



# Evaluation Report

## Feral Swine/Pseudo-rabies Working Group

### Meeting 2: January 25-26, 2010

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## Executive Summary

### Brief Synopsis of Event

This report is an evaluation of a NIMBioS Working Group entitled “Feral Swine/Pseudo-rabies” (Feral Swine), which held its second meeting at NIMBioS January 25-26, 2010. NIMBioS Working Groups are chosen to focus on major scientific questions at the interface between biology and mathematics. NIMBioS is particularly interested in questions that integrate diverse fields, require synthesis at multiple scales, and/or make use of or require development of new mathematical/computational approaches. NIMBioS Working Groups are relatively small (10-12 participants, with a maximum of 15), focus on a well-defined topic, and have well-defined goals and metrics of success. Working Groups will typically meet 2-3 times over a two-year period, with each meeting lasting 3-5 days; however, the number of participants, number of meetings, and duration of each meeting is flexible, depending on the needs and goals of the group.

The second meeting of the Feral Swine group comprised 14 participants, including organizers Graham Hickling (Department of Forestry, Wildlife and Fisheries, University of Tennessee, Knoxville and NIMBioS Associate Director for Partner Relations) and Suzanne Lenhart (Mathematics Department, University of Tennessee, Knoxville and NIMBioS Associate Director for Outreach, Education, and Diversity). Four participants from the first meeting of the Working Group were not present at the second meeting, and three participants in the second meeting did not attend the first meeting.

The second meeting of the Feral Swine Working Group began with an update on control efforts and disease surveillance of hogs in the GSMNP from the past year. The group discussed the development and availability of geospatial datasets for the GSMNP, and a preliminary spatial model for population dynamics and movement of hogs within and adjacent to the park. Progress on nationwide mapping of feral hogs was reviewed, and the University of Georgia is developing a “cyber infrastructure” proposal for mapping and analyzing multiple invasive species, the feral hog component of which will be contributed to by the Working Group as a whole.

The goals of the Working Group were reviewed and revised into more specific tasks, which included constructing a non-spatial age-structured model representing the transmission of pseudo-rabies in a generic feral hog population, creating a model that incorporates seasonal movement of hogs in the GSMNP, adapting an existing Individual Based Movement (IBM) bear model so it can be applied to hogs, developing a spatial/GIS model aimed at predicting hog distribution over Arkansas/Missouri and North Carolina/South Carolina, and writing a review article on the role of modeling in developing strategies for management of disease in feral hogs.

## Evaluation Design

An electronic survey aligned to the following evaluation questions was designed by the NIMBioS Evaluation Coordinator with input from the NIMBioS Director and Deputy Director:

1. Were participants satisfied with the Working Group overall?
2. Did the meeting meet participant expectations?
3. Do participants feel the Working Group made adequate progress toward its stated goals?
4. Do participants feel they have a good understanding about the work being done by other subgroups within the group?
5. Do participants feel they gained a better understanding of how the work of the various subgroups will tie together to reach the Working Group's goals?
6. What impact has the Working Group had on participants' research agendas?
7. Were participants satisfied with communication between group meetings?
8. Have participants produced any products/publications associated with the Working Group?

The final instrument was hosted online via the University of Tennessee's online survey host mrInterview. Links to the survey were sent to 11 Working Group participants on January 27, 2010 (organizers Graham Hickling and Suzanne Lenhart, as well as NIMBioS staff Eric Carr, were not included in the evaluation). Reminder emails were sent to non-responding participants on February 3 and 8, 2010. By February 15, 2010, nine participants had given their feedback, for a response rate of 82%.

An electronic demographic survey aligned to the reporting requirements of the National Science Foundation was designed by the NIMBioS Evaluation Coordinator with input from the NIMBioS Director. The final instrument was hosted online via the University of Tennessee's online survey host mrInterview. Links to the survey were sent to the two Working Group participants for whom NIMBioS did not have complete information on November 11, 2010. By November 18, 2010, both participants had filled out the survey for a response rate of 100%. Demographics questions regarding gender, race, and ethnicity, and disability status were optional (disability status is not reported in this evaluation report). All demographic information is confidential, and results are reported only in the aggregate. When feasible, the evaluator filled in missing demographic data from other sources (e.g. address, institution, field of study). The evaluator did not assume race, ethnicity, or disability status for any participant who did not report this information.

## Highlights of Results

- Overall satisfaction with the Working Group was high among respondents, 100% of whom indicated they either agreed or strongly agreed that the Working Group was very productive and 88% of whom indicated it met their expectations.
- 89% of respondents thought the presentations were useful and all thought that the presenters were very knowledgeable about their presentation topics.
- Overall, respondents reported being satisfied with the travel, housing, and other amenities provided by NIMBioS.
- All respondents agreed that participating in the Working Group meeting increased their understanding of the work being done by others in the group, and most (89%) agreed they had a better understanding of how everyone's work would come together to achieve the goals of the group.
- All respondents agreed that adequate progress was made toward developing the group's article reviewing optimal modeling and management of emerging diseases in feral species.
- All respondents said that participating in the working had influenced their research agendas in some way.
- 100% of respondents said they left this meeting with a good idea of what their contribution will be at the next meeting.

## Conclusions and Recommendations

Overall, the Working Group was very successful in making progress toward its goals. Working Group respondents were satisfied with the meeting, indicating that it was a productive experience that met their expectations. Respondents were also satisfied with the accommodations offered by NIMBioS.

