

Appendix E-67: Ephemeral

6. Please rank the following threats to the Wildlife in Ephemeral Wetland Habitats in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Invasive/non-native species	0% (0)	17% (1)	0% (0)	33% (2)	17% (1)	33% (2)	6
High sensitivity to pollution	0% (0)	0% (0)	67% (4)	17% (1)	0% (0)	17% (1)	6
Bioaccumulation of contaminants	0% (0)	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6
Predators (native or domesticated)	0% (0)	0% (0)	20% (1)	20% (1)	0% (0)	60% (3)	5
Dependence on other species (mutualism, pollinators)	0% (0)	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	6
Diseases/parasites (of the species itself)	0% (0)	0% (0)	17% (1)	0% (0)	0% (0)	83% (5)	6
Regulated hunting/fishing pressure (too much)	0% (0)	0% (0)	0% (0)	0% (0)	50% (3)	50% (3)	6
Species over population	0% (0)	0% (0)	0% (0)	17% (1)	50% (3)	33% (2)	6
Unintentional take/ direct mortality (e.g., vehicle collisions, power line collisions, by-catch, harvesting equipment, land preparation machinery)	0% (0)	0% (0)	17% (1)	17% (1)	17% (1)	50% (3)	6
Unregulated collection pressure	0% (0)	0% (0)	17% (1)	0% (0)	33% (2)	50% (3)	6
Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)	50% (3)	0% (0)	17% (1)	17% (1)	0% (0)	17% (1)	6
							65

7. Please also rank these threats to the Wildlife in Ephemeral Wetland Habitats in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Habitat loss (breeding range)	67% (4)	33% (2)	0% (0)	0% (0)	0% (0)	0% (0)	6
Habitat loss (feeding/foraging areas)	50% (3)	50% (3)	0% (0)	0% (0)	0% (0)	0% (0)	6
Small native range (high endemism)	17% (1)	0% (0)	0% (0)	0% (0)	67% (4)	17% (1)	6
Near limits of natural geographic range	17% (1)	17% (1)	17% (1)	0% (0)	50% (3)	0% (0)	6
Large home range requirements	0% (0)	0% (0)	0% (0)	17% (1)	67% (4)	17% (1)	6
Viable reproductive population size or availability	0% (0)	0% (0)	17% (1)	33% (2)	17% (1)	33% (2)	6
Specialized reproductive behavior or low reproductive rates	0% (0)	0% (0)	17% (1)	0% (0)	33% (2)	50% (3)	6
Degradation of movement/migration routes	17% (1)	33% (2)	33% (2)	0% (0)	0% (0)	17% (1)	6

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(overwintering habitats, nesting and staging sites)

Genetic pollution (hybridization)	0% (0)	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Total Respondents							55

8. Other threats to the Wildlife in Ephemeral Wetland Habitats in Indiana.

No responses were entered for this question.

Total Respondents 0

9. Please briefly describe the top two threats to the Wildlife in Ephemeral Wetland Habitats in Indiana identified above.

1. Habtiat loss and degradation
2. Loss of ephemeral wetland habitat and increase in migration distance to breeding sites as a result of this loss are the biggest threats to some wildlife species.
3. Loss & degradation of ephemeral wetland and upland forested habitat
4. -Loss of ephemeral wetlands is the top threat; unfortunately, most existing ephemeral wetlands have been destroyed in Indiana. Even more unfortunately, many of them were destroyed with the misguided notion that deep water was better for wildlife - landowners were advised to dredge out the ephemeral wetlands to provide duck habitat. These fish-infested deep waters have no habitat for Plains leopard frog.
-invasive species like reed canary grass are proliferating in the habitats that remain, decreasing plant diversity, cover, and the overall health of the wetland.
5. Extreme rarity & habitat loss
6. Habitat destruction and habitat degradation

Total Respondents 6

10. Please rank the following threats to the HABITAT of the Wildlife in Ephemeral Wetland Habitats in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Commercial or residential development (sprawl)	17% (1)	50% (3)	17% (1)	0% (0)	0% (0)	17% (1)	6
Counterproductive financial incentives or regulations	0% (0)	17% (1)	0% (0)	0% (0)	33% (2)	50% (3)	6

