# COMPREHENSIVE RESPONSE PLAN FOR ANIMAL CARCASS MANAGEMENT IN A DISASTER

# FRANKLIN COUNTY, MASSACHUSETTS



An Agricultural Emergency Response Planning Tool

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

### **JUNE 2009**

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

425 Main Street, Suite 20, Greenfield, MA 01301-3313 Telephone 413-774-3167 • Fax 413-774-3169 • www.frcog.org Executive Director • Linda Dunlavy





### **INTRODUCTION**

# What is the best way to dispose of farm animal carcasses after a flood, fire, ice storm or other disaster?

The Franklin County Solid Waste Management District (FCSWMD) and the Franklin Regional Council of Governments (FRCOG) have compiled a wealth of information for local officials struggling to answer this question as part of the emergency response during an agricultural disaster. An agricultural disaster is the result of a natural, manmade, or biological incident which results in farm animal mortalities and animal carcasses needing proper disposal.

Our efforts include several documents and appendices. The main document includes:

- Incident Command Structure
- Response Action Plan
- Checklists for Disposal Options
- Disposal Implementation Plans
- Procurement and Record Keeping
- Relevant forms
- Town-specific maps identifying farm locations

Companion documents for local police and fire departments relate to traffic control and decontamination/disinfection during a contagious animal disease outbreak. Also available is the Franklin County Animal Carcass Disposal Overview, published in 2008. All of these documents can be found on the CD accompanying this binder or online in the publications section at www.frcog.org.

#### How do I use this plan?

Franklin County is fortunate to have a vibrant agricultural community. We are also fortunate to have dedicated local officials and emergency management directors. The documents and tools that have been created will allow this region of western Massachusetts to respond, recover, and rebound if and when disaster strikes. We have endeavored to create stand-alone documents that will provide clear and concise information and instructions. The goal of this project is to prepare local officials for an emergency situation that most of us can't imagine. With a 2007 animal census of over 35,000 farm animals, any type of disaster or disease outbreak will require quick and uniform action to protect human health and the environment.

We recognize that reading through planning documents, whether on paper or electronically, is not a choice assignment. We know, though, from agricultural emergencies in other states and countries that pre-planning and understanding the potential scope of the disaster are key to an effective and efficient response.

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For more information about agricultural emergency response planning contact the Franklin Regional Council of Governments at 413-774-3167 or visit www.frcog.org. Information is also available through the Franklin County Solid Waste Management District at 413-772-2438 or at www.franklincountywastedistrict.org.

Our thanks go to the USDA, Jane Southworth, Glen Ayers, Thomas Williams, Phoebe Walker, and the tireless local officials who work to prepare our region for disaster.

Jan Ameen Jan Ameen Executive Director FCSWMD **Linda Dunlavy** Linda Dunlavy Executive Director FRCOG

#### ACKNOWLEDGEMENTS AND CREDITS

This Comprehensive Response Plan was developed by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments. This project is funded through a USDA Rural Utilities Program Solid Waste Management grant.

A large number of references and resources were viewed and used in the creation of these documents. We are grateful for the many dedicated professionals in the government and university sectors that have conducted research, created templates, developed flow charts, and "how-to" manuals. A full list of references and sources is included in the Appendix.

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### COMPREHENSIVE RESPONSE PLAN FOR ANIMAL CARCASS MANAGEMENT IN A DISASTER FRANKLIN COUNTY, MASSACHUSETTS

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## **INCIDENT COMMAND STRUCTURE**

## for Animal Carcass Management

### **Related to a Disaster in**

## Franklin County, Massachusetts



## An Agricultural Emergency Response Planning Tool

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This plan was developed by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments. This project is funded through a USDA Rural Utilities Program Solid Waste Management grant.

This section of the *Comprehensive Response Plan for Animal Carcass Management Related to a Disaster in Franklin County, MA* is based on the Banner County, Nebraska Local Emergency Operations Plan Annex G Appendix 2 (June 2007). This document can be found online at www.nema.ne.gov/content/e\_plan\_pdf/Banner\_eLEOP.pdf.

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Veterinarians in Franklin County Region

Agricultural and Animal Welfare Organizations

Survey of Groups with Registered Disaster Service Workers Form

Veterinary Emergency Response Personnel Application Form

#### **1.0 PURPOSE**

This Incident Command Structure document was written by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments to assist local public officials in responding to an emergency situation in which farm animal carcasses need to be managed in order to protect public health, safety, and the environment. This situation will most likely arise as a result of a natural disaster such as a flood, or a manmade disaster such as a hazardous material leak.

It was prepared to conform to guidelines established by FEMA, the National Animal Health Emergency Management System (NAHEMS), USDA, MEMA, Massachusetts Department of Agricultural Resources and Massachusetts Department of Environmental Protection.

This plan is meant to serve emergency responders. It should be implemented in the event that a municipality declares a state of emergency to manage the proper disposal of farm animal carcasses resulting from a disaster.

#### 2.0 SITUATION

There are three likely scenarios that would result in farm animal carcasses requiring proper disposal.

- The first is a natural disaster, such as a flood. Franklin County has numerous farms located in close proximity to a river. Major rivers vulnerable to flooding include the Connecticut, Deerfield, Millers, and Green Rivers. Should one or more of those rivers experience a significant flood (50- or 100-year) hundreds of farm animals would perish. Deceased animals might remain on or in close proximity to the farm where they were housed. Other animals might be washed down stream or deposited off site when flood waters recede. Other natural disasters that might affect Franklin County are ice storms and hurricanes. In any situation, local officials will be the first responders and will need to address rapid disposal of the carcasses for public health and safety.
  - The second scenario is a manmade disaster, such as a hazardous materials leak from a rail car. In this scenario nearby farm animals may die from chemical fumes and will need to be properly disposed of.
  - The third scenario that would result in farm animal carcasses is a disease outbreak. There are several common contagious animal diseases (CADs) that could infect a livestock or poultry population. In this scenario, state and federal officials would be the primary emergency responders. Local officials would provide assistance. Two companion documents address how local police and fire departments might be asked to assist with traffic control and decontamination/disinfection procedures. (These documents are in the

Appendices.) However, in a disease outbreak, the lead state and federal agencies will determine the response, including disposal.

Attached in the appendices is a table that shows the number of farm animals located in each municipality. Also attached in the appendices is a town-specific map indicating the location of farms. A spreadsheet identifies each farm and the number and type of animals present at that farm. This information is based on the best available information from 2007 and 2008. For updated information, contact your town's Animal Inspector.

#### 2.1 Hazard Analysis

Franklin County, Massachusetts is situated in the northwest portion of the state. It is a rural county, with significant agricultural components in most of its communities. Topography types in the County include flat, gently rolling, and quite hilly. Land cover ranges from open to densely forested. Major rivers vulnerable to flooding include the Connecticut, Deerfield, Millers, and Green Rivers. Should a major disaster impact the county, it is likely that many animals will die, either in their own location or after being transported by windstorms or flood waters. The County has experienced a wide range of severe weather types ranging from blizzards and ice storms to tornados, floods, and hurricanes, and is expected to continue experiencing them. A large number of animal carcasses would pose public health and environmental problems and necessitate a major and organized response.

There are two major highways through the county: Route 2 running east/west and Interstate 91 running North/South. Should these major highways be closed for any reason, challenges would be presented to emergency managers in terms of evacuation of residents or managing stranded people, moving carcasses and other debris, as well as obtaining supplies and materials in a timely manner.

#### 2.2 Capability Assessment

Each Town in Franklin County will be on its own in the first 72 hours after an emergency. Each Town has an emergency coordinator and equipment which may be available for use. Towns may have to request mutual aid. Towns are able to access equipment and supplies through Massachusetts state contracts (see the section on Procurement and Record Keeping). In a severe emergency the State Emergency Operations Plan will be activated and towns can access MEMA.

#### **3.0 ASSUMPTIONS**

There are several assumptions that were made when this plan was developed. They are as follows:

- A municipality may be responding to multiple emergencies resulting from a disaster, such as removing debris, opening roadways, evacuating residents, and managing large numbers of animal mortalities.
- Each municipality will have to determine when to declare a state of emergency to deal with animal carcass disposal. (Is the trigger 10 or 50 head of cattle; 40 or 80 sheep, etc.?)
- Once a state of emergency is declared the municipality will implement a unified command structure. All actions and activities related to locating and disposing of animal carcasses will be coordinated through an incident command system.
- Municipalities will most likely be on their own for up to 72 hours following the emergency declaration. If the scope of situation exceeds town resources, municipal officials will request assistance through MEMA and FEMA.
- If the response requires MEMA and FEMA involvement, then all response and recovery activities will be conducted in accordance with FEMA requirements using FEMA forms as appropriate.
- The affected municipality will determine when to request mutual aid from other Franklin County municipalities.
- One or several of the following management methods will be needed: burial on or off site, composting on or off site, transporting to a commercial incinerator or landfill.
- Enough major roadways will be passable to allow the municipality to implement off-site disposal of animal carcasses.
- Acquisition of equipment and supplies will be accomplished through the use of Massachusetts State Contracts where possible. However, shortages will develop and the use of other sources will be necessary. Appropriate FEMA compliant contracting methods must be used. See the Procurement and Record Keeping section for FEMA guidelines and forms and MA Operational Services Division state contract for emergency response equipment and supplies.

• Where any Contagious Animal Disease outbreak occurs, the local response will serve to support a state/federal response team, with local emergency personnel playing a secondary role.

#### 4.0 CONCEPT OF OPERATIONS

It is recognized that some disasters involving animal mortality could affect a complex web of people, infrastructure, and institutions and require a complex, wide-ranging response utilizing many resources. As with all emergencies, a unified incident command will be imperative to gather information and respond to variables. Some basic concepts of operation follow:

- Local governments in Franklin County will be on their own for the first 72 hours and will use their own resources to respond to all emergencies. Each town's Chief Elected Official or designee will activate its emergency plan and Incident Command structure. Mutual Aid agreements are in place and will be activated as necessary.
- Throughout all emergency response operations, a log of all calls and actions will be maintained by all responding agencies/organizations and any/all Command Centers, Emergency Operations Centers, and Incident Sites.
- When the Incident Command Center receives calls about animal mortalities, the information will be logged on the appropriate form (see the separate section "Response Action Plan") and summarized for the Incident Commander who will then activate a response.
- Local government and non-governmental organizations, trade, and professional organizations involved in animal care and agriculture will play a part in this response, containment and recovery effort, and will assist and support in animal rescue and support activities. See 5.0 Roles and Responsibilities.
- An interdisciplinary response team may be needed to address issues that are expected to arise following a disaster. These include large numbers of deceased animals at specific farm sites or possibly off-site as a result of a flood. The expertise and training of the following individuals and groups will be necessary:

Chief Elected Official Town Police Department Town Fire Department Town Board of Health Town Public Works Department Local Veterinarians Town Agricultural Committee Local Emergency Planning Committees Local Animal Rescue Teams A list of regional veterinarians and a list of animal welfare organizations are attached to this section.

• Levels of Operation will correspond to the Massachusetts CEMP. In incidents of a magnitude requiring resources beyond the local scope, it is probable that State Level Emergency Support Functions #3 and #17 will be utilized.

#### 5.0 ROLES AND RESPONSIBILITIES

The following describes the general roles and responsibilities of individuals and departments that might be involved in managing animal carcass disposal.

#### 5.1 Local Organization

A. Chief Elected Officer (CEO)

The CEO in each community will maintain direction and control of government activities, declare a Town Emergency through the normal process, and provide local resources within their capability.

B. Local Emergency Manager Director

The local Emergency Manager Director (EMD) is responsible for the overall coordination of emergency response to any incident within the community, and activates the local Emergency Operations Center if necessary.

The EMD should oversee collection, verification and analysis of animal mortality information and, if necessary, should coordinate with key personnel to establish a Damage Assessment Team. The EMD should evaluate information on animal mortalities and determine which method of disposal is most appropriate.

C. Board of Health

The Board of Health has jurisdiction over solid waste, air pollution, water pollution, nuisances, and management of animals (inspection). The Board of Health will collaborate with the emergency manager and operations staff to assess and respond to conditions that threaten human health, safety, and the environment.

Board of Health members may be assist with identifying farms in the disaster area, conducting on-site inquiries, tracking the location of animal carcasses (location, number and type), and serving as a communication resource with farmers.

D. Public Works/Highway Department

The Superintendent of Public Works/Highway and crews will provide support in the maintenance of usable roads and routing of traffic around any barriers or quarantined areas. They will also assist by providing excavation, earth moving, and transportation equipment and operators to excavate and move soil, carcasses, or debris as directed.

E. Police and Fire Departments

The Police Department will provide incident security, including management of approved entry and egress to a site and traffic control, as needed. In addition, the Police may be required to provide assistance to state and federal responders in quarantine situations, and provide security to responders and persons within a quarantine area.

The Franklin County Sheriff's office may also be asked to assist with traffic control.

The Fire Department may be required to provide assistance to state and federal responders in a quarantine situation and within their limits of training and equipment, provide assistance with decontamination, hazardous material and fire protection.

F. Town Administrator/Manager

The Town Administrator or Town Manager will be responsible for maintaining proper documentation, serving as a liaison to the Board of Selectmen, and coordinating the response effort from town departments. She or he may also work with the Town Accountant and/or Town Treasurer to maintain proper documentation of costs in the event the town seeks reimbursement from FEMA.

G. Agricultural Commissions

If a municipality has an agricultural commission, this group may assist with identifying farms in the disaster area, conducting on-site inquiries, tracking the location of animal carcasses (location, number and type), and serving as a communication resource with farmers.

#### H. Veterinarians

Local veterinarians can assist with euthanasia for injured animals, depopulation if necessary, and communicating with farmers. A list of regional veterinarians is attached to this section. Contact must be made to ascertain their willingness to assist.

I. Agricultural Organizations (Farm Bureau, CISA, etc.)

These organizations are a valuable local and regional resource. Local officials may seek assistance from these organizations in identifying sites with animal carcasses and communicating with farmers. A list of regional agricultural organizations is attached to this section.

J. Animal Welfare Organizations (Humane Society, etc.)

Animal welfare organizations are a valuable resource. Local officials may seek assistance from these organizations in identifying sites with animal carcasses and identifying sites for temporary housing, if needed. These organizations may also provide general assistance under the direction of the CEO and Emergency Management Director. A list of regional animal welfare organizations is attached to this section.

K. Volunteers

Citizen volunteers may be used to identify sites with animal carcasses and provide general assistance to the response effort.

L. Mental Health Services

Due to the potential traumatic nature of identifying deceased animals and the possibility that some animals may need to be euthanized, it is suggested that any local response include mental health counselors. Workers involved in any task related to viewing, handling, or euthanizing animals should be encouraged to participate in mental health services.

#### 5.2 State and Federal Organizations

The response and involvement of state and federal agencies will depend on the scope of the disaster and resulting animal mortalities. In general, the following state agencies will respond and assist local efforts during an agricultural emergency: Department of Environmental Protection (DEP), Department of Agricultural Resources (DAR), Massachusetts Emergency Management Agency (MEMA).

Revision 0.0 Initial Issue Date June 2009

If a state of emergency is declared by the governor and local government requires additional assistance, the following state agencies may respond: State Police, MassHighway, Department of Fish and Game, Massachusetts National Guard.

Federal agencies that might respond in an agricultural emergency are the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) and Veterinary Service (VS) and FEMA.

### **ATTACHMENTS**

- Veterinarians in Franklin County Region
- ✤ Agricultural and Animal Welfare Organizations
- ✤ Survey of Groups with Registered Disaster Service Workers Form
- Veterinary Emergency Response Personnel Application Form

### **VETERINARIANS IN FRANKLIN COUNTY REGION**

South Deerfield Veterinary 30 Elm St. South Deerfield, MA 413-665-3626 Large animal vet

Mill Valley Veterinary Clinic 224 Mill Valley Road Belchertown, MA 01007 413-323-9201 Large animal vet

Veterinary Emergency and Specialty Hospital 141 Greenfield Rd South Deerfield, MA 413-665-4911

Sidorsky & Sidorsky 78 Crittenden Hill Rd Shelburne Falls, MA 413-625-9353

Shelburne Falls Veterinary Hospital 3 Mohawk Trail Rd Shelburne Falls MA 413-587-9517

Greenfield Veterinary Clinic 18 French King Highway Greenfield, MA 01301 413-774-9919 Pioneer Valley Veterinary Hospital 571 Bernardston Rd. Greenfield, MA 01301 413-773-7511

Brookside Animal Hospital 279 Plain Rd Greenfield, MA 01301 413-774-5151

Victoria L. Howell DVM 1116 Mohawk Trail Shelburne Falls, MA 01370 413-625-6034

North Country Veterinary Clinic 1182 Bernardston Rd Greenfield MA 01301 413-773-8560

Lauralyn Brown DVM 196 Millers Falls Rd Turners Falls MA 01376 413-863-0025

Windy Hollow Veterinary Clinic 68 Sunderland Rd Montague, MA 01351 413-367-0062

Sunderland Animal Hospital, Inc. 52 Amherst Rd. Sunderland, MA 01375 413-665-9821

#### ORGANIZATIONS INVOLVED IN AGRICULTURE AND ANIMAL WELFARE IN THE FRANKLIN COUNTY REGION

Franklin County 4-H Association C/o Karen C. Herzog P.O. Box 564 Greenfield MA 01302 Or call: Christina Hunt (Dairy) 978-544-2704 Or Tom Waskiewicz 413-577 0788 (email <u>Waskiewicz@umext.umass.edu</u>)

Franklin County Conservation District C/o Tim Storrow 55 Federal St. Greenfield, MA 01301

Massachusetts Association of Dairy Farmers 160 N. County Road Bernardston, MA 01337

Massachusetts Purebred Dairy Cattle Association 18 S. Mill River Rd. Deerfield, MA 01373

Dakin Pioneer Valley Humane Society 163 Montague Road Leverett MA 01054

Pioneer Valley Humane Society 155 French King Highway Greenfield, MA 01301

Northeast Dairy Producers Alliance Ed. Maltby 30 Keets Road Deerfield, MA 01342 Franklin County Fair/Franklin County Agricultural Society Wisdom Way P.O. Box 564 Greenfield, MA 01302 413-774-4282 info@fcas.com

Massachusetts Farm Bureau Franklin County Contact Ken Avery kavery@massfb.org

USDA/NRCS 451 West St. Amherst MA. 01002 413-253-4350

Northeast Organic Farming Association (NOFA) 411 Sheldon Road Barre MA 01005 978-355-2853 nofa@nofamass.org

New England Small Farmers (NESF) Sue Ellen Johnson 275 Jackson St Belchertown, MA 01007 413-323-4531 sejohnson@smallfarm.org

Massachusetts Maple Association Watson-Spruce Corner Road Ashfield, MA 01330 413-628-3912

National Equine Association 94 High St. Plainville, MA 02762 508-695-4470

### Survey of Groups with Registered Disaster Service Workers Form

| Organization  |
|---|
| Address   |
| Phone ( ) Fax ( )   |
| Contact Name  |
| Contact's Phone ( ) Pager ( )   |
| Number of Volunteers  |
| 1. Trained as a disaster service worker                               |
| Veterinarian/Animal Health Technician                                 |
| Non-medical   |
| 2. Not trained as a disaster service worker                           |
| Veterinarian/Animal Health Technician                                 |
| Non-medical   |
| 3. Experienced with:  |
| Small Animal  |
| Large Animal (livestock)  |
| Horses  |
| Exotics   |
| Volunteers  |
| Name         Phone (         )  |
| □Veterinarian/AHT □ Non-medical □Trained as a disaster service worker |
| <b>Experience</b> : Small animal Carge Animal Horse Exotic            |
| NamePhone ( )   |
| □Veterinarian/AHT □ Non-medical □Trained as a disaster service worker |
| <b>Experience</b> : Small animal Carge Animal Horse Exotic            |
| Name         Phone (         )  |
| □Veterinarian/AHT □ Non-medical □Trained as a disaster service worker |
| Experience: Small animal Large Animal Horse Exotic                    |

# Veterinary Emergency Response Personnel Application<sup>1</sup> Form

| Name  |                   |                       |                                |
|---|-------------------|-----------------------|--------------------------------|
| Home Address  | First             |                       | MI                             |
| Number and Street   |                   | City                  | Zip                            |
| Home Phone ( )  | Fax (             | )                     |                                |
| Pager ( )   | Cell (            | )                     |                                |
| Work Address  |                   |                       |                                |
| Number and Street   | F (               | City                  | Zip                            |
|   | Fax (             | )                     |                                |
| May we call you at work? $\Box$ Yes $\Box$ No             |                   |                       |                                |
| Are you licensed and accredited in Massachuse             | tts? 🗆 Yes        | $\Box$ No             |                                |
| What is your primary area of expertise?                   |                   |                       |                                |
| $\Box$ Companion animals ( $\Box$ dogs $\Box$ cats        | $\Box$ pocket pet | s $\Box$ house exotic | cs)                            |
| $\Box$ Large animals ( $\Box$ cattle $\Box$ swine $\Box$  | norses 🗆 cer      | vidae 🗆 camelid       | s $\Box$ ratites)              |
| $\Box$ Poultry ( $\Box$ cnickens $\Box$ turkeys $\Box$ du | icks 🗆 geese      | )                     |                                |
| $\Box$ Other:   |                   |                       |                                |
|   |                   |                       |                                |
| Do you have a mobile clinic or equipment? $\Box$ Y        | es □No            |                       |                                |
| Are you prepared to use it during a disaster resp         | bonse? $\Box$ Y   | es □ No               |                                |
|   |                   |                       |                                |
| Medical Insurance Carrier                                 | Poli              | cy Number             |                                |
| Driver's License Number                                   | Exp               | piration Date         | //                             |
| Vehicle License Plate Number                              | Description       |                       |                                |
| Trailer License Plate Number                              | Description       |                       |                                |
|   |                   |                       |                                |
| Do you have Standardized Emergency Manager                | ment System       | (SEMS) training       | $? \square $ Yes $\square $ No |
| Disaster Training or Experience                           |                   |                       |                                |
|   |                   |                       |                                |
|   |                   |                       |                                |
| Signature   |                   | Date                  |                                |
| Approved by   |                   | Date                  |                                |
| 11 ···································                    |                   |                       |                                |

<sup>1</sup>Adapted from the Indiana *State Annex for Veterinary Emergencies* Committee.

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# RESPONSE ACTION PLAN for Animal Carcass Management Related to a Disaster in Franklin County, Massachusetts



# An Agricultural Emergency Response Planning Tool

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

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#### ACKNOWLEDGEMENTS AND CREDITS

This plan was developed by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments. This project is funded through a USDA Rural Utilities Program Solid Waste Management grant.

This section of the *Comprehensive Response Plan for Animal Carcass Management Related to a Disaster in Franklin County, MA* is based on the Missouri Department of Agriculture's *Catastrophic Mortality and Associated Material Disposal*, Standard Operating Guideline #002. This guideline can be found online at www.mda.mo.gov/ah/pdf/animalag\_guide2.pdf.

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For more information about agricultural emergency response planning contact the Franklin Regional Council of Governments at 413-774-3167 or visit www.frcog.org. Information is also available through the Franklin County Solid Waste Management District at 413-772-2438 or at www.franklincountywastedistrict.org.

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### ATTACHMENTS

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| Animal Carcass Damage Assessment                             |
| Decision Checklist for On-Site Composting                    |
| Area-to-Carcass Calculation Worksheet                        |
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| Land-to-Carcass Calculation Worksheet                        |
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#### **1.0 PURPOSE**

The purpose of this section of the Comprehensive Response Plan for Animal Carcass Management in a Disaster is to allow emergency responders to begin the process of assessing the on-the-ground situation. In any natural or man-made disaster there may be animal mortalities in sufficient numbers that they must be managed not by the local farmer/landowner but by the municipal government. Immediately following a disaster Incident Command needs to know the level of response and recovery to initiate. How many animal mortalities are there? What type of animals are they – cows, sheep, chicken, other? Where are they – on or off farm, on private property, in waterways? Are they accessible for equipment and vehicles?

These and more questions must be answered in order to develop an appropriate response. The answers will also provide Incident Command with an understanding of whether existing town equipment and staff can handle the scope or whether the town must rely on mutual aid services and/or private contractors.

If the information that has been gathered indicates the need for the town to manage the animal carcasses the Emergency Management Director can move to the next step: identifying a disposal method.

#### 2.0 INCIDENT ASSESSMENT AND SCOPE

In order to estimate the response necessary and resources required, one of the first tasks *immediately* following the end of the cause of the disaster is to conduct an Incident Assessment. Emergency responders should use the animal census data found in the appendices to get a sense of animal populations in their town. These numbers are from town animal inspectors, town assessors' records, and the MA Department of Agriculture's Barn Book. They should be updated annually, if possible.

Also found in the appendices is a map that locates farms within your town's borders. The map includes a spreadsheet that identifies the farm owner, location, and type and number of animals on that property. As with any data source and mapping project like this, this information is not complete and the sites identified on the map might not actually be where the animals are housed. However, the animal census and the town-specific map should be used as a resource to begin the process of locating animal mortalities after a disaster. Note that in the event of severe flooding or other disruptions, such as extremely high wind, animal carcasses may be moved away from their usual locations and deposited elsewhere.

#### 2.1 Methods for Gathering Data

There are two methods that can be employed for gathering data about animal mortalities: information submitted to Incident Command by farmers and the general public and information

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submitted by teams of individuals sent into the field under ICS. Refer to the section of the master document on Incident Command Structure for a list of town boards, individuals, and organizations that could be called upon to make up assessment teams.

#### 2.1.1 Telephone Message Logs

The Incident Command Center must have a communications/message station for logging animal mortality information. <u>A sample form is provided at the end of this section</u>. Officials should attempt to distribute information to farmers and the general public that encourages them to call or email the Incident Command Center with locations of animal carcasses, number and type of animal, and whether any animals are injured or suffering. This will allow the ICC to send assessment teams to areas that have not been reported by farmers or the general public.

#### 2.1.2 Assessment Teams

Damage assessment teams could be comprised of members of town boards, town staff, the Animal Inspector, the Agricultural Commission (if one exists), community volunteers, and animal welfare organizations. (**Note:** Individuals might witness grotesque scenes of dead or dying animals. They should be forewarned about the possible field conditions. They should also be advised to visit mental health professionals provided by Incident Command.)

The damage assessment teams should travel to farms which might have been impacted. Each team must be equipped with personal protective equipment, clipboards, tracking forms, pencils/pens, GPS, and a means of communication with the Incident Command Center. A sample form for the assessment teams is provided following this document.

#### 2.2 Evaluating the Damage

The Emergency Management Director should begin to compile the telephone message logs and the information collected by the damage assessment teams. The most critical piece of data will be the number and type (cow, sheep, poultry, etc.) of animal carcasses at each location. If the Damage Assessment shows that the number of carcasses is significant, the EMD should recommend to the Town that it must begin carcass management activities. This may trigger an emergency declaration, if one has not already been declared. Otherwise, small numbers of animals might be managed on-farm through normal mortality management techniques.

The EMD should consider mapping the location of animal carcasses, the number and type of animal. This will allow the EMD to prioritize locations that need to be addressed first. With animal carcasses, decomposition is a concern. Of course, if the disaster occurs in the winter there is less urgency except for scavenging from wild animals. However, the response should be as prompt as possible considering other possible constraints, such as areas inaccessible to large equipment.

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This is also the time to contact the MA Department of Environmental Protection (DEP) to discuss assistance they can provide as well as to identify any limitations on carcass disposal methods.

#### 3.0 ANIMAL CARCASS DISPOSAL METHODS

At this point, it is assumed that there are enough animal carcasses located in town that a response has been initiated. The next step in the response process is to evaluate the possible carcass disposal methods. There are several methods available. Each method has advantages and disadvantages as described below in Table 1.

The EMD will need to make a determination about what disposal method to use at each location with animal carcasses. Factors influencing which disposal method is appropriate include: number and type of animal carcass, accessibility to them for equipment (bucket loaders, back hoes, trucks), and whether each site meets the environmental setback criteria for burial and/or composting.

As disposal options are considered, the impact of each choice on the town's total emergency response should be weighed. Using a large amount of town resources, such as heavy equipment, for carcass disposal could redirect resources from other critical response activities.

The Massachusetts DEP has determined that the following are appropriate disposal options, listed in order of preference:

A. On-farm compostingB. Off-site burial (landfill)C. Off-site composting (commercial site or public land)D. On-farm burialE. Off-site incineration

As noted above, on-site management is preferred to off-site management, and composting is the preferred method, either on or off-site.