All respondents agreed that participating in the Working Group meeting increased their understanding of the work being done by others in the group, and most agreed they had a better understanding of how everyone's work would come together to achieve the goals of the group. Several respondents indicated the most beneficial aspect of the Working Group was the group discussions, although some would have liked to have had more time for breakout group discussions as well. All respondents said they felt the expectations for the next Working Group meeting are clear, in the sense that they were leaving this meeting with a good idea of what they needed to accomplish before the next meeting.

Most respondents indicated they had used the Wiggio for communicating with their group in some way, with the most common form of communication being reading a message to or from one or more group members or uploading a file. All but one respondent agreed that the Wiggio was either "Very useful" or "Somewhat useful" for the purpose of communicating and/or collaborating with other members of the Working Group.

All respondents said that participating in the Working Group had influenced their research agendas. Two participants noted that their research related to the Working Group was their highest priority, while others said being in the group has given them a better understanding of the topic and new ideas for research.

At the time of reporting the Feral Swine Working Group has not reported any products related to the group.

Several participants made suggestions for changing the meeting format, including having a longer meeting and more time for small group discussions and task work. All respondents indicated they would like to have more updates about what others in the group are doing between meetings. Most preferred this to be done electronically via email or the Wiggio.

Based on analysis of participant response data, the recommendations to NIMBioS and/or Working Group organizers are as follows:

- If feasible, consider adding another day to the next meeting to allow for more time for breakout group discussions and working on tasks.
- Consider asking subgroup leaders to report at regular intervals the progress on their tasks via the Wiggio.
- Working Group organizers should continue to monitor group publications and products and encourage group members to report these to NIMBioS as they become available.

# Feral Swine/Pseudo-rabies Working Group Evaluation Report

## Background

The second meeting of the Feral Swine Working Group comprised 14 participants, including organizers Graham Hickling (Department of Forestry, Wildlife and Fisheries, University of Tennessee, Knoxville and NIMBioS Associate Director for Partner Relations) and Suzanne Lenhart (Mathematics Department, University of Tennessee, Knoxville and NIMBioS Associate Director for Outreach, Education, and Diversity). Four participants from the first meeting of the Working Group were not present at the second meeting, and three participants in the second meeting did not attend the first meeting. Participants came from several government agencies and universities in Australia, North and Central America, and the United States (See Appendix A).

NIMBioS Working Groups are chosen to focus on major scientific questions at the interface between biology and mathematics. NIMBioS is particularly interested in questions that integrate diverse fields, require synthesis at multiple scales, and/or make use of or require development of new mathematical/computational approaches. NIMBioS Working Groups are relatively small (10-12 participants, with a maximum of 15), focus on a well-defined topic, and have well-defined goals and metrics of success. Working Groups will typically meet 2-3 times over a two-year period, with each meeting lasting 3-5 days; however, the number of participants, number of meetings, and duration of each meeting is flexible, depending on the needs and goals of the group.

The first meeting of the Feral Swine Working Group brought together a diverse group of researchers to model the feral hog population of the Smoky Mountains National Park (GSMNP), to investigate potential methods for predicting the spread of feral hogs in the southeastern United States, and to review the general principles of mathematical modeling and management of emerging diseases in feral species.

The first meeting of the Working Group discussed recent data on feral swine populations in the GSMNP, and utilized the National Feral Swine Mapping system to chart the growing distribution of feral hogs across the United States. Several tasks were assigned to subgroups, including initiating modeling of the feral hog population in the GSMNP, investigating prospects for predicting the spread of feral hogs in the southeastern United States, and reviewing the general principles of modeling and management of emerging diseases in feral species.

The second meeting of the Feral Swine Working Group began with an update on control efforts and disease surveillance of hogs in the GSMNP from the past year. The group discussed the development and availability of geospatial datasets for the GSMNP, and a preliminary spatial model for population dynamics and movement of hogs within and adjacent to the park. Progress on nationwide mapping of feral hogs was reviewed, and the University of Georgia is developing a “cyber infrastructure” proposal for mapping and analyzing multiple invasive species, the feral hog component of which will be contributed to by the Working Group as a whole.



The goals of the Working Group were reviewed and revised into more specific tasks, which included constructing a non-spatial age-structured model representing the transmission of pseudo-rabies in a generic feral hog population, creating a model that incorporates seasonal movement of hogs in the GSMNP, adapting an existing Individual Based Movement (IBM) bear model so it can be applied to hogs, developing a spatial/GIS model aimed at predicting hog distribution over Arkansas/Missouri and North Carolina/South Carolina, and writing a review article on the role of modeling in developing strategies for management of disease in feral hogs.

### Participant Demographics

Meeting participants were college/university faculty (64%) and government employees (36%). Primary fields of study for the 14 participants included agricultural sciences/natural resources, biological/biomedical sciences, engineering, mathematics, and health sciences (Table 1).

