

**Exercise Follow-up:  
Progress in Readiness Reviews  
for the  
New England Secure Milk Supply (SMS) Project**

---

by

**Richard P. Horwitz**, Ph.D.  
Consultant

Prepared for the  
United States Department of Agriculture,  
Animal and Plant Health Inspection Service (USDA-APHIS)  
and  
the New England Animal Agricultural Security Alliance (NESAASA)  
under  
Cooperative Agreement Number 13-9644-1245CA (FFY 2013)

**February 26, 2014**

---

# Contents

<b>BACKGROUND</b> .....	3
<b>PROGRESS IN COMPLETING THE READINESS REVIEW</b> .....	4
<b>APPENDIX</b> .....	5
Select Recommendations from the 2013 New England SMS Exercise AAR/IP .....	5
Reviewed vs. Unreviewed Dairy Farms by State, January 2014 .....	5
FMD-Susceptible Livestock on Reviewed Dairy Farms by State, January 2013 .....	6
Dairy Cattle .....	6
Beef Cattle .....	6
Swine .....	7
Sheep .....	7
Goats .....	8
Llamas .....	8
Farmed Deer.....	8
Readiness Ratings of Reviewed Farms, January 2014.....	9
Number of Farms by Readiness Rating .....	9
Cumulative Frequency of Farms Over a Minimum Readiness Rating.....	9

## BACKGROUND

This document was prepared for the [United States Department of Agriculture, Animal and Plant Health Inspection Service](#) (USDA-APHIS) and the [New England Animal Agricultural Security Alliance](#) (NESAASA) to advance the [New England Secure Milk Supply \(SMS\) Project](#).<sup>1</sup>

The project is intended to develop uniform principles and procedures among the six New England states to promote continuity of dairy operations, in the event of an animal-disease emergency, such as an outbreak of Foot-and-Mouth Disease (FMD). To date, the main focus has been preparing to help Incident Command identify farms that would be eligible for a permit to ship milk safely to market, even in a FMD Control Area. Qualification for a permit chiefly depends on a farm's epidemiological status (e.g., disease-free rather than infected, contact, or suspect) and its ability to resist infection by maintaining:

- A secure perimeter,
- A clean route from the perimeter to the bulk tank, and
- A wash station to decontaminate traffic (e.g., a milk tank truck) as it enters and leaves.

The chief instrument for assessing that ability is a [Readiness Review](#) of all dairy farms in the region. Elements of the review (now about 60% complete) are assigned weights by consensus of the chief animal public-health officials and integrated in a "Readiness Rating" for each farm. The Information Technology group of the Texas Center for Applied Technology in association with [National Center for Foreign Animal and Zoonotic Disease Defense](#) (FAZD) maintains this NESAASA database, including complete results of the review and a summary Readiness Rating for each farm. On-line access is restricted to State Veterinarians, but they can grant access to other officials in an emergency as well as in training and exercises.<sup>2</sup>

The most recent training and exercise of this part of the [New England SMS Plan](#) was held in Concord, New Hampshire on May 9, 2013. (Full documentation is on-line with [NESAASA reports](#).) Among the results was an [After-Action Report and Implementation Plan](#) (AAR/IP) that included several recommendations for improving regional preparedness. This document is among the efforts to implement those recommendations. (Relevant "Select Recommendations from the 2013 New England SMS Exercise AAR/IP" are appended.)

The focus of this document is progress in completing the Readiness Review and its implications for the [New England SMS Plan](#).

**The focus of this document is progress in completing the Readiness Review and its implications for the [New England SMS Plan](#)**

See the Appendix for relevant state-level statistics drawn from the latest (January 2014) Readiness Reviews of dairy farms in New England.

<sup>1</sup> "Support for the Project to 'Revise, Expand, and Exercise Regional FAD Emergency Continuity of Operation Planning,'" Cooperative Agreement Number 13-9644-1245CA (FFY 2013) between the Division of Agriculture/Animal Health in the Rhode Island Department of Environmental Management and USDA-APHIS Veterinary Services on behalf of NESAASA (October 4, 2013 to August 31, 2014).

<sup>2</sup> Richard P. Horwitz, [Assessing Farm Readiness for Emergency Milk Movement in New England](#) (NESAASA, 2012).

## PROGRESS IN COMPLETING THE READINESS REVIEW

Much of the promise of the [New England SMS Plan](#) depends on having adequate information about the biosecurity of dairy operations. During an outbreak, Incident Command will designate a disease Control Area where normal traffic to and from farms and hence dairy commerce will be interrupted. Exceptions may be authorized (by way of a permit to move milk) only to farms for which there is sufficient evidence of barriers to infection. The Readiness Review is designed to assure that such evidence will be available when needed.

