed</b>	<b>Needed</b>	<b>Slightly needed</b>	<b>Not needed</b>	<b>Unknown</b>	<b>Response Total</b>
Life cycle	0% (0)	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	<b>3</b>
Distribution and abundance	33% (1)	0% (0)	33% (1)	33% (1)	0% (0)	0% (0)	<b>3</b>
Limiting factors (food, shelter, water, breeding sites)	0% (0)	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Threats (predators/competition, contamination)	0% (0)	33% (1)	0% (0)	0% (0)	67% (2)	0% (0)	<b>3</b>
Relationship/dependence on specific habitats	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	0% (0)	<b>3</b>
Population health (genetic and physical)	0% (0)	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	<b>3</b>
Other (please specify below)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	0% (0)	<b>2</b>
							<b>Total Respondents</b>
							<b>3</b>

### 40. Other research needs for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. Whether the distribution of early successional habitat is now so poor and low (as are ruffed grouse populations) that the disappearance of ruffed grouse from local areas now expand into a more regional or complete extinction.

2. We don't need more reserch. We need habitat management for early successional forest species, including but not limited to the ruffed grouse.

**Total Respondents** **2**

(skipped this question)

1

### 41. What are the HABITAT research needs for the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	<b>Urgently needed</b>	<b>Greatly needed</b>	<b>Needed</b>	<b>Slightly needed</b>	<b>Not needed</b>	<b>Unknown</b>	<b>Response Total</b>
Successional changes	33% (1)	0% (0)	0% (0)	0% (0)	67% (2)	0% (0)	<b>3</b>
Distribution and abundance (fragmentation)	33% (1)	0% (0)	33% (1)	0% (0)	33% (1)	0% (0)	<b>3</b>
Threats (land use change/competition, contamination/global warming)	0% (0)	0% (0)	33% (1)	33% (1)	33% (1)	0% (0)	<b>3</b>
Relationship/dependence on specific site conditions	33% (1)	0% (0)	0% (0)	33% (1)	33% (1)	0% (0)	<b>3</b>
Growth and development of individual components of the	0% (0)	0% (0)	33% (1)	33% (1)	33% (1)	0% (0)	<b>3</b>

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habitat							
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
					<b>Total Respondents</b>		<b>3</b>

### 42. Other HABITAT research needs for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

We do not need research on grouse habitat. We know what they need, it just needs to be provided before the ruffed grouse is extirpated.

**Total Respondents**      **1**  
(skipped this question)      2

### 43. How well do the following conservation efforts address the threats to the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection (use below for details)	33% (1)	67% (2)	0% (0)	0% (0)	0% (0)	3
Population management (hunting, trapping)	33% (1)	67% (2)	0% (0)	0% (0)	0% (0)	3
Population enhancement (captive breeding and release)	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Reintroduction (restoration)	0% (0)	0% (0)	67% (2)	33% (1)	0% (0)	3
Food plots	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Threats reduction	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	3
Native predator control	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	3
Exotic/invasive species control	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	3
Regulation of collecting	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	3
Disease/parasite management	0% (0)	0% (0)	0% (0)	67% (2)	33% (1)	3
Translocation to new geographic range	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Protection of migration routes	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Limiting contact with pollutants/contaminants	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Public education to reduce human disturbance	0% (0)	33% (1)	0% (0)	67% (2)	0% (0)	3
Culling/selective removal	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Stocking	0% (0)	0% (0)	0% (0)	100% (3)	0% (0)	3
Other (please specify below)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
				<b>Total Respondents</b>		<b>3</b>

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**44.** Other current conservation practices for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. Instead of the word "protection" perhaps "enhancement" would be a better choice as the "protection" of habitat for ruffed grouse requires active vegetative management. While hunting is not responsible for the declining population trends and hunting pressure is self-limiting/regulated by diminishing returns, the question does eventually come to the point (with the continuous decline of habitat and subsequently low populations) where one must ask if there is an available surplus or are we shooting the last grouse in an area that was doomed anyway due to the lack of habitat.

2. N/A

3. What is needed is habitat management in the form of producing early successional forest stages in large tracts throughout the forested regions of the state, especially on public lands. If this is not provided, the grouse will soon be extirpated.

**Total Respondents 3**

**45.** What one or two specific practices would you recommend for more effective conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

1. Active timber management, especially on the larger blocks of public forest lands, especially those timber management practices that remove at least 75% of the overhead canopy.

2. Habitat decline must be addressed - methods to initiate active timber/wildlife management on the landscape is necessary to stem the serious decline of ruffed grouse in the state.