Note: Some or all disposal activities may require state permits. Contact DEP and DAR to determine what activities require permits or are exempt from permits. DEP-Boston: 617-292-5500; DAR-Boston: 617-626-1700

#### Table 1. Advantages and Disadvantages of Disposal Options

#### Disposal options are listed in order of preference.

| <b>Disposal Option</b> | Advantages                | Disadvantages               |  |
|------------------------|---------------------------|-----------------------------|--|
| On-farm composting     | Low technology            | Requires large volume       |  |
|                        | Quick implementation      | of carbon                   |  |
|                        | No transportation costs   | Not ideal for large         |  |
|                        | Beneficial end-product    | animals                     |  |
| Off-site burial        | Lined cells with leachate | Excessive tonnage could     |  |
| (landfill)             | collection                | affect operation and permit |  |
|                        | Regional facilities       | Pormit                      |  |
|                        | available                 | Will most likely require    |  |
|                        | T / 1 1                   | state permits               |  |
| Off-site composting    | Low technology            | of carbon                   |  |
|                        | Beneficial end-product    |                             |  |
|                        |                           | Not ideal for large         |  |
|                        |                           | animals                     |  |
|                        |                           | Will most likely require    |  |
|                        |                           | state permits               |  |
| On-farm burial         | Low technology            | Geologic and                |  |
|                        | Quick implementation      | environmental               |  |
|                        | No transportation costs   | minitations                 |  |
|                        |                           | Minimal decomposition       |  |
|                        |                           | Leachate                    |  |
| Off-site incineration  | Regional facilities       | Size of "hopper" to         |  |
|                        | available                 | accept large animals        |  |
|                        |                           | Wet and/or feathered        |  |
|                        |                           | animals don't burn well     |  |
|                        |                           | Will ment literate and i    |  |
|                        |                           | state permits               |  |
|                        |                           | r ·····                     |  |

#### 3.1 Disposal Checklists

To help emergency managers decide what to do, comprehensive checklists for each option are provided following this section. On site personnel should complete the checklist for each option to determine whether or not that option is feasible (for example on-site burial or composting). The checklist should be used in conjunction with the town-specific map in the Appendix of the main document binder to identify farms that might meet the burial criteria.

Also included in this binder are separate sections that provide more in-depth information and instruction on each method. For example, there is a section that explain how to compost animal carcasses on site. In addition, equipment lists are provided for each method.

In general, the following list identifies issues and limitations that need to be considered when evaluating disposal options<sup>1</sup>:

- State and local public health and environmental protection laws and codes. Consider Board of Health regulations.
- Potential hazards for other animals or humans
- > Isolation from public areas is desirable
- > Number and type of animals that will be disposed
- Site access for heavy equipment and vehicles
- Areas and methods of disposal should afford protection from scavenging animals
- Disposal area(s) should not be located in sensitive environments (i.e. wetlands, drinking water protection areas etc.) Impact on surface/ground water should be considered. Note: See specific disposal method information in following sections for these actual criteria.
- Permeability of subsoil, amount of rocks in the soil, drainage characteristics. Note: See specific disposal method information in following sections for these actual criteria.
- Location of any underground utilities
- Amount and type of non-animal material such as compost amendment or additional cover soil that will be needed
- Availability of supplies and equipment necessary for the disposal method selected
- Availability of utilities at the site (i.e. electricity, telephone, water)

<sup>&</sup>lt;sup>1</sup> Adapted by permission from Missouri Department of Agriculture Standard Operating Guide No. 002

- Subsequent use of the area
- If private lands are considered for any disposal option, the EMD should obtain written use agreements from the landowner(s). An example of such an agreement is provided following this document.

#### 3.2 Disposal Methodology Overview

After completing the checklist(s) the EMD can identify the most feasible disposal method that is also suitable for each specific site. The sections following this document will provide a walk-through of on-site composting, on-site burial, and off-site disposal at a landfill or incinerator.

- In general, on-site composting is preferred for small animals such as poultry because it is usually the most cost effective and it generates a usable end product. In many cases, the farm will have easy access to a carbon source such as poultry litter, hay, straw or even wood shavings. The farm will also typically have needed equipment such as a skid steer or bucket loader.
- If it's possible to use an off-site composting operation that should be considered as a disposal option. State and local permits will have to be investigated. In an emergency, state agencies may allow off-site composting of carcasses without a long permitting delay. In general, the major consideration for this option is transportation from the farm or carcass location to the composting operation.
- Burying carcasses on a farm is one of the most affordable disposal options but there is the potential for environmental degradation. Leachate from carcasses can enter groundwater or drinking water supplies. Carcasses also tend not to decompose when they are buried meaning that they could be unearthed years later if the burial area is dug up for development.
- The most significant advantage to landfills for carcass disposal is the fact that the infrastructure already exists and the capacity (depending on the landfill) can be relatively large. Lined landfills pose little risk to the environment. In the event of an emergency or catastrophic event, time is a very important factor and landfills offer preexisting sites for disposal of carcasses with the necessary equipment, personnel, procedures, and containment systems.
- While commercial incinerators can provide a disposal outlet, they are most effective for small animals. They are not effective for large animals, such as bovines or horses, or for feathered animals, such as poultry. In general, landfill disposal is more suitable for carcass disposal than incineration.
- Rendering is an acceptable disposal option for animal carcasses that have not degraded; however there are currently no rendering facilities in the area. Another possible option is

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alkaline hydrolysis, but there are no permitted facilities in the area and disposal of the end product is currently a problem. These disposal options are not covered in this document.

**Note:** Other disposal options exist but are either not recommended or not feasible as of the writing of this plan. A disposal option that is not recommended due to the level of resources needed and the resulting environmental degradation is on-farm incineration. This refers to aircurtain incinerators which require an enormous amount of dry wood, are labor intensive, and create significant air pollution.

#### 4.0 TEMPORARY STORAGE OF CARCASSES

If a determination is made that some carcasses can't or won't be managed within a week's time, temporary storage should be considered until disposal is possible. If the disaster occurs in cold weather, carcasses can be buried in snow piles. In warmer weather, some carcasses will bloat and bodily fluids may leak into the ground. In this situation, the carcasses would need to be stored on plastic sheeting with berms to contain bodily fluids. Pile carcasses together on the plastic sheeting and cover them with 3 feet of soil. This might slow down decomposition. In general, storage of carcasses in warm weather should be for the shortest time possible.

#### 5.0 TRANSPORTATION OF CARCASSES

Depending on the nature of the disaster and the methods chosen for disposal, it may be necessary to transport carcasses off the original site at which they were found. The transportation of large numbers of deceased animals requires significant planning and preparation. Dead animals must be transported in covered, leak-proof containers. The route(s) for transport of animal carcasses should be determined ahead of time.

For local short transport, emergency managers might use municipally-owned vehicles. Significant preparation for transport out of Franklin County will be required. All transportation personnel (public and private) will need briefing regarding what is expected of them, training in the use of personal protective equipment (PPE), in responding to public questions and the media, and being familiar with permits and other documents.

For long distance transport it is possible to use lined rolloff containers, lined dump trucks or other type truck that can "tip" its load. These types of vehicles are most commonly operated by private companies. Refer to the section on Procurement. It includes a list of heavy equipment vendors on state contract. If the carcasses are being hauled to a landfill then the contractual arrangements with the disposal location must be arranged.

#### 5.1 Procedures for retrieving, moving, and transporting carcasses<sup>2</sup>

The procedures for collecting, moving, and transporting carcasses are similar regardless of whether they are being disposed on-site or off-site. They will need to be carefully picked up and moved to either the on-site disposal location or placed into a leak-proof container for transportation off-site. In either situation, workers should wear PPE to protect from them from body fluids. This includes tyvek suit, boots, and synthetic impermeable gloves. Safety glasses should be considered depending on the state of the carcasses and whether liquid is likely to become airborne. They should all have direct communication with the Incident Command Center in case a problem arises. They should also be directed to seek mental health counseling based on some of the images they are likely to witness.

#### 5.1.1 Equipment and Supplies

The following list of equipment should be considered depending on the specific situation. It may be necessary to contract with private companies for supplies and/or equipment. Be certain to comply with FEMA contracting requirements in order to be reimbursed should this incident be declared a state disaster. See the section on Procurement and Record Keeping.

- Heavy machinery:
  - Skid Steer with attachments
  - Front-end loaders
  - Dump trucks
  - Roll-offs
  - Cranes
  - Chains, hooks, shovels
- > Supplies:
  - 6 mil plastic sheeting, poly bags with a zipper (available from Waste Management at www.wmupstream.com/documents/Bio-zipfinal.pdf)
  - Absorbent material sawdust, wood shavings, hay, straw
  - Personnel Protective Equipment

> Lighting: If the situation warrants working after daylight, then lighting should be provided. With any lighting system, it will be necessary to provide electricity, either with batteries, generators or drop service from power lines. The use of a drop service will require coordination with the local power company.

➤ Communications: Personnel at each site where carcasses are being collected, moved and transported need to have a means of communication with the Incident Command Post.

<sup>&</sup>lt;sup>2</sup> Adapted from the Missouri Department of Agriculture Standard Operating Guide #002 p13 ff.

#### 5.1.2 Methodology

If the town does not have adequate equipment, then order the necessary containers. Rolloff containers are usually 10, 20, 30, or 40 cubic yards. Rolloff containers will most likely need to be sealed to prevent leakage. Dump trucks can also be used. **Note:** Large transfer trailers are not ideal because the weight of the carcasses will not allow the load to tip out of the trailer easily or without ripping the liner. Make sure a contract has been prepared for the trucking activities.

1. Seal all rolloff containers and dump trucks around the gate. Do not use any container that has holes or is rusty and thin in places.

2. Double-line with 6 mil plastic sheeting or poly bags with a zipper (bio-zip from Waste Management). If using plastic sheeting make sure to leave enough at the sides to seal the top after loading is completed. Dimensions are as follows: 10 cubic yard is 32'x 44'; 20 cubic yard is 34'x 76'; 30 cubic yard is 40'x 80' and 40 cubic yard is 50'x 100'. Make sure two people work together to do the lining.

3. Load the container with 1 foot of absorbent material such as sawdust, wood shavings, hay or straw.

4. Retrieve animal mortalities on sites where it has been decided that they can not be managed. Some carcasses will bloat. Use great care, handle the carcass as little as possible. Load them carefully into the container both to avoid tearing the liner and to avoid puncturing the body cavity of the carcasses, thus keeping the release of body fluids to a minimum.

5. In loading a vehicle, ample space must be left for the expansion of carcasses. At least 1-2' of space (depending on the temperature and the distance to be traveled) should be left around the carcasses.

6. After loading, cover carcasses with plastic sheet which should be attached to sides and top of container to prevent leaking or zip the poly bag.

#### 5.1.3 Documentation

It is imperative to use appropriate documentation for all activities that require labor, equipment, supplies, and trucking services. The EMD should have some level of assurance that any containers of carcasses hauled off site have been properly loaded (not under filled or over filled) and are delivered to the contracted end disposal facility. Logs and written documentation will be required for reimbursement from FEMA. <u>See the</u> Procurement and Record Keeping section for copies of FEMA forms.

## ATTACHMENTS

- Animal Mortality Telephone Message Log
- Animal Carcass Damage Assessment
- Decision Checklist for On-Site Composting
- Area-to-Carcass Calculation Worksheet
- Decision Checklist for On-Site Burial
- Land-to-Carcass Calculation Worksheet
- Carcass Removal from Private Property Agreement
- \* Safety Guidelines for Animal Carcass Collection and Disposal
# ANIMAL MORTALITY TELEPHONE MESSAGE LOG

Town of \_\_\_\_\_

Disaster/incident:\_\_\_\_\_

Date\_\_\_\_\_ Name of Recorder\_\_\_\_\_

Please record all calls and information obtained about animal mortalities.

| Caller name | Caller phone number | Number and type of animal mortalities | Location/s | Comments |
|-------------|---------------------|---------------------------------------|------------|----------|
|             |                     |                                       |            |          |
|             |                     |                                       |            |          |
|             |                     |                                       |            |          |
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|             |                     |                                       |            |          |
|             |                     |                                       |            |          |
|             |                     |                                       |            |          |

# ANIMAL CARCASS DAMAGE ASSESSMENT

 TOWN OF \_\_\_\_\_\_
 INCIDENT \_\_\_\_\_\_

 DATE \_\_\_\_\_\_
 GPS Coordinates \_\_\_\_\_\_

\_\_\_\_\_

TEAM MEMBERS:

| Total numbers of animal carcasses |  | Location/s |
|-----------------------------------|--|------------|
| Cows                              |  |            |
| Horses                            |  |            |
| Sheep                             |  |            |
| Swine                             |  |            |
| Large Birds                       |  |            |
| (Turkeys)                         |  |            |
| Small Birds<br>(Chickens)         |  |            |
| Other: list                       |  |            |
|                                   |  |            |
|                                   |  |            |
|                                   |  |            |

# FRANKLIN COUNTY, MASSACHUSETTS

#### AGRICULTURAL DISASTER RESPONSE – ANIMAL CARCASS DISPOSAL

#### DECISION CHECKLIST FOR ON-SITE COMPOSTING

This worksheet should help emergency managers/staff decide if composting of animal carcasses on site is possible, and if so, what planning should be done to accommodate composting. Note: Any composting activity should be coordinated with the MassDEP, Mass DAR, and the local Board of Health. Some composting activities may require a permit or may qualify for a permit exemption. MassDEP-Boston: 617-292-5500; Mass DAR-Boston: 617-626-1700

Is on-site composting a possible management method? Use this checklist in conjunction with the town-specific map in the Appendix of the main document binder to identify farms that might meet the composting criteria.

Name, address, GPS coordinates of site:

Step 1. Determine whether composting is possible: You must answer "NO" to all questions in this section in order for a site to be usable for composting. If you answer "YES" to any question in this section consider burial on-site or off-site disposal. Refer to the on-site burial checklist.

- $\Box$  Is the site at least 500' from residences or sensitive receptors? Y\_ N\_
- $\Box$  Is the site within Zone I of a public water supply? Y\_ N\_
- $\Box$  Is the site within Zone A of a surface drinking water supply? Y\_ N\_
- $\Box$  Is the site within 500' of a private well? Y\_ N\_
- $\Box$  Is the site within 400' of a perennial watercourse? Y\_ N\_
- □ Is the maximum high groundwater table at least 4' below ground level? Y\_\_ N\_\_
- □ Is the site within 100' of a resource area protected by the Wetlands Protection Act? Y\_\_\_ N\_\_\_
- $\Box$  Is the site in a flood plain? Y\_ N\_

(over)

Step 2. *Other evaluative criteria for sites under consideration* (the more "yes" answers the better suited the site is for on-site composting)

| Is the site <u>outside</u> Zone II of an existing public water supply? Y N  |
|---|
| Is the site outside Zone B of a surface drinking water supply? Y N  |
| Is the site located on a relatively flat area (less than 2% slope)? Y N   |
| Is the site well-drained? Y N   |
| Is the site easily accessible by large trucks and equipment? Y N  |
| Would the site have adverse impact on other agricultural lands, wildlife habitat, areas of critical environmental concern, or open space? Y N |
| Is the site located downwind of any residences nearby? Y N  |

Step 3: Complete the attached area-to-carcass calculation worksheet to determine if enough open land or building space is available to complete composting of carcasses.

Step 4: If it is determined that the site meets the criteria for composting and enough space is available, make a list below of equipment that will be needed for this specific site.

# **Equipment list:**

# FRANKLIN COUNTY, MASSACHUSETTS

#### AGRICULTURAL DISASTER RESPONSE – ANIMAL CARCASS DISPOSAL DECISION CHECKLIST FOR <u>ON-SITE COMPOSTING</u>

#### Area-to-carcass calculation worksheet

Name, address, GPS coordinates of site:

<u>Amount of land needed</u>: (note both cubic and square footage)

1.2-3.5 cubic yards per bovine or equine; 14 square feet per bovine equivalent.

For other animals, one bovine = 1 horse

- = 5 sheep
- = 5 hogs
- = 40 turkeys
- = 200 chickens

| Animal type and number |        | Amount of space needed: first divide number of<br>animals by equivalent above, then multiply<br>answer times area ranges. See example below. |              |             |  |
|------------------------|--------|--|--------------|-------------|--|
| Animal                 | Number | Bovine<br>equivalent   | Space needed |             |  |
|                        |        |  | Cubic yards  | Square feet |  |
| Bovine                 |        | -  |              |             |  |
| Equine                 |        | -  |              |             |  |
| Sheep                  |        |  |              |             |  |
| Swine                  |        |  |              |             |  |
| Turkey or similar      |        |  |              |             |  |
| Chicken or similar     |        |  |              |             |  |
| TOTALS                 |        |  |              |             |  |

EXAMPLE: 45 HOGS/5 equivalents = 9 bovine equivalent X 1.2-3.5 cy = 10.8-31.5 cy and 126 square feet (9 x 14 sf) needed for composting

<u>Translate volume into area dimensions</u>: For a 10 cy animal area - There are 27 cf in a cy, so there are 270 cf in 10 cy. If the area itself is 7' wide and 5' tall then it must be about 9' long. (7 x 5 x 9 = 315 cf or 11.6 cy)

NOTE: 12 CY OF COVER/BASE MATERIAL IS NEEDED FOR EACH BOVINE EQUIVALENT.

# FRANKLIN COUNTY, MASSACHUSETTS

#### AGRICULTURAL DISASTER RESPONSE – ANIMAL CARCASS DISPOSAL

#### DECISION CHECKLIST FOR ON-SITE BURIAL

This worksheet should help emergency managers/staff decide if burial of animal carcasses on site or at a mass grave site is possible, and if so, what planning should be done to accommodate burial. Note: Any burial action should be coordinated with the MassDEP, Mass DAR, and the local Board of Health. Off-site burial will most likely require permits. MassDEP-Boston: 617-292-5500; Mass DAR-Boston: 617-626-1700

Is on-site burial a possible management method? Use this checklist in conjunction with the town-specific map in the Appendix of the main document binder to identify farms that might meet the burial criteria.

Name, address, GPS coordinates of site:

Step 1. Determine whether burial is possible: You must answer "NO" to all questions in this section in order for a site to be usable for burial. If you answer "YES" to any question in this section consider composting on-site or off-site disposal. Refer to the composting checklist.

- $\Box$  Is the site within Zone II of an existing public water supply well? Y\_ N\_
- $\Box$  Is the site within Zone A or B of a surface drinking water supply? Y\_ N\_
- $\Box$  Is the site within 400' of a perennial water course? Y\_ N\_
- □ Is the site within 1000' upgradient or 500' down gradient of a private drinking water well? Y\_ N\_
- □ Is the maximum high groundwater table within 4' of the bottom of the proposed burial trench? Y\_ N\_
- □ Are the perimeters of the burial trench within 100' of a resource area protected by the Wetlands Protection Act? Y\_ N\_
- $\Box$  Is any part of the burial trench within 400' of a lake or 200' of a river? Y\_ N\_
- $\Box \quad Is the site within a flood plain? Y_ N_$

(over)

Step 2. *Other evaluative criteria for sites under consideration* (the more "yes" answers the better suited the site is for on-site burial)

- □ Is the area large enough to accommodate the carcasses to be disposed of? (See the attached table to calculate the amount of land needed for different numbers and types of animals) Y\_\_\_ N\_\_\_
- Is the seasonal high groundwater static table at least 15' below ground surface?
   Y\_\_\_ N\_\_\_
- □ Is bedrock at least 15' below ground surface? Y\_ N\_
- $\Box$  Is the burial area close to the mortality site? Y\_ N\_
- □ Is the burial area easily accessible by large trucks and earth moving equipment? Y\_\_ N\_\_
- □ Is the site located on a relatively flat area (less than 2% slope) with low permeability soils? Y\_ N\_
- □ Is the area free of buried utility lines or pipelines or other utilities in or near the burial area? Y\_\_ N\_\_
- □ Would burial have adverse impact on other agricultural lands, wildlife habitat, areas of critical environmental concern, or open space? Y\_\_\_ N\_\_\_

Step 3: Complete the attached land-to-carcass calculation worksheet to determine if enough open land is available to complete trench burial of carcasses.

Step 4: If it is determined that the site meets the criteria for burial and enough land is available, make a list below of equipment that will be needed for this specific site.

Equipment list:

# FRANKLIN COUNTY, MASSACHUSETTS

#### AGRICULTURAL DISASTER RESPONSE – ANIMAL CARCASS DISPOSAL DECISION CHECKLIST FOR <u>ON-SITE BURIAL</u>

#### Land-to-carcass calculation worksheet

Name, address, GPS coordinates of site:

<u>Amount of land needed</u>: (note both cubic and square footage)

1.2-3.5 cubic yards per bovine or equine; 14 square feet per bovine equivalent.

For other animals, one bovine = 1 horse

- = 5 sheep
- = 5 hogs
- = 40 turkeys
- = 200 chickens

| Animal type and nu | ımber  | Amount of land needed: first divide number of<br>animals by equivalent above, then multiply<br>answer times land ranges. See example below. |             |             |  |
|--------------------|--------|---|-------------|-------------|--|
| Animal             | Number | Bovine<br>equivalent  | Land needed |             |  |
|                    |        |   | Cubic yards | Square feet |  |
| Bovine             |        | -   |             |             |  |
| Equine             |        | -   |             |             |  |
| Sheep              |        |   |             |             |  |
| Swine              |        |   |             |             |  |
| Turkey or similar  |        |   |             |             |  |
| Chicken or similar |        |   |             |             |  |
| TOTALS             |        |   |             |             |  |

EXAMPLE: 45 HOGS/5 equivalents = 9 bovine equivalent X 1.2-3.5 cy = 10.8-31.5 cy and 126 square feet (9 x 14 sf) needed for burial

<u>Translate volume into area dimensions</u>: For a 10 cy burial trench - There are 27 cf in a cy, so there are 270 cf in 10 cy. If the trench is 9' deep and 7' wide, it must be about 5' long. (9 x 7 x 5 = 315 cf or 11.6 cy)

NOTE: CARCASSES MUST BE COVERED WITH A MINIMUM OF 3' OF SOIL TO GRADE PLUS AN ADDITIONAL 1-2' ABOVE GRADE.

# FRANKLIN COUNTY, MASSACHUSETTS

#### AGRICULTURAL DISASTER RESPONSE – ANIMAL CARCASS DISPOSAL

#### CARCASS REMOVAL FROM PRIVATE PROPERTY

Animal carcasses may have been moved by flood waters or strong winds from their property of origin to land belonging to someone else. They must be removed and disposed of. If the disaster has become a federal level disaster with a Presidential Disaster Declaration, costs of the activity may be reimbursed by FEMA. However, in general, removal of carcasses from private property is not eligible for reimbursement because there is usually no health and safety threat to the public. There are times, however, when circumstances do create a health and safety threat to the public.

If a town is going to remove carcasses from private property, it should know that FEMA intends that an applicant seek approval for reimbursement <u>before</u> beginning work, and show that a public health threat does exist. If this is not possible because action is critical then the same actions that FEMA requires for pre-approval should be taken in order to seek reimbursement later:

- 1. The Town must demonstrate it has the authority and legal responsibility to enter private property to remove carcasses. This is usually established by law, ordinance, or code (i.e., housing code).
- 2. The Town's Board of Health should issue a written order to remove the carcasses from private property. This order should become part of the disaster records.
- 3. The Town must also show that a legally authorized official, such as the Chair of the Selectboard or Town Manager, has implemented the Board of Health order.
- 4. Photos of the animal carcasses needing removal should be taken and maintained in the files.
- 5. A "Right-of-Entry/Hold Harmless Agreement" should be signed by the property owner(s). A sample form is attached.

The applicable FEMA policy is FEMA DAP 9523.14 Debris Removal from Private Property.

This entire document was adapted from the Michigan Local Disaster Debris Management Planning Handbook, MSP/EMHSD Pub. 109a.

#### Sample Right of Entry/Hold Harmless Agreement for Removal of Carcasses from Private Property

| I/We | (names), the |
|------|--------------|
|      |              |

owners of the property commonly identified as

(address) in

\_\_\_\_\_\_(Town/City) in Franklin County, Massachusetts, do hereby grant and give freely and without coercion, the right of access and entry to said property to the Town/City of \_\_\_\_\_\_, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all disaster-related animal carcasses from the above described property. It is fully understood that this permission is NOT an obligation to perform clearance of animal carcasses.

The undersigned agrees and warrants to hold harmless the Town/City of

\_\_\_\_\_\_, Massachusetts, its agencies, contractors and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge and waive any action, either legal or equitable which might arise out of any activities on the above described property.

I/We have \_\_\_\_have not\_\_\_, will \_\_\_, will not \_\_\_receive/d any compensation for animal carcass removal from any other source including the Small Business Administration (SBA), Natural Resource Conservation Service (NRCS), private insurance, federal Individual Assistance programs, or any other public assistance program. I/We will report for this property any insurance settlements to me or my family for carcass removal that has been performed at government expense. I am fully aware that an individual who fraudulently or willfully misstates any fact in connection with this agreement shall be subject to a fine of not more than \$10,000 or imprisoned for not more than one year, or both. For the considerations and purposes set forth herein, I hereby set my hand this day\_\_\_\_\_\_of \_\_\_\_\_(month), 20\_\_\_\_.

Witness

Owner

Owner

Telephone Number

## SAFETY GUIDELINES FOR ANIMAL CARCASS COLLECTION AND DISPOSAL<sup>1</sup>

#### Site Safety Checklist:

- □ Conduct a job hazard analysis prior to beginning work.
- Assign a staff member to be responsible for safety issues.
- □ Note and list risks/hazards associated with all operations.
- Confirm that personnel are adequately trained for the jobs they are expected to do.
- □ List, obtain, and distribute appropriate protective clothing and equipment.
- □ Note and take any actions needed to make work environment less hazardous.

#### Hazards and Recommendations:

#### Unstable work surfaces

- Ensure work surfaces are as stable as possible.
- > Ensure workers have safety footwear with slip resistant soles.
- Remind workers to be alert to such hazards.

#### Dust and gases from engines/ road dust/ other sources

- ➢ Workers should use dust masks or respirators as needed.
- > Dust should be monitored and suppressed with water as necessary.
- ➢ Keep speeds down on construction equipment.

#### Heat and cold stress

- Cold: Wear adequate clothing to maintain warmth, drink warm liquids often, replace wet clothing as necessary, and use heated shelters as needed to maintain warmth.
- Heat: Adjust work schedules and rotate personnel. Replenish fluids. Know warning signs of heat stress. Provide shelter for workers. Use sun screen.

#### **Carbon monoxide**

- Heaters, generators, and heavy machinery can produce carbon monoxide which can make workers dizzy, drowsy, nauseous, or have headaches. Shut off machinery and get air.
- ➢ If possible, have a CO warning sensor.

#### **Traffic Hazards**

- > Make sure all workers wear appropriate high visibility safety garments.
- Use necessary traffic control devices.
- > Everyone should know what routes equipment will use.

#### **Heavy Equipment**

- ➢ Wear safety vests
- > Make sure that all warning devices on equipment are working.
- > Ensure that operators of equipment know where workers on foot are.
- > Ensure that workers do not walk through established equipment routes.

#### **Isolated Work Areas/Sanitation**

- > Sanitation equipment and materials should be provided.
- ➢ Use hand sanitizers.
- ➢ Use appropriate clothing/hand protection.
- ➤ Keep water and food on hand for workers.
- ➢ Have an on-site first aid kit.

#### **Mental Health**

Ensure workers have access to mental health counselors in order to discuss the effects of handling injured, euthanized, or deceased animals.

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

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# ANIMAL CARCASS ON-SITE COMPOSTING for Animal Carcass Management Related to a Disaster in Franklin County, Massachusetts



# An Agricultural Emergency Response Planning Tool

Developed by

# FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

**JUNE 2009** 

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

#### ACKNOWLEDGEMENTS AND CREDITS

This plan was developed by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments. This project is funded through a USDA Rural Utilities Program Solid Waste Management grant.

This section of the *Comprehensive Response Plan for Animal Carcass Management Related to a Disaster in Franklin County, MA* is based on the USDA National Animal Health Emergency Management System (NAHEMS) Operational Guideline: "Disposal", April 2005; Composting Animal Mortalities, Minnesota Department of Agriculture, July 2006; Carcass Disposal: A Comprehensive Review, Chapter 3 Composting, Kansas State University, 2004 and the Massachusetts Department of Environmental Protection (MassDEP) DRAFT Avian Flu Debris Management Plan, February 2007.

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The Franklin Regional Council of Governments and the Franklin County Solid Waste Management District are equal opportunity providers and employers.

For more information about agricultural emergency response planning contact the Franklin Regional Council of Governments at 413-774-3167 or visit www.frcog.org. Information is also available through the Franklin County Solid Waste Management District at 413-772-2438 or at www.franklincountywastedistrict.org.

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Animal Carcass Compost Monitoring Table

#### **1.0 INTRODUCTION**

On-site composting of animal carcasses is the preferred disposal option following an emergency situation. Prior to implementing on-site composting, it is imperative to complete the associated composting checklist (in the Response Action Plan section), review the town-specific GIS map for potential site limitations (see the Appendices), and conduct a site visit to confirm that the farm is suitable for composting of animal carcasses.