During a FMD outbreak, before issuing permits for milk pick-up, Incident Command is likely to require inspection and documentation that each eligible premises is secure. However, during the first days and weeks of an outbreak, qualified inspectors are likely to be otherwise occupied or overwhelmed with more urgent matters. On the other hand, insofar as Readiness Reviews are complete, there would be less need to wait. The 2013 NESAASA exercise showed that, with adequate preparation and documentation, continuity of commerce with hundreds or even thousands of farms could be authorized in a matter of minutes.

At the time of the exercise (May, 2013), a little over 40% of New England dairy farms (772 of 1821) were, in fact, reviewed well enough, in the judgment of the state veterinarians, to use in SMS permitting decisions. About nine months later (February, 2014), the share of reviewed farms increased to nearly 60% (991 of 1722). So, preparations in New England have been progressing and continue, albeit it more slowly than emergency managers might hope. Even with room to improve, no other U.S. state (with the arguable exception of Wisconsin) has conducted an assessment that is as complete, thorough, and ready-to-use as the six New England states.

Despite such progress, significant risks to dairy continuity remain attributable to incomplete reviews. If one assumes that farms in the region share average characteristics (the 40% awaiting review and the 60% reviewed to-date), the fate of at least 700 farms and the 88,000 cows they milk remains in doubt. As long as they must wait for an official, just-in-time assessment, these farms would face a loss of their main source of revenue, the milk checks that also pay for feed and care of their livestock.

These farms would also have to deal with the milk that their cows would continue to produce. If the Control Area encompassed the whole of New England, the milk on farms awaiting assessment alone could total more than four million pounds of food-turned-waste each and every day, potentially for weeks or even months. Such an ominous prospect is more than possible. As documented in [FMD as a Hazard for New England Dairies](#) and [New England as a Jurisdiction for Supporting Continuity of Dairy Operations](#), response to an outbreak anywhere in New England is actually likely to affect all six states. If FMD is confirmed anywhere in the region, farms awaiting review may well be awash in waste milk and driven out of business before they can be permitted to ship their produce to market.

The six states have committed as much resources as they can afford to review those remaining farms. At least one state (Vermont) is currently experimenting with an alternative method to increase coverage (a mail-out review to be verified on subsequent, regularly scheduled inspections), and all states are still struggling to incorporate regular updates in routine farm visits.

At this point, then, “roadblocks” (per the AAR/IP) to better coverage have proven permeable. It may be wise just to encourage efforts that have already begun and trust that coverage will continue to improve. It may also be wise, though, to set a deadline, by which time a benchmark level of coverage must be achieved, if the existing plan is to remain in effect.

## APPENDIX

Select Recommendations from the [2013 New England SMS Exercise AAR/IP](#)<sup>3</sup>

- 4.1 Further development and refinement of the criteria used in the Readiness Model should be considered.
- 4.4.1 Roadblocks to completing Readiness Reviews and entering info into database should be evaluated and corrected.
- 4.4.2 State agricultural support and mechanisms for continuing the Farm Readiness Review process need to be confirmed.
- 4.4.3 Clarify how would prioritize farms that do not participate in review and their impact on validity of Readiness Rating.
- 4.5.1 Re-evaluate and revise the Readiness Model and Weighing of Readiness Criteria based on discussions during the workshop.

Reviewed vs. Unreviewed Dairy Farms by State, January 2014<sup>4</sup>

	CT	MA	ME	NH	RI	VT	New England
<b>Number of Dairy Farms in NESASA Database</b>	138	170	297	130	17	970	1,722
<b>Number of Farms Reviewed, as of 1/27/2014</b>	46	116	210	78	16	525	991
<b>Share of Farms Reviewed, as of 1/27/2014</b>	33.3%	68.2%	70.7%	60.0%	94.1%	54.1%	57.6%
<b>Average Readiness Rating of Reviewed Farms</b>	0.568	0.587	0.671	0.578	0.608	0.568	0.593
<b>Number of Farms Not Yet Reviewed</b>	92	54	87	52	1	445	731
<b>Milking Cows Not Counted</b> (If average is the same as for reviewed farms)	12,494	3,553	8,567	5,903	64	57,850	88,431
<b>Milk Production Per Day on Unreviewed Farms</b> (assuming 49 lbs per day per cow)	612,206	174,097	419,783	289,247	3,136	2,834,650	4,333,119

<sup>3</sup> These recommendations are relative to exercise “Objective 4: Practice Implementing Permitting Plan.” Appendix A: Improvement Plan, [New England Secure Milk Supply Exercise AAR/IP](#) (September 27, 2013), pp. 26-28.

