

## Assessing Farm Readiness for Emergency Milk Movement in New England

### Background

Through their regional Animal Agricultural Security Alliance (NESAASA), the six New England states are advancing a continuity of operations plan ([The New England SMS Plan](#)) for dairies in the event of an animal-disease emergency, such as an outbreak of Foot-and-Mouth Disease (FMD). The plan includes standard procedures for designating a dairy operation “Ready” (sufficiently prepared to increase biosecurity) to be eligible for a permit to ship unpasteurized milk within, to or from a FMD Control Area. The procedures are designed to yield permits that will be recognized by regulatory authorities in all six states and to comply with national emergency response plans and Secure Milk Supply (SMS) performance standards.<sup>1</sup>

Unfortunately, given the communicability of FMD and the large number and variety of participants in raw milk shipments (producers, haulers, co-ops, processors, and handlers), capacity for just-in-time, case-by-case epidemiological assessments is likely to be short of ideal. At least initially, if FMD is suspected or found in the region, the Control Area may encompass nearly 2,000 farms plus hundreds of trucks, handlers, and plants. Even if shipments are merely delayed, hundreds of thousands of cows will continue to produce milk, and on-farm holding capacity will be exceeded in no more than two days. Unless the emergency permitting process can be very rapid, producers will have to concoct a (likely illegal and dangerous or at least noxious) way to dispose of millions of pounds of valuable product as well as a way – without milk checks – to fund the care and feeding of their livestock.

Plainly, it would be helpful for animal public health officials of the region to prepare for such a possibility – to have on-hand reliable, up-to-date information on farm readiness for emergency milk movement BEFORE an outbreak.

### Objectives

There are three sorts of information that NESAASA has targeted to accelerate the permitting process:

1. Contact Information – phone and FAX numbers and email addresses for a responsible party in each operation as well as backups and secondary contacts (e.g., veterinarians and feed suppliers).
2. Production Characteristics – information to help Incident Command anticipate the kind and amount of help an operation is apt to need (e.g., livestock inventory, production, storage, and shipment norms and capacities).
3. Biosecurity – capability to implement the enhanced biosecurity measures that disease control and SMS Performance Standards would require (e.g., to secure the perimeter and decontaminate traffic to and from the farms).

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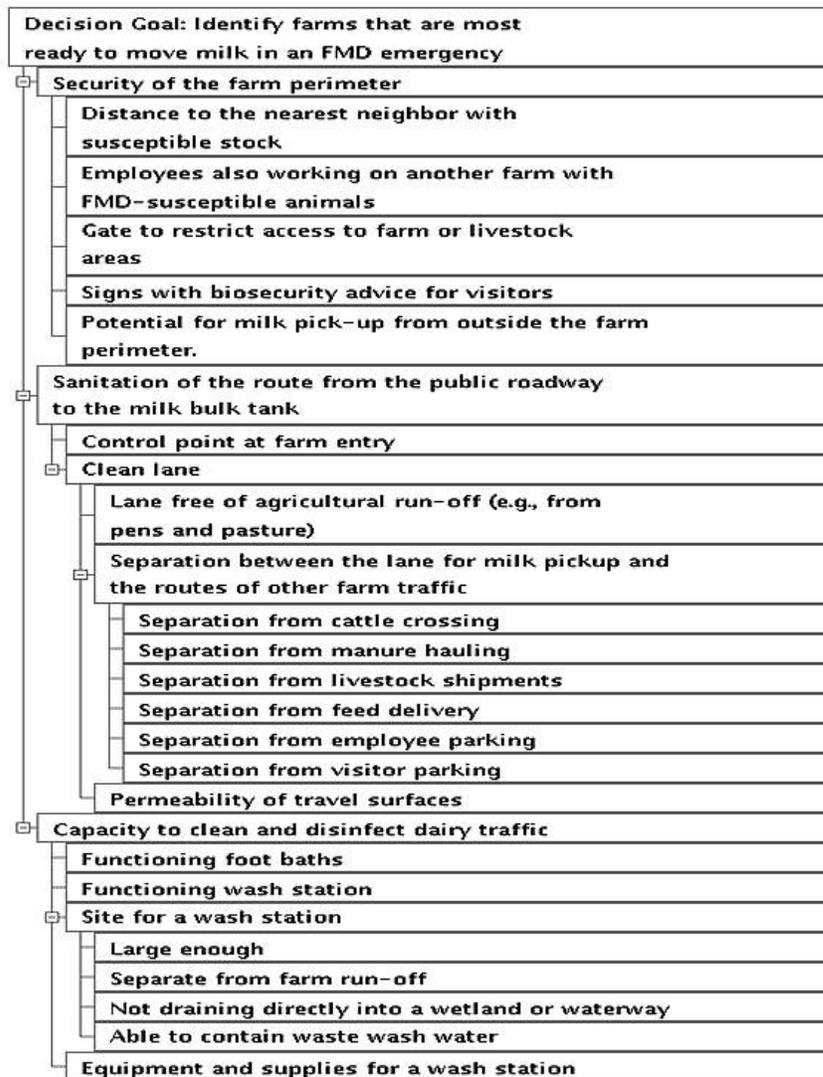
<sup>1</sup> See US DHS, [National Response Framework](#) (2012), USDA-APHIS-VS, National Center for Animal Health Emergency Management (NCAHEM), [Foot-and-Mouth Disease Response Plan: The Red Book](#) (June, 2012); [The Secure Milk Supply Project](#) (2012), especially SMS Plan Executive Summary with Supporting Documents (January 2012); and Richard P. Horwitz, [Foot-and-Mouth Disease \(FMD\) as a Hazard for New England Dairies](#) (June 30, 2011). National and New England SMS documents are available on-line at the [APHIS-AHEM](#) website, [FAD PReP](#). A [MOU on the New England SMS Plan](#) was signed by the six states, June 3, 2014.