When it has become clear that on-site composting is the best disposal method for some or all of the animal mortalities, consult with MassDEP, MA Department of Agricultural Resources, and the town's Board of Health. Permits may be necessary. (See the Attachments for an excerpt of regulatory requirements.)

# **2.0 METHODOLOGY<sup>1</sup>**

On-site composting of animal carcasses is a complex process. There are four common composting methods:

- in-house composting (poultry operations)
- passively-aerated windrow system (PAWS)
- bin-based composting (poultry and small animals)
- "Ag Bag" composting.

It is assumed that the on-site composting checklist has been completed and a site visit has been conducted to ensure the site meets set back and other requirements.

#### 2.1 Common Steps

Each method has implementation steps in common. These include selecting a site that meets the set back requirements listed in the Response Action Plan section, gathering and/or procuring a bulking agent as a carbon source, gathering appropriate equipment and supplies, preparing the compost pile, and monitoring the pile to maintain optimal composting conditions.

#### 2.2 Select the Method

One of the first considerations in determining which composting method is best for each farm is the type and number of carcasses requiring disposal. All types of animals can be composted but some methods are more feasible than others. For example, poultry can be most easily composted inside the poultry house. The advantage of this method is that

<sup>&</sup>lt;sup>1</sup> NAHEMS, Operational Guidelines: Disposal. April 2005.

| Franklin County, Massachusetts  | Revision 0.0       |
|---------------------------------|--------------------|
| Agricultural Emergency Response | Initial Issue Date |
| On-Site Composting              | June 2009          |

litter is usually available to be used as a carbon source and the process is contained inside the house. Conversely, large animals such as cattle are more easily composted in windrows. The Ag Bag system can be used for small animals but requires special equipment and processing. This method would be selected at sites that meet the setback requirements but require a contained system. Table 1 below shows the feasible methods for different types of animals. However, it should be noted that large numbers of any type of animal will be most effectively composted in a windrow system.

| Method   | Poultry | Swine | Bovines | Sheep/Goats |
|----------|---------|-------|---------|-------------|
| In-House | Х       |       |         |             |
| Windrows | Х       | Х     | Х       | Х           |
| Bins     | Х       | Х     |         |             |
| Ag Bag   | Х       | X*    |         | X*          |

#### Table 1. Composting Methods by Animal Type

\* The Ag Bag systems requires that large animal carcasses be size reduced prior to filling the Ag Bag.

#### 2.3 Bulking Agent

Every composting method will require a bulking agent. The bulking agent serves a number of functions in the compost pile. It is the base which holds the carcasses and carbon source up off the ground so air can circulate and provide oxygen. It serves as a "sponge" so that any excess liquids are absorbed and retained within the compost pile providing the necessary moisture content for composting to take place. And finally, it serves as a cover to partially retain any odors and to prevent birds, rodents, and other scavengers from having access to the carcasses. The most readily available bulking agent is 1-2" wood chips. The bulking agent is vitally important because after a compost pile or windrow is formed, porosity and aeration become the critical factors for preventing excessive odor formation.

The bulking agent is not composted to any great extent but rather serves to give the compost pile the necessary porosity to ensure the availability of oxygen for aerobic decomposition. During the first period of composting, the bulking agent serves the functions listed above, but when the pile is turned and mixed, it provides for more uniform porosity.

The physical characteristics of the bulking agent will affect how well your compost piles work. In addition to choosing a bulking agent with the appropriate carbon to nitrogen (C:N) ratio, you want to find a bulking agent with a large enough particle size to let air

flow, but not to the point that it cools the pile. It should have enough surface area for the microorganisms to grab onto.<sup>2</sup>

Expect to use about 6.7 cubic yards of bulking agent per 1000 pounds of carcasses.<sup>3</sup>

## 2.4 Carbon Sources<sup>3</sup>

Creating and maintaining the proper ratio of carbon to nitrogen (C:N) is a crucial part of the composting process. Carbon sources or co-composting material provides the suitable balance and environment for composting carcasses which are high in nitrogen. Bulking agents are usually bigger in particle size and maintain air spaces in the compost mass while carbon sources generally facilitate the decomposition process.

If there is too little carbon (low C:N), the high nitrogen supply is converted to ammonia and is emitted from the pile, resulting in odors. If there is too much carbon (high C:N), the low nitrogen supply can limit microbial activity resulting in slow carcass decomposition and cool temperatures.<sup>4</sup>

A C:N ratio of 30:1 will provide the most ideal conditions for rapid composting and heating within the compost pile, although a range of 15-35:1 is acceptable. As the C:N ratio increases, the temperature peak will be depressed and the composting time will increase - which is not desirable for pathogen kill. While composting will take place over a wide range of C:N ratios, at a ratio below 20:1 the carbon will become the limiting component and some excess nitrogen will be lost to the atmosphere with resultant odor. Table 2 below lists some common sources of carbon and their properties relative to composting.

To calculate the amount of carbon needed for large animals multiply the estimated weight of the carcasses by 0.007 cubic yards. For poultry calculate carbon needed by multiplying the weight of the birds (lbs.) by 1.5 lbs of carbon.<sup>5</sup>

Ensure that you are able to procure an adequate supply of carbon from off-farm sources prior to beginning the composting process. Depending on the time of year and the market demand, it may not be feasible to procure enough carbon, such as sawdust. <u>Attached to this section is a list of sawmills in the region. A list of forestry organizations is also attached.</u> These groups may be a resource for wood chips and carbon sources.

<sup>&</sup>lt;sup>2</sup> Composting Animal Mortalities, Minnesota Department of Agriculture, July 2006.

<sup>&</sup>lt;sup>3</sup> Sources discussing types of carbon sources and bulking agents are: "Carcass Disposal: A Comprehensive Review" Chapter 3; Cornell University Waste Management Institute Composting Fact Sheets and "On-Farm Composting Handbook" Appendix A; North Carolina State University "Large Scale Organic Materials Composting" NC Cooperative Extension Service, No Date; and Ontario Ministry of Agriculture Food and Rural Affairs "Windrow Composting of Poultry Carcasses," February 2008.

<sup>&</sup>lt;sup>4</sup> Composting Animal Mortalities, Minnesota Department of Agriculture, July 2006.

<sup>&</sup>lt;sup>5</sup> Guidelines for In-House Composting, Flory, G. et al, Virginia DEQ, September 2006.

| Source      | C:N      | Structure, | Moisture | Degradability | Treatment | Density             |
|-------------|----------|------------|----------|---------------|-----------|---------------------|
|             | Ratio    | Porosity   | – as is  |               | Required  | lbs/yd <sup>3</sup> |
| Sawdust     | 100:1    | very       | good     | excellent     | none      | 400                 |
|             |          | good       | -        |               |           |                     |
| Wood chips  | 40-100:1 | good       | too dry  | low           | grinding  | 500                 |
| Straw       |          |            |          |               |           |                     |
| wheat       | 100:1    | good       | dry      | medium        | chopping  | 200                 |
| oat/rye     | 60:1     | good       | dry      | medium        | chopping  | 200                 |
| barley      | 40-50:1  | good       | dry      | medium        | chopping  | 200                 |
| Bark        | 100-     | very       | medium   | very good     | grinding  | -                   |
|             | 300:1    | good       |          |               |           |                     |
| Peat        | 60-80:1  | good       | medium   | low           | none      | -                   |
| Autumn      | 30-80:1  | good       | dry      | medium        | shredding | -                   |
| leaves      |          |            |          |               |           |                     |
| Corn silage | 40:1     | good       | medium   | good          | none      | -                   |
| Hay         | 30:1     | good       | dry      | medium        | none      | -                   |
| Manure with | 25-30:1  | good       | good     | medium        | none      | -                   |
| straw       |          |            |          |               |           |                     |
| Horse       | 25:1     | good       | good     | medium        | none      | 1400                |
| manure      |          |            |          |               |           |                     |
| Cattle      | 20:1     | medium     | medium   | high          | none      | 1450                |
| manure      |          |            |          |               |           |                     |
| Poultry     | 13-30:1  | medium     | dry      | medium        | none      | 900                 |
| manure w/   |          |            |          |               |           |                     |
| litter      |          |            |          |               |           |                     |
| Poultry     | 10:1     | poor       | moist    | good          | bulking   | -                   |
| manure w/o  |          |            |          |               | material  |                     |
| litter      |          |            |          |               |           |                     |

## Table 2. Properties of Carbon Sources<sup>6,7</sup>

Note: Corrugated cardboard and newspaper have very high C:N ratios (over 500:1). These materials could be used as a carbon source if other sources are not readily available. However, the compost pile will require additional monitoring to maintain moisture content and ensure the process is active.

# 2.5 Water Source 4,6

<sup>&</sup>lt;sup>6</sup> Carcass Disposal: A Comprehensive Review. Chapter 3 Composting. Kansas State University, 2004.

<sup>&</sup>lt;sup>7</sup> On-Farm Composting Handbook, Appendix A, Cornell University, Waste Management Institute, 1996.

Microorganisms require water as a medium for chemical reactions, to transport nutrients, and to move about. Compost with too little moisture will not supply sufficient water for microorganisms to survive. Too much moisture inhibits oxygen flow through the pile, causing aerobic microorganisms to slow down, which can lead to odors.

The required moisture content for carcass compost piles depends on the character of the material, but should generally be between 50% and 60% (wet basis). A moisture content of greater than 60% will generate odors and increase the chance of runoff (leachate) from the compost pile. However, turning the compost pile and adding more dry materials will solve the problem. If the compost mixture feels moist, without water dripping from a handful when squeezed, the moisture is adequate.

Water consumption for carcass composting is based on the dryness of co-composting materials. For example, if sawdust is dry, water should be added to obtain a damp feel and appearance. Up to 1-1.5 gal/ft<sup>3</sup> of water can be added to each unit volume of sawdust.

If a source of water is not available on-site and near the composting area, it may be necessary to procure a water truck.

#### 2.6 Equipment

The type of equipment needed for on-site composting depends on the method that is selected. In general, all methods will require a skid steer and/or bucket loader to move carcasses and add them to the compost bin or pile. Hand tools, such as shovels, pitch forks, rakes and hoes, may also be needed. A probe-type thermometer with a minimum 36-inch stainless steel stem is needed to monitor the pile.

If the situation warrants working after daylight then lighting should be provided. With any lighting system, it will be necessary to provide electricity, either with batteries, generators or drop service from power lines. The use of a drop service will require coordination with the local power company.

Personnel on site should have steel-toed boots, hard hats, impermeable gloves, tyvek suits and eye protection.

Use the MA Operational Services Division (OSD) State Contracts to obtain needed equipment. If equipment is not available from State contract firms, obtain it elsewhere, but remember to keep careful track of the procurement process. See the Procurement and Record Keeping Section for statewide contracts, FEMA documentation requirements, and FEMA tracking forms.

#### 2.7 Composting Time

The time that it will take for initial decomposition will vary based on several conditions. However, in general, small animals less than 10 pounds will decompose in 2 weeks. Animals weighing 11-25 pounds will decompose in 3 weeks. Larger animals, such as sows, will decompose in 45 days and cattle may take several months.

# 3.0 IN-HOUSE COMPOSTING (POULTRY)<sup>8</sup>

Setting up a composting operation inside a poultry house is the preferred method for managing poultry carcasses. The poultry house allows the composting area to be managed indoors, controls runoff, and allows for the use of poultry litter as a carbon source.

Follow these step-by-step instructions for layering poultry carcasses:

- 1. Make a 10-12 foot wide base of a carbon material (litter, sawdust, straw, etc.) that is 3-4 inches thick.
- 2. Lay the bird carcasses on the base using a skid steer or bucket loader. First shred or crush large birds (greater than 5 lbs.).
- 3. Spread the carcasses evenly with a rake or pitchfork until they are about 8 to 10 inches thick.
- 4. Add 6 to 8 inches of carbon material on top of the carcasses.
- 5. Repeat the layering procedure as needed until the pile is 6 feet high. If this height is not possible, make the pile height at least 3-4 feet.
- 6. Deposit a 6- to 8-inch layer of litter/sawdust "cap" over the birds with a foot overlap on the sides. Leave no carcasses or bird parts exposed.
- 7. If the windrow is too dry, add water in small amounts.
- 8. On a daily basis, monitor the temperature of each windrow every 50-100 feet. Temperatures should reach 130° F in 7 days.
- 9. Aerate the windrow if the temperature drops below 105°F. The pile can be turned using a skid steer or bucket loader. Make sure that all exposed carcasses are covered again.

<sup>&</sup>lt;sup>8</sup> Guidelines for In-House Composting, Flory, G. et al, Virginia DEQ, September 2006 and In-House Composting of Poultry Mortalities Due to Catastrophic Disease, N. Tablante and G. Malone, U of MD and U of DE.

10. The compost is finished when temperatures drop consistently and there is no sign of fleshy body parts. The final compost product should be screened prior to use.





CARCASSES COMPOSTING WINDROW X-SECTION

Credit: Tablante and Malone, U of MD and U of DE.

#### 4.0 PASSIVELY AERATED WINDROW SYSTEM (PAWS)<sup>9</sup>

While the procedure for constructing a windrow pile is similar for carcasses of various animal species, carcass size dictates the layering configuration within the pile. Regardless of carcass size, the length of a windrow can be increased to accommodate more carcasses. Carcasses can be generally categorized as small (e.g., poultry and turkey), medium (e.g., sheep and young swine), large (e.g., mature swine), or very large (e.g., cattle and horses).

Follow these step-by-step directions for windrow composting:

<sup>&</sup>lt;sup>9</sup> Carcass Disposal: A Comprehensive Review. Chapter 3 Composting. Kansas State University, 2004.

- 1. Locate the windrow on the highest point of the site. Lay a plastic liner <sup>1</sup>/<sub>4</sub> inch thick on the windrow location. This serves as a moisture and leachate barrier.
- 2. Cover the liner completely with a carbon material, such as wood chips, sawdust, straw, etc.
  - ➤ 1 foot thick for small carcasses
  - ➤ 1.5 feet thick for medium carcasses
  - ➢ 2 feet thick for large and very large carcasses.
- 3. A layer of highly porous, pack-resistant bulking material (such as litter) should then be placed on top of the carbon material to absorb moisture from the carcasses and to maintain adequate porosity. The thickness of the bulking material should be:
  - ➢ 0.5 feet for small carcasses
  - $\succ$  1 feet for all others.
- 4. An evenly spaced layer of carcasses should then be placed directly on the bulking material layer.
  - Large animal carcasses (e.g., cattle, horses, hogs, sheep, and goats) should be opened to permit the escape of gas. This can be accomplished by opening the thorax and abdomen of all species, and the rumen of ruminants and the cecum of horses. A bucket loader, back hoe, etc. can be used to crush the carcasses instead of opening each carcass separately. This step is extremely important!
- 5. In the case of small and medium carcasses, carcasses can be covered with a 1 foot layer of carbon materials and then a second layer of evenly spaced carcasses can be placed on top of the carbon material. <u>This layering process</u> can be repeated until the windrow reaches a height of 6 feet.
- 6. Cover the entire windrow with 1 foot of bulking material. Make sure that no carcasses are showing.
- 7. If the windrow is too dry, add water in small amounts.
- 8. On a daily basis, monitor the temperature of each windrow every 50-100 feet. Temperatures should reach 130° F in 7 days.
- 9. Aerate the windrow if the temperature drops below 105°F. The pile can be turned using a skid steer or bucket loader. Make sure that all exposed carcasses are covered again.
- 10. The compost is finished when temperatures drop consistently and there is no sign of fleshy body parts. The final compost product should be screened prior to use.

#### **Diagram 2. Layout of Compost Windrows For Dairy Cows**



Developed by Dr. Bill Seekins, Maine Department of Agriculture, Food and Rural Resources, 2005.

## 5.0 BIN SYSTEM<sup>10</sup>

Carcass composting of smaller animals can be done in bins that can either be under cover or uncovered. These bins are usually sized to allow the use of a front-end loader for moving and mixing the bin contents. Structures should be located and situated so as to protect the pile from predators, pests, and runoff. Bins may or may not be covered by a roof. A roof is advantageous, especially in high rainfall areas (more than 40 inches annual average), as it results in reduced potential for leaching from the pile and better working conditions for the operator during inclement weather.

Bins can be constructed of any material structurally adequate to confine the compost pile, such as concrete, wood, hay bales, etc. Walls and panels can also be constructed with pressure-treated lumber (e.g., 1-in treated plywood backed with 2 x 6 studs). The wall height for primary and secondary bins should be 5-6 feet, and the bin width should be adequate for the material-handling equipment, but generally should not exceed 8 feet. The minimum front dimension should be at least 2 feet greater than the loading bucket width.

#### 5.1 Calculate the Number and Size of Bins

Table 3 below lists small animals and their average weight. This information can be used in conjunction with volume conversions in Table 4. Multiply the estimated pounds of dead animals by the cubic feet per pound listed in Table 4 for the average size of the animals to be composted. This is the required volume for the primary composting area. It may be that several bins are needed for the primary bin area. Add an equal number of bins for the secondary composting area.



<sup>&</sup>lt;sup>10</sup> Carcass Disposal: A Comprehensive Review. Chapter 3 Composting. Kansas State University. 2004 and Composting Animal Mortalities, Minnesota Department of Agriculture, July 2006.

# Table 3. Estimated Animal Weights <sup>11</sup>

| Species                   | Average       |
|---------------------------|---------------|
|                           | Weight (lbs.) |
| Goats and Sheep: pre-wean | 8             |
| lambs                     | 50            |
| mature                    | 170           |
| Poultry: broiler          | 3             |
| layer                     | 3             |
| turkey hens               | 10            |
| turkey toms               | 17            |
| Swine: wean to nursery    | 10            |
| nursery                   | 30            |
| grow finish               | 150           |
| SOWS                      | 300           |

| Table 4. | <b>Multiplier</b> | Factor to | Estimate | Bin V | olume | by An | imal Size <sup>12</sup> |
|----------|-------------------|-----------|----------|-------|-------|-------|-------------------------|
|----------|-------------------|-----------|----------|-------|-------|-------|-------------------------|

| Carcass Size (lb) | Multiply By                  |
|-------------------|------------------------------|
| 1-10 lbs.         | $3 \text{ ft}^3/\text{lb}.$  |
| 11-25 lbs.        | $5 \text{ ft}^3/\text{lb}.$  |
| 26-300 lbs.       | $10 \text{ ft}^3/\text{lb}.$ |

*Example:* The average size of the animal carcass to be composted is about 150 pounds. The table lists the bin volume of 10 ft<sup>3</sup>/lb for animals of that size. (150 lb.) x (10 ft<sup>3</sup>/lb) = 1500 cubic feet of primary bin space and an equal amount of secondary bin space.

 <sup>&</sup>lt;sup>11</sup> Composting Animal Mortalities, Minnesota Department of Agriculture, July 2006.
 <sup>12</sup> *Ibid*.

# 5.2 Bin Methodology<sup>13</sup>

Follow these step-by-step instructions for preparing the bins and layering the carcasses;

- 1. Place a mixture of bulking agent, such as wood chips, and carbon source, such as sawdust, on the floor of the bin to a depth of 12 inches.
- 2. Place the carcasses in a single layer on top of the bulking agent one foot from the walls of the bin and 6-8 inches apart from each other. Build the pile from the back, building it up and forward simultaneously.
- 3. Cover the carcasses with another mixture of bulking agent and carbon sources to 2 feet thick.
- 4. Add water as needed to maintain the proper moisture level. Caution: If the pile dries out (25% to 45% moisture) and if piles are too large, spontaneous combustion can occur.
- 5. On a daily basis, monitor the temperature in the bin. It should reach 130°F for up to 7 days. When the temperature drops, move the entire pile to the secondary bin.
- 6. Place at least 12 inches of bulking agent and carbon source on the floor of the secondary bin. Move the pile from the primary bin into the secondary bin.
- 7. Cover the pile with at least 12 inches of fresh bulking agent and carbon source.
- 8. Monitor the temperature daily. When the temperature decreases consistently, the finished compost is ready to be screened for reuse.

#### 6.0 AG BAG COMPOSTING

Ag Bag composting is an "in-vessel" system that uses an EcoPod<sup>®</sup>, a low-density polyethylene plastic bag, to contain the carcasses and bulking agents. This system is most ideal for small animals such as poultry but can be used for larger animals with grinding. The system requires special equipment to feed the 20 foot long bag. The EcoPod<sup>®</sup> comes with aeration piping with all fittings, seal strip sealing equipment with tools, controllable vents, temperature probes and starter inoculant. This system should be considered when leachate needs to be contained or when the site is not suitable for windrows or bin composting.

An important consideration is that the carcasses must be properly mixed with the bulking agent and carbon source in order for the system to work properly. If this system is used, professional assistance from the manufacturer should be attained. The system is manufactured by Ag Bag Environmental, 1-800-334-7432, www.ag-bagfs.com.

<sup>13</sup> Ibid.

#### 7.0 TROUBLE SHOOTING

In an ideal situation, animal carcasses can be composted in a short time and produce a usable end product. However, in reality composting is a finely tuned process that requires the correct mixture of materials and regularly monitoring. Most problems can be fixed by either adding more carbon, adjusting the moisture content, or aerating the pile. Table 5 below identifies the most common problems that might be faced and offers solutions.

#### Table 5. Troubleshooting Guide for Carcass Composting

Adapted from the National Pork Producers Council Swine Mortality Composting Module

| Problem/Symptom  | Probable Cause                  | Solution                   |
|------------------|---------------------------------|----------------------------|
| Improper         | • Too dry                       | Add water                  |
| Temperature      | • Too wet                       | • Add bulking agent and    |
| _                |                                 | turn pile                  |
|                  | • Improper C:N ratio or bulking | • Evaluate bulking agent   |
|                  | agent is too porous             | and adjust amount          |
| Odor             | • Too wet                       | • Add bulking agent/aerate |
|                  | Too low C:N ratio               | • Evaluate carbon source   |
|                  | • Air flow restricted           | • Turn pile                |
|                  | Inadequate cover over           | • Cover with 1' of bulking |
|                  | carcasses                       | agent or carbon source     |
|                  | • Long periods of low temps     | • See temperature section  |
| Flies/Scavengers | Inadequate cover over           | • Cover with 1' of bulking |
|                  | carcasses                       | agent or carbon source     |
|                  | • Too wet                       | • Add bulking agent/aerate |
|                  | Low temperature                 | See temperature section    |
| Failure to       | Improper C:N ratio              | • Turn pile and adjust the |
| Decompose        |                                 | amount of bulking          |
|                  |                                 | agent/carbon               |
|                  | • Carcasses layered too thickly | Remove carcasses and       |
|                  |                                 | reduce layering            |
|                  | Carcasses too close to edge of  | • Maintain 1' of space     |
|                  | pile                            | between carcasses and      |
|                  |                                 | edge of pile               |

#### 8.0 USE OF FINISHED COMPOST

In most situations, the finished compost from animal carcasses will need to be screened to remove bones and other animal parts that do not decompose. It is recommended that compost produced from animal carcasses be used exclusively on a farm where it can be used as a soil amendment, and not be made available to the public or used commercially for off-farm use. Agricultural composting operations that use materials obtained from a source other than their own farm are required to be registered with the MA Department of Agricultural Resources (DAR). Agricultural composting that occurs with materials limited to farm-generated materials is exempt from licensing and registration. Under emergency circumstances exceptions may be made if suitable plans and controls are in place. Close coordination with regulatory personnel is needed. For a more detailed explanation of the regulatory requirements, see the attached document titled, "On-Site Carcass Composting Regulatory Requirements."

The finished product has an organic matter content of approximately 35-70%, a pH of about 5.5 to 8.0, and a bulk density of about 29.6- 40 lb/ft<sup>,14</sup> Compost nutrient estimates are 15 pounds of nitrogen, 5 pounds of phosphorus and 10 pounds of potassium per ton of compost. Nutrients would be higher if manure or turkey litter were used in the compost.<sup>15</sup>

#### 9.0 DOCUMENTATION

It is imperative to use appropriate documentation for all activities that require labor, equipment, supplies, and trucking services. Logs and written documentation will be required for reimbursement from FEMA. See the Procurement and Record Keeping section for copies of FEMA forms.

<sup>&</sup>lt;sup>14</sup> Carcass Disposal: A Comprehensive Review. Chapter 3 Composting. Kansas State University. 2004

<sup>&</sup>lt;sup>15</sup> Composting Animal Mortalities, Minnesota Department of Agriculture. July 2006.

# **ATTACHMENTS**

- Regulatory Requirements for On-Site Composting Operations
- Sawmills In or Near Franklin County
- ✤ Other Forestry Resources
- Animal Carcass Compost Monitoring Table

# **Regulatory Requirements for On-Site Composting Operations**

#### **Permitting Requirements**

Composting operations that are considered to be part of an agricultural or farming operation, as defined by MGL c. 128 sec. 1A, and that follow the MA DAR Agricultural Waste Composting Guidelines are exempt from the permitting requirements of the DEP Solid Waste Regulations for Determination of Need for Site Assignment as set forth in 310 CMR 16.05(4). On-farm agricultural composting operations that handle materials obtained from a source other than their own agricultural production are required to be registered with the Massachusetts Department of Agricultural Resources. Farms that compost only materials generated on the farm, including mortalities, do not need to be registered, as long as the compost being produced is being used entirely on-site in the farming operation and is not being sold or taken off of the farm for other uses. See the following MA DAR guidelines and contact information for the Agricultural Waste Composting program. Also attached are excerpts from the DEP Solid Waste Regulations that apply to composting operations.

#### Local Oversight

Local review of the composting operation and site by the Board of Health and Conservation Commission is important to establish a minimum level of regulatory oversight. Even though agricultural operations are exempt from many statutes and regulations, the local town boards will often have the best knowledge of the local conditions and their involvement can help to reduce the perceived need to bring in outside experts or state and federal agencies.

#### **Transportation of Off-Site Carcasses**

The transportation of off-site carcasses may need to be approved by the appropriate regulatory authorities, depending on the specific conditions. Returning the carcasses of animals that escaped or were washed, blown, or floated from the agricultural property would be exempt from some regulations, as explained above, but in other cases the transportation of carcasses would have to comply with DEP, DAR, and possibly DPH requirements.

# MA Department of Agricultural Resources Agricultural Composting Program

All persons engaged in agricultural pursuits and who are interested in composting organic materials obtained from a source other than their own agricultural operation are required to be registered with the Massachusetts Department of Agricultural Resources. Persons composting organic materials without a registration are subject to the Department of Environmental Protection's site assignment requirements. The registration application should be completed and mailed to The Department of Agricultural Resources. Yearly Annual Reports will be required in order for a composter to remain registered with the Department.

The Department may register agricultural composting operations if the Department determines that:

- 1) the compost operation is located on agricultural unit;
- 2) the applicant has submitted a completed application;
- 3) the applicant agrees to a site visit;

4) the applicant demonstrates knowledge and capability to conduct the agricultural composting operation to produce a stabilized compost product.

If the department finds that any portion of the Agricultural Composting Registration application includes false or misleading information, or the operation of a registered composting facility is in violation of the regulations or guidelines, or is acting not in the best interest of Massachusetts agriculture, the Department may suspend or revoke the registration which will also revoke the exemption status and thereby the operator must comply with DEP Regulations for Determination of Need for Site Assignment as set forth 310 CMR 16.05(4)(c) Agricultural Waste Composting. A composting operation for agricultural wastes, when located on a farm engaged in "agriculture" or "farming" as defined in M.G.L. c. 128, § 1A. Such composting operation may, in addition to agricultural wastes, utilize the following compostable materials, provided the operation is registered and complies with policies of the Department of Agricultural Resources:

- 1. leaf and yard waste;
- 2. wood wastes;
- 3. clean newspaper or cardboard;
- 4. clean, compostable (i.e. thin) shells, and clean bones;
- 5. non-agricultural sources of manures and animal bedding materials;
- 6. less than 20 cubic yards or less than ten tons per day of vegetative material; and
- 7. less than ten cubic yards or less than five tons per day of food material.

Contact: William Blanchard at William.Blanchard@state.ma.us or 617-626-1709.

# **Excerpts from MA Department of Environmental Protection Solid** Waste Regulations applicable to agricultural composting operations:

DEPARTMENT OF ENVIRONMENTAL PROTECTION 310 CMR 16.00: SITE ASSIGNMENT REGULATIONS FOR SOLID WASTE FACILITIES

PART 1: PROCEDURES FOR SUBMISSION AND REVIEW OF SITE ASSIGNMENT APPLICATIONS

#### 16.01: Purpose

(1) **Purpose.** 310 CMR 16.00 is composed of four Parts pertaining to the process for deciding whether a parcel of land is suitable to serve as the site for a solid waste management facility. The first Part describes the procedures for submitting an application to the Department and the board of health for site assignment and sets forth the review process used by the Department in determining whether a site is suitable. Part I is intended to provide for the complete submission of information necessary for determining site suitability and for extensive opportunity for public comment within a relatively short review period. The second Part sets forth rules governing the Public Hearings to be held by the board of health for the purpose of assigning a site. The third Part sets forth the process by which the board of health assesses the Application Fee and the allowed expenditures of those funds for reviewing the application and conducting the public hearings. The final Part establishes the site suitability criteria that are to be applied by the Department and the board of health in determining whether a site is suitable. Part IV is intended to make the siting of facilities subject to consistent standards and provide for the protection of public health and safety and the environment. Protection of public health, safety and the environment is primarily the prevention of pollution from the site, but also encompasses the function of the site within an integrated solid waste management system which maximizes material reuse and conservation of natural resources.