<sup>4</sup> This table, like all of those that follow, are based on reports generated at the end of January, 2013, from the NESASA database on New England dairy producers. The data belong to their respective New England state and are maintained on a server by the Information Technology group of the Texas Center for Applied Technology in association with National Center for Foreign Animal and Zoonotic Disease Defense (FAZD).

## FMD-Susceptible Livestock on Reviewed Dairy Farms by State, January 2013

### Dairy Cattle

	CT	MA	ME	NH	RI	VT	New England
Number of Milking Cows (among dairy stock) on Reviewed Farms	6,247	7,632	20,678	8,855	1,089	68,050	112,551
Largest Number of Milking Cows on a Reviewed Farm	1,030	427	1,640	1,047	260	1,750	1,750
Average Number of Milking Cows on Reviewed Farms	136	66	98	114	68	130	114
Number of Other Dairy Cattle (dry, heifer, calf, bull) on Reviewed Farms	7,869	7,925	24,698	9,744	920	60,372	111,528
Average Number of Other Dairy Cattle on Reviewed Farms	171	68	118	125	56	115	113
Largest Number of Other Dairy Cattle on a Reviewed Farm	1,174	316	2,155	1,545	145	1,290	2,155
Total Number of Dairy Cattle on Reviewed Farms	14,116	15,557	45,376	18,599	2,009	128,422	224,079
Average Number of Dairy Cattle on Reviewed Farms	307	134	216	238	126	245	226
Largest Number of Dairy Cattle on a Reviewed Farm	2,204	675	3,795	2,592	405	2,512	2,592

### Beef Cattle

	CT	MA	ME	NH	RI	VT	New England
Total Number of Beef Cattle on Reviewed Farms	404	170	1,333	342	65	986	3,300
Number of Reviewed Farms with Beef Cattle	17	22	57	28	5	123	252
Number of Reviewed Farms with More Beef Cattle Than Milking Cows	2	2	4	0	0	2	10
Share of Reviewed Farms with Beef Cattle	37.0%	19.0%	27.1%	35.9%	29.4%	23.4%	25.4%
Largest Number of Beef Cattle on a Reviewed Farm	150	27	350	150	50	70	350
Average Number of Beef Cattle per Reviewed Farm with Beef Cattle	24	8	23	12	13	8	13

## Swine

	CT	MA	ME	NH	RI	VT	New England
Number of Reviewed Farms with Swine	5	15	30	17	1	55	123
Number of Reviewed Farms with More Pigs Than Milking Cows	0	3	1	0	0	2	6
Share of Reviewed Farms with Swine	10.9%	12.9%	14.3%	21.8%	5.9%	10.5%	12.4%
Total Number of Milking Cows on Reviewed Farms with Pigs	205	928	1,673	1,317	44	6,085	10,252
Average Number of Milk Cows Per Reviewed Farm with Pigs	41	62	56	77	44	111	83
Average Readiness Rating of Reviewed Farms with Pigs	0.627	0.600	0.662	0.595	0.612	0.595	0.613
Average Readiness Rating of Reviewed Farms with No Pigs	0.560	0.585	0.673	0.573	0.608	0.564	0.590
Total Number of Pigs on Reviewed Farms	31	159	142	89	11	274	706
Largest Number of Pigs on a Reviewed Farm	20	40	51	22	11	43	51
Average Number of Pigs per Reviewed Farm with Pigs	6	11	5	5	11	5	6
Milk at-Risk Per Day if Farms with Swine Stopped Shipping (assuming 49 lbs per day per cow)	10,045	45,472	81,977	64,533	2,156	298,165	502,348

## Sheep

	CT	MA	ME	NH	RI	VT	New England
Total Number of Sheep on Reviewed Farms	143	66	222	68	1	677	1,177
Number of Reviewed Farms with Sheep	5	8	9	7	8	20	57
Number of Reviewed Farms with More Sheep Than Milking Cows	2	1	2	0	0	1	6
Share of Reviewed Farms with Sheep	10.9%	6.9%	4.3%	9.0%	47.1%	3.8%	5.8%
Largest Number of Sheep on a Reviewed Farm	97	25	101	28	8	400	400
Average Number of Sheep per Reviewed Farm with Sheep	29	8	25	10	0	34	21

## Goats

	CT	MA	ME	NH	RI	VT	New England
Total Number of Goats on Reviewed Farms	194	488	102	20	14	1,681	2,499
Number of Reviewed Farms with Goats	4	18	16	5	4	41	88
Number of Reviewed Farms with More Goats Than Milking Cows	1	6	1	2	0	10	20
Share of Reviewed Farms with Goats	8.7%	15.5%	7.6%	6.4%	23.5%	7.8%	8.9%
Largest Number of Goats on a Reviewed Farm	169	203	50	7	6	300	300
Average Number of Goats per Reviewed Farm with Goats	49	27	6	4	4	41	28

