

Appendix E-4: Dunes and Shorelines

10. Please rank the following threats to the HABITAT of the Wildlife in Dunes and Shorelines Habitat in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Commercial or residential development (sprawl)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Counterproductive financial incentives or regulations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Invasive/non-native species	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Nonpoint source pollution (sedimentation and nutrients)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Habitat fragmentation	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Successional change	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Diseases (of plants that create habitat)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Habitat degradation	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Climate change	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Stream channelization	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Impoundment of water/flow regulation	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Agricultural/forestry practices	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Residual contamination (persistent toxins)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Point source pollution (continuing)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Mining/acidification	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Drainage practices (stormwater runoff)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Total Respondents							16

11. Other HABITAT threats to the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents **0**

(skipped this question) **1**

12. Please briefly describe the top two HABITAT threats to the Wildlife in Dunes and Shorelines Habitat in Indiana identified above.

1. Factors that affect food availability
Modification of stream shoreline habitats.

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Total Respondents 1

13. What current monitoring efforts by state agencies are you aware of for the Wildlife in Dunes and Shorelines Habitat 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% (1)	1
Statewide once a year monitoring conducted by state agencies	0% (0)	100% (1)	1
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (1)	1
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	100% (1)	0% (0)	1
Regional or local year-round monitoring conducted by state agencies	0% (0)	100% (1)	1
Regional or local once a year monitoring conducted by state agencies	0% (0)	100% (1)	1
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (1)	1
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (1)	1
		Total Respondents	8

14. What current monitoring efforts by other organizations are you aware of for the Wildlife in Dunes and Shorelines Habitat 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% (1)	1
Statewide once a year monitoring conducted by other organizations	100% (1)	0% (0)	1
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (1)	1
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	100% (1)	1
Regional or local year-round monitoring conducted by other organizations	0% (0)	100% (1)	1
Regional or local once a year monitoring conducted by other organizations	0% (0)	100% (1)	1
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	100% (1)	0% (0)	1
Occasional regional or local (less than once a year and not			

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regularly scheduled) monitoring conducted by other organizations

Total Respondents 8

15. How crucial are these monitoring efforts by state agencies for the conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total
Statewide year-round monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Statewide once a year monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Regional or local year-round monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Regional or local once a year monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
				Total Respondents		8

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16. How crucial are these monitoring efforts by other organizations for the conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total				
Statewide year-round monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Statewide once a year monitoring conducted by other organizations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1				
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Regional or local year-round monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Regional or local once a year monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1				
				Total Respondents		8				

17. Regional or local state agency monitoring for the Wildlife in Dunes and Shorelines Habitat in Indiana.

- Breeding Bird Atlas statewide every 20 years

Total Respondents 1

18. Regional or local monitoring by other organizations for the Wildlife in Dunes and Shorelines Habitat in Indiana.

- federal Breeding Bird Survey, state May Day counts, Summer Bird Counts

Total Respondents 1

19. Please list organizations that are monitoring the Wildlife in Dunes and Shorelines Habitat in Indiana.

- USGS (Breeding Bird Survey) and volunteers with Indiana Audubon Society

Total Respondents 1

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20. What are the current monitoring techniques for the Wildlife in Dunes and Shorelines Habitat 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)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Modeling	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Coverboard routes	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Spot mapping	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Driving a survey route	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Reporting from harvest, depredation, or unintentional take (road kill, bycatch)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Mark and recapture	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Professional survey/census	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Volunteer survey/census	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	1
Trapping (by any technique)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Representative sites	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Probabilistic sites	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Total Respondents							12

21. Other monitoring techniques for the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents **0**

(skipped this question) 1

22. What one or two monitoring techniques would you recommend for effective conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

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1. Directed surveys (canoe surveys, migration counts) most intensive.
General breeding bird surveys less intensive

Total Respondents 1

23. What current HABITAT inventory and assessment efforts or activities by state agencies are you aware of for the Wildlife in Dunes and Shorelines Habitat 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% (1)	1
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Regional or local once a year inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	1
		Total Respondents	8

24. What current HABITAT inventory and assessment efforts or activities by other organizations are you aware of for the Wildlife in Dunes and Shorelines Habitat 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% (1)	1
Statewide once a year inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Regional or local year-round inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Regional or local once a year inventory and assessment conducted by other organizations	0% (0)	100% (1)	1

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Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	1
Total Respondents			8

25. How crucial are these HABITAT efforts by state agencies for the conservation of the Wildlife in Dunes and Shorelines Habitat 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)	0% (0)	0% (0)	100% (1)	0% (0)	1
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Regional or local once a year inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	1
Total Respondents						8

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Total Respondents 1

29. Please list organizations that are monitoring this HABITAT for the Wildlife in Dunes and Shorelines Habitat in Indiana.