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Invasive/non-native species	0% (0)	17% (1)	0% (0)	17% (1)	17% (1)	50% (3)	6
Nonpoint source pollution (sedimentation and nutrients)	0% (0)	0% (0)	50% (3)	17% (1)	0% (0)	33% (2)	6
Habitat fragmentation	33% (2)	50% (3)	17% (1)	0% (0)	0% (0)	0% (0)	6
Successional change	0% (0)	0% (0)	17% (1)	0% (0)	17% (1)	67% (4)	6
Diseases (of plants that create habitat)	0% (0)	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	6
Habitat degradation	50% (3)	50% (3)	0% (0)	0% (0)	0% (0)	0% (0)	6
Climate change	0% (0)	0% (0)	0% (0)	17% (1)	0% (0)	83% (5)	6
Stream channelization	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	0% (0)	6
Impoundment of water/flow regulation	0% (0)	0% (0)	50% (3)	0% (0)	50% (3)	0% (0)	6
Agricultural/forestry practices	17% (1)	50% (3)	17% (1)	0% (0)	0% (0)	17% (1)	6
Residual contamination (persistent toxins)	0% (0)	0% (0)	17% (1)	33% (2)	0% (0)	50% (3)	6
Point source pollution (continuing)	0% (0)	0% (0)	33% (2)	17% (1)	0% (0)	50% (3)	6
Mining/acidification	0% (0)	0% (0)	17% (1)	33% (2)	0% (0)	50% (3)	6
Drainage practices (stormwater runoff)	17% (1)	17% (1)	0% (0)	0% (0)	17% (1)	50% (3)	6
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Total Respondents							97

11. Other HABITAT threats to the Wildlife in Ephemeral Wetland Habitats in Indiana.

No responses were entered for this question.

Total Respondents 0

12. Please briefly describe the top two HABITAT threats to the Wildlife in Ephemeral Wetland Habitats in Indiana identified above.

1. Habitat loss & degradation
2. Habitat degradation or loss and fragmentation of habitat are the largest threats.
3. Habitat loss & degradation
4. Loss of ephemeral wetland habitat, invasion of wetlands by species like reed canary grass, cattails, purple loosestrife or other invasives that create monocultures, agricultural practices that destroy ephemeral wetlands.
5. Habitat fragmentation & degradation

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6. Habitat destruction and degradation of ephemeral wetlands

Total Respondents 6

13. What current monitoring efforts by state agencies are you aware of for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Yes, these efforts occur	Not aware of these efforts occurring	Response Total
Statewide year-round monitoring conducted by state agencies	0% (0)	100% (6)	6
Statewide once a year monitoring conducted by state agencies	17% (1)	83% (5)	6
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (6)	6
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	17% (1)	83% (5)	6
Regional or local year-round monitoring conducted by state agencies	0% (0)	100% (6)	6
Regional or local once a year monitoring conducted by state agencies	0% (0)	100% (6)	6
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (6)	6
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	17% (1)	83% (5)	6
		Total Respondents	48

14. What current monitoring efforts by other organizations are you aware of for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Yes, these efforts occur	Not aware of these efforts occurring	Response Total
Statewide year-round monitoring conducted by other organizations	0% (0)	100% (6)	6
Statewide once a year monitoring conducted by other organizations	0% (0)	100% (6)	6
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (6)	6
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (6)	6

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Regional or local year-round monitoring conducted by other organizations	0% (0)	100% (6)	6
Regional or local once a year monitoring conducted by other organizations	33% (2)	67% (4)	6
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (6)	6
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	67% (4)	33% (2)	6
		Total Respondents	48

15. How crucial are these monitoring efforts by state agencies for the conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?						
	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total
Statewide year-round monitoring conducted by state agencies	0% (0)	20% (1)	0% (0)	0% (0)	80% (4)	5
Statewide once a year monitoring conducted by state agencies	33% (2)	0% (0)	0% (0)	0% (0)	67% (4)	6
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	20% (1)	20% (1)	0% (0)	0% (0)	60% (3)	5
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5
Regional or local year-round monitoring conducted by state agencies	0% (0)	20% (1)	0% (0)	0% (0)	80% (4)	5
Regional or local once a year monitoring conducted by state agencies	17% (1)	0% (0)	0% (0)	0% (0)	83% (5)	6
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5
					Total Respondents	42

16. How crucial are these monitoring efforts by other organizations for the conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?						
	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total
Statewide year-round monitoring conducted by other organizations	0% (0)	20% (1)	0% (0)	0% (0)	80% (4)	5
Statewide once a year monitoring conducted by other organizations	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5

