

FARMER INTERVIEW INFORMATION SHEET

Adaptive targeting: Engaging stakeholders to improve watershed modeling and in-field implementation of agricultural conservation practices

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Purpose of Research: The interviews are being conducted to collect land management practice data from agricultural producers to inform a watershed-scale model that will be used to identify locations for conservation that are cost-effective and efficient. Social information will also be collected to tailor conservation practices to producer preferences in order to improve relevance of targeted solutions and hopefully increase adoption rates.

Specific Procedures: You will be asked to participate in individual interviews that will be audio recorded. The student will use an interview guide to work through the interview. During the interview, you will be asked questions relating to your farming practices, conservation practices, and your views on targeting conservation to the most cost-effective and efficient locations.

Duration of Participation: The study will be conducted from December 2011 to summer of 2012. Interviews will average one hour and you will be asked to participate in only one or two interviews.

Risks: Risks are no more than one would encounter in everyday life. If you are uncomfortable with any of the techniques used or questions asked, you may choose not to participate.

Benefits: There will be no direct benefits to individual participants.

Compensation: No compensation will be provided for participating in these interviews.

Confidentiality: All opinions you share, and information related to your management practices, will be purely confidential and accessible only to the research team. Information related to the spatial locations of structures and practices (e.g. conservation practices) may be shared with conservation staff. Transcriptions of the interviews will be confidential and stored indefinitely. Raw interview data will be confidential and destroyed at the conclusion of the study, approximately May 2013. Individual names of interviewees will not be included in the reporting of findings; instead a generic identity such as "Interviewee 1" will be used to replace names or other identifying information that could be used to associate specific responses with individual participants.

Voluntary Nature of Participation: Participation is voluntary - you do not have to participate in this research project. If you agree to participate you can withdraw your participation at any time without penalty.

Contact Information: If you have any questions about this research project, you can contact Dr. Jane Frankenberger, Professor, 765-494-1194, frankenb@purdue.edu, or Margaret Kalcic, Graduate Research Assistant, 413-522-7353, mmccahon@purdue.edu (primary contact). If you have concerns about the treatment of research participants, you can contact the Institutional Review Board at Purdue University, Ernest C. Young Hall, Room 1032, 155 S. Grant St., West Lafayette, IN 47907-2114. The phone number for the Board is (765) 494-5942. The email address is irb@purdue.edu.

Informed Consent: I have had the opportunity to read this information sheet and have the research study explained. I have had the opportunity to ask questions about the research project and my questions have been answered. I am prepared to participate in the research project described above.

I want to thank you for your time, this interview will be a great help to me. You may be hearing from me again in a few months about an opportunity to place an optimal practice on your land, and at that point I would contact you again for another interview. If you do not want me to contact you for a second interview, you can let me know now or at a later point. If at any point you are curious about the status of my research, or want to contact me for any reason, here is my contact information:

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Introduction

Before we start the interview, I want to go over an information sheet with you. This sheet explains my study, that it is ethically sound, and will protect all persons involved. Note that if at any point in our conversation you are uncomfortable with the information you shared or have been asked to share, you can simply let me know and we'll move on.

I will be taking notes during our interview, but I may not be able to catch everything on paper. Would you mind if I tape record our conversation today?

Farm information

I would like to get some basic information about you and your farm.

1. Approximately what year did you start farming in this region? _____
2. What year were you born? _____
3. I would like to know what type of farm you have.
 - a. What are the primary crops that you grow? _____
 - b. Do you have livestock on your farm? If so, what livestock do you have?
 - i. Dairy cattle
 - ii. Beef cattle
 - iii. Hogs
 - iv. Poultry
 - v. Sheep
 - vi. Goats
 - vii. Other
4. I have here a number of maps of my study area, and I believe you farm some land in this area. Will you point out to me the locations where you grow crops? If you don't mind, please mark the fields you own and farm or rent and farm in highlighter, and mark "O" in fields you own and "R" in fields you rent. You will be marking up these small maps throughout our interview today.

Conservation practices

Now I want to ask you some questions about conservation practices. We will go through conservation practices one at a time, looking at each one carefully.

5. Before we do this, do you have any streams or ditches on your property? If so, do they match up with this streams data layer on the map?
6. Do you have any tile drains on your property? For each field, please write "ND" for no drains, "RD" for randomly patterned drains, and "PD" for patterned tiles. Also estimate drain spacing if it is known.