## Llamas

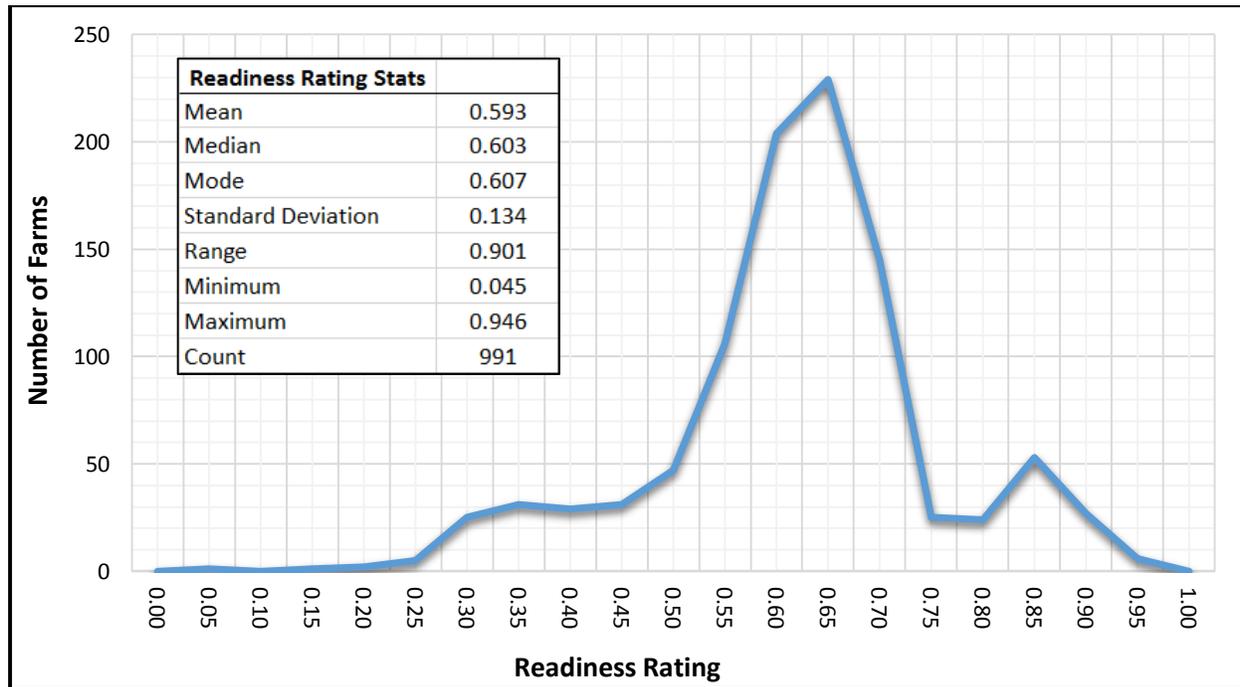
	CT	MA	ME	NH	RI	VT	New England
Total Number of Llamas on Reviewed Farms	2	7	3	1	1	43	57
Number of Reviewed Farms with Llamas	2	2	1	1	1	12	19
Number of Reviewed Farms with More Llamas Than Milking Cows	0	0	0	0	0	2	2
Share of Reviewed Farms with Llamas	4.3%	1.7%	0.5%	1.3%	5.9%	2.3%	2.0%
Largest Number of Llamas on a Reviewed Farm	1	5	3	1	1	18	18
Average Number of Llamas per Reviewed Farm with Llamas	1	4	3	1	1	4	2

## Farmed Deer

	CT	MA	ME	NH	RI	VT	New England
Total Number of Farmed Deer on Reviewed Farms	0	0	0	0	0	0	0
Share of Reviewed Farms with Farmed Deer	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Number of Reviewed Farms with Farmed Deer	0	0	0	0	0	0	0
Number of Reviewed Farms with More Farmed Deer Than Milking Cows	0	0	0	0	0	0	0
Largest Number of Farmed Deer on a Reviewed Farm	0	0	0	0	0	0	0
Average Number of Farmed Deer per Reviewed Farm with Farmed Deer	0	0	0	0	0	0	0
Total Number of Farmed Deer on Reviewed Farms	0	0	0	0	0	0	0

## Readiness Ratings of Reviewed Farms, January 2014

### Number of Farms by Readiness Rating



### Cumulative Frequency of Farms Over a Minimum Readiness Rating