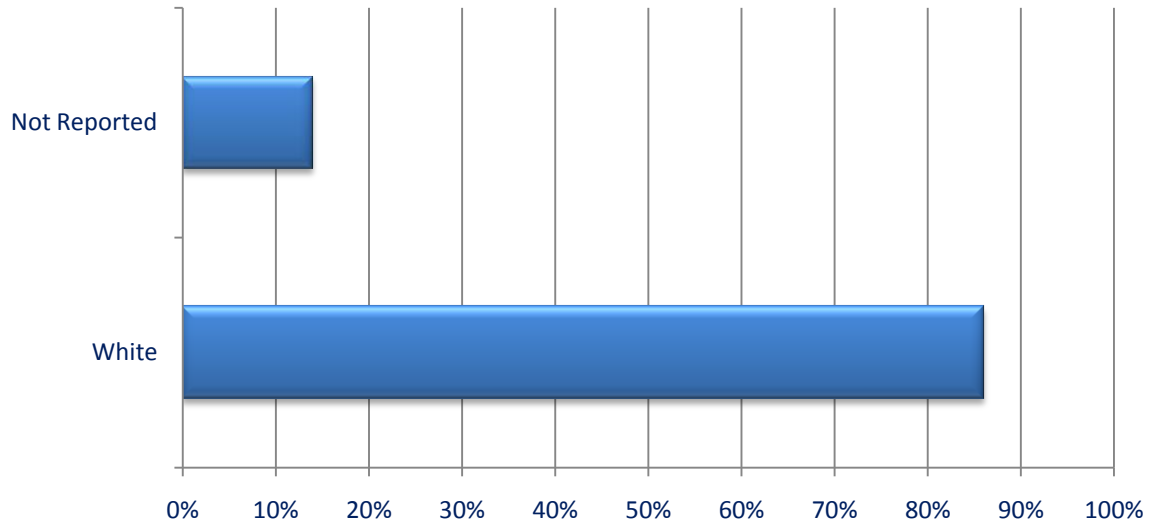
**Table 1. Participant fields of study and areas of concentration**

Field of Study	Concentration	# Participants
Agricultural Sciences/Natural Resources	Natural Resource Conservation	1
	Wildlife/Range Management	3
Biological/Biomedical Sciences	Ecology	1
	Zoology	1
	Zoology, Other	1
Engineering	Materials Science	1
Health Sciences	Veterinary Medicine	2
Mathematics	Applied Mathematics	1
	Mathematical Biology	1
	Mathematical Ecology	1
Not Reported	N/A	1

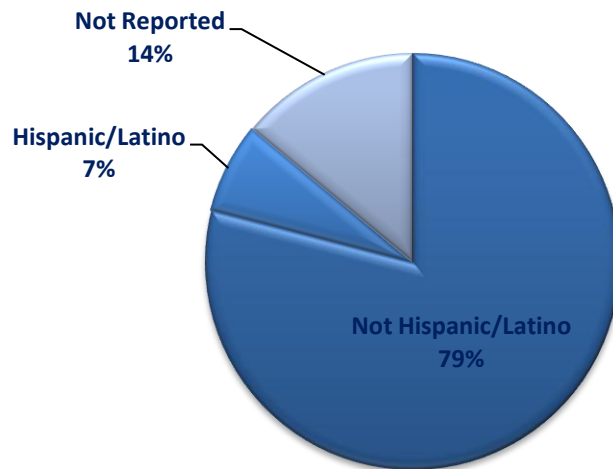
Participants represented eight different institutions across Australia, North and Central America, and the United States. Within the U.S., four states were represented. Of the four different colleges/universities, all were classified as comprehensive (having undergraduate and graduate programs).

The four females and 10 males (one of whom self-identified as being of Hispanic/Latino ethnicity) mostly self-identified racially as white (Figures 1 & 2).

**Figure 1. Racial composition of program participants (n=14)**



**Figure 2. Ethnic composition of program participants (n=14)**



## Evaluation Design

### Evaluation Questions

The evaluation of the meeting was both formative and summative in nature, in that the data collected from participants was intended to both gain feedback from participants about the quality of the current meeting and also to inform future meetings. The evaluation framework was guided by Kirkpatrick's Four

Levels of Evaluation model for training and learning programs (Kirkpatrick, 1994<sup>1</sup>). Several questions constituted the foundation for the evaluation:

1. Were participants satisfied with the Working Group overall?
2. Did the meeting meet participant expectations?
3. Do participants feel the Working Group made adequate progress toward its stated goals?
4. Do participants feel they have a good understanding about the work being done by other subgroups within the group?
5. Do participants feel they gained a better understanding of how the work of the various subgroups will tie together to reach the Working Group's goals?
6. What impact has the Working Group had on participants' research agendas?
7. Were participants satisfied with communication between group meetings?
8. Have participants produced any products/publications associated with the Working Group?

### Evaluation Procedures

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### Data Analysis

Data from the electronic survey included both forced-response and supply-item questions. All data were downloaded from the online survey host into the statistical software package SPSS for analysis. Quantitative data were analyzed using SPSS, while qualitative data were analyzed in SPSS Text Analysis for Surveys. Qualitative responses were categorized by question and analyzed for trends.

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<sup>1</sup> From Kirkpatrick, D.L. (1994). *Evaluating Training Programs: The Four Levels*. San Francisco, CA: Berrett-Koehler.

## Findings

### Participant Satisfaction

#### *Overall Satisfaction*

Overall satisfaction with the Working Group was high among respondents, 100% of whom indicated they either agreed or strongly agreed that the Working Group was very productive, and 88% of whom indicated it met their expectations. Some participant comments:

*“Hope to continue working with this and other NIMBioS groups.”*

*“The meeting was incredibly well organized and executed...”*

In addition, most respondents (89%) thought the presentations were useful, and all felt that the presenters were very knowledgeable about their presentation topics (Table 2).