Continuous no-till, strip till, or mulch till (Residue and tillage management (329))

8. Would you please describe your current tillage practices for corn and bean crops?
9. Have you ever used continuous no-till on your farm? If yes:
 - a. Are you currently using this practice? If not, why did you stop using this practice?
 - b. What crops do you no-till –beans, corn, or others?
 - c. Can you show me where on the map you are currently using no-till? Mark with ‘NT’.
 - d. Why did you implement no-till?
 - e. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?
10. What benefits do you think continuous no-till/strip-till/mulch-till provides?
11. Do you think this practice could be applicable to the land you farm? If yes:
 - a. Would you consider using continuous no-till on your farm, if given an incentive to do so?
 - b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Cover crops (340)

12. Have you ever grown cover crops on your farm? If yes:

- a. Are you currently using this practice? If not, why did you stop using this practice?
- b. Can you show me where on the map you are currently using this practice? Mark with 'CC'.
- c. What cover crop variety do you use?
- d. Why did you grow cover crops?
- e. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?

13. What benefits do you think cover crops provide?

14. Do you think this practice could be applicable to the land you farm? If yes:

- a. Would you consider installing this practice on your farm, if given an incentive to do so?
- b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
- c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Filter strip (393)

15. Have you ever implemented filter strips on your farm? If yes:

- a. Are you currently using this practice? If not, why did you stop using this practice?
- b. Can you show me where on the map you are currently using this practice? Mark with 'FS'.
- c. Why did you implement filter strips?
- d. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?

16. What benefits do you think filter strips provide?

17. Do you think this practice could be applicable to the land you farm? If yes:

- a. Would you consider installing this practice on your farm, if given an incentive to do so?
- b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
- c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Grassed waterway (412)

18. Have you ever implemented grassed waterways on your farm? If yes:

- a. Are you currently using this practice? If not, why did you stop using this practice?
- b. Can you show me where on the map you are currently using this practice? Mark with 'GW'.
- c. Why did you implement this practice?
- d. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?

19. What benefits do you think this practice provide?

20. Do you think this practice could be applicable to the land you farm? If yes:

- a. Would you consider installing this practice on your farm, if given an incentive to do so?
- b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
- c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Drainage water management (554)

21. Have you ever implemented drainage water management on your farm? If yes:
- Are you currently using this practice? If not, why did you stop using this practice?
 - Can you show me where on the map you are currently using this practice? Mark with 'DWM'.
 - Why did you implement this practice?
 - Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?
22. What benefits do you think this practice provide?
23. Do you think this practice could be applicable to the land you farm? If yes:
- Would you consider installing this practice on your farm, if given an incentive to do so?
 - Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - If not applicable, would you be interested in the practice under different circumstances? What would those be?

(Note: drainage water management only makes sense if systematic drains, with spacing of less than 100 ft)

Nutrient management (590)

24. Can you please describe your nutrient management strategies?
- Can you tell me at what rates and timings your fertilizers and/or manure is applied?
 - How do you decide your application rates? What's the basis for the decision?
 - How do you apply Phosphorus? Do you apply it below the soil? If broadcast, is it incorporated?
25. Have you ever received funding for nutrient management on your farm? Or have you worked with a certified technical service provider (TSP) to develop a comprehensive nutrient management plan (CNMP)? (TSPs can be crop advisors, chemical reps, seed salesman, etc.) If yes to either question:
- Are you currently using this practice? If not, why did you stop using this practice?
 - Can you show me where on the map you are currently using this practice? Mark with 'NM'.
 - What specifically have you done for this practice?
 - Why did you implement this practice?
26. What benefits do you think this practice provide?
27. Do you think this practice could be applicable to the land you farm? If yes:
- Would you consider working with a certified technical service provider to develop a comprehensive nutrient management plan on your farm, if given an incentive to do so?
 - Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - If not applicable, would you be interested in the practice under different circumstances? What would those be?

Waste utilization (633)

28. Do you apply manure on your farm?

29. Do you have animals on your farm? If yes:

- a. Do you apply their manure as fertilizer? Where?
- b. When do you apply this manure?
- c. Approximately how many animals do you have?
- d. Approximately how much manure do they produce?
- e. How do you decide your manure application rates? What's the basis for the decision?
- f. Do you think that you could apply less fertilizer overall if you spread out your manure applications to a wider area?
- g. In what other fields would you be interested in applying the manure?

30. Have you ever received funding to use waste utilization on your farm? If yes:

- a. Are you currently using this practice? If not, why did you stop using this practice?
- a. Can you show me where on the map you are currently using this practice? Mark with 'WU'.
- b. Why did you implement this practice?