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Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	20% (1)	20% (1)	0% (0)	0% (0)	60% (3)	5
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5
Regional or local year-round monitoring conducted by other organizations	0% (0)	20% (1)	0% (0)	0% (0)	80% (4)	5
Regional or local once a year monitoring conducted by other organizations	50% (3)	0% (0)	0% (0)	0% (0)	50% (3)	6
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	20% (1)	0% (0)	0% (0)	0% (0)	80% (4)	5
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	40% (2)	20% (1)	20% (1)	0% (0)	20% (1)	5
					Total Respondents	41

17. Regional or local state agency monitoring for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. IDNR, Non-game herpetologist incorporates this as part of the annual field season.
2. INDR runs a NAAMP frog monitory program
3. None

Total Respondents 3

18. Regional or local monitoring by other organizations for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. Spencer Cortwright, IUN
Robert Brodman, Saint Joseph's College
2. Univerisity professors and members of the Herpetology TAC for the State of Indiana as part of their annual field season.
3. Robert Brodman, Saint Joseph's College in NW Indiana
4. NW Indiana (Newton, Jasper, Pulaski, Lake, Porter counties).

Total Respondents 4

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21. Other monitoring techniques for the Wildlife in Ephemeral Wetland Habitats in Indiana.

No responses were entered for this question.

Total Respondents **0**
(skipped this question) 2

22. What one or two monitoring techniques would you recommend for effective conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?

1. Professional survey and either mark recapture or telemetry
2. Pit-fall traps and cover board objects near ephemeral wetland breeding sites.
3. Fall surveys at breeding sites
4. Call surveys and systematic sampling
5. Minnow trapping and possible either mark recapture or telemetry

Total Respondents **5**

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

	Yes, these efforts occur	No effort that I'm aware of	Response Total
Statewide annual inventory and assessment conducted by state agencies	0% (0)	100% (6)	6
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	100% (6)	6
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (6)	6
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	17% (1)	83% (5)	6
Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	100% (6)	6
Regional or local once a year inventory and assessment conducted by state agencies	0% (0)	100% (6)	6
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (6)	6

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Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	17% (1)	83% (5)	6
		Total Respondents	48

24. What current HABITAT inventory and assessment efforts or activities by other organizations are you aware of for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Yes, these efforts occur	No effort that I'm aware of	Response Total
Statewide year-round inventory and assessment conducted by other organizations	0% (0)	100% (6)	6
Statewide once a year inventory and assessment conducted by other organizations	0% (0)	100% (6)	6
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (6)	6
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	17% (1)	83% (5)	6
Regional or local year-round inventory and assessment conducted by other organizations	17% (1)	83% (5)	6
Regional or local once a year inventory and assessment conducted by other organizations	33% (2)	67% (4)	6
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	17% (1)	83% (5)	6
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	83% (5)	17% (1)	6
		Total Respondents	48

25. How crucial are these HABITAT efforts by state agencies for the conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?

	These efforts are very crucial for this HABITAT	These efforts are somewhat crucial for this HABITAT	These efforts are slightly crucial for this HABITAT	These efforts are not crucial for this HABITAT	Unknown	Response Total
Statewide annual inventory and assessment conducted by state agencies	0% (0)	25% (1)	0% (0)	0% (0)	75% (3)	4
Statewide once a year inventory and assessment conducted by state agencies	25% (1)	0% (0)	0% (0)	0% (0)	75% (3)	4
Periodic statewide (less than once a						

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and assessment conducted by other organizations

Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	25% (1)	0% (0)	0% (0)	0% (0)	75% (3)	4
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	40% (2)	20% (1)	40% (2)	0% (0)	0% (0)	5
Total Respondents						35

27. Regional or local state agency HABITAT inventory and assessment for the Wildlife in Ephemeral Wetland Habitats in Indiana.

No responses were entered for this question.

Total Respondents 0

28. Regional or local HABITAT inventory and assessment by other organizations for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. Cortwright monitors populations in Brown County & Porter County
Brodman monitors them in Owens County
2. Kankakee Sands and other Conservancy preserves - staff evaluate the restored/created habitat to judge its ability to support Plains leopard frog and other species of concern.
3. Robert Brodman, Saint Joseph's College in NW Indiana
4. NW Indiana (Newton, Jasper, Pulaski, Lake & Porter Counties)

Total Respondents 4

29. Please list organizations that are monitoring this HABITAT for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. IDNR, Non-game Herpetologist; University Professors, members of the Herpetology TAC Committee for the State of Indiana
2. TNC.
3. Robert Brodman, Saint Joseph's College