**Table 2. Satisfaction with various aspects of the Working Group**

	<i>n</i>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I feel the Working Group was very productive.	9	44%	56%	0%	0%	0%
The Working Group met my expectations.	9	44%	44%	11%	0%	0%
The presenters were very knowledgeable about their topics.	9	67%	33%	0%	0%	0%
The presentations were useful.	9	67%	22%	11%	0%	0%
The group discussions were useful.	9	56%	44%	0%	0%	0%

#### *Satisfaction with Accommodations*

Overall, respondents reported being satisfied with the travel, housing, and facilities provided by NIMBioS during the Working Group (Table 3). One participant’s comments about the overall accommodations:

*“...I loved the hotel. The meeting room was perfect (3 projectors were on simultaneously!)...”*

**Table 3. Participant satisfaction with Working Group accommodations**

Please indicate your level of satisfaction with the Working Group accommodations:	<i>n</i>	Very satisfied	Satisfied	Neutral	Dissatisfied	Strongly dissatisfied
Comfort of the facility in which the Working Group took place	9	89%	11%	0%	0%	0%
Resources of the facility in which the Working Group took place	9	89%	11%	0%	0%	0%
Quality of meals	9	78%	11%	11%	0%	0%
Quality of drinks and snacks provided	9	78%	22%	0%	0%	0%

### *Progress Toward Goals*

Most respondents (78%) felt the format for the second meeting was effective for meeting its goals. Participants who felt the format was not effective thought there was not enough time to work on tasks:

*“[The format would have been more effective] If there had been time for task work while the group was convened.”*

*“I think the Working Group meeting time is rather too short. Effectively, we had about a day and a half. This was enough for reporting back and producing a "going to do..." list, but not enough time to actually do anything during the Working Group. Given most of us have a lot of other competing jobs, the harsh reality is that once we get back to our home institution this is likely to go on the backburner. So I think actually getting some of the writing and work done on site is very important. This would need at least an extra day.”*

All respondents agreed that adequate progress was made toward developing the group’s article reviewing optimal modeling and management of emerging diseases in feral species. Participant comments:

*“I do think that the number of tasks the group has decided to tackle is very high for the time that we have to complete this project. I anticipate there will be multiple (5-6) papers coming out of the work, but the group is spread thinly on each task.”*

*“This was my first Feral Swine/Pseudorabies Working Group meeting and I was extremely impressed by the expertise of the members and the leadership of the WG/meeting. The sub-Working Group seemed to make progress on the review article and future tasks were outlined. There were a few volunteers to help with this review, but perhaps help from the whole group (e.g. submitting key papers that might be considered for the review) would jump start progress for the next meeting.”*

*“I think the progress has been “adequate” rather than “good” or very good. Again, I think the critical problem is that the meeting time is a bit too short and we did not actually do anything (as distinct from reporting back and planning) during the meeting. Reporting back and planning are obviously extremely important, but not sufficient on their own.”*

All respondents agreed that participating in the Working Group meeting increased their understanding of the work being done by others in the group, and most (89%) agreed they had a better understanding of how everyone’s work would come together to achieve the goals of the group (Table 4).

**Table 4. Understanding of Working Group structure and function**

<b>As a result of participating in this Working Group, I have a better understanding of:</b>	<i>n</i>	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
the work being accomplished by the other subgroups within the Working Group.	9	22%	78%	0%	0%	0%
how the work of the various subgroups will tie together to achieve the goals of the group	9	22%	67%	11%	0%	0%

**Most Useful Aspects**

Several respondents indicated the most beneficial aspect of the Working Group was the group discussions:

*“Whole group discussions were useful in allowing each member to get a feel for different perspectives.”*

*“Whole group discussion of the particular topics to get views from difference constituencies.”*

*“I liked the combination of whole group presentations/discussions and one-on-one conversations.”*

Some participants, however, would have liked to have had more time for breakout groups:

*“I liked meeting with the whole group, however, it is now time to break into smaller groups and complete the assigned tasks.”*

*“All the discussions were as a whole group. I think given the short period of the meeting that was appropriate. However, if we had been able to meet for longer it would have been beneficial to have had some smaller breakout groups with three or four of us working together to actually write something (both text for a review and some models).”*

**Clarity of Expectations**

All respondents said they felt the expectations for the next Working Group meeting are clear, in the sense that they were leaving this meeting with a good idea of what they needed to accomplish before the next meeting. One participant felt the meeting was very well-organized in this respect:

*“I feel we were able to get up to speed quickly, make some strong connections and end the meeting with well-defined tasks and commitments to achieve goals by approximate deadlines.”*