#### 16.02: Definitions

Agricultural Waste means discarded organic materials produced from the raising of plants and animals as part of agronomic, horticultural or silvicultural operations, including, but not limited to, animal manure, bedding materials, plant stalks, leaves, other vegetative matter and discarded by-products from the on-farm processing of fruits and vegetables.

Compostable Material means an organic material, excluding waste water treatment residuals, that has the potential to be composted, which is pre-sorted and not contaminated by significant amounts of toxic substances.

Composting means a process of accelerated biodegradation and stabilization of organic material under controlled conditions yielding a product which can safely be used. Land Actively Devoted to Agricultural or Horticultural Uses means that land as defined at M.G.L. c. 61A, § 3.

Processing means the use of any method, technique or process to reduce the volume or alter the physical characteristics of solid waste or recyclable or compostable materials through any means, including, without limitation, separating, baling, shredding, crushing or reworking.

Residue means all solid waste remaining after treatment or processing and includes, without limitation, ash, material which is processed for recycling or composting but is unmarketable or speculatively accumulated due to its inferior quality and other solid waste which is not recovered. Non-recyclable material which is integral to a pre-sorted recyclable product shall not constitute residue for the purpose of calculating residue generation rates.

Solid Waste or Waste means useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, mining, agricultural, municipal or household activities that is abandoned by being disposed or incinerated or is stored, treated or transferred pending such disposal, incineration or other treatment, but does not include:

(i) compostable or recyclable materials when composted or recycled in an operation not required to be assigned pursuant to 310 CMR 16.05(2) through (6).

#### 16.05: Applicability

(1) General. 310 CMR 16.00 shall govern the process of application, review, public hearing and decision for a site assignment to expand a solid waste management facility or establish a new solid waste management facility at an unassigned site.

#### (2) Facilities and Operations to Which 310 CMR 16.00 Does Not Apply. 310 CMR

16.00 does not apply to the following facilities or operations:

(d) Farming Operations. The use or application of agricultural manures in normal farming operations.

(4) Conditionally Exempt Composting Operations. The following composting operations and activities do not require a site assignment provided the operation incorporates good management practice, is carried out in a manner that prevents an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth, and results in no public nuisance:

(a) Backyard Composting. Backyard composting.

(b) Leaf Composting Operations. Operations which transfer or compost clean leaves and yard waste containing no greater than 25% grass clippings by volume provided that less than 50,000 cubic yards or less than 10,000 tons total are on site at any one time, with a maximum volume per unit area of 5,000 cubic yards per acre, and either:

1. the operation is registered with the Department; or

2. the operation is located within the property boundaries of the site where all the leaf and yard waste is generated;

(c) Agricultural Waste Composting. A composting operation for agricultural wastes,

when located on a farm engaged in "agriculture" or "farming" as defined in M.G.L. c. 128, § 1A. Such composting operation may, in addition to agricultural wastes, utilize the following compostable materials generated off-site, provided the operation is registered and complies with policies of the

Department of Food and Agriculture:

- 1. leaf and yard waste;
- 2. wood waste;
- 3. clean newspaper or cardboard;
- 4. clean compostable (*i.e.* thin) shells, and clean bones;
- 5. non-agricultural sources of manures and animal bedding materials.
- 6. less than 20 cubic yards or less than ten tons per day of vegetative material; and
- 7. less than ten cubic yards or less than five tons per day of food material.

(d) Composting on Industrial, Commercial or Institutional Sites or Zoos. A composting operation located at an industrial, commercial or institutional site or zoo which composts less than four cubic yards or less than two tons per week of vegetative materials, food materials or animal manures that are generated on-site, and where, at least 30 days prior to commencement of operations, the operator notifies the Department and the board of health, using a form as may be supplied by the Department.

(5) Other Conditionally Exempted Operations. The following operations do not require a site assignment or a Solid Waste Management Facility Permit pursuant to 310 CMR 19.000, provided the operation incorporates good management practice, is carried out in a manner that prevents an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth and results in no public nuisance:

(a) Temporary Storage by Public Works Departments. Dumpsters, roll-offs, or other temporary storage containers or temporary storage areas at a location controlled by a public works department such as a municipal department of public works, the Massachusetts Highway

Department, Massachusetts Turnpike Authority, Metropolitan District Commission or similar government agency, when used exclusively for solid waste generated and collected by the public works department and when storage is appropriate for the type of waste (e.g., materials such as trash from roadside trash barrels are stored in dumpsters or roll-offs while materials such as street sweepings may be stored without containers);

#### (7) Determination Process.

(e) Determinations of Need.

1. All Department decisions regarding determinations of need for site assignment for recycling or composting facilities shall be made in writing.

2. The Department shall issue a draft determination and send a copy to the applicant and board of health.

3. The Department shall accept written comments up to 21 days from the date of issuance of the draft determination. Commentors may, in their comments, request the Department to revise with conditions a draft determination or show why the facility should be required to obtain site assignment as a solid waste management facility.

4. The Department shall issue a final determination following the 21 day comment

period.

5. The Department may make a determination that no site assignment is needed subject to the applicant's compliance with conditions. These conditions may include, but are not limited to:

a. requirements to ensure that only exempt recycling or composting operations are conducted on the site;

b. weighing and operational reporting requirements, including maintenance of a daily log of the quantity of materials received and shipped, estimation or weighing of materials, depending on facility size, and regular certified reports detailing operating conditions and material disposition;

c. the authority of the Department or the board of health without prior notice to periodically enter upon and inspect the site, the facility and relevant operating records to determine and compel compliance with applicable regulations and the conditions of the determination;

d. payment of penalties in accordance with the provisions of M.G.L. c. 21A, § 16 for violation of a condition or other requirement; and

e. a termination date.

#### (10) Demonstration Projects for Recycling or Composting Pre-Sorted Material.

The Department may approve projects to demonstrate innovative recycling or composting techniques at unassigned sites as provided below.

(a) General Conditions. The following conditions shall apply to all demonstration projects approved under 310 CMR 16.05(10):

1. The materials to be processed shall be limited to the pre-sorted recyclable or compostable materials permitted to be processed by operations set forth at 310 CMR 16.05(3) and (4); and

2. projects shall be limited to a specified time period not to exceed one year, after which time they shall terminate unless appropriate approvals are obtained.

(b) Application. An application to conduct a recycling or composting demonstration project shall be submitted to the Department, the board of health and, in the case of agricultural composting, to the Department of Food and Agriculture. The application shall contain:

1. the information described at 310 CMR 16.05(7)(b) and (c) as required by the Department;

2. the proposed duration of the demonstration project; and

3. a description and schedule of interim and final reports to be submitted to the Department describing and evaluating the project.

(c) Criteria for Department Determination. The Department shall consider the following criteria when determining whether to allow the demonstration project:

1. the potential for adverse impacts taking into account the recyclable and compostable materials, project location, design and operating controls, management practices and operator experience;

2. the likelihood of obtaining useful, new information in the time frame proposed for the demonstration project; and

3. the ability of the applicant to appropriately use or dispose of all project materials.

(d) Department Decision. The Department shall follow the procedure described at 310 CMR 16.05(7)(e)1. through 4. when issuing its decision on whether to allow the demonstration project.
Franklin County, Massachusetts Agricultural Emergency Response On-Site Composting Revision 0.0 Initial Issue Date June 2009

#### Sawmills In or Near Franklin County

Businesses listed may be approached to procure carbon and bulking agents. Data accurate as of June 2009.

C and M Rough Cut Lumber Jim Conkey 94 Old North Dana Rd New Salem, MA 01355 978-575-0475

Hall Tavern Farm Jay Healy 136 Burnt Hill Rd Shelburne Falls, MA 01370 413-625-9008 jhealy6387@aol.com

Heyes Forest Products, Inc Fred Heyes 34 Daniel Shays Hwy Orange, MA 01364 978-544-8801 fred@heyesforest.com

Hicks Farm Norman A. Hicks 15 Harmony Lane Charlemont, MA 01339 413-339-4414

Northwoods Forest Products Cory Norwood 675 Gulf Rd Northfield, MA 01360 413-498-5335 NorthwoodsFP@hotmail.com

Roberts Brothers Lumber Lenny Roberts 1450 Spruce Corner Rd Ashfield, MA 01330 413-628-3333 robtlbr@mtdata.net Berkshire Hardwoods Jeff Poirier 73 East St. POB #270 Chesterfield MA 01012 413-296-4546 jeff@berkshirehardwoods.com

Colrain Tree Services Blue Sky 326 W. Leyden Road Colrain, MA 01340 413-624-3645

Quist Road Lumber Michael Idoine Quist Road Wendell MA 01379 978-544-2623 mikar65@earthlink.net

Cowls Sawmill 125 Sunderland Road N. Amherst, MA <u>www.cowls.com</u> 413-549-0001

Cersosimo Lumber Vernon Road Brattleboro VT 05301 802-254-4508

Allard Lumber Old Ferry Road Brattleboro VT 053011 802-254-493 Franklin County, Massachusetts Agricultural Emergency Response On-Site Composting Revision 0.0 Initial Issue Date June 2009

#### **Other Forestry Resources**

Massachusetts Forest Stewardship Program 433 West St. Suite 5 Amherst, MA 01002 413-256-1201

Extension Forester Holdsworth Natural Resource Center University of Massachusetts Amherst, MA 01003

Massachusetts Forest Products Association 433 West St. Suite 5 Amherst MA 01002 413-256-6795

Massachusetts Wood Producers Association P.O. Box 455 Northampton MA 01061 413-339-5526

Massachusetts Association of Professional Foresters P.O. Box 9509 North Amherst, MA 01059

American Forest and Paper Association 1111 19<sup>th</sup> St. NW Suite 800 Washington DC 20036 202-463-5161

### Animal Carcass Compost Monitoring Monitoring Table for Single Windrow or Pile

Monitored by:\_

page 1 of 2

| Pile No:         | Pile Location:                       | Carcass type & other<br>pile ingredients: | _        |                                     |
|------------------|--------------------------------------|---|----------|-------------------------------------|
| Start Date:      | File remperatures                    |   |          |                                     |
| Day              | -from 3 places at least 24" deep     | Moisture (A,B,C)*                         | Air Temp | Notes; odor, leaking, insects, etc. |
| 1                |                                      |   |          |                                     |
| 2                |                                      |   |          |                                     |
| 3                | / /                                  |   |          |                                     |
| 4                | / /                                  |   |          |                                     |
| 5                | / /                                  |   |          |                                     |
| 6                | / /                                  |   |          |                                     |
| 7                | / /                                  |   |          |                                     |
| 8                |                                      |   |          |                                     |
| 9                |                                      |   |          |                                     |
| 10               |                                      |   |          |                                     |
| 11               |                                      |   |          |                                     |
| 12               |                                      |   |          |                                     |
| 13               |                                      |   |          |                                     |
| 14               |                                      |   |          |                                     |
| 15               |                                      |   |          |                                     |
| 16               | 1 1                                  |   |          |                                     |
| 17               | 1 1                                  |   |          |                                     |
| 18               |                                      |   |          |                                     |
| 19               |                                      |   |          |                                     |
| 20               | 1 1                                  |   |          |                                     |
| 21               |                                      |   |          |                                     |
| 22               |                                      |   |          |                                     |
| 23               |                                      |   |          |                                     |
| 24               |                                      |   |          |                                     |
| 25               |                                      |   |          |                                     |
| 26               |                                      |   |          |                                     |
| 27               |                                      |   |          |                                     |
| 28               |                                      |   |          |                                     |
| 29               |                                      |   |          |                                     |
| 30               |                                      |   |          |                                     |
| 31               |                                      |   |          |                                     |
| 32               |                                      |   |          |                                     |
| 33               |                                      |   |          |                                     |
| 34               |                                      |   |          |                                     |
| 35               |                                      |   |          |                                     |
| Moisture content | : A=just right (60%), B= too dry, C= | too wet                                   |          |                                     |

#### Animal Carcass Compost Monitoring Monitoring Table for Single Windrow or Pile Monitored by:\_\_\_\_\_

page 2 of 2

| Pile No:   | Pile Location:                   | Carcass type & other<br>pile ingredients: |          |                                     |
|------------|----------------------------------|---|----------|-------------------------------------|
| Start Day: | Pile Temperatures                | Original Volume:                          |          |                                     |
| Day        | -from 3 places at least 24" deep | Moisture (A,B,C)*                         | Air Temp | Notes; odor, leaking, insects, etc. |
| 36         |                                  |   |          |                                     |
| 37         |                                  |   |          |                                     |
| 38         |                                  |   |          |                                     |
| 39         |                                  |   |          |                                     |
| 40         |                                  |   |          |                                     |
| 41         |                                  |   |          |                                     |
| 42         |                                  |   |          |                                     |
| 43         |                                  |   |          |                                     |
| 44         |                                  |   |          |                                     |
| 45         |                                  |   |          |                                     |
| 46         |                                  |   |          |                                     |
| 47         |                                  |   |          |                                     |
| 48         |                                  |   |          |                                     |
| 49         |                                  |   |          |                                     |
| 50         |                                  |   |          |                                     |
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| 52         |                                  |   |          |                                     |
| 53         |                                  |   |          |                                     |
| 54         |                                  |   |          |                                     |
| 55         |                                  |   |          |                                     |
| 56         |                                  |   |          |                                     |
| 57         |                                  |   |          |                                     |
| 58         |                                  |   |          |                                     |
| 59         |                                  |   |          |                                     |
| 60         |                                  |   |          |                                     |
| 61         |                                  |   |          |                                     |
| 62         |                                  |   |          |                                     |
| 63         |                                  |   |          |                                     |
| 64         |                                  |   |          |                                     |
| 65         |                                  |   |          |                                     |
| 66         |                                  |   |          |                                     |
| 67         |                                  |   |          |                                     |
| End Date:  |                                  |   |          |                                     |
|            |                                  | End Volume:                               |          |                                     |

Moisture content: A=just right (60%), B= too dry, C=too wet

#### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

425 Main Street, Suite 20, Greenfield, MA 01301-3313 Telephone 413-774-3167 • Fax 413-774-3169 • www.frcog.org Executive Director • Linda Dunlavy





# ANIMAL CARCASS OFF-SITE DISPOSAL for Animal Carcass Management Related to a Disaster in Franklin County, Massachusetts



### **An Agricultural Emergency Response Planning Tool**

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

### **JUNE 2009**

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

#### ACKNOWLEDGEMENTS AND CREDITS

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Solid Waste/ Trucking Companies With Water Tight Roll-Offs

#### **1.0 INTRODUCTION**

Off-site disposal of animal carcasses includes landfilling and incineration. Capacity currently exists in western Massachusetts at each type of facility. The decision of whether or not to transport animal carcasses off-site must be made by first assessing all of the disposal options, including completing the checklists for on-farm composting and on-farm burial.

Perhaps the most significant advantage to landfills for carcass disposal is the fact that the infrastructure already exists and the capacity (depending on the landfill) can be relatively large. Lined landfills pose little risk to the environment. In the event of an emergency or catastrophic event, time is a very important factor and landfills offer preexisting sites for disposal of carcasses with the necessary equipment, personnel, procedures, and containment systems.

While commercial incinerators can provide a disposal outlet, they are most effective for small animals. They are not effective for large animals, such as bovines or horses, or for feathered animals, such as poultry.

**Note:** Other disposal options exist but are either not recommended or not feasible as of the writing of this plan. The disposal option that is not recommended due to the level of resources needed and the resulting environmental degradation is on-farm incineration. This refers to air-curtain incinerators that require an enormous amount of dry wood, are labor intensive, and create significant air pollution.

Rendering is an acceptable disposal option for animal carcasses that have not degraded; however, there are currently no rendering facilities in the area. Another possible option is alkaline hydrolysis but there are no permitted facilities in the area and disposal of the end product is currently a problem.

#### 2.0 SECURE DISPOSAL CAPACITY

It will be necessary to secure disposal capacity at a commercial landfill and/or commercial incinerator prior to collecting and transporting the animal carcasses. There are currently two facilities in western Massachusetts that have indicated a willingness to accept animal carcasses following a disaster: Waste Management landfills (413-534-8741) and Covanta Energy waste-to-energy incinerator (413-785-5120). **Note:** Commercial disposal facilities may be required to get a special waste permit from MassDEP prior to accepting animal carcasses.

When contacting these facilities make sure to identify all of the specifications for transporting, trucking, and tipping loads of animal carcasses. Find out weight

restrictions, delivery time(s), and anything else that might affect how this activity will need to be carried out at each farm or location.

#### 3.0 TRANSPORTATION OF CARCASSES

The transportation of large numbers of deceased animals requires significant planning and preparation. Dead animals must be transported in covered, leak-proof containers. The route(s) for transport of animal carcasses should be determined ahead of time.

For local short transport, emergency managers might use municipally-owned vehicles. For transport out of Franklin County significant preparation will be required. All transportation personnel (public and private) will need briefing regarding what is expected of them, training in the use of PPE, in responding to public questions and the media, and being familiar with permits and other documents.

For long distance transport it is possible to use lined rolloff containers, lined dump trucks or other type truck that can "tip" its load. These types of vehicles are most commonly operated by private companies. Refer to the list of companies with water tight rolloff containers attached to this section. Refer to the section on Procurement and Record Keeping for equipment vendors on statewide contract. If the carcasses are being hauled to a landfill then the contractual arrangements with the disposal location must be arranged.

#### 3.1 Procedures for retrieving, moving, and transporting carcasses<sup>1</sup>

The procedures for collecting, moving, and transporting carcasses are relatively the same regardless of whether they are being disposed on-site or off-site. They will need to be carefully picked up and moved to either the on-site disposal location or placed into a leak-proof container for transportation off-site. In either situation, workers should wear PPE to protect from them from body fluids. This includes tyvek suit, boots, and synthetic impermeable gloves. Safety glasses should be considered depending on the state of the carcasses and whether liquid is likely to become airborne. They should all have direct communication with the Incident Command Center in case a problem arises. They should also be directed to seek mental health counseling based on some of the images they are likely to witness.

#### **3.1.1 Equipment and Supplies**

The following list of equipment should be considered depending on the specific situation. It may be necessary to contract with private companies for supplies and/or equipment. Be certain to comply with FEMA contracting requirements in

<sup>&</sup>lt;sup>1</sup> Adapted from the Missouri Department of Agriculture Standard Operating Guide #002 p13 ff.

order to be reimbursed should this incident be declared a state disaster. See the section on Procurement and Record Keeping.

- ➢ Heavy machinery:
  - Skid Steer with attachments
  - Front-end loaders
  - Dump trucks
  - Roll-offs
  - Cranes
  - Chains, hooks, shovels
- > Supplies:
  - 6 mil plastic sheeting, poly bags with a zipper (available from Waste Management -http://www.wmupstream.com/documents/Bio-zipfinal.pdf)
  - Absorbent material sawdust, wood shavings, hay, straw
  - Personnel Protective Equipment

> Lighting: If the situation warrants working after daylight then lighting should be provided. With any lighting system, it will be necessary to provide electricity, either with batteries, generators or drop service from power lines. The use of a drop service will require coordination with the local power company.

➤ Communications: Personnel at each site where carcasses are being collected, moved and transported need to have a means of communication with the Incident Command Post.

#### 3.1.2 Methodology

If the town does not have adequate equipment then order the necessary containers. Rolloff containers are usually 10, 20, 30, or 40 cubic yards. Rolloff containers will most likely need to be sealed to prevent leakage. Dump trucks can also be used. **Note:** Large transfer trailers are not ideal because the weight of the carcasses will not allow the load to tip out of the trailer easily or without ripping the liner. Make sure a contract has been prepared for the trucking activities.

- 1. Seal all rolloff containers and dump trucks around the gate. Do not use any container that has holes or is rusty and thin in places.
- 2. Double-line with 6 mil plastic sheeting or poly bags with a zipper (bio-zip from Waste Management). If using plastic sheeting make sure to leave enough at the sides to seal the top after loading is completed. Dimensions are as follows: 10 cubic yard is 32'x 44'; 20 cubic yard is 34'x 76'; 30 cubic yard is 40'x 80' and 40 cubic yard is 50'x 100'. Make sure two people work together to do the lining.

- 3. Load the container with 1 foot of absorbent material such as sawdust, wood shavings, hay or straw.
- 4. Retrieve animal mortalities on sites where it has been decided that they can not be managed. Some carcasses will bloat. Use great care, handle the carcass as little as possible. Load them carefully into the container both to avoid tearing the liner and to avoid puncturing the body cavity of the carcasses, thus keeping the release of body fluids to a minimum.
- 5. In loading a vehicle, ample space must be left for the expansion of carcasses. At least 1-2' of space (depending on the temperature and the distance to be traveled) should be left around the carcasses.
- 6. After loading, cover carcasses with plastic sheet which should be attached to sides and top of container to prevent leaking or zip the poly bag.

#### 4.0 DOCUMENTATION

It is imperative to use appropriate documentation for all activities that require labor, equipment, supplies, and trucking services. The EMD should have some level of assurance that any containers of carcasses hauled off site have been properly loaded (not under filled or over filled) and are delivered to the contracted end disposal facility. Logs and written documentation will be required for reimbursement from FEMA. <u>See the</u> Procurement and Record Keeping section for copies of FEMA forms.

### ATTACHMENTS

✤ Solid Waste/ Trucking Companies With Water Tight Roll-Offs

Franklin County, Massachusetts Agricultural Emergency Response Off-Site Disposal Revision 0.0 Initial Issue Date June 2009

#### SOLID WASTE/ TRUCKING COMPANIES WITH WATER TIGHT ROLL-OFFS

New England Disposal Technologies 83 Gilmore Dr Sutton, MA 01590 800-698-1865 508-234-4440

BFI/Allied Waste 845 Burnett Rd Chicopee, MA 01020 413-592-9411 800-367-7778

New England Waste 28 Moylan Ave Agawam MA 01001 413-878-1740

Cyn Environmental 11B Old Windsor Rd Bloomfield CT 06002 860-466-8500

Waste Management 600 New Ludlow Rd South Hadley, MA 01075 800-427-1661 FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

425 Main Street, Suite 20, Greenfield, MA 01301-3313 Telephone 413-774-3167 • Fax 413-774-3169 • www.frcog.org Executive Director • Linda Dunlavy





# ANIMAL CARCASS ON-FARM BURIAL for Animal Carcass Management Related to a Disaster in Franklin County, Massachusetts



### An Agricultural Emergency Response Planning Tool

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

### **JUNE 2009**

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

#### ACKNOWLEDGEMENTS AND CREDITS

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#### **1.0 INTRODUCTION**

On-farm burial of animal carcasses is one disposal option available following an emergency situation. Prior to implementing on-farm burial, it is imperative to complete the associated burial checklist (in the Response Action Plan section), review the town GIS map for potential site limitations (see the Appendices), and conduct a site visit to confirm that the farm is suitable for burial of animal carcasses.

When it has become clear that on-farm burial is the best disposal method for some or all of the animal mortalities, consult with MassDEP, MA Department of Agricultural Resources, and the town's Board of Health. Permits may be necessary.

#### **2.0 METHODOLOGY<sup>1</sup>**

On-farm burial of animal carcasses is not a complex process. However, there are issues that will need to be addressed and every site will be different. This section walks through the steps of on-farm burial.

It is assumed that the site has an adequate size parcel of land for burial.

#### 2.1 Equipment

➢ Heavy Equipment: An excavator is typically used to dig and/or fill burial pits. This large, backhoe-type machine, mounted on tracks, sometimes is referred to as a track hoe. Among the machine's advantages is its ability to (a) construct a long, deep, straight-sided pit efficiently; (b) store topsoil separately from subsoil; (c) fill a pit with carcasses or other materials and close it without disturbing the carcasses or other material in the pit; and (d) cause comparatively little site disturbance.

Loaders, bulldozers, road graders, and backhoes (for small jobs) also may be used. With the exception of the backhoe, however, these pieces of equipment tend to be less efficient and to involve continual movement over the site while the pit is being dug, causing greater damage to the site.

Because excavators and backhoes remain essentially in a fixed position while digging, they move the soil faster and with less damage to the site surrounding the pit. Most excavators have an attachable hammer for use with rock.

Use the MA Operational Services Division (OSD) State Contracts to obtain needed equipment. If equipment is not available from State contract firms, obtain it elsewhere, but remember to keep careful track of the procurement process. See the Procurement and

<sup>&</sup>lt;sup>1</sup> NAHEMS, Operational Guidelines: Disposal. April 2005.

Record Keeping Section for statewide contracts, FEMA documentation requirements, and FEMA tracking forms.

 $\succ$  Lighting: If the situation warrants working after daylight then lighting should be provided. With any lighting system, it will be necessary to provide electricity, either with batteries, generators or drop service from power lines. The use of a drop service will require coordination with the local power company.

Communications: Personnel at each site where carcasses are being collected, moved and transported need to have a means of communication with the Incident Command Post.

> Personal Protective Equipment: Personnel on site should have steel-toed boots, hard hats, impermeable gloves, tyvek suits and eye protection.

#### 2.2 Carcass Gas Production

The production of gas from decomposition within unopened carcasses may result in carcass expansion within the burial pit and cracking and heaving of the surface of the pit after it is closed. Depending on the volume of biomass, the pit may bubble and leak fluids, and carcasses may even emerge from the surface of the pit.

A track hoe or other equipment can be used to crush the carcasses in such a manner that opening of individual carcasses will be unnecessary. If this is infeasible, however, large animal carcasses (e.g., cattle, horses, hogs, sheep, and goats) should be opened to permit the escape of gas. This can be accomplished by opening the thorax and abdomen of the carcasses of all species, and the rumen of ruminants and the cecum of horses.

#### **2.3 Burial Trench Dimensions**

The dimensions of the trench will depend on the site (soil conditions and available area) and the size, types, and amounts of carcasses to be disposed of. Calculations for the trench size should have been completed as part of the checklist process for determining disposal options.

Keep the excavator in one position as much as possible. Store top soil and sub-soil separately, and disturb the rest of the site as little as possible.

The pit should have vertical sides and be as deep as feasible considering soil, water table, and equipment available. If a bulldozer is used, for example, the pit's width should be no greater than the width of one blade—approximately 10 ft. Otherwise, the equipment operator may find it difficult to push carcasses into the pit from one side and to fill the pit evenly.

The length of the pit will depend on the size and amount of the carcasses and other material slated for disposal. It is important to avoid situations in which the carcasses must be moved after they are placed in the pit. Each bovine carcass requires about three (3) feet of length. Depending on soil conditions and water-table level, burial pits that are 7 feet wide and 9 feet deep are usually acceptable. Note: Fill the trench 3 feet below grade to allow for covering the carcasses.

#### 2.4 Filling and Closing the Trench

Place the carcasses evenly, making sure to crush the large ones as needed. After the burial pit is filled it should be covered with 6 feet of soil, including 3 feet of soil mounded over the burial site starting at ground level. Fine, dry soil is best, if available, as it prevents carcasses from "floating" and it absorbs fats, greases, and decomposition products.

Care should be taken to ensure that the land's contour and vegetation are restored as closely as possible to their original characteristics.

Using GPS information and any other coordinates necessary, record the location of the burial trench as well as the type and estimated number of animal carcasses buried in an appropriate incident response log.

#### 2.5 Site Management

The burial site must be inspected on a regular basis after it is completed. The overall objective is to allow the site to return as much as possible to its original contour and condition. Prepare a schedule and assign a worker to do this. Provide report forms. The worker should look for settling, seepage, odor, and appropriate re-growth of vegetation.

The soil covering the site will probably need to be replenished periodically during the first year as the carcasses decompose and the soil settles into a depression. Depressions should be avoided because they can collect surface water that may increase percolation through the burial site and into groundwater.

