

MAINE USES A
TEAM APPROACH TO DEVELOPING
AN EMERGENCY CARCASS DISPOSAL PLAN

by
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&
The Maine Compost Team

The State of Maine, through the Maine Compost Team, has been involved in addressing animal carcass disposal issues through composting since 2001. The Team is made up of representatives of the Maine Department of Agriculture, the Maine DEP, the Maine State Planning Office and the University of Maine Cooperative Extension. The Team conducted trials with large animals from 2001 through 2005 and has presented the results at one national symposium and a number of state and regional workshops. In 2005, a new challenge surfaced for the Team. This was the threat of highly pathogenic Avian Influenza. The Team was asked to lead the effort to put together a statewide emergency carcass disposal plan that could be implemented in case of an outbreak of the highly pathogenic H5N1 strain of Avian Influenza that is currently circulating in many parts of the world. In addition to the Compost Team, the planning group included the State Veterinarian, the State Nutrient Management Coordinator, a representative of the largest poultry producer in the state, a poultry technician with AI experience and the state's Agricultural Compliance Supervisor.

Previous evaluations of disposal methods associated with the Foot and Mouth Disease threat of 2001 showed that the State of Maine really only had two viable options for disposing of large quantities of diseased animal carcasses. These options were burial and composting. Because of the prevalence of shallow to bedrock or shallow to water table soils, burial would only be a viable option in a limited number of circumstances. For this reason, the primary disposal option to be addressed in the plan would, necessarily, be composting.

PLAN OF ACTION

The plan has different levels of detail and different activities depending on the type and scale of various poultry operations.

A. Cage Layer Operations

The largest poultry operations in the state are, for the most part, cage layer operations. For these facilities, the most likely scenario will involve composting on nearby fields. Composting may be done using either pre-made hot compost that has been trucked to the site or compost that is made on-site from poultry manure and one or more bulky, high carbon materials such as sawdust, shavings, leaves, short paper fiber or horse bedding.

The choice of materials will depend on availability of hot compost and other ingredients and upon the characteristics of the site. Some sites have been evaluated as being suitable for use of either pre-made hot compost or newly mixed ingredients, while others have been determined to be only suitable for pre-made hot compost. These determinations are laid out in a table and depicted on aerial photos. (See examples at the end of the abstract.)

The process for laying out the windrows for composting in a field is described in the section on composting and depicted in an attached diagram.

B. Medium to Large Floor Bird Operations

The medium and large scale facilities that have floor birds (no cages) and any that have empty deep pits below the house, have the additional option of composting within the house itself. Each site will need to be evaluated individually to determine if in-house composting is a valid option. Those that have litter on the floor may be able to use that litter as a significant part of the bulking material needed to compost the birds from those buildings. Again, this will have to be evaluated on a case-by-case basis to determine how much additional material will need to be brought to the site to form the windrows.

Virginia Cooperative Extension and the Virginia Department of Environmental Quality have experimented with in-house composting of poultry and have published guidelines for the practice for poultry growers in that state. A copy of those guidelines is included as attachment to the disposal plan.

C. Small/Backyard Flocks

Small and backyard flocks will most likely either be composted outside at the facility or buried nearby. Although the principles for composting at this smaller scale are the same, there are some technical differences that are important to note. The process for mixing, sizing and setting up a compost pile for a small operation are described in the brochure “Safe Disposal of Backyard Poultry Mortalities”, developed by the University of Maine Cooperative Extension. A copy of the brochure is included as an attachment to the plan. Agency staff who are assisting small flock owners or the flock owners themselves may use “Guidelines for Siting Compost Operations” (also attached to the plan) to find the best site available for establishing a compost pile on their property.

In addition, small flock owners have the option of locating a burial site using “Procedure for Burial of up to 500 Lbs. per year of Carcasses in Accordance with MDAFRR Rules and Policy.” A copy of this procedure is included as an attachment to the plan. The choice of whether to compost or bury will depend on a number of different factors that will need to be evaluated at each site. Among the most important of these will be the volume of carcasses for disposal, the availability of suitable site(s) for burial, the availability of litter or other suitable bulking materials, the availability of equipment and access to expertise/information about composting.

In the event of a widespread outbreak of Avian Influenza in the state, it is likely that many backyard flocks will not have access to technical assistance from the Department of Agriculture or other members of the statewide emergency carcass disposal team, as these resources will be fully occupied elsewhere. To address this issue, not only is the emergency response team providing the materials cited above, but has and will be providing training to other agency, university and private sector personnel who can work with small flock owners to address disposal issues. Among them are a number of staff at DEP and the University of Maine Cooperative Extension. See the attached photo of a training workshop held in October, 2006 for agency, university and industry people who may be able to work with small flock owners.