## Communications

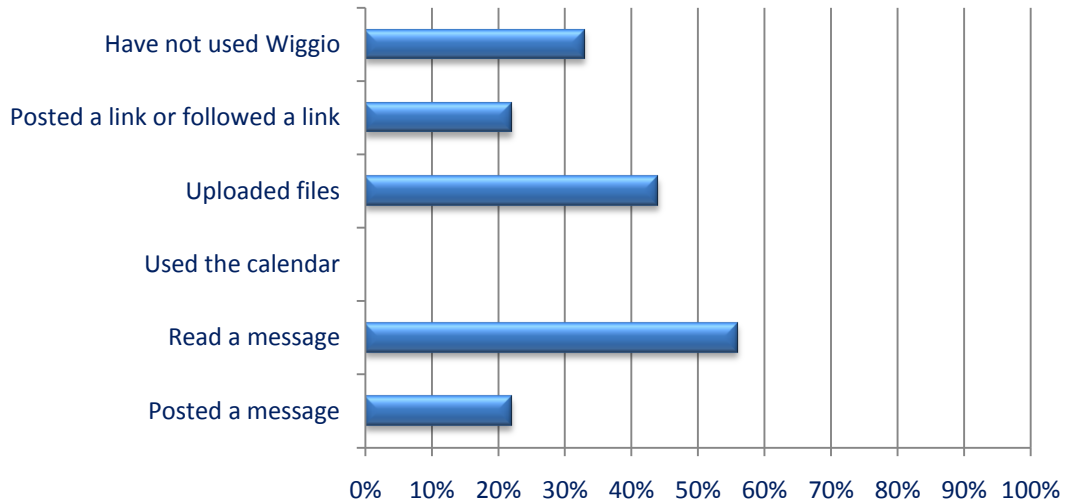
Each research group coordinated through NIMBioS is provided access to an online collaborative group site called "Wiggio." Wiggio's interface includes six basic tools:

- Calendar — A fairly simple shared calendar that allows users to manage group events.
- Folder — Users can upload most file types to Wiggio groups, where they can edit documents and spreadsheets within Wiggio and get automatic version-tracking. Group members also can download the file, change it and re-upload it.
- Meeting — Three types of meetings are available for users: in-person, conference call and chat rooms.
- Poll — Allows users to get a quick consensus from group members. Users ask questions, and get the responses back aggregated in a chart format.
- Messages — Through Wiggio, users can send and receive text, email, and voice messages. Each group has its own email address. When anyone in the group sends mail to that address, it gets redistributed to everyone in the group, according to their delivery preference.
- Links — Users can use the link tool to paste in links so that the group has a shared set of bookmarks, videos and/or resources.

To evaluate its effectiveness, respondents were asked several questions about their use of the Wiggio as a communication tool, as well as their opinions of its usefulness. Six respondents indicated they had used the Wiggio for communicating with their group in some way, with the most common form of communication being reading a message to or from one or more group members or uploading a file (Figure 3). One participant who had not used the Wiggio indicated he/she had just learned about it at the meeting, while another indicated it “didn’t work the first two times I tried,” and he/she hadn’t tried to use it again. The third participant who did not use the Wiggio said he/she simply forgot about it:

*“It just slipped from my radar! I forgot about it before the meeting and will try to familiarize myself with it soon..”*

**Figure 3. Wiggio use**



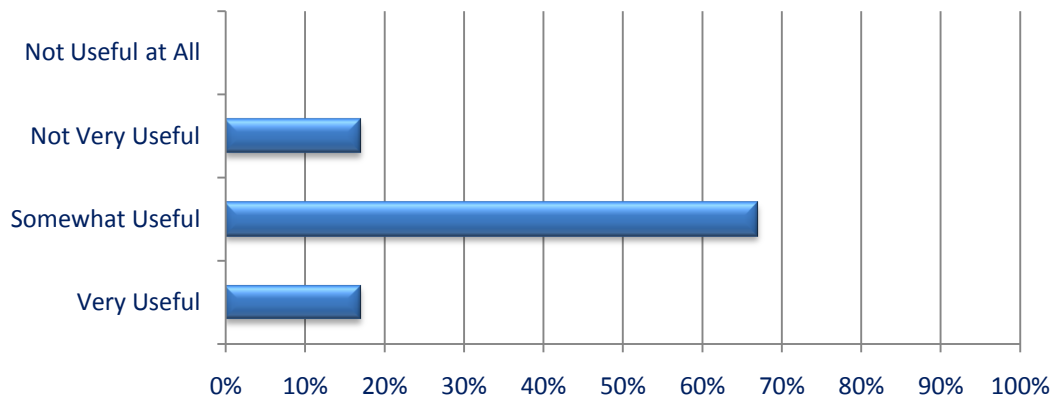
Respondents who had used the Wiggio rated its usefulness. Five of the six respondents who had used the Wiggio indicated that it was either “Very useful” or “Somewhat useful” for the purpose of communicating and/or collaborating with other members of the Working Group, while one thought it was “not very useful” (Figure 4). While one participant commented that it was a very useful communication tool, several participants indicated they had experienced some trouble with the technology:

*“I had trouble getting set up on the Wiggio, likely problems on my end associated with security and restrictions on my agency's computers.”*

*“I still have not been able to figure out how to upload a document.”*

*“It is only useful if people use it as a main resource; so far our WG hasn't been using it much.”*

**Figure 4. Usefulness of the Wiggio for communicating with research group members (n=6)**





## Working Group Impact

### Participant Research

All respondents said that participating in the working had influenced their research agendas. Two participants noted that the research related to the Working Group was their highest priority, while others said being in the group has given them new understanding of the topic and ideas for research:

*“I came back with a better understanding of the role of modeling in resource management. I was excited about the prospects of working with a mix of individuals with expertise in modeling, policy, regulation, testing, sampling and management.”*

*“...It has certainly given me some ideas on the research needs related to wild hogs and wild hog diseases.”*

*“It has had me thinking much more about the issues of zoonotic and livestock diseases coming out of feral populations. Most of my previous work has concentrated on wildlife populations and disease.”*

### Publications and Products

NIMBioS asks all Working Group participants to report any publications and/or other products resulting from their involvement in NIMBioS-related research activities. Participants may report their publications through evaluation surveys or via an online reporting system available on the NIMBioS website (<http://www.nimbios.org/research/products>). A link to the reporting system may be found on the NIMBioS homepage. Research participants may report their results at any time, however, email reminders are sent to all research participants four times a year (March, June, September, and December) to solicit any unreported products.