#### **3.0 DOCUMENTATION**

It is imperative to use appropriate documentation for all activities that require labor, equipment, supplies, and trucking services. The EMD should have some level of assurance that any containers of carcasses hauled off site have been properly loaded (not under filled or over filled) and are delivered to the contracted end disposal facility. Logs and written documentation will be required for reimbursement from FEMA. <u>See the Procurement and Record Keeping section for copies of FEMA forms.</u>

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PROCUREMENT AND RECORD KEEPING for Animal Carcass Management Related to a Disaster in Franklin County, Massachusetts



An Agricultural Emergency Response Planning Tool

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

### **JUNE 2009**

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

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MA Emergency Response Supplies, Services & Equipment

#### **1.0 INTRODUCTION**

In general, in Massachusetts, all procurement of any commodity or service must be done through a competitive process. However, a competitive process is not necessary if the commodity or service is available from an existing statewide contract in which the MA Operational Services Division (OSD) has already conducted the procurement<sup>1</sup> or if the procurement qualifies as an exemption under 801 CFR 21.05. One of the exemptions involves circumstances which require departments to procure commodities or services on an emergency basis but only for the period necessary to alleviate the immediate risk of harm, damage, or danger.<sup>2</sup>

This document will describe how a municipality can use the statewide contract for emergency supplies and services, documentation protocol for non-OSD contracted services and supplies, and provides an overview of FEMA record keeping requirements for procurement.

Following this document is a copy of OSD's most recent statewide contract listing for *Emergency Response Supplies, Services and Equipment*. It is also available on OSD's website under Publications and Reports (www.massgov/osd). Also attached is the OSD policy on exceptions to competitive bids. A set of standard FEMA tracking logs is also attached.

#### 2.0 MA STATE CONTRACTS

The MA Operational Services Division has a variety of pre-existing statewide contracts that could be used in an emergency situation. Most notable is the one mentioned above: *Emergency Response Supplies, Services and Equipment*. This document lists vendors for a host of services and supplies that might be needed during a disaster situation. This should be the first resource the Emergency Management Directors use. MA OSD has other contracts that might be needed and not listed in the emergency response document. To access all OSD contracts it is best to visit the Comm-Pass website at www.comm-pass.com.

#### **3.0 EMERGENCY EXEMPTION**

Regulation 801 CMR 21.05(3) recognizes that unforeseen circumstances may require departments to procure commodities or services on an emergency basis. Some reasons for emergency procurements include:

The avoidance of harm to the government

The provision of mandated services

The provision of services or commodities for the health, welfare or safety of persons The prevention of property damage

<sup>&</sup>lt;sup>1</sup> Operational Services Division, *Exceptions to Competitive Procurement Policy*, 2005 p. 1.

<sup>&</sup>lt;sup>2</sup> Op. Cit. p. 3

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Municipalities should enter into emergency contracts for only the period necessary to alleviate the immediate risk of harm, damage or danger.

Whenever possible, municipalities should make an effort to get competitive prices or quotes for the emergency procurement, if the desired service is not on statewide contract. It is better to take some time and get prices from qualified vendors up front than have to defend procurement decisions afterwards. <u>Be certain to document the procurement process.</u>

#### 4.0 RECORD KEEPING/DOCUMENTATION

Because the expenses incurred for this type of emergency response may be reimbursable through the Federal Emergency Management Agency it is important to keep detailed and complete records of all procurement and contractual activities.

For any state or federal reimbursement or cost sharing, it will be necessary to document everything: all labor, materials, equipment applied and expended in providing animal mortality disposal. This documentation can include labor charges, equipment rental, purchase costs of expendable equipment or supplies, subcontractor costs, or any other costs associated with providing the mortality disposal activities. It is crucial that the personnel who will compile and maintain this documentation be identified as part of the disposal team, and that all relevant documents be forwarded to them.

Documentation of procurement, as well as all other activities, should always be in written form, but may be backed up by photographs, videos, and the like. A logbook, worksheets, or both may be used, but all should be written in ink, and any errors should be changed by drawing a single line through them, making the change, and initialing the change.

Logbooks should have numbered pages, with a sewn spine, making removal of pages difficult. Everyone and anyone making entries in logs or notebooks or worksheets should always sign and date the entries or papers. A different set of log books and worksheets should be provided for each response task, and they should be listed and numbered in a master control book, so that chain of custody is possible.<sup>3</sup>

Where the recovery project involves hauling either carcasses or materials, if FEMA reimbursement is possible, the municipality should keep very careful records, and be aware of issues of concern as follows: inaccurate truck capacity records, trucks not fully loaded, too lightly loaded, too heavily loaded, multiple counting of same load.

<sup>&</sup>lt;sup>3</sup> Adapted from Missouri Department of Agriculture, *Catastrophic Mortality and Associated Material Disposal, Standard Operating Guideline No.* 002. p. 24-25

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#### 4.1 Procurement Information to Record

The following lists and forms are suggestions. Information required by FEMA and FEMA forms are provided following this document.

✤ Materials and supplies purchasing

Item and amount (i.e. number of shovels, tons of dirt) Unit price and total price Vendor (note whether OSD contract) Purpose/Description of Work performed Date Purchased, Date/s used Location/project

✤ Force Account Labor

Location of work performed Description of work performed Name and job title for each worker Dates and hours (separate regular and over time hours) worked Total hours, hourly rates, benefits, totals

#### ✤ Force Account Equipment

Location of work (physical address) Description of work Type of equipment (size, capacity, horsepower, make and model) Equipment Code (FEMA's) Operator's Name Date Hours Equipment Rate Totals

\* Rented Equipment

Location/Site (physical address) Description of Work Type of Equipment size, capacity, horsepower, make and model) Dates and hours used Rate with and without operator Total Cost Vendor Vendor Vendor invoice Date/amount paid/check # Franklin County, Massachusetts Agricultural Emergency Response Procurement and Record Keeping Revision 0.0 Initial Issue Date June 2009

- Contract Work

   Location/Site (physical address)
   Description of Work general
   Dates worked
   Contractor
   Billing/Invoice number
   Amount
   Comments/Scope specific to each contractor
- Load Monitors' reports (to record and monitor hauling of materials or carcasses)

Time truck observed Truck No. (given by Town to its own or contractor's truck) Load Ticket (should have multiple copies) Truck Capacity Volume or Weight Cargo Origination/Destination Weight slip Any issues/conflicts and their resolution Truck Certification Forms

#### 5.0 FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

#### Introduction

The following material is a summary of information from the Federal Emergency Management Agency (FEMA) document Debris Management Guide, FEMA 325, July 2007 (www.fema.gov/government/grant/pa/demagde.shtm). We include this to provide an explanatory overview of FEMA's roles and requirements. However, please refer to the original document if you have questions. Regulations governing FEMA are found in 44 CFR Part 13.36 Procurement. FEMA has specific guidelines and rules regarding disaster debris that is eligible for reimbursement. Only FEMA can make eligibility determinations. FEMA publications with information about eligibility are: FEMA 321 (Public Assistance Policy Digest), FEMA 322 (Public Assistance Guide), and FEMA 323 (Public Assistance Applicant Handbook) and FEMA 325.

#### How and Why Does FEMA get involved and what difference does it make?

FEMA can provide reimbursement for disaster response and recovery activities. It is important to know what FEMA's requirements are so that if aid becomes eligible, a municipality may qualify for it. FEMA gets involved only after the State has requested and the President of the United States has provided a Federal Disaster Declaration. After a presidential declaration has been made, FEMA will provide information on the areas eligible for assistance and the types of assistance available. Only costs associated with FEMA criteria are reimbursed. To be eligible

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for reimbursement, work must be required as a result of the disaster, be located within a designated disaster area, and be the legal responsibility of an eligible applicant. Municipalities are eligible applicants. Eligible work must be in the public interest (as defined by FEMA) and costs must be reasonable.

#### **Overview of FEMA's Documentation and Requirements for Procurement**

Work done by a municipality's staff with their own equipment is eligible for funding, but hours worked and equipment used must be documented. Employees' overtime hours are eligible, but straight-time is not. Both straight and over-time is eligible for employees specifically hired for the emergency work. Equipment is usually reimbursed based on either FEMA's published rates or the Town's rates, whichever is less.

FEMA will also reimburse Mutual Aid costs if certain conditions are met, and Contract Services, provided the work is limited to that necessary to remove debris that is an immediate threat.

#### Procurement acceptable to FEMA includes:

- "Small Purchase Procedures" for services or supplies costing less than \$100,000. This requires obtaining several price quotes from different sources.
   "Sealed bids" preferred for construction projects
   "Competitive Proposals"- used more for services
   "Non Competitive Proposals" should be used only when one of the other three methods is not possible and the item is only available from a single source, an emergency does not permit delay, or finding other vendors has been attempted and other vendors do not exist or are inadequate.

- Contracts accepted by FEMA are:
  Lump Sum work with a clear scope and total price
  Unit Price work is done on an item by item basis

  - Cost-plus-Fixed fee either lump sum or unit price plus a contractor's fixed fee
     Time-and-Materials FEMA would prefer that these types of contracts be avoided, but they are often necessary after an emergency. FEMA will reimburse for only 70 hours of this type of contract.

FEMA has specific contract requirements for contracts of different sizes. For each contract, documentation required includes at least a rationale for the procurement method, contract type, contractor selection or rejection, and the basis for the contract price.

Regarding animal carcasses, FEMA states on p. 27 of the Debris Management Guide (FEMA 325) that "putrescent debris is any debris that will decompose or rot, such as animal carcasses...The cost of putrescent debris collection and disposal may be eligible. Disposal of putrescent debris must be in compliance with applicable Federal, State, and local requirements to be eligible for Public Assistance grant funding.

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In general, FEMA does not approve eligibility for removal of material from private property. If debris is brought by the property owner to a public way where it can be collected, costs associated may be eligible. In the case of animal carcasses washed by flood waters downstream onto other private land, retrieval of the carcasses may be allowed by FEMA because it is in the public interest due to the carcasses possibly posing health and safety threats to the public.

In general, when a town must work on private property, a "Right of Entry" form should be signed by the property owner. A sample form is attached to the Response Action Plan section. Photos of the carcasses/damage should be taken. As much documentation as possible should be done before removal.

### ATTACHMENTS

- FEMA Forms
- MA Operational Services Division Procurement Policy (excerpt)
- ✤ MA Emergency Response Supplies, Services & Equipment

|                    | The Commonwealth of Massachusetts<br>Operational Services Division<br>One Ashburton Place, Room 1017<br>Boston, MA 02108<br>Procurement Policies and Procedures |
|--------------------|---|
| Policy:            | Exceptions to Competitive Procurements  |
| Issue Date:        | November 1, 2005  |
| Date Last Revised: | August 13, 2007   |

#### EXECUTIVE SUMMARY

A <u>competitive procurement</u> is required for the acquisition of <u>any</u> commodity or service or both unless the procurement qualifies as a <u>competitive procurement exception under 801 CMR 21.05</u>. This document explains the six competitive procurement exceptions allowed under 801 CMR 21.05. This section also clarifies two procurement concepts, the so-called "Sole Source" procurement and "A Deal Too Good to Pass Up," which are <u>not</u> competitive procurement exceptions.

A special note: Apart from the six exceptions covered in the body of this document, a competitive procurement is not necessary if the commodity or service is available from an existing statewide contract where OSD or its designee has already conducted the procurement. Please see the document entitled *Procurement Introduction*, available in Procurement Information Center for help on using existing statewide contracts. A listing of statewide contracts is available on Comm-PASS by using the Search function. Select "Search for Contracts", check the "statewide contract" box and "active" under Document Status. Clicking on the "Search" button will create a list of all active statewide contracts available for use by eligible entities. Also, if permitted in the RFR, departments may use another department's procurement to execute contracts with the awarded vendors. Please see Statewide Contract, Designated Contract, Single or Multiple Department Contract Guidance, available via a link at the end of this document.

All contracts executed under 801 CMR 21.05, Competitive Procurement Exceptions, must have written justification and documentation available for review in the procurement file. Insufficient documentation or abuse of the competitive procurement exceptions may result in the withdrawal of procurement authority or other sanctions.

Departments should note that an exception from a competitive procurement does not relieve a department from complying with the remaining provisions of 801 CMR 21.00, or other statutory, regulatory or policy requirements. These provisions include, but are not limited to, consultation with relevant PMT groups, maintenance of a procurement file, execution of all required contract forms, contract management and quality assurance. OSD's Quality Assurance Team reviews all of the exception categories as well as the

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procurement file to ensure that the required documentation is present.

#### SIX PROCUREMENT EXCEPTIONS

Regulation 801 CMR 21.05 recognizes the following six conditions in which a competitive procurement is not necessary.

- 1. Incidental purchases
- 2. Emergency situations that require the immediate acquisition of a commodity or service

#### **1. INCIDENTAL PURCHASES**

An incidental purchase is defined as a one-time, non-recurring, unanticipated need for commodities and/or services with a total dollar value of up to \$5,000. As authorized under M.G.L. c. 7, s. 22, regulation 801 CMR 21.05(1) recognizes the fact that conducting a competitive procurement for certain types of purchases is neither cost-effective nor an efficient use of administrative and staff resources. Therefore, to maximize available resources, encourage best value in purchasing practices and support timeliness, some purchases may be considered incidental in nature. Departments are generally allowed to do incidental purchasing unless this privilege has been rescinded or the amount has been lowered due to non-compliance with procurement policies.

On the other hand, when a department knows that repeated or multiple purchases for the same commodity or service are planned or are a possibility, the commodity or service is not an exception and must be competitively procured.

<u>Exceptions</u>: There are two notable limitations for incidental purchasing: statewide contract usage and certain restrictions on MMARS object class/object codes. Even for incidental purchases, Executive departments must use statewide contracts. Any small purchase that is available on statewide contract does not qualify as an incidental purchase (procurement exception) since it is available from a contract established as a result of a competitive procurement. Certain object codes, such as contracted employees, legal services and leases, cannot be considered incidental purchases, regardless of the dollar value. Also, consultant services governed by M.G.L. c. 29, s. 29A (certain HH, NN and UU object codes) require secretariat approval for all purchases greater than \$1,000.

<u>Transactions and Required Documentation:</u> The encumbrance transaction for incidental purchases is the GAE (General Accounting Encumbrance document) and the payment transaction is the INP (Incidental Payment document). For most incidental purchases, only the invoice is required. On the other hand, departments may determine it is in their best interest to execute a *Commonwealth Terms and Conditions* and *Standard Contract Form*. If they elect to do a CT (Contract Encumbrance document), RPO (Recurring Payment Order) or PC (Commodity Purchase Order), then both of these forms are required.

<u>Affirmative Market Program</u>: Pursuant to Executive Order 390, agencies should always consider using SOMWBA certified Minority- and Women-Owned Business Enterprises (M/WBE) for incidental purchases. A listing of SOMWBA certified businesses is located at <u>www.mass.gov/somwba</u>. These purchases would assist the agency in reaching their annual Affirmative Market Program benchmarks.

## PLEASE SEE THE ASSOCIATED GUIDANCE ENTITLED *Incidental Purchasing Policy Guidance* Available via a link at the end of this document.

#### 2. Emergency Contracts

Regulation 801 CMR 21.05(3) recognizes that unforeseen circumstances may require departments to procure commodities or services on an emergency basis. Some reasons for emergency procurements include:

- The avoidance of harm to the government
- The provision of mandated services
- The provision of services or commodities for the health, welfare or safety of persons
- The prevention of property damage

Whenever possible, departments should make an effort to shop around for competitive prices or quotes for the emergency procurement.

Departments should enter into emergency contracts for only the period necessary to alleviate the immediate risk of harm, damage or danger. In certain circumstances, removal of clients receiving services through emergency human and social service contracts may be clinically contraindicated or could negatively impact clients. In those cases, departments may establish emergency contracts for a period of time consistent with the needs of the individual(s) served.

Departments are cautioned that extending emergency contracts to include other items that are not related to the immediate solution of the emergency is not appropriate. For example, an emergency contract to repair or replace a broken pipe should not be extended to include fixing other pipes or plumbing unrelated to the emergency or which present no emergency threat. These repairs need to be covered under a standard competitive procurement.

While department heads must make this important determination, secretariats may also establish a policy for administering emergency contracts. Departments are encouraged to work with the relevant OSD PMT group or with other departments to develop contingency plans for emergencies or to seek assistance when an emergency has arisen.

Departments are required to execute a contract with the entity selected to perform the contract. The department should execute the appropriate version of the *Commonwealth Terms and Conditions* as well as a *Standard Contract Form* as soon as possible after the need for the emergency commodity or service has arisen.

*Note:* OSD has compiled a reference guide of existing statewide contracts that could be used in an emergency that requires a specific commodity or service. That booklet, *Emergency Response Supplies, Services and Equipment,* is available on OSD's website under Publications and Reports.

#### TWO PROCUREMENT CONCEPTS THAT ARE NOT EXCEPTIONS

"SOLE SOURCE" PROCUREMENTS

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Regulation 801 CMR 21.00 does not recognize, as a competitive procurement exception, the concept of sole source procurements, in which only one bidder is deemed to be capable of providing the commodity or service (thus eliminating the competitive procurement process). These procurements are counterproductive because they eliminate competition and the "pool" from which departments select quality contractors. They also prevent contractors, including small, minority or women-owned businesses and businesses owned by individuals with disabilities, from competing for Commonwealth contracts.

The concept of an open, fair and competitive procurement is designed to provide a broad opportunity for bidders to compete for Commonwealth contracts. The only way to guarantee this opportunity is to ensure that at least *some* method of competitive procurement is used to solicit a reasonable number of qualified bidders. It's possible that certain bidders may appear to be the only ones capable of providing a commodity or service (due to factors such as unique licensing restrictions or training requirements). Even in these situations, the department must attempt at least some form of verification by posting an RFR. If the RFR elicits only one response, the department may proceed with a contract. If additional qualified bidders respond to the RFR, then the basis for a competitive procurement has been established. Please note: Even if there was only one bidder at the time, a new competitive procurement will be necessary at the end of this contract, since new bidders may have entered the market in the interim.

#### "A DEAL TOO GOOD TO PASS UP"

Departments are sometimes approached unsolicited by a bidder and presented with a great "deal." The deal may appear so beneficial or advantageous that rejecting the deal in favor of completing a competitive procurement may seem disadvantageous, wasteful or unjustifiable. Examples of situations that might fall under this provision include offers made to the Commonwealth at zero cost, at a cost significantly lower than market cost and even deals that would result in payments to a department, such as services for the removal of recycled materials.

However, there is no such thing as "a deal too good to pass up" unless and until a department has taken steps to confirm, through a public process that is fair, open and competitive, that there is no other bidder that can meet or beat the deal being offered to the Commonwealth. Because any misinterpretation of this concept could serve to undermine confidence in the fair, open and competitive requirements of the Commonwealth's public procurement process, the procedures for handling this concept are explicitly outlined below.

- 1. The Chief Financial Officer of the department intending to use this provision must seek approval on department letterhead and in writing from the State Purchasing Agent. The following information must be included in the written request for approval:
  - A detailed description of the commodity or service being offered;
  - Name of the company that is offering the commodity or service and the terms of that offering;
  - An explanation of why the department is seeking to post notice of the offer rather than conduct a competitive procurement including all research and due diligence conducted by the department that resulted in the decision to exercise this option;
  - A copy of the RFR specifications that will be posted on Comm-PASS if the request to post the notice is approved in writing by the State Purchasing Agent; and
  - Proposed timeframes for posting on Comm-PASS. Please note that, while the timeframe for

posting the notice on Comm-PASS may be brief, it must be posted for at least fourteen business days, the minimum period of time OSD believes is sufficient for all potential companies to review the specifications and respond, if it believes that the Commonwealth can achieve a better offer through a competitive bid. Please note that World Trade Organization requirements may mandate a longer posting period based on the total dollar value of the potential contract.

2. Once written approval has been received, a department must post the potential contract, using the Request for Response template on Comm-PASS to determine if there are any other interested bidders willing and able to provide a comparable or better offer. Departments may supplement the Comm-PASS posting with a similar notice in a newspaper; however, all RFRs posted under this provision

with a procurement value of greater than \$5,000 must appear on Comm-PASS. If no other interest is generated in response to the RFR, the department may proceed with a contract. However, depending on how the notice/RFR was written, if interest is generated, the department must either conduct a procurement that is fair, open and competitive or, if the notice was designed to solicit the actual submission of an RFR response with a comparable or better deal, then the department must evaluate all submitted responses.

3. All documentation, correspondence and information must be retained by the department in a procurement file.

OSD's Quality Assurance Team reviews these "deals too good to pass up", including all of the procurement file material. For tracking purposes, all written requests to the State Purchasing Agent and all postings on Comm-PASS must include the reference ("Notice of a Deal Too Good to Pass Up") in the title. Please see *OSD Policy Guidance 05-11, Changes to "A Deal Too Good to Pass Up"*, available via a link at the end of this document, for more information.

#### Associated Regulations and Policy Guidance

- 801 CMR 21.00 Procurement of Commodities or Services, Including Human and Social Services
- <u>Individual Contractors: Contract Employees vs. Independent Contractors</u> (Issued jointly by the Operational Services Division, the Office of the Comptroller and the Human Resources Division)
- Incidental Purchasing Policy Guidance
- OSD Policy Guidance 04-19, Policy Regarding Use of Federal General Services Administration (GSA) Contracts
- OSD Policy Guidance 05-11, Changes to "A Deal Too Good to Pass Up"
- <u>Statewide Contract, Designated Contract, Single or Multiple Department Contract Guidance</u>



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### **Emergency Response Supplies, Services** and Equipment

A Reference Guide to Statewide Contracts for Emergencies

Commonwealth of Massachusetts Operational Services Division One Ashburton Place, Room 1017 Boston, MA 02108

Revised August 11, 2008

### How to use this booklet

This booklet is intended as a reference guide for departments to obtain specific supplies, services and equipment for emergency and non-emergency situations. Referenced within this booklet is the "Emergency Standby Services" contract, which is *only* available under emergency situations, however, contractors may extend their services based on regional situations. Also, see the Hazardous Incident Response Equipment (HIRE) HSP01 contract contained in the booklet.

Using this booklet you can find information in three ways:

- 1. **Quick Reference Table:** Identifies supplies and/or services available through statewide contracts that are contained in this booklet.
- 2. **Contract Reference Index:** Provides a quick reference for locating the most commonly needed emergency items and navigating this booklet.
- 3. Alphabetical Listing of Statewide Contracts: Provides a convenient listing of statewide contracts and associated contact information during normal business hours, except where noted. For after hour emergencies, please contact any one of the three OSD Procurement Directors using their cellular phone numbers identified below.

For emergency situations occurring *during regular business hours* additional resource support is available at the following departments:

| Operational Services Division (OSD)       | 617-720-3300 |
|---|--------------|
| Department of Public Safety               | 617-727-3200 |
| Massachusetts Emergency Management Agency | 508-820-2000 |

| Other Emergency numbers, regardless of the time | e of day are: |
|---|---------------|
| State Police                                    |               |
| For all other emergencies                       | 911           |
| Essential Community Services                    |               |

Thank you,

| William J. Funk, Director             |  |
|---------------------------------------|--|
| Professional & Institutional Services |  |
| P: 617-720-3329                       |  |

In Emergencies ONLY: C: 857-919-1039 **Darcy Rowell, Director** Infrastructure P: 617-720-3128

In Emergencies ONLY: C: 978-870-9081 **Richard Mordaunt, Director** IT and Office P: 617-720-3302

In Emergencies ONLY: C: 508-543-3694
### Quick Reference table for Statewide Contracts of Commodities and Services Contained within this booklet

### **Biohazard Supplies, Equipment & Kits**

Biohazard Waste Containers, Biohazard Waste, Safety Disposal Cans, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Civil Defense Kits, CPR Kits, Decontamination Kits, Decontamination Shower Systems, Firefighting/Decontamination Systems, First Aid Kits (all), First Responders Kits, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, Hearing Protectors, HEPA Vacuum, Oil Sorbents, Polyliner Bags, Portable Showers, Safety Disposable Cans and Other Safety Items.,

### **Building Materials and Supplies**

Appliances, Electrical, Building Materials & Janitorial Supplies., Certified Wood, Electrical & Lighting Supplies, Flooring, Hardware, Lumber, Paint & Supplies, Paint, Reprocessed, Plumbing Supplies, Pre-fabricated Items (storage sheds, cabinets, etc), Sustainable Roofing Materials, Tools, Wall/Ceiling Materials,

### **Clothing**, Misc.

Athletic Wear, Children's Wear, Clothing and Accessories, Footwear, Hospital Wear, Outerwear, Underwear,

### **Computers**

Computer Hardware, all, Computer Service, Computer Supplies, all,

### **Copiers, Printers, Facsimile**

Digital black and white photocopiers, printers, facsimile/multifunctional equipment, supplies and services,

### **Emergency Standby Services**

All types equipment, supplies & services, Barriers, Blankets, Catering Services, Communications, Construction Equipment, Cots, Electrical Assistance, Emergency Personnel, Emergency Standby Services, not otherwise identified, Equipment Personnel, Food, MRE & Bulk, Fork Lifts, Fork Lifts, Generators, Generators, HazMat Clean-up, Heavy Equipment, Light Towers, Modular Building Offices, Personnel, Portable HVAC, Pumps, Pumps, Quick Camps, Recovery Systems, Sandbag Equipment, Sandbags, Shower Units, Spill Control, Tents, Tents, Water Damage, Water Products,

### **Evacuation Stretchers and Chairs**

EMT Stretchers, Rescue Seats, Stair Chairs,

### **Fire/EMS Equipment & Supplies and Services**

AED's (Defibrillators), Emergency Vehicle Lighting, EMT Paramedic items, except vehicles, Fire alarm equipment, Fire fighting and decontamination systems, Turnout gear,

### Food & Catering Services

Food & Catering Services,

### Food, Bulk - Prime Grocer

Food, Produce, Janitorial & Paper Products,

### Fuel

Fuel Diesel, Fuel Oil, number 2, Fuel Oil, number 4 & 6, Fuel Unleaded Gas,

### Hazardous Incident Response Equipment

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AED's (Defibrillators), AED's (Defibrillators), Assault gear, Bomb shields, Carrying bags, Command and control vehicles, Decontamination equipment, Detection equipment, Evacuation chair & storage cabinet, Fire alarm equipment, First aid supplies, First Aid Supplies, Generators, Generators, Marine supplies, Monitors, PPE suits/masks/kits, Radiation detection equipment, Rescue equipment, Testing equipment, Vehicles Specialty, X-Ray equipment/screening.