THE PLAN

The art, science and technology associated with the emergency disposal of animal carcasses is evolving constantly. Approaches unheard of today may become widely accepted in the future. To accommodate this potential for change, the plan will be published in a loose leaf notebook format to allow it to be updated as needed.

The plan is an example of all the details that must be considered when putting together a large scale emergency composting operation and illustrates how one state addressed those details. Not only does the plan address the disposal needs for the large poultry facilities, but also includes a strategy for addressing disposal on the medium scale operations that are distant from the major complexes and for the small backyard flocks. The plan includes guidance for proper composting under a variety of scenarios, contacts, material sources, aerial photos depicting composting and staging areas and interagency agreements for emergency cooperation. It also contains estimates of volumes of materials, space and equipment and labor needs for a large scale operation. Finally, it contains an alternative emergency containment scheme in the case of a 'worst case' scenario in which birds are dying faster than the system can set up compost piles to accept them.

The presentation will introduce the audience to these various plan elements and how the planning team addressed them.

For more information:

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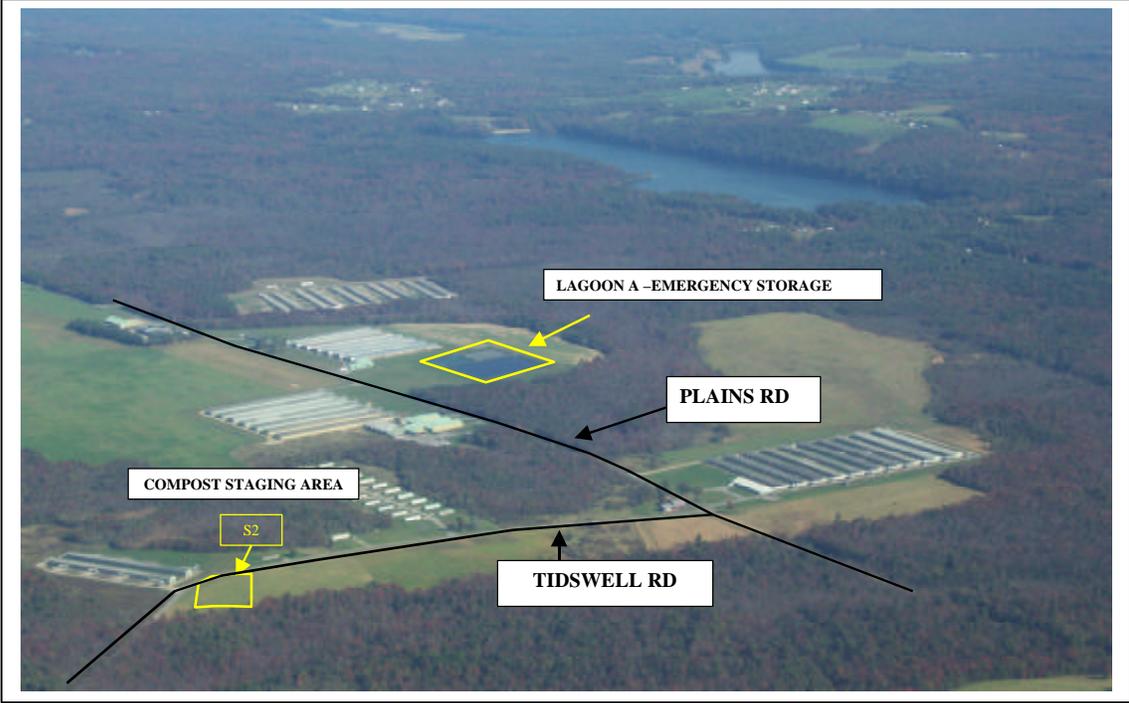
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Here are two of the aerial photos used in the plan. One identifies the location of the emergency storage lagoon at the state's largest poultry complex and the second illustrates the results of a site investigation for an emergency compost operation at another facility.