Total Respondents 3

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30. What are the current HABITAT inventory and/or assessment techniques for the Wildlife in Ephemeral Wetland 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
GIS mapping	17% (1)	0% (0)	50% (3)	0% (0)	0% (0)	33% (2)	6
Aerial photography and analysis	0% (0)	33% (2)	33% (2)	0% (0)	0% (0)	33% (2)	6
Systematic sampling	33% (2)	33% (2)	17% (1)	0% (0)	0% (0)	17% (1)	6
Property tax estimates	0% (0)	0% (0)	0% (0)	40% (2)	0% (0)	60% (3)	5
State revenue data	0% (0)	0% (0)	0% (0)	40% (2)	0% (0)	60% (3)	5
Regulatory information	0% (0)	0% (0)	0% (0)	40% (2)	0% (0)	60% (3)	5
Participation in landuse programs	0% (0)	0% (0)	0% (0)	40% (2)	0% (0)	60% (3)	5
Modeling	0% (0)	17% (1)	33% (2)	0% (0)	0% (0)	50% (3)	6
Voluntary landowner reporting	0% (0)	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6
Other (please specify below)	0% (0)	67% (2)	0% (0)	0% (0)	0% (0)	33% (1)	3
Total Respondents							53

31. Other HABITAT inventory and assessment techniques for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. Pit-fall trapping and cover board objects adjacent to ephemeral wetlands; mark and recapture
2. Visual estimate of amount of appropriate habitat being provided in restored areas.

Total Respondents 2

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

1. Surveys
2. Pit-fall traps and cover boards can be used to assess population size and use of ephemeral wetlands for breeding; Mark and recapture can be used to determine migration patterns and use of specific ephemeral wetlands for breeding.

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use of specific ephemeral wetlands for breeding

3. Systematic survey & GIS
4. Systematic sampling (intensive) and GIS (less intensive)

Total Respondents 4

33. What is the current body of science for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Response Total	Response Percent
Complete, up to date and extensive	0	0%
Adequate	0	0%
Inadequate	5	83%
Nonexistent	1	17%
Other (please explain below)	0	0%
Total Respondents	6	

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

		Response Total	Response Percent
Title	1. Amphibians and reptiles from 23 counties of Indiana.	2	100%
Author	1. Robert Brodman	2	100%
Date	1. 2003	2	100%
Publisher	1. Proceedings of the Indiana Academy of Science, 112: 43-54.	2	100%
	2. Proceedings of the Indiana Academy of Science, 112: 43-54.		
Total Respondents		2	

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

		Response Total	Response Percent
Title	Amphibians and reptiles from 23 counties of Indiana.	1	100%
Author	Robert Brodman	1	100%
Date	2003	1	100%
Publisher	Proceedings of the Indiana Academy of Science, 112: 43-54.	1	100%
Total Respondents		1	

36. What is the current HABITAT body of science for the Wildlife in Ephemeral Wetland Habitats in Indiana?

		Response Total	Response Percent
Complete, up to date and extensive		0	0%
Adequate		0	0%
Inadequate		6	100%
Nonexistent		0	0%
Other (please explain below)		0	0%
Total Respondents		6	

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

		Response Total	Response Percent
Title		0	0%
Author		0	0%
Date		0	0%
Publisher		0	0%
Total Respondents		0	

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

		Response Total	Response Percent
Title		0	0%

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Author	0	0%
Date	0	0%
Publisher	0	0%
Total Respondents	0	

39. What are the research needs for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Urgently needed	Greatly needed	Needed	Slightly needed	Not needed	Unknown	Response Total
Life cycle	0% (0)	17% (1)	50% (3)	33% (2)	0% (0)	0% (0)	6
Distribution and abundance	17% (1)	33% (2)	50% (3)	0% (0)	0% (0)	0% (0)	6
Limiting factors (food, shelter, water, breeding sites)	67% (4)	0% (0)	33% (2)	0% (0)	0% (0)	0% (0)	6
Threats (predators/competition, contamination)	67% (4)	0% (0)	33% (2)	0% (0)	0% (0)	0% (0)	6
Relationship/dependence on specific habitats	50% (3)	33% (2)	0% (0)	17% (1)	0% (0)	0% (0)	6
Population health (genetic and physical)	33% (2)	33% (2)	17% (1)	17% (1)	0% (0)	0% (0)	6
Other (please specify below)	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	2
Total Respondents							38

40. Other research needs for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. Information on metapopulation dynamics and migration distances to and from ephemeral wetlands are needed. Information on how many ephemeral wetland habitats within the landscape are needed to maintain healthy populations of Spotted salamander are also needed. Information on buffer size and vegetation composition around ephemeral wetlands is needed.
2. Quite little is known about much of the basic natural history of some wildlife species