At the time of reporting the Feral Swine Working Group has not reported any products related to the group.

### Suggestions for Future Working Group Meetings

Respondents were asked several questions soliciting ideas for improving Working Group meetings with regard to content, format, and communications. No suggestions were made regarding content; however, several participants made suggestions for changing the format, including having a longer meeting and more time for small group discussions and task work:

*“Perhaps some more time spent for informal/small group or one-on-one conversations following a whole group session. I felt there was high energy at the breaks and wanted a little more time to develop those exchanges before heading in to the room again.”*

*“The first two meeting have focused around concepts/agenda. I would suggest that at the next meeting to have smaller groups that work on their individual tasks.”*

*“...I would make the meeting a day longer.”*

Regarding communications, all respondents indicated they would like to have more updates about what others in the group are doing between meetings. Most said this could be done electronically via email or the Wiggio:

*“Since we did not get a ‘game plan’ from each task Working Group before the end of the meeting, I think it would be helpful to have frequent communications with each task work group and have some sort of progress info put onto Wiggio.”*

*“Regular status updates from other sub-groups, Encouraging sharing of resources and results on the Wiggio.”*

*“Your reminder emails are great. A phone call or two would help get my attention. Sub-Group leaders are bound to remind us of our duties. Constant nagging always works with me and I never get annoyed by gentle reminders.”*

*“Use Wiggio, but don't forget about simple email and phone (conference call) communication.”*

## Conclusions and Recommendations

Overall, the Working Group was very successful in making progress toward its goals. Working Group respondents were satisfied with the meeting, indicating that it was a productive experience that met their expectations. Respondents were also satisfied with the accommodations offered by NIMBioS.

All respondents agreed that participating in the Working Group meeting increased their understanding of the work being done by others in the group, and most agreed they had a better understanding of how everyone's work would come together to achieve the goals of the group. Several respondents indicated the most beneficial aspect of the Working Group was the group discussions, although some would have liked to have had more time for breakout group discussions as well. All respondents said they felt the expectations for the next Working Group meeting are clear, in the sense that they were leaving this meeting with a good idea of what they needed to accomplish before the next meeting.

Most respondents indicated they had used the Wiggio for communicating with their group in some way, with the most common form of communication being reading a message to or from one or more group members or uploading a file. All but one respondent agreed that the Wiggio was either “Very useful” or “Somewhat useful” for the purpose of communicating and/or collaborating with other members of the Working Group.

All respondents said that participating in the Working Group had influenced their research agendas. Two participants noted that their research related to the Working Group was their highest priority, while others said being in the group has given them a better understanding of the topic and new ideas for research.

At the time of reporting the Feral Swine Working Group has not reported any products related to the group.

Several participants made suggestions for changing the meeting format, including having a longer meeting and more time for small group discussions and task work. All respondents indicated they would like to have more updates about what others in the group are doing between meetings. Most preferred this to be done electronically via email or the Wiggio.

Based on analysis of participant response data, the recommendations to NIMBioS and/or Working Group organizers are as follows:

- If feasible, consider adding another day to the next meeting to allow for more time for breakout group discussions and working on tasks.
- Consider asking subgroup leaders to report at regular intervals the progress on their tasks via the Wiggio.
- Working Group organizers should continue to monitor group publications and products and encourage group members to report these to NIMBioS as they become available.

## **Appendix A**

### ***List of Participants***

## Participants

<b>Last name</b>	<b>First name</b>	<b>Institution</b>
†Carr	Eric	NIMBioS
Collins	Charles	University of Tennessee, Knoxville
Corn	Joseph	University of Georgia, Athens
*Hickling	Graham	NIMBioS
Kasari	Ellen	United States Department of Agriculture APHIS
*Lenhart	Suzanne	NIMBioS
†Madden	Marguerite	University of Georgia, Athens
McCallum	Hamish	Griffith University
McMillan	April	Oak Ridge National Laboratory
Odoi	Agricola	NIMBioS
Salinas	Rene	Appalachian State University
Stiver	Bill	Great Smoky Mountains National Park
†Swafford	Seth	United States Department of Agriculture APHIS
VerCauteren	Kurt	United States Department of Agriculture APHIS

\* Organizer of Working Group

†Not present at first Working Group meeting

### Participants who attended the first Working Group meeting, but not the second

<b>Last name</b>	<b>First name</b>	<b>Institution</b>
De Lozier	Kim	Great Smoky Mountains National Park
Haydon	Daniel	University of Glasgow
Lungu	Edward	University of Botswana
*Real	Les	Emory University

\* Organizer of Working Group

## **Appendix B**

*Feral Swine/Pseudo-rabies Working Group Survey, Meeting Two*

## Feral Swine/Pseudo-rabies Working Group Survey

### Second Meeting

Thank you for taking a moment to complete this survey. Your responses will be used to help measure the progress of your Working Group, and to improve future Working Groups hosted by the National Institute for Mathematical and Biological Synthesis. Information you supply on the survey about your opinions of the Working Group will be confidential, and results will be reported only in the aggregate.