Plan for Cage Layers

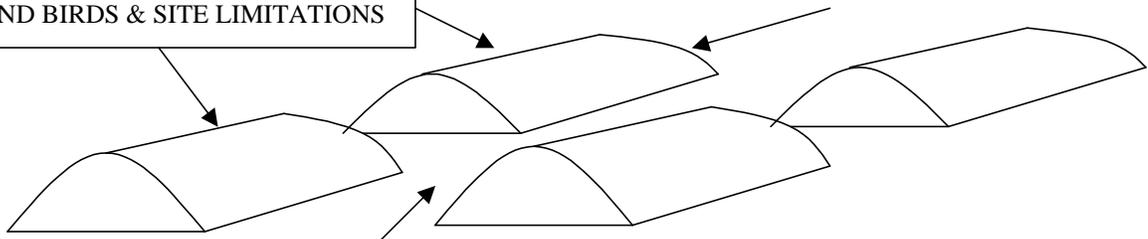


■ Details on Outdoor Windrow Composting

POULTRY COMPOST WINDROW LAYOUT

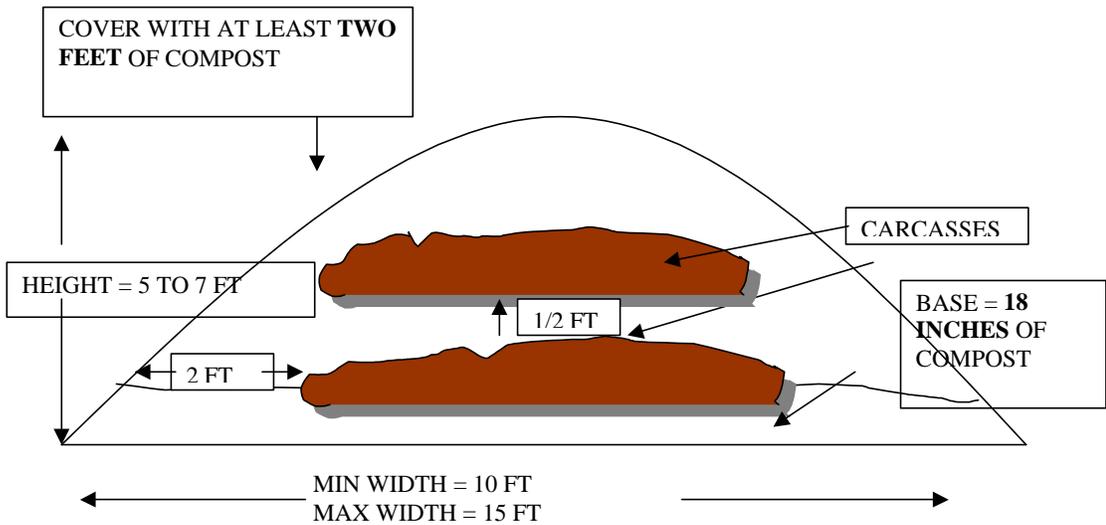
WINDROW LENGTH BASED ON VOLUME OF BULKING AGENT AND BIRDS & SITE LIMITATIONS

RUN WINDROWS UP AND DOWN THE SLOPE TO ALLOW FOR DRAINAGE

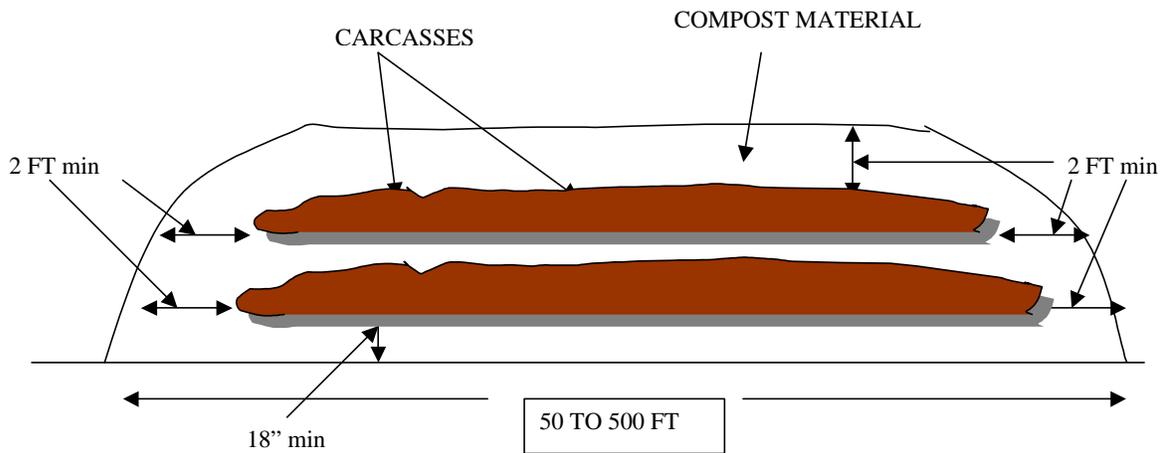


LEAVE ALLEY BETWEEN WINDROWS FOR AERATION AND FOR EQUIPMENT MOVEMENT (APPROX 12 FT)

WINDROW CONSTRUCTION for POULTRY CARCASSES



WINDROW CROSS SECTION: END VIEW



WINDROW CROSS SECTION: SIDE VIEW

THE PLAN

EMERGENCY DISPOSAL PLAN
For DEAD BIRDS From An
OUTBREAK of HIGHLY PATHOGENIC AVIAN INFLUENZA
July, 2006
Maine Department of Agriculture, Food and Rural Resources



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**TRAINING WORKSHOP FOR AGENCY, UNIVERSITY AND
INDUSTRY PEOPLE WHO WORK WITH SMALL FLOCK
OWNERS.**