Much of this information (particularly #1 and #2) has long been on-hand in each state, albeit with various agencies and in various media and formats. These data have now been assembled, updated, verified, standardized, and loaded on a server where they can be regularly updated and secured but also readily consulted in response to a regional incident or exercise.

The greatest remaining need is for information about producers' capability to implement enhanced biosecurity measures, their "Readiness" for emergency milk movement.

## Review of Farm Readiness

In the spring of 2012, the six New England states began a survey of the participants in routine shipments of raw milk, beginning with dairy farms. Questions about farm biosecurity were keyed to an overall model of emergency biosecurity considerations:<sup>2</sup>



<sup>2</sup> For the survey, see [Producer Survey](#), [Cover Letter](#), and [FAQ](#) and for the coding and scoring scheme, see [Criteria for Rating Readiness in Permitting Milk Pickup](#) and [Raw Scores for Producer Survey](#) in the attached "Resources for Accessing Farm Readiness."

A representative of each state animal health agency (the State Veterinarian or his/her designee) and the owner or manager of each dairy operation complete the survey together during an on-farm visit. This information is expected to change little from year to year but should always be within six-months of an update and verification by both the producer and a state-designated representative on-site. Current plans include updates during semiannual licensure inspections.

With the support of USDA-APHIS, data entry, maintenance, and reporting capacity are maintained by the Information Technology group of the Institute for Infectious Animal Diseases (IIAD), a Department of Homeland Security (DHS) Science and Technology Center of Excellence, in partnership with the Texas Center for Applied Technology at Texas A&M University. Data access is normally restricted to animal-health officials in each participating state, but in a regional emergency (when Control Areas are not confined to one state), data from all six states will be available to the Incident Management Team.

Biosecurity and production data from the survey, as collected (raw, unweighted) could be sufficient to support a permitting decision. Since, however, the data set is very large and the interpretation challenging as well as contestable, NESAASA has also developed a consensus, composite measure of preparedness for each farm, a “Readiness Rating,” that could both help Incident Command accelerate the permitting process and help farmers learn how best to improve their prospects for qualifying for a milk movement permit in an emergency.

### **Weighing of Biosecurity Criteria**

Using decision-support software from [Decision Lens](#) (DL), members of NESAASA (state and USDA-APHIS-VS District animal health officials) joined with USDA-APHIS epidemiologists to produce a measure of the relative importance of each of the biosecurity criteria.<sup>3</sup>

Calculation of a weight for the answer to each biosecurity question (a measure of its significance for a permit decision) is based on a series of pairwise comparisons of biosecurity capabilities: For example, “All else being equal on a farm in a Control Area, which is more important: That it has a gate at the entry or a clean path to the bulk tank? And how much more important is it?” Weights were then aggregated, normalized (0.0 to 1.0) and applied to the survey results to derive a single, composite measure of the capability of each farm to meet elevated biosecurity standards, its “Readiness Rating.”

One option for rapid permitting, then, is to rank eligible farms by their Readiness Rating. Premises with a higher Readiness Rating may be considered better prepared and hence more likely to qualify for milk pickup permits. (See also: [Weighted Criteria for Rating Producer Readiness.](#))

Prepared by Richard P. Horwitz  
Consultant to NESAASA and USDA-APHIS  
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<sup>3</sup> The software is an Analytic Hierarchy Process (AHP) product developed by [Decision Lens](#) (DL). It was available to NESAASA and the [New England Area Office of USDA-APHIS-VS](#) through a licensing agreement between DL and USDA-APHIS.