1. unknown

Total Respondents 1

30. What are the current HABITAT inventory and/or assessment techniques for Wildlife in Dunes and Shorelines Habitat 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	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Aerial photography and analysis	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Systematic sampling	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Property tax estimates	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
State revenue data	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Regulatory information	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Participation in landuse programs	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Modeling	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Voluntary landowner reporting	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
							Total Respondents 9

31. Other HABITAT inventory and assessment techniques for the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents 0

(skipped this question) 1

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32. What one or two HABITAT inventory and assessment techniques would you recommend for effective conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

1. aerial imagery to identify and quantify habitat.

Total Respondents **1**

33. What is the current body of science for the Wildlife in Dunes and Shorelines Habitat in Indiana?

	Response Total	Response Percent
Complete, up to date and extensive	0	0%
Adequate	1	100%
Inadequate	0	0%
Nonexistent	0	0%
Other (please explain below)	0	0%
Total Respondents	1	

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

Title Atlas of Breeding Birds in Indiana
 Author Castrale, J.S., E. Hopkins, C.E. Keller
 Date 1998
 Publisher IDNR

35. If possible, please provide a second citation (title, author, date, publisher) that would give another good overview of the Wildlife in Dunes and Shorelines Habitat in Indiana. This resource may also 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	
(skipped this question)		1

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36. What is the current HABITAT body of science for the Wildlife in Dunes and Shorelines Habitat in Indiana?

		Response Total	Response Percent
Complete, up to date and extensive		0	0%
Adequate		0	0%
Inadequate		1	100%
Nonexistent		0	0%
Other (please explain below)		0	0%
Total Respondents			1

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

		Response Total	Response Percent
Title	see previous citation	1	100%
Author		0	0%
Date		0	0%
Publisher		0	0%
Total Respondents			1

38. If possible, please provide a second citation (title, author, date, publisher) that would give another good HABITAT overview of the Wildlife in Dunes and Shorelines Habitat in Indiana. This resource may also 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
(skipped this question)			1

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42. Other HABITAT research needs for the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents 0

(skipped this question) 1

43. How well do the following conservation efforts address the threats to the Wildlife in Dunes and Shorelines Habitat in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection (use below for details)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Population management (hunting, trapping)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Population enhancement (captive breeding and release)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Reintroduction (restoration)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Food plots	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Threats reduction	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Native predator control	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Exotic/invasive species control	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Regulation of collecting	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Disease/parasite management	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	1
Translocation to new geographic range	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Protection of migration routes	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Limiting contact with pollutants/contaminants	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Public education to reduce human disturbance	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Culling/selective removal	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Stocking	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
						Total Respondents 16

44. Other current conservation practices for the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents 0

(skipped this question) 1

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45. What one or two specific practices would you recommend for more effective conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

1. Prevention of stream channelization and other (pollution) habitat factors.
Limit disturbance in nesting/migration habitat.

Total Respondents **1**

46. How well do the following conservation efforts address the HABITAT threats to the Wildlife in Dunes and Shorelines Habitat in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection through regulation	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Habitat protection on public lands	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Habitat protection incentives (financial)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Habitat restoration through regulation	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Habitat restoration on public lands	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Habitat restoration incentives (financial)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Artificial habitat creation (artificial reefs, nesting platforms)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Selective use of functionally equivalent exotic species in place of extirpated natives	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	1
Succession control (fire, mowing)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Corridor development/protection	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Managing water regimes	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Pollution reduction	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Protection of adjacent buffer zone	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Restrict public access and disturbance	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	1
Land use planning	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Technical assistance	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Cooperative land management agreements (conservation easements)	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	1
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
						Total Respondents 17

47. Other current HABITAT conservation practices for the Wildlife in Dunes and Shorelines Habitat in Indiana.

No responses were entered for this question.

Total Respondents **0**

(skipped this question) 1

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48. What one or two specific HABITAT practices would you recommend for more effective conservation of the Wildlife in Dunes and Shorelines Habitat in Indiana?

1. Water regime management for migration habitat.
Protection of nesting habitat along streams.

Total Respondents **1**

49. Do you have any additional comments or information on the Wildlife in Dunes and Shorelines Habitat that you feel would be useful in the development of the Indiana Comprehensive Wildlife Strategy?

No responses were entered for this question.

Total Respondents **0**

(skipped this question) **1**