Total Respondents 2

41. What are the HABITAT research needs for the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Urgently needed	Greatly needed	Needed	Slightly needed	Not needed	Unknown	Response Total
Successional changes	0% (0)	17% (1)	83% (5)	0% (0)	0% (0)	0% (0)	6
Distribution and abundance (fragmentation)	50% (3)	33% (2)	17% (1)	0% (0)	0% (0)	0% (0)	6
Threats (land use change/competition,	67% (4)	33% (2)	0% (0)	0% (0)	0% (0)	0% (0)	6

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Stocking	0% (0)	0% (0)	0% (0)	83% (5)	17% (1)	6
Other (please specify below)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	2
				Total Respondents		98

44. Other current conservation practices for the Wildlife in Ephemeral Wetland Habitats in Indiana.

1. Wetland restoration
2. Too little is known

Total Respondents 2

45. What one or two specific practices would you recommend for more effective conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?

1. Ephemeral Wetland and forested upland habitat protection
2. 1.Habitat protection needs to be improved greatly. Ephemeral wetlands are not protected or valued as much as other wetlands via regulation.
2.Restoration of ephemeral wetlands and retention of these habitats within the landscape.
3. Protection & restoration of ephemeral wetlands within the historic range of some wildlife species.

Total Respondents 3

46. How well do the following conservation efforts address the HABITAT threats to the Wildlife in Ephemeral Wetland Habitats in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection through regulation	50% (3)	50% (3)	0% (0)	0% (0)	0% (0)	6
Habitat protection on public lands	67% (4)	33% (2)	0% (0)	0% (0)	0% (0)	6
Habitat protection incentives (financial)	17% (1)	17% (1)	17% (1)	0% (0)	50% (3)	6
Habitat restoration through regulation	0% (0)	33% (2)	0% (0)	0% (0)	67% (4)	6
Habitat restoration on public lands	0% (0)	50% (3)	0% (0)	0% (0)	50% (3)	6
Habitat restoration incentives (financial)	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6
Artificial habitat creation (artificial reefs, nesting platforms)	0% (0)	17% (1)	0% (0)	17% (1)	67% (4)	6
Selective use of functionally equivalent exotic species in place of extirpated natives	0% (0)	0% (0)	17% (1)	17% (1)	67% (4)	6
Succession control (fire, mowing)	0% (0)	0% (0)	17% (1)	17% (1)	67% (4)	6
Corridor development/protection	0% (0)	17% (1)	0% (0)	17% (1)	67% (4)	6
Managing water regimes	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6

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Pollution reduction	0% (0)	17% (1)	0% (0)	0% (0)	83% (5)	6
Protection of adjacent buffer zone	0% (0)	50% (3)	0% (0)	0% (0)	50% (3)	6
Restrict public access and disturbance	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	6
Land use planning	0% (0)	33% (2)	0% (0)	0% (0)	67% (4)	6
Technical assistance	0% (0)	17% (1)	17% (1)	0% (0)	67% (4)	6
Cooperative land management agreements (conservation easements)	0% (0)	0% (0)	0% (0)	17% (1)	83% (5)	6
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
					Total Respondents	103

47. Other current HABITAT conservation practices for the Wildlife in Ephemeral Wetland Habitats in Indiana.

Many of the current 'conservation practices' and incentive programs promoted by biologists seem to be aimed at ducks and actually manage against some other wildlife species.

Total Respondents 1

48. What one or two specific HABITAT practices would you recommend for more effective conservation of the Wildlife in Ephemeral Wetland Habitats in Indiana?

1. Forested ephemeral wetland protection and forest protection
2. Restoration and protection of ephemeral wetlands; protection of buffers needed for amphibians migrating to the ephemeral wetland for breeding;
3. When creating wetlands under a landowner incentive program, create ephemeral wetlands whenever possible rather than duck ponds.
4. Protection and restoration of ephemeral wetlands.
5. Habitat protection on private & public lands

Total Respondents 5

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

1. The distribution of spotted salamanders in Indiana is more spotty than one might expect.
2. It is not known if *Rana blairi* exists in Indiana. The only known specimen from Indiana were collected and deposited in museums prior to the species even being described. To the best of my knowledge, the most recently documented *Rana blairi* from Indiana was about 30 years ago.
3. Step one is the need for more information about some wildlife species and their abundance in Indiana

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	Total Respondents 3
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