Please check the appropriate box to indicate your level of agreement with the following statements about the second Working Group meeting: (Strongly agree, Agree, Neutral, Disagree, Strongly disagree)

- I feel the meeting was very productive.
- The meeting met my expectations.
- The presenters were very knowledgeable about their topics.
- The presentations were useful.
- The group discussions were useful.

How do you feel about the format of the Working Group?

- This was a very effective format for achieving our goals.
- This was not a very effective format for achieving our goals.
- The Working Group format would have been more effective if:

Please check the appropriate box to indicate your level of agreement with the following statements. As a result of participating in this Working Group, I have a better understanding of:  
(Strongly agree, Agree, Neutral, Disagree, Strongly disagree)

- The work being accomplished by the other subgroups within the Working Group.
- How the work of the various subgroups will tie together for the group's publications and/or products

Do you feel the Working Group made adequate progress, for its second meeting, toward developing its article that reviews optimal modeling and management of emerging diseases in feral species?

- Yes
- No
- Comments:

Do you feel the expectations for the next Working Group meeting are clear (in the sense that you are leaving this meeting with a good idea of what you need to accomplish before the next meeting)?

- Yes
- No

Comments:

What aspect of this meeting of the Working Group did you feel was the most beneficial in advancing the group's research agenda? (e.g. discussions with the whole group/small groups, opportunity to resolve technical difficulties, or a particular activity)

What, if anything, would you change about the Working Group meeting?

How has participating in the Working Group influenced your research agenda thus far?

### **Accommodations**

Please indicate your level of satisfaction with the Working Group accommodations:  
(Very satisfied, Satisfied, Neutral, Dissatisfied, Very dissatisfied, Not applicable)

Comfort of the facility in which the Working Group took place  
Resources of the facility in which the Working Group took place  
Quality of meals  
Quality of drinks and snacks provided

Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to Working Group participants:

### **Communications**

In what ways have you used the Wiggio for communicating/collaborating with other members of your Working Group?

Posted a message to one or more members of the group  
Read a message from one or more members of the group  
Used the calendar to coordinate research-related activities  
Uploaded files to the Wiggio for other group members to read  
Posted a link or followed a posted link  
I have not used the Wiggio  
Why did you not use the Wiggio?

How useful do you feel the Wiggio has been for the purpose of communicating and/or collaborating with other members of your Working Group?

Very useful  
Somewhat useful  
Not very useful  
Not useful at all



Please use this space for any comments you have about the Wiggio:

What, if anything, do you feel your Working Group organizers can do to better facilitate communication/collaboration among group members between meetings?

Please provide any additional comments about your overall experience with the Working Group:

### **Publications and Products**

Please indicate in the appropriate boxes any publications and/or other products that have resulted from your activities at NIMBioS. Please provide NIMBioS with an electronic copy of any new publications.

Journal articles and/or book chapters: (Include if work is published or in press)

Reports, white papers and other non-refereed materials:

Presentations: (Indicate presenter(s), date, title, and venue)

Proposals submitted for follow-on research: (Indicate funding status, title, investigators, and sponsoring organization)

Publications and Products, continued Meeting or meetings: (Indicate date, location, title, organizer, and number of participants)

Student training: (List theses or dissertations, new courses, course materials or training meetings, including name, date, title)

Data, software, and/or web sites: (Please provide a brief description and provide NIMBioS with a copy where appropriate)

Publicity in popular press: (Include articles, in popular magazines, radio and video coverage, and online publicity)

## **Appendix C**

### ***Open-ended Survey Responses***

## Open-ended responses, by question and response category

### **Do you feel the Working Group made adequate progress, for its second meeting, toward reaching its intended goals? (n=4)**

Hamish seemed to be the most prepared and ready to move forward.

I do think that the number of tasks the group has decided to tackle is very high for the time that we have to complete this project. I anticipate there will be multiple (5-6) papers coming out of the work, but the group is spread thinly on each task.

This was my first Feral Swine/Pseudorabies Working Group meeting and I was extremely impressed by the expertise of the members and the leadership of the WG/meeting. The sub-Working Group seemed to make progress on the review article and future tasks were outlined. There were a few volunteers to help with this review, but perhaps help from the whole group (e.g. submitting key papers that might be considered for the review) would jump start progress for the next meeting.

I think the progress has been "adequate" rather than "good" or very good. Again, I think the critical problem is that the meeting time is a bit too short and we did not actually do anything (as distinct from reporting back and planning) during the meeting. Reporting back and planning are obviously extremely important, but not sufficient on their own.

### **How has participating in the Working Group influenced your research agenda thus far? (n=6)**

Information from this workgroup will be very useful in guiding future decisions surrounding feral swine control, and biosecurity measures that may need to be enlisted to prevent disease spread from feral swine to domestic populations.

It is on the top of my list right now.

Yes, I've made the tasks of the WG my main priority

I came back with a better understanding of the role of modeling in resource management. I was excited about the prospects of working with a mix of individuals with expertise in modeling, policy, regulation, testing, sampling and management.

Yes. It has certainly given me some ideas on the research needs related to wild hogs and wild hog diseases.