### **Hazardous Material Collection & Disposal**

Abandoned Hazardous Material, Analysis, profiling and related labor, Compressed gas cylinders, Emergency response and training, Material collection and disposal including various chemical waste, Medical waste collection, Training for the management of hazardous materials, Unidentified waste sampling, Waste management related labor,

### **Medical Supplies & Equipment**

Bandages, Batteries, Beds, CPR Kits, Diapers/Incontinent Care, Disposable Medical Equipment, Evacuation chair & storage cabinet, First aid supplies, First Aid Supplies, Flashlights, Gauze Wraps/Bandages, IV Poles, IV Solutions, Ointments, Stretchers, General, Toiletries, Wheelchairs,

### **Office Supplies**

Office Supplies, Recycled Envelopes, Recycled Paper,

### **Portable Toilets**

Portable Restroom,

### **Protective Apparel**

Cooling Vests, Coveralls Dupont Tyvek w/hood & boots, Dupont Responder Apparel, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, HazMat Boots, Splash Suits, Vapor tight suit,

### **Protective Masks**

Chemical Protective Masks, Commercial Face Protection, Cone Masks, Escape Hoods, Escape Hoods, Eye Shields, Face Mask, Face shields, Full Face Shields, Gas Masks, Gas Masks, Protective Goggles, Smoke Escape Hoods,

### **Rental Equipment**

Air Compressors (HVAC), Air Tools, Backhoes, Bulldozers, Concrete Saws, Earth Moving & Material Handling Equipment, Excavation Hammers, Fans/Blowers, Folding Chairs, Fork Lifts, Fork Lifts, Generators (all), Heaters, High Voltage Cables, Highway Message Boards, Hydraulics, Jackhammers, Personal Lifts, Pumps, Pumps, Rental Equipment, not otherwise identified, Scaffolding, Screeners, Tents, Tents, Tractors, Traffic Control Devices, Trailers, Transformers, Welders,

### **Respirators**

Escape Hoods, Escape Hoods, Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Disposable, Respirators Emergency Escape, Respirators Half Mask and Particulate Regulators (NIOSH standards), Respirators N95 (all types), Respirators OSHA Substance specific respirators Shroud protector hoods,

### **Safety Gloves**

Gloves Butyl Rubber, Gloves Code Blue, Gloves Neoprene, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Safety Gloves, other,

### Self Contained Breathing Apparatus (SCBA)

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Chemical Bio-Gas Masks, Escape Hoods, Escape Hoods, Gas Masks, Gas Masks, Negative and Positive Pressure Respirators, North and WorkMask SCBAs., SCBA Head Harnesses (nuclear biological & chemical canisters available),

### Solid Waste Removal, Non-Hazardous

Asphalt Waste, Brick/Concrete plus solid waste recycling, Bulky Waste, Construction/Demolition Waste, Municipal solid waste,

### **Telephone Service**

*Telephone Service, cellular, Telephone Service, local, Telephone Service, long distance* 

### Televisions, VCR, Multi-Media Equipment, Video Conferencing, Surveillance & Security

Access Control Systems, Amplifiers, Audio/Visual Duplicators, Camcorders, Cameras, CD Players, Closed Circuit TV, Combo Recorders/Players, DVD, Editing Systems, Equalizers, Headphones, Identification Systems, Interactive White Boards, Intrusion Protection Systems, Lamination Equipment, Lecterns, Microphones, Mixers, Patch Panels, Plasma Displays, Projectors, Public Address Systems, Racks, Receivers, Screens, Sound Systems, Speakers, Stands, Televisions, Tripods, VCR, VCR 4-head, VHS, Visual Presenters

### **Temporary Help Services/Personnel**

Accounting Staff, Administrative & Accounting Support Staff, Light Labor, Office Computer Operators, Paralegal, Temporary workers: General & Senior Clerks

### **Transportation**

Cargo van rental, Compact rental, Enterprise Rent-A-Car Rentals, Hybrid rental, Intermediate rental, Minivan rental, Standard rental, Wagon rental

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| Generators  | 20, 33  |
| Generators (all)  | 45  |
| Gloves Butyl Rubber   | 12, 41, 43, 44, 46, 48, 50                      |
| Gloves Code Blue  | 13, 37, 42, 44, 47, 49                          |
| Gloves Neoprene   | 12, 41, 43, 46, 48, 50                          |
| Gloves Nitrile  | 13, 37, 42, 44, 47, 49                          |
| Gloves Powder-free  | 13, 37, 42, 44, 47, 49                          |
| Gloves Vinyl exam   | 13, 37, 42, 44, 47, 49                          |
| Gloves Viton  | 13, 37, 42, 44, 47, 49                          |
| Gowns, Impervious Polygowns   | 13, 37, 42, 44, 47, 49                          |
| Gowns, tie back protective isolation  | 13, 37, 42, 44, 47, 49                          |
| Hardware  | 14  |
| HazMat Boots  | 12, 41, 43, 44, 46, 48, 50                      |
| HazMat Clean-up   | 20  |
| HazMat Simultest Kit (detects gases and vapors)   | 12, 41, 44, 46, 48, 50                          |
| HazMat spray canisters  | 12, 41, 44, 46, 48, 50                          |
| Headphones  | ,,,,,,,,,                                       |
| Hearing Protectors  | 13. 37. 42. 44. 47. 49                          |
| Heaters   | 45  |
|   | 10  |

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|---|--|
| Heavy Equipment   | 2  |
| HEPA Vacuum   | 12, 41, 44, 46, 48, 5                            |
| High Voltage Cables   | 4  |
| Highway Message Boards  | 4  |
| Hospital Wear   | 1.   |
| Hybrid rental   | 5  |
| Hydraulics  | 4  |
| Identification Systems  | 5  |
| Interactive White Boards  | 5  |
| Intermediate rental   | 5  |
| Intrusion Protection Systems  | 5  |
| IV Poles  | 13, 37, 42, 44, 47, 4                            |
| IV Solutions  | 13, 37, 42, 44, 47, 4                            |
| Jackhammers   | 4  |
| Lamination Equipment  | 5  |
| Lecterns  | 5  |
| Light Labor   | 5.   |
| Light Towers  | 2  |
| Lumber  |  |
| Marine supplies   | 3  |
| Material collection and disposal including various chemical waste                                   | 3  |
| Medical waste collection  | 3  |
| Microphones   | 5  |
| Minivan rental  | 5  |
| Mixers  | 5  |
| Modular Building Offices  | 2  |
| Monitors  | 3  |
| Municipal solid waste   | 5  |
| Negative and Positive Pressure Respirators  | 12 11 11 16 18 5                                 |
| North and WorkMask SCBAs  | 12, 41, 43, 46, 48, 5                            |
| Office Computer Operators   | 12, +1, +3, +0, +0, 5                            |
| Office Supplies   | 3  |
| Oil Sorbents  | 12 11 11 16 18 5                                 |
| Ointments   | 12, 41, 44, 40, 40, 50<br>13, 37, 42, 44, 47, 40 |
| Outerwear   | 13, 37, 42, 44, 47, 4                            |
| Duitt & Supplies  | 1  |
| Paint & Supplies  | 1<br>1   |
| Paralagal   | 14   |
| Patalegai   | ی۔<br>ح  |
| r awii r alleis<br>Dersonal Lifta   |  |
| Personnal   | 4.   |
|   | 2  |
| Plasma Displays   | 5.   |
| Plumoing Supplies   |  |
| Polyliner Bags  | 12, 41, 44, 46, 48, 5                            |
| Portable HVAC   | 29   |

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|--|---|
| Dortable Destroom  | <i></i>   |
| Portable Showers   | 12 41 44 46 48 5  |
| PPF suits/masks/kits   | 12, 41, 44, 40, 40, 5   |
| Pre-fabricated Items (storage sheds, cabinets, etc.)   | 1   |
| Projectors   | 5   |
| Protective Goggles   | 4   |
| Public Address Systems   | 5   |
| Pumps  | 20.4  |
| Ouick Camps  | 20, 1   |
| Racks  |   |
| Radiation detection equipment  | 2   |
| Receivers  | 5   |
| Recovery Systems   | 2<br>2  |
| Recycled Envelopes   | 2   |
| Recycled Paper   | 3   |
| Rental Equipment not otherwise identified  | 5<br>/  |
| Rescue equipment   | 7   |
| Rescue Seats   | 21 3  |
| Resource Seals<br>Respirators Acid Cas 12, 13, 37, 41, 42  | <i>A</i> 3 <i>A</i> 4 <i>A</i> 6 <i>A</i> 7 <i>A</i> 8 <i>A</i> 9 5 |
| Despirators Air Durifying Masks  | +3, +4, +0, +7, +0, +9, 3<br>12 11 12 16 18 5                       |
| Respirators Confined Space   | 12, 41, 43, 40, 40, 5<br>12, 41, 43, 46, 48, 5                      |
| Respirators Disposable   | 12, 41, 45, 40, 40, 5<br>12, 27, 40, 40, 40, 5                      |
| Respirators Emergency Escence  | 13, 37, 42, 44, 47, 4   |
| Respirators Helf Mask and Darticulate Deculators (NIOSU standards)                               | 12, 41, 45, 40, 40, 5   |
| Respirators N05 (all types)  | 13, 37, 42, 44, 47, 4   |
| Respirators OSUA Substance specific respirators Shroud protector head                            | 13, 37, 42, 44, 47, 4   |
| Sefety Dispessible Cana and Other Sefety Items   | 18 12, 41, 44, 40, 40, 5<br>12, 41, 42, 46, 40, 5                   |
| Safety Clause, other   | 12, 41, 45, 40, 40, 5   |
| Safety Gloves, other   | 12, 41, 45, 40, 48, 5   |
| Sandbag Equipment  | 2   |
|  | 2   |
| Scanolding   | 4   |
| SCBA Head Harnesses (nuclear biological & chemical canisters availab                             | 1e) 12, 41, 44, 46, 48, 5   |
| Screeners  | 4   |
| Screens  | 5   |
| Shower Units   | 2   |
| Smoke Escape Hoods   | 12, 41, 44, 46, 48, 5   |
| Sound Systems  | 5   |
| Speakers   | 5   |
| Spill Control  | 2   |
| Splash Suits   | 12, 41, 43, 44, 46, 48, 5   |
| Stair Chairs   | 21, 3   |
| Standard rental  | 5   |
| Stands   | 5   |
| Stretchers, General  | 21, 3   |
| Sustainable Roofing Materials  | 1   |

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|---|---|
| Telephone Service, cellular   | 54  |
| Telephone Service, local  | 54  |
| Telephone Service, long distance  | 54  |
| Televisions   | 53  |
| Temporary workers General & Senior Clerks   | 55  |
| Tents   | 20, 45  |
| Testing equipment   | 33  |
| Toiletries  | 13, 37, 42, 44, 47, 49                          |
| Tools   | 14  |
| Tractors  | 45  |
| Traffic Control Devices   | 45  |
| Trailers  | 45  |
| Training for the management of hazardous materials  | 36  |
| Transformers  | 45  |
| Tripods   | 53  |
| Turnout gear  | 22  |
| Underwear   | 15  |
| Unidentified waste sampling   | 36  |
| Vapor tight suit  | 12, 41, 43, 44, 46, 48, 50                      |
| VCR   | 53  |
| VCR 4-head  | 53  |
| Vehicles Specialty  | 33  |
| VHS   | 53  |
| Visual Presenters   | 53  |
| Wagon rental  | 57  |
| Wall/Ceiling Materials  | 14  |
| Waste management related labor  | 36  |
| Water Damage  | 20  |
| Water Products  | 20  |
| Welders   | 45  |
| Wheelchairs   | 21, 37  |
| X-Ray equipment/screening.  | 33  |

### **Biohazard Supplies, Equipment & Kits**

### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

# Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company           | Government Scientific Source       |
|-------------------------------------|------------------------------------|
| 2000 Park Lane Drive                | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275                 | Reston, VA 20191                   |
| Contact: Jeannie Deegan             | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609 | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com     | E: jruiz@govsci.com                |

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### **VWR Scientific Products**

161 Grove Street Franklin, MA 02038 **Contact:** Jerry Bornstein P: 800-947-4270x4245 F:800-460-8592 E: jerry\_bornstein@vwr.com

#### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.                          | Invacare Supply Group          |
|--|--------------------------------|
| 220 Tosca Drive                                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072                            | Milford, MA 01757              |
| Contact: Paul Paisner                          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451                 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET                        | E: bleonard@invacare.com       |
| McKesson Medical-Surgical Minnesota Supply Inc | Medline Industries,Inc.        |
| 8121 10th Ave No Government Sales              | One Medline Place              |
| Golden Valley, MN 55427                        | Mundelein, MA 60060            |
| Contact: Therese Mugge                         | Contact: Keith White           |
| P: 800-328-8111x6588 F:800-237-9766            | P: 508-478-3713 F:508-478-6588 |
| E: government.sales@mckesson.com               | E: kwhite@medline.com          |
| TRANS MED USA INC                              | Westnet Inc.                   |
| 31 PROGRESS AVENUE                             | Westnet Inc 30A North Street   |
| TYNGSBOROUGH, MA 01879                         | Canton, MA 02021               |
| Contact: BETTY GANTZ                           | Contact: Tina McLean           |
| P: 978-649-1970 F:978-649-1971                 | P: 781-828-7772 F:781-828-7772 |
| E: BETTY@TRANSMED-USA.COM                      | E: tina@westnetmed.com         |

### **Building Materials and Supplies**

#### Contract: FAC27, Building Materials and Supplies (FAC27)

Effective Date: 04/01/2004 to 04/01/2014

**Example:** Appliances, Electrical, Building Materials & Janitorial Supplies., Certified Wood, Electrical & Lighting Supplies, Flooring, Hardware, Lumber, Paint & Supplies, Paint, Reprocessed, Plumbing Supplies, Pre-fabricated Items (storage sheds, cabinets, etc), Sustainable Roofing Materials, Tools, Wall/Ceiling Materials

| A&A Industrial / Albeco Fastener Supply    | Curtis-Newton Corp.            |
|--|--------------------------------|
| 792R Main Street                           | PO Box 4128                    |
| Tewksbury, MA 01876                        | Dedham, MA 02027               |
| Contact: Ted Morang                        | Contact: Bob Naughton          |
| P: 877-425-2326 F:978-851-4483             | P: 781-461-6000 F:781-329-7360 |
| E: ted@4albeco.com                         | E: bobnaughton@mindspring.com  |
| Facility Contract Services/National Lumber | Heyes Forest Products Inc      |
| PO Box 940                                 | 34 Daniel Shays Highway        |
| Westwood, MA 02090                         | Orange, MA 01364               |
| Contact: Jerry McManus                     | <b>Contact:</b> Fred Heyes     |
| P: 781-461-0838 F:781-461-8006             | P: 978-544-8801 F:978-544-8803 |
| E: gerardmcmanus@lycos.com                 | E: fred@heyesforest.com        |
|  |                                |
| Home Depot                                 | Jackson Lumber & Millwork Co.  |
| 2455 Paces Ferry Road                      | 245 Market Street              |
| Atlanta, GA 30339                          | Lawrence, MA 01842             |
| Contact: Rich Nyberg                       | Contact: Tom Zappala           |
| P: 866-589-0690 F:                         | P: 800-551-5591 F:978-688-6844 |
| E: richard_nyberg@homedepot.com            | E: tzappala@jacksonlumber.com  |

### Clothing, Misc.

Contract: CLT06, CLOTHING, UNIFORMS, FOOTWEAR, ACCESSORIES AND HYGIENE SUPPLIES Effective Date: 08/04/2007 to 07/31/2011

**Example:** Athletic Wear, Children's Wear, Clothing and Accessories, Footwear, Hospital Wear, Outerwear, Underwear

| ANDREA'S POLICE SUPPLY   | Aramark Uniform   |
|--|---|
| RATINHAM MARKETPLACE 1470 KT 44<br>RAYNHAM, MA 02767   | Norwell, MA 02061   |
| Contact: JOANNE THAYER<br>P: 508-821-5815x101 F:   | <b>Contact:</b> Lewis McConkey<br>P: 877-272-1144x5262. F:  |
| E: JVTHAYER@TMLP.COM   | E: Lewis.mcconkey@aramark-uniform.com   |
| Bob Barker Company, Inc<br>PO Box 429<br>Fuquay Varina, NC 27526<br>Contact: Nenna Mann<br>P: 800-334-9880x413 F:<br>E: bidnotices@bobbarker.com             | Darter Specialties, Inc<br>PO Box 188<br>Cheshire, CT 06410<br>Contact: Guy Darter<br>P: 203-699-9805 F:203-699-9807<br>E: sales@darterpress.com  |
| Doughboy Police and Fire Supply  | Graphic Productions   |
| Revere, MA 02151   | Accord, MA 02018  |
| Contact: Paul Simonini<br>P: 781-289-3300 F:   | <b>Contact:</b> Maryann Gabriele<br>P: 781_878_8828 F:781_878_4530  |
| E: info@doughboyuniforms.com   | E: graphicspro@msn.com  |
| Hallmark Emblems<br>2401 North Tampa St<br>Tampa, FL 33602<br>Contact: Scott Delarco<br>P: 813-223-5427 F:813-273-0564<br>F: hallmark@att.net                | Massachusetts Correctional Industries<br>1 Industries Drive, Building A P. O. Box 188<br>Norfolk, MA 02056<br>Contact: Debbie Correia<br>P: 800-222-2211x212 F:508-850-1091<br>F: dacorreia@doc.state.ma.us |
| OD TARAGIN & BROS<br>1400 ALICEANNA ST<br>BALTIMORE, MD 21231<br>Contact: JONATHAN SHAPIRO<br>P: 410-276-7570 F:<br>E: ODTAR@EROLS.COM                       | Raphaels   7 Whistling Brook Rd   Marlboro, MA 01752   Contact: Herbert Raphael   P: 508-624-4585 F:508-624-0804   E: ianjack@verizon.net   |
| Razz-m-Tazz Promotions, LLC<br>PO BOX 620<br>Westminster, MA 01473<br>Contact: Gail Sabettini<br>P: 877-874-0502 F:978-874-1057<br>E: razzspecials@yahoo.com | Uniforms Manufacturing, Inc<br>Box 12716<br>Scottsdale, AZ 85267<br>Contact: Lawrence Tucker<br>P: 480-368-9316x112 F:<br>E: ltucker@unifmfg.com  |
| VISIBLY SAFE<br>PO Box 641<br>Harwich, MA 02645<br>Contact: Terence Burke<br>P: 508-432-6050 F:<br>E: sales@visiblysafe.com                                  | Worcester County Police Equipment, Inc.<br>405 Water St<br>Fitchburg, MA 01420<br>Contact: James Averso<br>P: 978-343-0019 F:<br>E: jawcpe@verizon.net  |

### Computers

Contract: ITC16A, IT Hardware (ITC16a) Computers, Mobile Equipment, Servers, Storage and Services Effective Date: 10/01/2004 to 06/30/2011

Example: Computer Hardware, all, Computer Service, Computer Supplies, all

| AdvizeX Technologies                   | Agilysys, Inc.   |
|--|--|
| 128 Wheeler Road                       | 10 Mall Road   |
| Burlington, MA 01803                   | Burlington, MA 01803                                   |
| Contact: Timothy B. Igo                | Contact: Marilyn Koch                                  |
| P: 781-238-8510 F:781-229-9991         | P: 781-993-5111 F:781-993-5180                         |
| E: tigo@advizex.com                    | E: marilyn.koch@agilysys.com                           |
| Apple Computer                         | CBE Holdings LLC                                       |
| 1 Infinite Loop                        | 10 City Square   |
| Cupertino, CA 95014                    | Boston, MA 02129                                       |
| Contact: Robin Martinez                | Contact: Warren Nelson                                 |
| P: 408-974-1406 F:408-974-4908         | P: 617-514-1730 F:617-514-1830                         |
| E: rmartinez@apple.com                 | E: warren.nelson@cbetech.com                           |
| CDW-Government Inc.                    | Covisia Solutions (formerly known as Aegis Associates) |
| 2 Enterprise Drive                     | 1440 Main Street                                       |
| Shelton, CT 06484                      | Waltham, MA 02451                                      |
| Contact: Wilson Garcia                 | Contact: William Fistori                               |
| P: 877-325-8223 F:312-705-8663         | P: 781-895-5216 F:781-895-5100                         |
| E: wilsgar@cdwg.com                    | E: bfistori@covisia.com                                |
| Dell Marketing L.P.                    | EMC Corporation  |
| One Dell Way Mail Stop 8707            | 95 Wells Avenue  |
| Round Rock, TX 78682                   | Newton, MA 02459                                       |
| Contact: Ryan Cargill                  | Contact: Kevin Molloy                                  |
| P: 800-822-8965x7246759 F:512-728-1037 | P: 617-618-3459 F:617-618-8652                         |
| E: ryan_cargill@dell.com               | E: molloy_kevin@emc.com                                |
| Enpointe Technologies                  | ePlus Technology                                       |
| 1600 Providence Highway                | 80 Hudson Road Suite 100                               |
| Walpole, MA 02081                      | Canton, MA 02021                                       |
| Contact: Jonathan Morse                | Contact: Steve Low                                     |
| P: 603-436-0342 F:508-660-0309         | P: 781-615-1314 F:781-615-1401                         |
| E: jmorse@enpointe.com                 | E: stevel@eplus.com                                    |
| First World USA                        | Focus Technology                                       |
| 163 Armory Street                      | 93 Ledge Road  |
| Brookline, MA 02446                    | Seabrook, MA 03874                                     |
| Contact: Rich Pomper                   | Contact: Toby Harper                                   |
| P: 617-731-6319x25 F:617-277-1984      | P: 617-938-6222 F:603-766-0060                         |
| E: rpomper@terminal.com                | E: tharper@focustsi.com                                |
| GovConnection                          | GreenPages Technology Solutions                        |
| 706 Milford Road                       | 33 Badgers Island West                                 |
| Merrimack, NH 03054                    | Kittery, ME 03904                                      |
| Contact: Kevin Fortier                 | Contact: Jake Brown                                    |
| P: 800-800-0019x33470 F:603-683-0535   | P: 800-989-2989x1365 F:800-896-0444                    |
| E: kfortier@govconnection.com          | E: macontract@greenpages.com                           |

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| Hewlett Packard Company  | <b>IBM Corporation</b>   |
|--|--|
| (Ordering) 10810 Farnam Drive  | 1 Rodgers Street   |
| Omaha, NE 68154  | Cambridge, MA 02142  |
| P: 508-533-8470 F:800-825-2329<br>E: charlie.palmer@hp.com   | E: kmclaugh@us.ibm.com   |
| Insight Public Sector  | Integrated IT Solutions  |
| 6820 S. Harl Avenue  | 290 Vanderbilt Avenue  |
| Tempe, MA 85283  | Norwood, MA 02062  |
| Contact: Dave Lundeen  | Contact: David H. Yazdi  |
| P: 800-234-3475 F:480-760-9506   | P: 781-453-5100 F:781-499-7897   |
| E: ma@insight.com  | E: davidy@integratedit.com   |
| INX, Inc. (formerly known as Select)   | LCN Inc.   |
| 780 Dedham Street Suuite 650   | 260 Libbey Parkway   |
| Canton, MA 02021   | Weymouth, MA 02189   |
| Contact: Dana Zahka  | Contact: Michael D. Lieb   |
| P: 339-502-5352 F:339-502-6650   | P: 781-340-1400x127 F:781-340-1444   |
| E: dana.zahka@inxi.com   | E: mlieb@lcn-inc.com   |
| Lenovo (United States) Inc.  | Merrimack Education Center   |
| 1271a Washington Street  | 2 Republic Road  |
| Weymouth, MA 02189   | Billerica, MA 01862  |
| Contact: Ron Gates   | Contact: Sharon Grover-Renda   |
| P: 781-254-1779 F:   | P: 978-262-4124 F:978-262-4100   |
| E: rongates@lenovo.com   | E: srenda@mecnet.net   |
| Micronet Associates     100 South Street     Hopkinton, MA 01748-2207     Contact: Ken Hahn     P: 800-400-6638 F:508-435-7666     E: ken@mcrnet.com | MPC / Gateway Company<br>300 N. Centennial Drive Suite 220, Mail Drop Y-40<br>North Sioux City, SD 57049<br>Contact: Monique Koob<br>P: 800-846-2030x27622 F:605-232-8312<br>E: monique.koob@mpccorp.com |
| NetTeks Technology Consultants   | P J Systems  |
| 2 Oliver Street  | 25 Drydock Ave. 6th Floor  |
| Boston, MA 02109   | Boston, MA 02210   |
| Contact: Keven Webb  | Contact: Jane Sheng  |
| P: 617-896-6305 F:617-896-6355   | P: 617-951-4650x108 F:617-951-4651   |
| E: kwebb@netteks.com   | E: jsheng@hiq.com  |
| PC Enterprises   | Retrofit Technologies  |
| 138 Memorial Avenue  | 455 Fortune Boulevard  |
| West Springfield, MA 01077   | Milford, MA 01757  |
| Contact: Rob Braceland   | Contact: Madeline Doherty  |
| P: 413-736-2112 F:413-731-0664   | P: 508-660-3193 F:508-478-2040   |
| E: rbraceland@pc-enterprises.com   | E: mdoherty@retrofit.com   |
| Sun Microsystems Federal Inc.  | Unicom Technology Group  |
| One Network Drive  | 1026 Park EAst Drive   |
| Burlington, MA 01803   | Woonsocket, RI 02895-1499  |
| Contact: Janice DePaulo  | Contact: Catherine Burton  |
| P: 781-442-7347 F:781-439-7511   | P: 800-556-2828x1247 F:  |
| E: janice.depaulo@sun.com  | E: cburton@unicom-inc.com  |

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| Unisys | Corporation |  |
|--------|-------------|--|
|--------|-------------|--|

Township Line & Union Meeting Rds-A Unisys Way, Mailstop A-40 Blue Bell, PA 19424 **Contact:** Denise Youngberg P: 508-624-6707 F:215-986-9349 E: denise.youngberg@unisys.com Whalley Computer Associates One Whalley Way Southwick, MA 01077 Contact: Steve Cross P: 413-569-4366 F:413-569-4377 E: smc@wca.com

## Copiers

**Contract: OFF16 - Photocopiers, Printers, Facsimile/Multifunctional Equipment, Supplies and Services Effective Date:** 12/01/2004 to 11/30/2012

**Example:** Photocopiers, Printers, Facsimile/Multifunctional Equipment, Supplies and Services: Digital black and white photocopiers

| Cam Office Services, Inc            | <b>CBE Holdings LLC</b>                   |
|-------------------------------------|---|
| 10 Walnut Hill Park                 | 10 City Square                            |
| Woburn, MA 01801-3700               | Boston, MA 02129                          |
| Contact: Corrinne Mandrafino        | Contact: Warren Nelson                    |
| P: 781-932-9868 F:                  | P: 617-514-1730 F:617-514-1830            |
| E: c.mandrafino@camoffice.com       | E: warren.nelson@cbetech.com              |
| Commonwealth Office Products, Inc.  | G.A. Blanco & Sons, Inc.                  |
| 28 Ames Road                        | PO Box 149                                |
| Brockton, MA 02302                  | Great Barrington, MA 01230                |
| Contact: Roseann Kelleher           | Contact: Steven Walsh                     |
| P: 508-587-2772 F:                  | P: 508-331-2465 F:800-931-0016            |
| E: rkelleher@copoffice.com          | E: swalsh@gablanco.com                    |
| Ikon Office Solutions               | KonicaMinolta Business Solutions USA Inc. |
| One Federal Street                  | 2100 Washington Blvd., Suite 100          |
| Boston, MA 02110                    | Arlington, VA 22204                       |
| Contact: Walter G. Maziarski        | Contact: Mace Coleman                     |
| P: 617-292-7555x2623 F:617-292-7595 | P: 845-401-3845 F:                        |
| E: WMaziarski@IKON.com              | E: colemanm@kmbs.konicaminolta.us         |
| Muratec America, Inc                | Nelson Copy Supply Company, Inc.          |
| 3301 E. Plano Parkway, Ste #100     | 199 Winter Street                         |
| Plano, TX 75074                     | Hanover, MA 02339                         |
| Contact: Jerry Roberts              | Contact: John Sarson                      |
| P: 800-347-3296 F:                  | P: 781-878-4474 F:                        |
| E: contracts@muratec.com            | E: jsarson@nelsoncopy.com                 |
| New England Copy Specialists, Inc.  | New England Office Supply, Inc.           |
| 39 Sixth Road                       | 135 Lundquist Dr                          |
| Woburn, MA 01801                    | Braintree, MA 02184                       |
| Contact: Betty Jane Casazza         | Contact: Patricia Vacca                   |
| P: 781-937-7301 F:781-938-9317      | P: 781-794-8800 F:                        |
| E: bettyjane.casazza@necs.biz       | E: patv@neosusa.com                       |
| Oce North America, Inc.             | Oce` Imagistics                           |
| 404 Wyman Street, Suite 220         | 404 Wyman Street, Suite 220               |
| Waltham, MA 02451                   | Waltham, MA 02451                         |
| Contact: Chris Agostino             | Contact: Ronald DeSilva                   |
| P: 781-768-6936 F:781-890-0983      | P: 781-902-7548 F:781-902-7598            |
| E: Chris.Agostino@oce.com           | E: ron.desilva@oce.com                    |
| OEM Connect, Ltd.                   | OfficeMax                                 |
| 32A Holton St.                      | 9 Progress Road                           |
| Woburn, MA 01801                    | Billerica, MA 01821                       |
| Contact: Bill Coffill               | Contact: Louis Douvris                    |
| P: 781-935-2255 F:781-935-7444      | P: 800-331-7676x6215 F:                   |
| E: bcoffill@oemconnect.com          | E: louisdouvris@officemax.com             |

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| P J Systems, Inc. d/b/a HiQ Computers   | Panasonic Digital Document Company  |
|---|---|
| 25 Drydock Ave.   | 2 Panasonic Way   |
| Boston, MA 02210  | Secaucus, MA 07094  |
| Contact: Jane Sheng   | Contact: Michael Hurley   |
| P: 617-951-4650x108 F:  | P: 201-392-4194 F:  |
| E: jsheng@hiq.com   | E: hurleym@panasonic.com  |
| Relyco Sales100 Main St., Ste 222Dover, MA 03820Contact: Bruce SteinbergP: 603-516-3713 F:E: bsteinberg@recyclefirst.com                          | RetroFit Technologies, Inc.<br>455 Fortune Blvd<br>Milford, MA 01757<br>Contact: Madeline Doherty<br>P: 508-660-3193 F:<br>E: mdoherty@retrofit.com |
| Ricoh Americas Corporation  | Toshiba America Business Solutions, Inc.,   |
| 5 Dedrick Place   | 959 Route 46 East, 5th Floor  |
| West Caldwell, NJ 07006   | Parsippany, NJ 07054  |
| Contact: Mike Pallotta  | Contact: Keith Gates  |
| P: 978-621-1276 F:  | P: 888-343-6245 F:603-228-4618  |
| E: mike.pallotta@ricoh-usa.com  | E: keith.gates@tabs.toshiba.com   |
| Xerox Corporation<br>101 Federal Street<br>Boston, MA 02110<br>Contact: Peter McCue<br>P: 617-556-3456 F:617-556-3477<br>E: peter.mccue@xerox.com |   |