31. What benefits do you think this practice provide?

32. Do you think this practice could be applicable to the land you farm? If yes:

- a. Would you consider installing this practice on your farm, if given an incentive to do so?
- b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
- c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Restoration and management of rare or declining habitats (643)

33. Have you ever implemented this practice on your farm? Or do you grow any prairie grasses on your farm? If yes:
- Are you currently using this practice? If not, why did you stop using this practice?
 - Can you show me where on the map you are currently using this practice? Mark with 'Restore'.
 - What habitats have you restored/managed?
 - Why did you implement this practice?
 - Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?
34. What benefits do you think this practice provide?
35. Do you think this practice could be applicable to the land you farm? If yes:
- Would you consider installing this practice on your farm, if given an incentive to do so?
 - Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - If not applicable, would you be interested in the practice under different circumstances? What would those be?

Upland wildlife habitat management (645)

36. Have you ever implemented this practice on your farm? If yes:
- Are you currently using this practice? If not, why did you stop using this practice?
 - Can you show me where on the map you are currently using this practice? Mark with 'Upland'.
 - What specific habitats have you managed on your farm? What species? (trees, grasses?)
 - Why did you implement this practice?
 - Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?
37. What benefits do you think this practice provide?
38. Do you think this practice could be applicable to the land you farm? If yes:
- Would you consider installing this practice on your farm, if given an incentive to do so?
 - Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - If not applicable, would you be interested in the practice under different circumstances? What would those be?

Two-stage drainage ditches (option of 654)

39. Have you ever implemented two-stage ditches on your farm? If yes:

- a. Are you currently using this practice? If not, why did you stop using this practice?
- b. Can you show me where on the map you are currently using this practice? Mark with '2-stage'.
- c. Why did you implement this practice?
- d. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?

40. What benefits do you think this practice provide?

41. Do you think this practice could be applicable to the land you farm? If yes:

- a. Would you consider installing this practice on your farm, if given an incentive to do so?
- b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
- c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Wetlands (Wetland restoration/creation (657/658))

42. Have you ever created or restored a wetland on your farm? If yes:
- a. Are you currently using this practice? If not, why did you stop using this practice?
 - b. Can you show me where on the map you are currently using this practice? Mark with 'Wetland'.
 - c. Why did you implement this practice?
 - d. Are you receiving, or did you receive in the past, any incentives for this practice? If so, which ones?
43. What benefits do you think this practice provide?
44. Past research has indicated that wetlands can be applicable to a variety of farmland in this area.
- a. Would you consider installing a wetland on your farm, if given an incentive to do so?
 - b. Why or why not? Please place the fact sheet in one of three piles: yes, no, and maybe.
 - c. If not applicable, would you be interested in the practice under different circumstances? What would those be?

Summary of conservation practices

45. Let's look back through the piles you made. Would you move anything around? Why?
46. Have you used other conservation practices, which we did not cover? If so, which ones? What benefits do these provide?
47. Are there any other reasons you would choose to or not to install conservation practices? What might cause you to decide you want to implement more conservation practices on your farm?
- a. *May probe further into incentives:* What kinds of incentives are appealing to you? What kinds of incentives do not appeal to you?
48. Are you familiar with the term "ecosystem services?"
- a. How would you describe ecosystem services?
49. Do you think some farmers contribute more to water quality problems than others? Why or why not?
50. How do you think farmers should take responsibility for water quality preservation?

Response to targeting

51. Do you think conservation practices should be targeted to locations where they are most effective?
- a. Should conservation practices be prioritized in locations where they do the most good for water quality at the least cost?
 - b. Why do you think this?

52. Do you think conservation funding should be higher for land that is most vulnerable to soil and water quality problems? Why or why not?

53. In my research, I am using a landscape-scale model to find optimal locations for conservation practices in this area. Do you think computer models can effectively identify good locations for conservation practices? What would increase your trust in these models?

54. After I use the computer model to find optimal locations for conservation, I will approach those landowners to show them what I've found. How would you feel if you were told that you had the opportunity to be compensated for adopting an optimal conservation practice on your farm?

a. How would you likely respond?

55. We have nearly concluded the interview. Do you have any questions for me?

Closing statements

I want to thank you for your time, this interview will be a great help to me. You may be hearing from me again in a few months about an opportunity to place an optimal practice on your land, and at that point I would contact you again for another interview. If you do not want me to contact you for a second interview, you can let me know now or at a later point.

56. If I find that your land may be optimal for a conservation practice that you expressed an interest in during this study, would you like me to contact you for a second interview?

If at any point you are curious about the status of my research, or want to contact me for any reason, here is my contact information:

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