3. Immediate production of early successional stages of vegetation on public lands. Forstry practices such as clear-cutting and certain select cutting methods are needed to provide the habitat that is essential to returning ruffed grouse populations to earlier levels.

**Total Respondents 3**

**46.** How well do the following conservation efforts address the HABILITAT threats to the Wildlife in Early Forest Stage Forest Habitats in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection through regulation	0% (0)	67% (2)	33% (1)	0% (0)	0% (0)	3
Habitat protection on public lands	0% (0)	67% (2)	33% (1)	0% (0)	0% (0)	3
Habitat protection incentives (financial)	0% (0)	67% (2)	33% (1)	0% (0)	0% (0)	3
Habitat restoration through regulation	33% (1)	0% (0)	33% (1)	0% (0)	33% (1)	3
Habitat restoration on public lands	33% (1)	0% (0)	0% (0)	33% (1)	33% (1)	3
Habitat restoration incentives (financial)	33% (1)	0% (0)	0% (0)	33% (1)	33% (1)	3
Artificial habitat creation (artificial reefs, nesting platforms)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	2
Selective use of functionally equivalent exotic species in place of extirpated natives	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	3
Succession control (fire, mowing)	33% (1)	0% (0)	33% (1)	33% (1)	0% (0)	3
Corridor development/protection	33% (1)	33% (1)	0% (0)	33% (1)	0% (0)	3

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Managing water regimes	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	<b>2</b>
Pollution reduction	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	<b>2</b>
Protection of adjacent buffer zone	0% (0)	33% (1)	33% (1)	33% (1)	0% (0)	<b>3</b>
Restrict public access and disturbance	0% (0)	0% (0)	33% (1)	67% (2)	0% (0)	<b>3</b>
Land use planning	33% (1)	33% (1)	0% (0)	33% (1)	0% (0)	<b>3</b>
Technical assistance	0% (0)	100% (3)	0% (0)	0% (0)	0% (0)	<b>3</b>
Cooperative land management agreements (conservation easements)	0% (0)	67% (2)	0% (0)	33% (1)	0% (0)	<b>3</b>
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	<b>0</b>
				<b>Total Respondents</b>		<b>48</b>

### 47. Other current HABITAT conservation practices for the Wildlife in Early Forest Stage Forest Habitats in Indiana.

1. Under the habitat through "protection and regulation", some states have "policies or regulations" that specifically mandate that a certain percentage of their public lands will be maintained in early successional and transitional forest types

2. There are very few if any "current habitat conservation practices" being implemented for the ruffed grouse. That is the major problem with the critically low population levels for this species.

**Total Respondents** **2**

(skipped this question) 1

### 48. What one or two specific HABITAT practices would you recommend for more effective conservation of the Wildlife in Early Forest Stage Forest Habitats in Indiana?

1. I thought I answered this already but here we go:

ACTIVE TIMBER MANAGEMENT THAT REMOVES AT LEAST 75% OF THE EXISTING FOREST CANOPY ON A PROPORTION OF THE FORESTED LANDSCAPE EVERY 5-10 YEARS ON A 80-120 YEAR ROTATION (DEPENDING SITECONSTRAINTS AND MGMT OBJECTIVES) USING PRIMARILY EVEN-AGE TIMBER MANAGEMENT TECHNIQUES.

2. TIMBER MANAGEMENT

3. Implement forestry practices that will benefit early successional species including grey fox, bobcat, and woodcock, as well as ruffed grouse.

Educate the public so they understand that "nature knows best" and that "letting things go back to nature" are ignorant and foolish concepts. Educate the public to understand that habitat management in this day and age is necessary if we are to provide habitat for specialist species whose populations are in peril.

**Total Respondents** **3**

### 49. Do you have any additional comments or information on the Wildlife in Early Forest Stage Forest Habitats that you feel would be useful in the development of the Indiana Comprehensive Wildlife Strategy?

1. Ruffed grouse should be viewed as an interior forest dependent species requiring early successional forests. While their populations will also benefit to some degree from the transitional habitats that develop from abandoned fields going into forested cover, they are primarily dependent on the larger tracts of contiguous forests. They are not an

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"edge" species even though that is commonly found in the popular literature and some older technical publications. Grouse are often found on forest edges because that is the only early successional habitat they can find. they are also more vulnerable to natural and man-induced (hunting)predation when forced up to the edge or limit of good or marginal habitat.

2. Indiana mirrors other states, especially on the southern periphery of the ruffed grouse range in the severe reduction of suitable habitats and consequently, populations. As land abandonment and reverting farmlands are a thing of the past, only timber management on public (especially) and private lands can rebalance successional age classes in forest lands to benefit grouse and a host of other early successional species.

**Total Respondents**      **2**

(skipped this question)      1