### **Emergency Standby Services**

#### **Contract: PRF21, Emergency Standby Services**

Effective Date: 12/12/2004 to 12/12/2009

**Example:** All types equipment, supplies & services, Barriers, Blankets, Catering Services, Communications, Construction Equipment, Cots, Electrical Assistance, Emergency Personnel, Emergency Standby Services, not otherwise identified, Equipment Personnel, Food, MRE & Bulk, Fork Lifts, Generators, HazMat Clean-up, Heavy Equipment, Light Towers, Modular Building Offices, Personnel, Portable HVAC, Pumps, Quick Camps, Recovery Systems, Sandbag Equipment, Sandbags, Shower Units, Spill Control, Tents, Water Damage, Water Products

| Airline Cargo Services         | Garner Environmental Services  |
|--------------------------------|--------------------------------|
| 700 Rockaway Turnpike #402     | 1717 West 13th Street          |
| Lawrence, NY 11559             | Deer Park, TX 77536            |
| Contact: Peter Appleton        | Contact: John Temperilli       |
| P: 516-371-1545 F:516-371-5537 | P: 800-442-7637 F:281-479-0296 |
| E: pjappiero@aoi.com           | E: jtemperin @garner-es.com    |
|                                |                                |
| Miller Environmental Group     | Unlimited Resources Inc        |
| 538 Edwards Avenue             | 6014 Bridgewater Circle        |
| Calverton NY 11933             | Pointe Vedra Beach, FL 32082   |

### **Evacuation Stretchers and Chairs**

# **Contract: HSP24, Medical Equipment, Beds and Furnishings Effective Date:** 01/01/2007 to 12/31/2009

**Example:** Beds, Disposable Medical Equipment, EMT Stretchers, Evacuation chair & storage cabinet, Rescue Seats, Stair Chairs, Stretchers, General, Wheelchairs

| All Care Home Health Services                                  | Claflin Equipment   |
|--|---|
| 48 Wyman Street  | 451 Industrial Drive  |
| Stoughton, MA 02072  | Warwick, RI 02886   |
| Contact: Lester Davis  | Contact: Bryan Messier  |
| P: 781-297-2002 F:   | P: 800-338-2372x8279 F:888-685-5455   |
| E: allcarehhs@aol.com  | E: bmessier@claflinequip.com  |
| H. Eric Richards, Inc.   | Hudson Home Health Care   |
| 220 Tosca Drive  | 151 Rockwell Road For MA Locations see attachment below                                       |
| Stoughton, MA 02072  | Newington, CT 06111   |
| Contact: Paul H.   | Contact: AL Alvarado  |
| P: 781-344-7400 F:781-344-1451                                 | P: 860-897-6100 F:781-993-0777  |
| E: PAULPHER@COMCAST.NET  | E: al.alvardo@hudsonhhc.com   |
| Trans Med U.S.A., Inc.   | Ultimate Mobility Inc.  |
| 31 Progress Avenue   | 1158 Main Street  |
| Tyngsborough, MA 01879-1436                                    | Worcester, MA 01603   |
| P: 978-649-1970x109 F:978-649-1971<br>E: Paul@TransMed-USA.com | <b>Contact:</b> Kelly O'Day<br>P: 508-363-1227x119 F:508-363-1228<br>E: Kelly.ODay@ultmob.com |

### **Fire/EMS Equipment & Supplies and Services**

### Contract: FIR02, Fire/EMS Equipment & Supplies/Related Services/ Repairs

Effective Date: 03/27/2003 to 03/27/2011

**Example:** AED's (Defibrillators), Emergency Vehicle Lighting, EMT Paramedic items, except vehicles, Fire alarm equipment, Fire fighting and decontamination systems, Turnout gear

|  | î                                  |
|--|------------------------------------|
| Adamson Industries Corp.               | All Comm Technology                |
| 45 Research Drive                      | 5 Whitmore Road                    |
| Haverhill, MA 01832                    | Revere, MA 02151                   |
| Contact: Steve Contarino               | Contact: Paul Boudreau             |
| P: 800-922-0162 F:978-975-7168         | P: 781-289-3000 F:781-289-7300     |
| E: scontarino@adamsonindustries.com    | E: esalesman@allcomm1.com          |
| American Fire                          | BPC Rescue Equipment, Inc          |
| 58 Norfolk Ave, Unit 5                 | PO Box 192                         |
| Easton, MA 02375                       | Rochdale, MA 01542                 |
| Contact: Tim O'Brien                   | Contact: Barbara Meloche           |
| P: 508-238-3800 F:508-238-0300         | P: 800-423-0686 F:800-423-0686     |
| E: tim@amfire.net                      | E: rescuealive@charter.net         |
| Brigham Industries, Inc                | C & S Specialty                    |
| 15 Brigham Rd                          | 1181 Old Smithfield Road           |
| Paxton, MA 01612                       | North Smithfield, RI 02896         |
| Contact: Neil Bagdis Bagdis            | Contact: David Totsch              |
| P: 508-795-7905 F:508-755-1676         | P: 800-321-0325 F:401-769-2270     |
| E: nbagdis@brighamindustries.com       | E: nsri@aol.com                    |
| Ed Lyons Fire Equipments               | Fire Equipment Inc                 |
| 1643 Central Street                    | 88 Hicks Ave                       |
| Stoughton, MA 02072                    | Medford, MA 02155                  |
| Contact: Ed Lyons                      | Contact: Stephen Merrill           |
| P: 781-341-1220 F:781-341-1270         | P: 781-391-8050 F:781-391-8835     |
| E: edlyonsfireequip@aol.com            | E: engineering@firefire.com        |
| Fire Tech & Safety of New England      | Firematic Supply Co.               |
| 27 Industrial Avenue                   | PO Box 385, 153 Clinton Road       |
| Chelmsford, MA 01824                   | Sterling, MA 01564                 |
| Contact: Larry R. Guerette             | Contact: Thomas Hannigan           |
| P: 978-244-0555 F:978-250-0822         | P: 978-422-3560 F:978-422-9621     |
| E: LRGuerette@aol.com                  | E: infor@firematic.com             |
| Fisher Safety                          | Industrial Protection              |
| 45 Shanaghan Rd                        | 220 Ballardvale Street             |
| East Haddam, PA 06423                  | Wilmington, MA 01867               |
| Contact: James Bond                    | Contact: Richard or Kevin Murphy   |
| P: 800-955-6666x1994707 F:860-873-0007 | P: 978-667-4742 F:978-658-0257     |
| E: james.bond@fishersci.com            | E: cmurphy@ipp-ips.com             |
| L W Bills                              | Mike & Wayne's                     |
| 7-8 Park Street, PO Box 7              | 163 Huttleson Avenue               |
| Georgetown, MA 01833                   | Fairhaven, MA 02719                |
| Contact: Daniel Dinwiddie              | Contact: Wayne Oliveira            |
| P: 800-892-0275 F:978-352-6639         | P: 508-997-2688x101 F:508-991-7975 |
| E: L.W.Bills@worldnet.att.net          | E: Sales@mikeandwaynes.com         |

| Franklin County, Massachusetts   | Revision 0.0                            |
|--|---|
| Agricultural Emergency Response  | Initial Issue Date                      |
| Procurement and Record Keeping   | June 2009                               |
| Moore Medical  | Municipal Emergency Services            |
| 389 John Downey Drive  | 261 Upper North Road                    |
| New Britian, MA 06050  | Highland, MA 12528                      |
| Contact: Luz Rodriguez   | Contact: Steve Joslin                   |
| P: 800-234-1464 F:   | P: 845-691-4313 F:845-691-4318          |
| E: lrodriguez@mooremedical.com   | E: sjoslin@mesfire.com                  |
| Northeast Rescue Systems   | Total Fire Equip/Morning Pride          |
| 313 Belgrade Avenue  | 1 Innovation Court                      |
| Boston, MA 02131   | Dayton, OH 45414                        |
| Contact: Dot O'Connor  | Contact: Madison Messinger              |
| P: 617-325-3993 F:617-325-0238   | P: 800-688-6148 F:937-264-2677          |
| E: ocners@aol.com  | E: madison.messinger@totalfiregroup.com |
| Zoll Medical Corp.<br>269 Mill Road<br>Chelmsford, MA 01824<br>Contact: Elizabeth McCaughey@Zoll.com<br>P: 800-242-9150 F:978-421-0005<br>E: EMcCaughey@Zoll.com |   |

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## **Food & Catering Services**

Contract: GRO21A, Catering Services Effective Date: 05/01/2007 to 04/30/2011 Example: Food & Catering Services

| A & R Foodservice/Metro Catering   | A La Carte Catering               |
|------------------------------------|-----------------------------------|
| 1 Ashburton Place                  | 109 Middle Street                 |
| Boston, MA 02108                   | Fairhaven, MA 02719               |
| Contact: Tony Penta                | Contact: Jarrod Ross              |
| P: 617-248-6886 F:                 | P: 508-264-8916 F:                |
| E: tpenta@gometro.com              | E: jarrod_caterer@yahoo.com       |
| Apple Spice New England, Inc       | Atkins Fruit Bowl                 |
| 810 Boston Turnpike                | 1150 West Street                  |
| Shrewsbury, MA 01545               | Amherst, MA 01002                 |
| Contact: Kimberly Ferguson         | Contact: Ronald Williams          |
| P: 508-845-0051 F:508-845-5125     | P: 413-253-9528 F:413-256-3117    |
| E: kim@applespice.com              | E: info@atkinsfarms.com           |
| <b>B &amp; M Clambake Co.</b>      | Bakers Best Inc.                  |
| 560 York Avenue                    | 27 Lincoln Street                 |
| Pawtucket, RI 02861                | Newton, MA 02461                  |
| <b>Contact:</b> Brian S. Doherty   | Contact: Jim Costa                |
| P: 800-722-2526 F:401-722-9430     | P: 617-332-4588x17 F:617-332-2448 |
| E: brian@clambakeco.com            | E: jcosta@bakersbestcatering.com  |
| <b>Big Y Foods, Inc.</b>           | Blanchard Foods Corp.             |
| 2145 Roosevelt Ave.                | 322 Cambridge Street              |
| Springfield, MA 01102              | Worcester, MA 01603               |
| <b>Contact:</b> Leon Drzewianowski | Contact: Matthew Blanchard        |
| P: 413-504-4204 F:413-504-5204     | P: 508-798-4070 F:508-791-0855    |
| E: drzewian@bigy.com               | E: noaddress@noaddress.com        |
| Boston Cafe and Catering, Inc.     | C B Cullen Inc./Corporate Bites   |
| 325 New Boston St. Unit 15         | 151 Pearl Street                  |
| Woburn, MA 01801                   | Boston, MA 02110                  |
| Contact: David B. Briggs           | Contact: Heather Cullen           |
| P: 781-938-9300 F:781-937-9833     | P: 617-859-8007 F:617-859-8002    |
| E: dbriggs@bostoncaterer.com       | E: cbc@corporatebites.com         |
| Casual Gourmet                     | Cirelli Foods, Inc.               |
| 31 Richardson Road                 | 30 Commerce Blvd.                 |
| Centerville, MA 02652              | Middleborough, MA 02346           |
| Contact: Mary Lyons                | Contact: John J. Cirelli          |
| P: 508-775-4946 F:                 | P: 508-638-6717 F:508-638-6817    |
| E: mary@thecasualgourmet.com       | E: jjcirelli@cirelli.com          |
| Cirrus Ventures, LLC/Vmeals        | Donovan Savin Corp.               |
| 14 Thackeray Road, Suite 1B        | 112 Savin Hill Ave                |
| Wellesley, MA 02481                | Dorchester, MA 02125              |
| Contact: Paul Hayre                | Contact: Arthur Donovan           |
| P: 617-290-3348 F:781-772-1779     | P: 617-436-2226 F:617-436-1827    |
| E: phayre@vmeals.com               | E: arthur.donovan2004@hotmail.com |

| Franklin County, Massachusetts  |  |
|---------------------------------|--|
| Agricultural Emergency Response |  |
| Procurement and Record Keeping  |  |

| Elmwood Donuts/Mel & Ernies Catering  | Emily's Inc.  |
|---|---|
| 310 Commonwealth Road   | 35-41 Williams Street   |
| Wayland, MA 01778   | Chelsea, MA 02150   |
| Contact: Steve Bloomstein   | Contact: Paul S. Taylor   |
| P: 508-655-1455 F:508-655-6568  | P: 617-884-4445 F:617-884-4456  |
| E: melanderniescatering@comcast.net   | E: emilyscatering@verizon.net   |
| Franklin Caterers   | Frigo Food Products   |
| 325 Boston Post Road  | 90 William Street   |
| Wayland, MA 01778   | Springfield, MA 01105   |
| Contact: Jeremy Franklin  | Contact: Joe Frigo  |
| P: 508-358-5106 F:508-875-8874  | P: 413-732-5428 F:413-734-4365  |
| E: franklincaterers@aol.com   | E: joe@frigofoods.com   |
| G. Gould & Sons/Cafe Arpeggio   | Grillo Enterprises/Struck Catering  |
| 621 Second Street   | 130 Hamilton Street   |
| Fall River, 02721   | Worcester, MA 01602   |
| Contact: Keith Gould  | Contact: Barbara Cotter   |
| P: 508-999-2233 F:  | P: 508-755-5953 F:508-421-9391  |
| E: rob@cafearpeggio.com   | E: barbaracotter@struckcatering.com   |
| JMI Internation/DragonFly Deli & Gourmet Cafe   | Jules Catering  |
| 111 Belmont Street  | PO Box 360, 56 South Street   |
| So. Easton, MA 02375  | Somerville, MA 02143  |
| Contact: Michael Schwartz   | Contact: Robert Grehan  |
| P: 508-230-8074 F:508-230-9065  | P: 617-628-5977 F:617-625-9725  |
| E: dragonflydeli@comcast.net  | E: rgrehan@julescatering.com  |
| Lucy Kanbourian/The Lunch Box Cafe Express  | Marty's Catering/Montvale Plaza   |
| 350 Main Street   | 54 Montvale Ave.  |
| Malden, MA 02148  | Stoneham, MA 02180  |
| Contact: Lucy Kanbourain  | Contact: Martin L Murphy  |
| P: 781-324-2404 F:781-893-4175  | P: 781-438-5511 F:781-438-8858  |
| E: lkanbourian@yahoo.com  | E: mmurphy@montvaleplaza.com  |
| Milk Street Cafe, Inc.  | Morrison Management Specialist  |
| 50 Milk Street  | 714B Southbridge Street   |
| Boston, MA 02109  | Auburn, MA 01501  |
| Contact: Erez Haas  | Contact: Sean Schena  |
| P: 617-542-3663 F:617-451-5329  | P: 508-383-8502 F:  |
| E: ehaas@milkstreetcafe.com   | E: sschena@iammorrison.com  |
| Northeast Family Institute/Riverside School<br>34 Berry Road<br>Lowell, MA 01854<br>Contact: Gregg Williams<br>P: 978-937-1995x11 F:978-937-2347<br>E: greggwilliams@nafi.com | Papa Ginos/D'Angelos600 Providence HighwayDedham, MA 02026Contact: Nancy TuckerP: 781-467-1714 F:781-467-1670E: ntucker@papaginos.com |
| Perry's Main Street Deli  | Rebecca's Cafe  |
| 546 Main Street   | PO Box 845681   |
| Hyannis, MA 02601   | Boston, MA 02284  |
| Contact: Willie P Gaines  | Contact: Shlomie Heller   |
| P: 508-775-9711 F:  | P: 781-272-0539x42 F:617-624-9626   |
| E: progings@varieon.net   | E: sheller@rebeccascafe.com   |

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| Riccardi's Restaurant               | <b>Rita's Catering</b>           |
|-------------------------------------|----------------------------------|
| 901 Hathaway Road                   | 1935 Revere Beach Parkway        |
| New Bedford, MA 02740               | Everett, MA 02149                |
| Contact: Madeleine Monteiro         | Contact: Deborah Rossi           |
| P: 508-992-6800 F:508-992-9393      | P: 61/-389-1601 F:61/-389-5358   |
| E: trim550@vahoo.com                | F: deborah@ritascatering.com     |
| ROCA Inc./Circle Catering           | Scott Toupin Catering            |
| 101 Park Street                     | 571 scott road                   |
| Chelsea, MA 02150                   | Oakham, MA 01068                 |
| <b>Contact:</b> Matthew McLaughin   | <b>Contact:</b> Scott Loupin     |
| P: 617-889-2160x229 F:617-889-2145  | P: 508-882-0133 F:508-882-0148   |
| E: matthew_mclaughln@rocainc.com    | E: stoupin@charter.net           |
| SMK Ventures/The Bistro             | Sousa Lee Inc/Off Broadway Diner |
| 72 East Main Street                 | 19 Taunton Green                 |
| Westborough, MA 01581               | Taunton, MA 02780                |
| Contact: Stephen Chitow             | Contact: Nuno Sousa              |
| P: 508-836-3889 F:508-836-4502      | P: 508-880-7700 F:508-880-0060   |
| E: stephen@thebagelbistro.com       | E: nunoandsue@somcast.net        |
| Spinelli's Catering                 | The Cuisine of Mark Connolly     |
| 282 Bennington Street               | 89 Sandwich Street               |
| East Boston, MA 02128               | Plymouth, MA 02360               |
| Contact: Rita Roberto               | Contact: Julie Riley             |
| P: 617-567-1992x40 F:617-567-5150   | P: 508-746-2357 F:508-746-8661   |
| E: jeannie@spinellis.com            | E: comccatering@verizon.net      |
| The Party Connection                | The Sidebar/Gayle P. Whittier    |
| PO Box 1028                         | 3 Pemberton Square               |
| Methuen, MA 01844                   | Boston, MA 02108                 |
| Contact: Cindy Parangian            | Contact: Gayle P. Whittier       |
| P: 978-686-6331 F:978-687-7177      | P: 617-725-1415 F:               |
| E: cindy@thepartyconnection.biz     | E: chiefgayle1@aol.com           |
| TIL-LU/MaRaffa's Italian Restaurant | VB Dining Group Inc./Peppercornz |
| 1142 County Street                  | 435 Columbian Street             |
| Somerset, MA 02726                  | Weymouth, MA 02190               |
| Contact: Dominic Raffa              | Contact: Linda Varraso           |
| P: 508-324-0909 F:508-324-0908      | P: 781-331-9931 F:781-331-9881   |
| E: maraffas@aol.com                 | E: linda@peppercornz.com         |

# **Contract: GRO21B, Catering With Conference Space Effective Date:** 05/01/2007 to 04/30/2011

Example: Food & Catering Services

| A & R Foodservice/Metro Catering | Bentley College                |
|----------------------------------|--------------------------------|
| One Ashburton Place              | 175 Forest Street              |
| Boston, MA 02108                 | Waltham, MA 02452              |
| Contact: Tony Penta              | Contact: Robert L Webb         |
| P: 617-248-6886 F:617-248-6939   | P: 781-891-2273 F:781-891-2434 |
| E: tpenta@gometro.com            | E: rwebb@bentley.edu           |

| Franklin County, Massachusetts                    | Revision 0.0                                      |
|---|---|
| Agricultural Emergency Response                   | Initial Issue Date                                |
| Procurement and Record Keeping                    | June 2009   |
| Bridge Fund Inc.                                  | Bridgewater State College Conference & Event Ctr. |
| 301 Ashmont Street                                | Rondileau Campus Center Park Avenue               |
| Dorchester, MA 02124                              | Bridgewater, MA 02325                             |
| Contact: Jonathan Shepard                         | Contact: Laura J. Aikey                           |
| P: 617-288-2300 F:617-288-2099                    | P: 508-531-6139 F:508-531-1705                    |
| E: bridgefund@verizon.net                         | E: ceso@bridgew.edu                               |
| Casual Gourmet                                    | College of Holy Cross                             |
| 31 Richardson Road                                | 1 College Street                                  |
| Centerville, MA 02652                             | Worcester, MA 01610                               |
| Contact: Mary Lyons                               | Contact: Jeremiah A. O'Connor                     |
| P: 508-775-4946 F:508-790-4295                    | P: 508-793-2615 F:508-793-2564                    |
| E: mary@thecasualgourmet.com                      | E: joconnor@holycross.edu                         |
| Donovan Savin Corp.                               | Holiday Inn, Mansfield Hospitality LLC            |
| 112 Savin Hill Ave.                               | 31 Hampshire Street                               |
| Dorchester, MA 02125                              | Mansfield, MA 02048                               |
| Contact: Arthur Donovan                           | Contact: Rob Perkins                              |
| P: 617-436-2226 F:617-436-1827                    | P: 508-594-4125 F:508-339-1040                    |
| E: arthur.donovan2004@hotmail.com                 | E: himansfieldcs@aol.com                          |
| Lantana, LLC                                      | Lombardo's  |
| 43 Scanlon Drive                                  | 6 Billings Street                                 |
| Randolph, MA 02368                                | Randolph, 02368                                   |
| Contact: Nancy Mahoney                            | Contact: Robert Colia                             |
| P: 781-961-4660x11 F:781-986-1105                 | P: 781-986-5000 F:781-986-6003                    |
| E: nancy@thelantana.com                           | E: bob@lombardos.com                              |
| Marist House                                      | Massachusetts Elementary School Principal Assoc.  |
| 518 Pleasant Street                               | 28 Lord Road, Suite 125                           |
| Framingham, 01701                                 | Marlborough, MA 01752                             |
| Contact: Denise D'Amico                           | Contact: Nadya Higgins                            |
| P: 508-874-1620 F:508-879-7132                    | P: 508-624-0500 F:508-485-9965                    |
| E: ddamico@conversent.net                         | E: higginsn@mespa.org                             |
| MIT Endicott Houset                               | Montvale Plaza/Marty's Catering                   |
| 80 Haven Street                                   | 54 Montvale Ave.                                  |
| Dedham, 02026                                     | Stoneham, MA 02180                                |
| Contact: Michael Fitzgerald                       | Contact: Martin L. Murphy, Jr.                    |
| P: 781-326-5151 F:781-326-8702                    | P: 781-438-5511 F:781-438-5911                    |
| E: mrfitzg@mit.edu                                | E: mmurphy@montvaleplaza.com                      |
| Northeastern University Henderson House Conf. Ctr | Spectacor Management Group/DCU Cemter             |
| 99 West Cliff Road                                | 50 Foster Street                                  |
| Weston, MA 02493                                  | Worcester, MA 01608                               |
| Contact: Thomas Petrin                            | Contact: Anne Kruse                               |
| P: 781-235-4350 F:781-235-5847                    | P: 508-755-6800x2124 F:508-929-0111               |
| E: t.petrin@neu.edu                               | E: akruse@dcucenter.com                           |
| Spinelli's Catering                               | University of Mass, Amherst                       |
| 282 Bennington Street                             | 918 Campus Center, One Campus Center Way          |
| East Boston, MA 02128                             | Amherst, MA 01003                                 |
| Contact: Rita Roberto                             | Contact: Michael Ellman                           |
| P: 617-567-1992x40 F:617-567-5150                 | P: 413-545-2591 F:413-545-0050                    |
| E: Jeannie@spinellis.com                          | E: mellman@mail.aux.umass.edu                     |

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University of Mass/Hoagland Pincus Conf. Center 222 Maple Ave. Shrewsbury, MA 01545 Contact: Mary A. Marshall P: 508-856-5813 F:508-856-6838 E: mary.marshall@umassmed.edu

### **Contract: GRO21C , Catering Services-Conference Space-Hotel Rooms Effective Date:** 05/01/2007 to 04/30/2011 **Example:** Food & Catering Services

| Batterymarch Conference Center/Aramark   | Best Western Royal Plaza Hotel, Marlborough  |
|--|--|
| 60 Batterymarch St., 2nd Floor   | 131 Boston Post Road   |
| Boston, MA 02110   | Marlborough, MA 01752  |
| Contact: Christopher Davey   | Contact: Anton Ramus   |
| P: 617-556-8000 F:617-556-9901   | P: 508-460-0700x1786 F:508-480-9343  |
| E: davey-chris@batterymarchmeet.com  | E: aramus@rplazahotels.com   |
| Clarion Hotel & Conference/Oldway Leasing Inc.   | Crowne Plaza Hotel, Worcester  |
| 1 Atwood Drive   | 10 Lincoln Square  |
| Northampton, MA 01060  | Worcester, MA 01608  |
| Contact: Jeffrey Hoess-Brooks  | Contact: Claire Di Cicco   |
| P: 413-586-7862 F:   | P: 508-751-6514 F:508-791-1796   |
| E: jhhoess@hhgmail.com   | E: cdicicco@lodgian.com  |
| Devens Common Center/Springhill Suites by Marriott   | Double Tree Boston-Westboro Hotel  |
| 2731 Andrews Parkway   | 5400 Computer Drive  |
| Devens, MA 01434   | Westborough, MA 01581  |
| Contact: Michael P. Egan   | Contact: Oliver Knight   |
| P: 978-757-3004 F:978-772-4903   | P: 508-616-7410 F:508-366-3950   |
| E: dosdevens@truenorthhotels.com   | E: oliver_knight@hilton.com  |
| Endicott College<br>Endicott College 376 Hale Street<br>Beverly, MA 01915<br>Contact: Eileen Geyer<br>P: 978-232-2129 F:978-232-2500<br>E: egeyer@endicott.edu | FCC Waterford Marlborough Holdings<br>LLC/Marlborough Courtyard by Marriott/<br>75 Felton Street<br>Marlborough, MA 01752<br>Contact: Mary L. Simone<br>P: 508-263-9144 F:508-485-2243<br>E: msimone@whghotels.com |
| Harvard Forest/President & Fellows of Harvard College  | Hilton Garden Inn/Columbus Hotels  |
| 324 North Main Street  | 35 Major Taylor Blvd.  |
| Petersham, MA 01366  | Worcester, 01605   |
| Contact: Laurie Chaisson   | Contact: Connie Pion   |
| P: 978-724-3302x224 F:978-724-3595   | P: 508-753-5700 F:508-753-5780   |
| E: hfvisit@fas.harvard.edu   | E: Connie.Pion@hilton.com  |
| Holiday Inn Boxborough/RFP VI Hotel Boxborough-O   | Holiday Inn Hotel and Suites, Marlborough  |
| 242 Adams Place  | 265 Lakeside Avenue  |
| Boxborough, MA 01719   | Marlborough, MA 01782  |
| Contact: Nancy O'Rourke  | Contact: Peggy A Sheldon   |
| P: 978-889-1713 F:978-266-9429   | P: 508-481-3000 F:508-357-8841   |
| E: nhurley@hiboxborough.com  | E: psheldon@midlandhotelcorp.com   |

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| Holiday Inn Taunton/Weilsi Enterprises<br>700 Myles Standish Blvd.<br>Taunton, MA 02780<br>Contact: Glen A. Vuilleumier<br>P: 508-967-2661 F:508-567-2659<br>E: gvuilleumier@weilsi.us | Hospitality Association of Lancaster/Sturbridge Host<br>Hotel<br>366 Main Street<br>Sturbridge, MA 01566<br>Contact: Ann Nicholas<br>P: 508-347-7393 F:508-347-3824<br>E: anicholas@sturbridgehosthotel.com |
| HST Lessee Boston LLC/Sheraton Boston Hotel  | Mananto Ent LLC/Hotel Northampton   |
| 39 Dalton Street   | 36 King Street  |
| Boston, MA 02199   | Northampton, MA 01060   |
| Contact: Alison Tankard  | Contact: Michael Kolesar  |
| P: 617-236-6109 F:617-236-6061   | P: 413-587-8105 F:413-585-0210  |
| E: alison.tankard@sheraton.com   | E: mkolesar@hotelnorthampton.com  |
| MIT Endicott House<br>80 Haven Street<br>Dedham, 02026<br>Contact: Michael Fitzgerald<br>P: 781-326-5151 F:781-326-8792<br>E: mrfitzg@mit.edu  | PHF ND Colonial LLC/Sheraton Colonial Hotel & Golf<br>Club<br>1 Auduben Road<br>Wakefield, MA 01880<br>Contact: Jessica Mcginley<br>P: 781-876-6087 F:781-246-4636<br>E: jmcginley@pyramidhotels.com        |

| Plymouth Hotel Associates LP<br>180 Water Street<br>Plymouth, MA 02360<br>Contact: Ed Goodwin<br>P: 508-591-5000 F:508-746-2609<br>E: egoodwin@radissonplymouth.com   | PMA1 Limited Partnership/Four Points by Sheraton<br>Leominster<br>99 Erdman Way<br>Leominster, MA 01453<br>Contact: Suzanne Farias<br>P: 978-534-9000 F:978-534-0891<br>E: suzannef@fourpointsleom.com |
|---|--|
| Sanil Hospitality Corp/Clarion Hotel and Conference<br>Center<br>1080 Riverdale Street<br>West Springfield, MA 01089<br>Contact: Lorraine St. Onge<br>P: 413-788-7434 F:413-721-5999<br>E: lstonge@wsclarionhotel.com | Sea Crest Resort & Conference Center<br>350 Quaker Road<br>North Falmouth, MA 02556<br>Contact: Ellie MacKenzie<br>P: 508-540-5300 F:508-540-7710<br>E: elliemackenzie@seacrest-resort.com             |
| <b>The Lord Jeffrey Inn/Baron Jeff Corp.</b><br>30 Boltwood Ave.  | University of Mass Ahmerst<br>918 Campus Center, One Campus Center Way<br>Amberet, MA 01002  |

| 30 Boltwood Ave.                 | 918 Campus Center, One Campus Ce |
|----------------------------------|----------------------------------|
| Amherst, MA 01002                | Amherst, MA 01003                |
| <b>Contact:</b> Sharon Scott     | <b>Contact:</b> Michael Ellman   |
| P: 413-253-2576 F:413-256-6152   | P: 413-545-2591 F:413-545-0050   |
| E: sales@lordjeffreyinn.com      | E: mellman@mail.aux.umass.edu    |
| Wachusetts Village Inn           | Westford Regency Inn, Inc        |
| 9 Village Inn Road               | 219 Littleton Road               |
| Westminster, MA 01473            | Westford, MA 01886               |
| Contact: Laura Hume              | Contact: Elizabeth Gildroy       |
| P: 978-571-2504 F:978-874-1753   | P: 978-692-8200 F:978-692-2403   |
| E: laura@wachusettvillageinn.com | E: MKindlan@westfordregency.com  |
|                                  |                                  |