It has had me thinking much more about the issues of zoonotic and livestock diseases coming out of feral populations. Most of my previous work has concentrated on wildlife populations and disease

### **Do you feel the expectations for the next Working Group meeting are clear (in the sense that you are leaving this meeting with a good idea of what you need to accomplish before the next meeting)? (n=1)**

I feel we were able to get up to speed quickly, make some strong connections and end the meeting with well-defined tasks and commitments to achieve goals by approximate deadlines.

**What, if anything, would you change about the Working Group meeting? (n=5)**

It was too loosely organized b/t Graham and Suzanne. I was unsure of who was leading the group and everyone's subsequent role.

At the end of the meeting we should have had an outline and a timeline for each of the six tasks the group chose to undertake, with a clear understanding of the role and assignment for each task's team members. , Distribution of meeting notes to the group will be helpful. , For a two day meeting, organized but more relaxed discussions within small task groups could have been continued in the evenings.

Perhaps some more time spent for informal/small group or one-on-one conversations following a whole group session. I felt there was high energy at the breaks and wanted a little more time to develop those exchanges before heading in to the room again.

The first two meeting have focused around concepts/agenda. I would suggest that at the next meeting to have smaller groups that work on their individual tasks.

As I said above, I would make the meeting a day longer

**The Working Group format would have been more effective if: (n=2)**

If there had been time for task work while the group was convened.

I think the Working Group meeting time is rather too short. Effectively, we had about a day and a half. This was enough for reporting back and producing a "going to do..." list, but not enough time to actually do anything during the Working Group. Given most of us have a lot of other competing jobs, the harsh reality is that once we get back to our home institution this is likely to go on the backburner. So I think actually getting some of the writing and work done on site is very important. This would need at least an extra day.

**Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to Working Group participants (n=6)**

very well done

Excellent job.

Warm lunches during the winter months. Stock more diet cokes!

Ceiling mounted projection systems would make it easier for projection, plus maybe some sort of symposium/smart board-system where one could annotate the display

The meeting was incredibly well organized and executed. I loved the hotel. The meeting room was perfect (3 projectors were on simultaneously!) and the meals/snacks were wonderful. The only, only thing I would have liked is more hot coffee/tea in the afternoon to warm and wake me up, but that is a very minor point.

I think it would be a good idea to get out of the building a bit. As the Working Group has currently been structured, we turn up for breakfast in the meeting room at 8 AM, have a prepared lunch in the meeting room and then leave at about 5 PM. This leads to a bit of cabin fever. I feel if we got out for lunch we would come back rather more fresh. This may, of course, also have something to do with jetlag. The worst thing to do with jetlag is to go into a windowless room and spent the entire day there.

**Please provide additional comments about your overall experience with the Working Group (n=2)**

Hope to continue working with this and other NIMBioS groups.

The reality of my life is if I want a task completed for a deadline, I fund a student to perform the analysis/data collection/etc. If NIMBioS is serious about products being delivered within a set timeframe, you may wish to consider funding mechanisms for WG members to hire hourly support for students to assist in the project under our supervision. Just a thought!

**What aspect of this meeting of the Working Group did you feel was the most beneficial in advancing the group's research agenda? (n=7)**

Keeping the meeting informal and the group size small. Too formal and too many people lead to be unproductive and discussions get sidetracked.

Whole group discussions were useful in allowing each member to get a feel for different perspectives.

Breaking up into subgroups.

Whole group discussion of the particular topics to get views from difference constituencies

I liked the combination of whole group presentations/discussions and one-on-one conversations.

I liked meeting with the whole group, however, it is now time to break into smaller groups and complete the assigned tasks.

All the discussions were as a whole group. I think given the short period of the meeting, that was appropriate. However, if we had been able to meet for longer it would have been beneficial to have had some smaller breakout groups with three or four of us working together to actually write something (both text for a review and some models)

**What, if anything, do you feel your Working Group organizers can do to better facilitate communication/collaboration among group members between meetings? (n=7)**

Use Wiggio, but don't forget about simple email and phone (conference call) communication.

Email updates about what subgroups are doing.

Since we did not get a "game plan" from each task Working Group before the end of the meeting, I think it would be helpful to have frequent communications with each task work group and have some sort of progress info put onto Wiggio.

Facilitate short term visits for the subgroups.

Regular status updates from other sub-groups, Encouraging sharing of resources and results on the Wiggio

Your reminder emails are great. A phone call or two would help get my attention. Sub-Group leaders are bound to remind us of our duties. Constant nagging always works with me and I never get annoyed by gentle reminders.

Regular e-mail is good

**Please use this space for any comments you have about the Wiggio: (n=4)**

I had trouble getting set up on the Wiggio, likely problems on my end associated with security and restrictions on my agency's computers

I still have not been able to figure out how to upload a document.

It is only useful if people use it as a main resource; so far our WG hasn't been using it much

I have really only just started to use it, but I think it's a very useful tool

**Why did you not use the Wiggio? (n=3)**

Just learned about it during the meeting.

Didn't work first two times I tried, haven't tried since.

It just slipped from my radar! I forgot about it before the meeting and will try to familiarize myself with it soon. A reminder email with instructions would be wonderful...

## **Appendix D**

### ***Working Group Related Products***

**Journal articles and/or book chapters**

**Reports, white papers and other non-refereed materials**

**Presentations**

**Proposals submitted for follow-on research**

**Student education**

**Data, software, and/or web sites**

**Publicity in popular press**

**Meetings**