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### Food, Bulk - Prime Grocer

### **Contract: GRO14, Prime Grocer(s)**

Effective Date: 01/01/2002 to 12/31/2012 Example: Food, Produce, Janitorial & Paper Products

| Springfield Food Service Corp./PFG Springfield | US Foodservice                 |
|--|--------------------------------|
| PO Box 3024, 340 Taylor Street                 | 201 Beacham Street             |
| Springfield, MA 01101                          | Everett, MA 02149              |
| Contact: Jeff Schaefer                         | Contact: John Phinney          |
| P: 413-733-3053 F:413-272-1394                 | P: 800-732-3350 F:617-381-6929 |
| E: jschaefer@pfgspringfield.com                | E: John.Phinney@usfood.com     |

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### Fuel

### **Contract: ENE20, Unleaded Gasoline Effective Date:** 08/01/2004 to 07/31/2010 **Example:** Fuel Unleaded Gas

| Dennis K. Burke, Inc.          | Global Montello Group, LLC     |
|--------------------------------|--------------------------------|
| 284 Eastern Ave.               | 800 South Street               |
| Chelsea, MA 02150              | Waltham, MA 02254              |
| Contact: Joe Cote              | Contact: Kevin Young           |
| P: 617-884-7800 F:617-884-7638 | P: 781-398-4259 F:781-398-4164 |
| E: j.cote@burkeoil.com         | E: kyoung@globalp.com          |

### Contract: ENE22, No. 2 Heating Oil Contract

Effective Date: 10/01/2004 to 09/30/2010 Example: Fuel Oil, number 2

| Continental Fuels, Inc.            | Dennis K. Burke                |
|------------------------------------|--------------------------------|
| 7826 Eastern Ave NW Suite 408      | 284 Eastern Avenue             |
| Washington, DC 20012               | Chelsea, MA 02150              |
| Contact: Michael Gizaw             | Contact: Joe Cote              |
| P: 888-846-2618 F:                 | P: 617-884-7800 F:617-884-7638 |
| E: MFGizaw@aol.com                 | E: joe.cote@burkeoil.com       |
| East Coast Petroleum               | East River Energy              |
| 1185 Turnpike Street               | 401 Soundview Road             |
| Stoughton, MA 02171-1648           | Guilford, CT 06437-0388        |
| Contact: Vincent Meglio            | Contact: Charles Guadagnino    |
| P: 800-649-0550 F:781-297-7011     | P: 800-336-3762 F:203-453-3899 |
| E: VincentM@EastCoastPetroleum.com | E: cag@eastriverenergy.com     |
| <b>FL Roberts &amp; Co., Inc.</b>  | Global Montello Group, LLC     |
| 93 West Broad Street PO Box 1964   | 800 South Street               |
| Springfield, MA 01102              | Waltham, MA 02254-9161         |
| Contact: Lisa Allen                | <b>Contact:</b> Kevin Young    |
| P: 413-736-9611 F:413-781-8185     | P: 781-398-4259 F:781-398-4164 |
| E: lisa_allen@flroberts.com        | E: kyoung@globalp.com          |

**Contract: ENE23-Biodiesel, Category 3-Biodiesel Fuel Effective Date:** 08/01/2006 to 07/31/2010 **Example:** Fuel Diesel

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### Dennis K. Burke Inc 284 Eastern Ave Chelsea, MA 02150 Contact: Joe Cote P: 617-884-7800 F:617-884-7638 E: j.cote@burkeoil.com

### **Contract: ENE23-Ultra Low Sulfur Diesel, Category 2- Ultra Low Sulfur Diesel Fuel Effective Date:** 10/16/2006 to 07/31/2010 **Example:** Fuel Diesel

| Dennis K Burke Inc.    | Global Montello                |
|------------------------|--------------------------------|
| 284 Eastern Ave        | 800 South Street               |
| Chelsea, MA 02150      | Waltham, MA 02454              |
| Contact: Joe Cote      | Contact: Kevin Young           |
| P: 617-884-7800 F:     | P: 781-398-4259 F:781-398-4164 |
| E: j.cote@burkeoil.com | E: KYoung@globalp.com          |

### **Contract: ENE24, No.4 & No.6 Residual Heating Fuel Effective Date:** 11/01/2004 to 12/01/2008 **Example:** Fuel Oil, number 4 & 6

| Global Montello Group          | Sprague Energy Corporation     |
|--------------------------------|--------------------------------|
| 800 South Street               | 4 New King Street              |
| Waltham, MA 02254              | White Plains, NY 10604         |
| Contact: Kevin Young           | Contact: Burr Mosher           |
| P: 781-398-4259 F:781-398-4164 | P: 914-328-6726 F:914-328-6721 |
| E: kyoung@globalp.com          | E: bmosher@spragueenergy.com   |

### **Hazardous Incident Response Equipment**

### Contract: HLS01, Hazardous Incident Response Equipment

Effective Date: 03/15/2006 to 05/31/2015

**Example:** AED's (Defibrillators), Assault gear, Bomb shields, Carrying bags, Command and control vehicles, Decontamination equipment, Detection equipment, Evacuation chair & storage cabinet, Fire alarm equipment, First Aid Supplies, Generators, Marine supplies, Monitors, PPE suits/masks/kits, Radiation detection equipment, Rescue equipment, Testing equipment, Vehicles Specialty, X-Ray equipment/screening.

| 308 Systems   | ADS, Inc  |
|---|---|
| 2637 Wapiti Rd.   | 477 Viking Drive  |
| Fort Collins, CO 80525  | Virginia Beach, 23452   |
| Contact: Andy McKennan  | Contact: Marc Whedbee   |
| P: 970-282-7015 F:970-282-7015  | P: 800-948-9433 F:757-481-2039  |
| E: andy@308systems.com  | E: mwhedbee@ads-primevendor.com   |
| Agilent Technologies, Inc   | Ahura Corporations  |
| 2850 Centerville Rd   | 46 Jonspin Boad   |
| Wilmington, 19808-1644   Contact: Shannon Dunn   P: 800-227-9770 F:302-993-5788   E: shannon_dunn@agilent.com | Wilmington, 01887<br>Contact: Kevin O'Brien<br>P: 978-642-1109 F:978-662-1133<br>E: kobrien@ahuracorp.com |
| ARAMSCO, INC  | Arrow-Tech, Inc   |
| 1480 Grandview Ave  | 417 Main Ave. West  |
| Thorofare, 08086  | Rolla, ND 58367-1240  |
| Contact: Anna Marie Glover  | Contact: Perry LaFountain   |
| P: 800-767-6933x7723 F:856-686-4423   | P: 877-477-6461 F:701-477-6464  |
| E: aglover@amamsco.com  | E: perry@arrowtechinc.com   |
| Atlantic Nuclear Corp   | <b>B-Lann Equipment Co., Inc</b>  |
| 1020 Turnpike St #9   | 2288 5th Ave PO Box 997   |
| Canton, 02021   | Troy, NY 12180  |
| Contact: John Anderson  | <b>Contact:</b> Remington Alpha   |
| P: 800-878-9118 F:888-440-1319  | P: 800-962-5266 F:518-274-4954  |
| E: anc@att.net  | E: aremingt@nycap.rr.com  |
| BIOMARINE NTRON, INC  | BNC Corp  |
| 456 Creamery Way  | 2955 Kerner Blvd  |
| Exton, PA 19341   | San Rafael, 94901   |
| Contact: Ted Beck   | Contact: David Brown  |
| P: 800-378-2287 F:610-524-8807  | P: 800-234-7858 F:415-453-9956  |
| E: ted.beck@neutronicsinc.com   | E: db@berkeleynucleonics.com  |
| Buffalo Computer Graphics   | FARBER SPECIALTY VEHICLES   |
| 3741 Lake Shore Road  | 7052 Americana Pkwy   |
| Blasdell, 14219   | Reynoldsburg, OH 43068  |
| Contact: Gary Masterson   | Contact: Ken Farber   |
| P: 800-823-8668 F:716-822-2730  | P: 800-331-3188 F:614-759-2098  |

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| Ferno   | FIRST LINE TECHNOLOGY, LLC   |
| 70 Weil Way   | 8153 Old Barrington Blvd   |
| Wilmington, OH 45177  | Fairfax Station, VA 22039  |
| Contact: Becky Jenkins  | Contact: Amit Kapoor   |
| P: 800-733-3766x1222 F:937-283-3622   | P: 866-556-0517 F:202-318-8480   |
| E: bjenkins@ferno.com   | E: akapoor@firstlinetech.com   |
| Global Bay Mobile Technologies  | GLOBAL PROTECTION, LLC   |
| 50 Gragwood Drive   | 5 Stow Road, Suite H   |
| South Plainfield, 07080   | Marlton, NJ 08053  |
| Contact: Nimit Sabharwal  | Contact: Kevin Loutzenhiser  |
| P: 877-504-6734 F:  | P: 800-957-8955 F:856-810-9560   |
| E: nsabharwal@globalbay.com   | E: kevin@protectivesuits.com   |
| Government Scientific Source  | Guard Line fire and Safety   |
| 12351 Sunrise Valley Drive  | 75 Main Ave  |
| Reston, 20191-3415  | Elwood Park, 07407   |
| Contact: Mike Mendrysa  | Contact: Wayne Dora  |
| P: 800-248-8030x173 F:703-734-1803  | P: 201-475-6600x47 F:201-703-8180  |
| E: mmendrysa@govsci.com   | E: wdora@guardlinefire.com   |
| Laerdal Medical Corp  | LAURUS SYSTEMS, INC.   |
| 167 Myers Corners Rd  | 8779 Autumn Hill Dr  |
| Wappingers Falls, 12590   | Ellicott City, MD 21043  |
| Contact: Jennifer Marion  | Contact: Laura Lynch   |
| P: 800-648-1851 F:800-266-4359  | P: 866-465-5558 F:410-465-5257   |
| E: jennifer.marion@laerdal.com  | E: lauralynch@laurussystems.com  |
| LDV, INC  | Lenco Industries, Inc  |
| 180 Industrial Dr   | 10 Betnr Industrial Park   |
| Burlington, 53105   | Pittsfield, 01201  |
| Contact: Frank Solofra  | Contact: Len Light   |
| P: 800-558-5986 F:262-757-2436  | P: 800-444-5362 F:413-445-7865   |
| E: fsolofra@ldvusa.com  | E: len@lencoarmor.com  |
| MAR-VEL INTERNATIONIAL, INC.  | Mine Safety Appliances Co  |
| 7100 Airport Hwy  | 121 Gamma Drive  |
| Pennsauken, NJ 08109  | Pittsburgh, 15238  |
| Contact: Thomas Maddox  | Contact: Gregory Gatcomb   |
| P: 800-325-5711 F:856-488-4343  | P: 800-672-2222 F:800-967-0398   |
| E: tmaddox@mar-vel.com  | E: gregory.gatcomb@msanet.com  |
| NABCO Inc<br>1001 Corporate Drive, Suite 205<br>Canonsburg, 15317<br>Contact: Randy Markey<br>P: 724-746-9617 F:724-746-9709<br>E: randy@nabcoinc.com | Pine Environmental Services92 N. Main StWindsor, 08561Contact: Martin DiazP: 800-301-9663x22 F:609-371-9663E: mdiaz@pine-environmental.com |
| PROSPERITY LIGHTING SUPPLY, INC.  | RAE Systems  |
| 2140 West Henrietta Rd  | 3885 North First St  |
| Rochester, NY 14623   | San Jose, 95134  |
| Contact: Catherine Henn   | Contact: Jeromy Mello  |
| P: 800-475-1321 F:800-475-4448  | P: 877-723-2878 F:408-952-8487   |
| E: gov_orders@betterlighting.com  | E: jmello@raesystems.com   |

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| REMINGTON ELSAG LAW ENFORCEMENT<br>SYSTEMS, LLC<br>870 Remington Dr PO Box 1046<br>Madison, NC 27025<br>Contact: Mark Windover<br>P: 336-379-7135 F:336-379-7164<br>E: mark.windover@remington.com | Safety Systems Corp<br>361 Randy Rd, Unit 101<br>Carol Stream, 60188<br>Contact: Michael Asimor<br>P: 877-653-1103 F:630-653-6325<br>E: mikea@safetysystemscorp.com |
|--|---|
| SAFEWARE, INC  | SCANNA MSC, INC.  |
| 5641 S. Laburnum Ave   | 4370 S. Tamiami Tr. Suite 160   |
| Richmond, VA 23231   | Sarasota, FL 34231  |
| Contact: Mandy Hough   | Contact: Henry Turtle   |
| P: 800-359-4617x204 F:804-226-0987   | P: 866-522-1020 F:941-925-1548  |
| E: mhough@safewareinc.com  | E: scanna@comcast.net   |
| SCIENCE APPLICATIONS INTERNATIONAL CORP.   | SMITHS DETECCTION, INC  |
| 16701 West Bernardo Dr   | 30 Hook Mountain Rd   |
| San Diego, CA 92127  | Pine Brook, NJ 07058  |
| Contact: Erin K. Day-Vanderwarker  | Contact: Alan Martin  |
| P: 817-750-2684 F:817-750-2683   | P: 800-297-0955 F:973-830-2200  |
| E: erin.k.day@saic.com   | E: alan.m.martin@smithsdetection.com  |
| <b>STRATEGIX, LLC</b>  | The Yodock Wall Co., Inc  |
| 385 East Dr  | 1000 Market St PO BOX 354   |
| Melbourne, FL 32904  | Bloomsburg, 17815   |
| <b>Contact:</b> Mike White   | Contact: Melissa Fisher   |
| P: 866-367-0066 F:856-308-2930   | P: 800-496-3625 F:570-380-2859  |
| E: mike@mirgear.com  | E: mfisher@yodock.com   |
| Thermo Electron, RM & P  | Tough Traveler LTD  |
| 5981 Airport Rd  | 1012 State St   |
| Santa Fe, 87507  | Schenectady, MA 12307   |
| Contact: Bob Thompson  | Contact: Nancy Gold   |
| P: 603-329-8022 F:603-329-8077   | P: 800-468-6844 F:518-377-5434  |
| E: bob.thompson@thermo.com   | E: toughtraveler@aol.com  |
| TSI Incorporated<br>500 Cardigan FR<br>Shoreview, 55126<br>Contact: Norman Brown<br>P: 800-874-2811 F:651-490-3824<br>E: norman.brown@tsi.com  |   |

### **Hazardous Material Collection & Disposal**

### **Contract: FAC36, Hazardous Materials and Medical Waste Collection and Disposal (FAC36) Effective Date:** 10/08/2004 to 11/30/2008

**Example:** Abandoned Hazardous Material, Analysis, profiling and related labor, Compressed gas cylinders, Emergency response and training, Material collection and disposal including various chemical waste, Medical waste collection, Training for the management of hazardous materials, Unidentified waste sampling, Waste management related labor

| Clean Harbors  | Enviro-Safe Corporation  |
|--|--|
| PO Box 3442  | 263 Howard Street  |
| Boston, MA 02241   | Lowell, MA 01852   |
| Contact: Bob Smith   | Contact: Kevin Poulin  |
| P: 800-282-0058x3419 F:781-380-7194  | P: 800-585-7916 F:978-453-7775   |
| E: smithro@cleanharbors.com  | E: kpoulin@envirosafene.com  |
| Medical Waste Disposal Company   | Stericycle, Inc.   |
| PO Box 673   | 2333 Waukegan Road, Suite 300  |
| Natick, MA 01760   | Bannockburn, IL 60015  |
| Contact: Marc Selman   | Contact: Eugene Tan  |
| P: 508-651-0892 F:508-256-0067   | P: 847-943-6636 F:800-417-0728   |
| E: mselman@mwdconline.com  | E: etan@stericycle.com   |
| Triumvirate Environmental Services<br>PO Box 3682<br>Boston, MA 02241<br>Contact: Tom Aicardi<br>P: 800-966-9282x213 F:617-628-8099<br>E: taicardi@triumvirate.com | Veolia Environmental Services Technical Solutions, LLC<br>(formerly Onyx Environmental)<br>398 Cedar Street<br>Marlboro, MA 01752<br>Contact: Gerry Beland<br>P: 508-804-4800 F:508-804-4836<br>E: gerry.beland@veoliaes.com |

### **Medical Supplies & Equipment**

#### Contract: HSP24, Medical Equipment, Beds and Furnishings

Effective Date: 01/01/2007 to 12/31/2009

**Example:** Beds, Disposable Medical Equipment, EMT Stretchers, Evacuation chair & storage cabinet, Rescue Seats, Stair Chairs, Stretchers, General, Wheelchairs

| All Care Home Health Services   | Claflin Equipment                                       |
|---|---|
| 48 Wyman Street   | 451 Industrial Drive                                    |
| Stoughton, MA 02072   | Warwick, RI 02886                                       |
| Contact: Lester Davis   | Contact: Bryan Messier                                  |
| P: 781-297-2002 F:  | P: 800-338-2372x8279 F:888-685-5455                     |
| E: allcarehhs@aol.com   | E: bmessier@claflinequip.com                            |
| H. Eric Richards, Inc.  | Hudson Home Health Care                                 |
| 220 Tosca Drive   | 151 Rockwell Road For MA Locations see attachment below |
| Stoughton, MA 02072   | Newington, CT 06111                                     |
| Contact: Paul H.  | Contact: AL Alvarado                                    |
| P: 781-344-7400 F:781-344-1451  | P: 860-897-6100 F:781-993-0777                          |
| E: PAULPHER@COMCAST.NET   | E: al.alvardo@hudsonhhc.com                             |
| Trans Med U.S.A., Inc.  | Ultimate Mobility Inc.                                  |
| 31 Progress Avenue  | 1158 Main Street  |
| Tyngsborough, MA 01879-1436   | Worcester, MA 01603                                     |
| Contact: Paul Albarano  | Contact: Kelly O'Day                                    |
| P: 978-649-1970x109 F:978-649-1971  | P: 508-363-1227x119 F:508-363-1228                      |
| E: Paul@TransMed-USA.com  | E: Kelly.ODay@ultmob.com                                |
| Westnet, Inc.<br>Westnet Inc 30A North Street<br>Canton, MA 02021<br>Contact: Tina McLean<br>P: 781-828-7772 F:781-828-2011<br>E: Tina@WestnetMed.com |   |

### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.          | Invacare Supply Group          |
|--------------------------------|--------------------------------|
| 220 Tosca Drive                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072            | Milford, MA 01757              |
| Contact: Paul Paisner          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET        | E: bleonard@invacare.com       |
Revision 0.0 Initial Issue Date June 2009

| McKesson Medical-Surgical Minnesota Supply Inc                                   | Medline Industries,Inc.  |
|--|--|
| 8121 10th Ave No Government Sales  | One Medline Place  |
| Golden Valley, MN 55427  | Mundelein, MA 60060  |
| Contact: Therese Mugge   | Contact: Keith White   |
| P: 800-328-8111x6588 F:800-237-9766  | P: 508-478-3713 F:508-478-6588   |
| E: government.sales@mckesson.com   | E: kwhite@medline.com  |
| TRANS MED USA INC  | Westnet Inc.   |
| 31 PROGRESS AVENUE   | Westnet Inc 30A North Street   |
|  |  |
| TYNGSBOROUGH, MA 01879   | Canton, MA 02021   |
| TYNGSBOROUGH, MA 01879<br>Contact: BETTY GANTZ                                   | Canton, MA 02021<br>Contact: Tina McLean                                   |
| TYNGSBOROUGH, MA 01879<br>Contact: BETTY GANTZ<br>P: 978-649-1970 F:978-649-1971 | Canton, MA 02021<br>Contact: Tina McLean<br>P: 781-828-7772 F:781-828-7772 |

# **Office Supplies**

**Contract: OFF19 - Office Supplies, Recycled Paper and Envelopes Effective Date:** 08/01/2005 to 12/31/2008

Example: Office Supplies, Recycled Envelopes, Recycled Paper

| Bay State Envelope                   | International Paper                          |
|--------------------------------------|--|
| 440 Chauncy Street                   | 613 Main Street                              |
| Mansfield, MA 02048                  | Wilmington, MA 01887                         |
| Contact: Mandi Razukiewicz           | Contact: Richard Glennon                     |
| P: 508-337-8900x127 F:               | P: 978-988-8604 F:978-988-8595               |
| E: mrazukiewicz@baystateenvelope.com | E: rich.glennon@xpedx.com                    |
| Lindenmeyr Munroe                    | Massachusetts Commission for the Blind (MCB) |
| 200 Riverpark Drive                  | 11 Highland Avenue                           |
| North Reading, MA 01864              | Malden, MA 02148                             |
| Contact: Timothy Goldberg            | Contact: Susan Lavin                         |
| P: 800-237-2737x351 F:800-409-1506   | P: 617-626-7718 F:781-324-3111               |
| E: tgoldberg@lindenmeyr.com          | E: Susan.Lavin@massmail.state.ma.us          |
| New England Office Supply            | Worcester Envelope Company                   |
| 135 Lundquist Dr                     | 22 Millbury Street                           |
| Braintree, MA 02184                  | Auburn, MA 01501                             |
| Contact: Patricia Vacca              | Contact: Rachel Blum                         |
| P: 800-345-7080x228 F:888-636-7329   | P: 774-272-3015 F:508-832-6879               |
| E: patv@neosusa.com                  | E: rblum@worcesterenvelope.com               |

### **Portable Toilets**

**Contract: FAC39, Toilets, Portable and/or Composting and Related Products and Services Effective Date:** 06/06/2006 to 06/06/2009 **Example:** Portable Restroom

| Clivus New England, Inc. (Category 2)   | Handy House (Category 1)            |
|---|-------------------------------------|
| PO Box 127  | PO Box 9131                         |
| North Andover, MA 01845   | Foxboro, MA 02035                   |
| Contact: William Wall   | Contact: Carol Haddad               |
| P: 978-794-9400 F:978-794-9444  | P: 800-442-1286x5014 F:800-647-6170 |
| E: 123cne@clivusne.com  | E: carolh@handyhouse.com            |
| karl j alm  | Sanmass Inc                         |
| 398 wickaboag valley road   | P.O. Box 16400                      |
| west brookfield, MA 01585   | Rumford, RI 02916                   |
| Contact: karl alm   | Contact: Eric Collins               |
| P: 508-867-2544 F:  | P: 800-866-5266 F:                  |
| E: kjafamily@aol.com  | E: saniri@aol.com                   |
| Willis Enterprises, Inc.<br>600 Upper Valley Road<br>Washington, MA 01223<br>Contact: Paul Lisi Jr.<br>P: 413-623-5079 F:<br>E: whitewolfte@earthlink.net |                                     |

### **Protective Apparel**

#### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

# Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company           | Government Scientific Source       |
|-------------------------------------|------------------------------------|
| 2000 Park Lane Drive                | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275                 | Reston, VA 20191                   |
| Contact: Jeannie Deegan             | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609 | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com     | E: jruiz@govsci.com                |

Revision 0.0 Initial Issue Date June 2009

#### VWR Scientific Products 161 Grove Street Franklin, MA 02038 Contact: Bob Dearth P: 800-947-4270x4248 F: 508-520-1935 E: bob\_dearth@vwr.com

#### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.                          | Invacare Supply Group          |
|--|--------------------------------|
| 220 Tosca Drive                                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072                            | Milford, MA 01757              |
| Contact: Paul Paisner                          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451                 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET                        | E: bleonard@invacare.com       |
| McKesson Medical-Surgical Minnesota Supply Inc | Medline Industries,Inc.        |
| 8121 10th Ave No Government Sales              | One Medline Place              |
| Golden Valley, MN 55427                        | Mundelein, MA 60060            |
| Contact: Therese Mugge                         | Contact: Keith White           |
| P: 800-328-8111x6588 F:800-237-9766            | P: 508-478-3713 F:508-478-6588 |
| E: government.sales@mckesson.com               | E: kwhite@medline.com          |
| TRANS MED USA INC                              | Westnet Inc.                   |
| 31 PROGRESS AVENUE                             | Westnet Inc 30A North Street   |
| TYNGSBOROUGH, MA 01879                         | Canton, MA 02021               |
| Contact: BETTY GANTZ                           | Contact: Tina McLean           |
| P: 978-649-1970 F:978-649-1971                 | P: 781-828-7772 F:781-828-7772 |
| E: BETTY @TRANSMED-USA.COM                     | E: tina@westnetmed.com         |

### **Protective Masks**

#### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

#### Contract: HSP21, Medical and Surgical Commodities

Effective Date: 07/01/2003 to 06/30/2008 Example: Protective Goggles

| Geriatric Medical & Surgical Supply | H. Eric Richards               |
|-------------------------------------|--------------------------------|
| 404 Third Street                    | 220 Tosca Drive                |
| Everett, MA 02149                   | Stoughton, MA 02072            |
| Contact: Jeff Goldstein             | Contact: Paul Paisner          |
| P: 800-442-1205 F:617-389-1527      | P: 781-344-7400 F:781-344-1451 |
| E: Jgoldstein@geriatricmedical.com  | E: paulpher@comcast.net        |
| McKesson Medical-Surgical Supply    | Medline Industries, Inc.       |
| 8121 10th Avenue, North             | One Medline Place              |
| Golden Valley, MN 55427             | Mundelein, IL 60060            |
| Contact: Ross Brownstein            | Contact: Keith White           |
| P: 763-595-6000 F:800-237-9766      | P: 508-733-3717 F:508-478-6588 |
| E: government sales@mckesson.com    | F: kwhite@medline.com          |

Revision 0.0 Initial Issue Date June 2009

| TransMed USA, Inc.             | Westnet                        |
|--------------------------------|--------------------------------|
| 31 Progress Avenue             | 30A North Street               |
| Tygnsborough, MA 01879         | Canton, MA 02021               |
| Contact: Paul Albarano         | Contact: Gordon Thompson       |
| P: 978-649-1970 F:978-389-1971 | P: 781-828-7772 F:781-828-2011 |
| E: PAUL@transMed-USA.com       | E: Gordon@westnetmed.com       |

# Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company   | Government Scientific Source       |
|---|------------------------------------|
| 2000 Park Lane Drive  | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275   | Reston, VA 20191                   |
| Contact: Jeannie Deegan   | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609   | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com   | E: jruiz@govsci.com                |
| VWR Scientific Products<br>161 Grove Street<br>Franklin, MA 02038<br>Contact: Bob Dearth<br>P: 800-947-4270x4248 F: 508-520-1935<br>E: bob_dearth@vwr.com |                                    |

#### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.          | Invacare Supply Group          |
|--------------------------------|--------------------------------|
| 220 Tosca Drive                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072            | Milford, MA 01757              |
| Contact: Paul Paisner          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET        | E: bleonard@invacare.com       |

Revision 0.0 Initial Issue Date June 2009

| McKesson Medical-Surgical Minnesota Supply Inc  | Medline Industries,Inc.  |
|---|--|
| 8121 10th Ave No Government Sales   | One Medline Place  |
| Golden Valley, MN 55427   | Mundelein, MA 60060  |
| Contact: Therese Mugge  | Contact: Keith White   |
| P: 800-328-8111x6588 F:800-237-9766   | P: 508-478-3713 F:508-478-6588   |
| E: government.sales@mckesson.com  | E: kwhite@medline.com  |
|   |  |
| TRANS MED USA INC   | Westnet Inc.   |
| TRANS MED USA INC<br>31 PROGRESS AVENUE   | Westnet Inc.<br>Westnet Inc 30A North Street   |
| TRANS MED USA INC<br>31 PROGRESS AVENUE<br>TYNGSBOROUGH, MA 01879   | Westnet Inc.<br>Westnet Inc 30A North Street<br>Canton, MA 02021   |
| TRANS MED USA INC<br>31 PROGRESS AVENUE<br>TYNGSBOROUGH, MA 01879<br>Contact: BETTY GANTZ                                   | Westnet Inc.<br>Westnet Inc 30A North Street<br>Canton, MA 02021<br>Contact: Tina McLean                                   |
| TRANS MED USA INC<br>31 PROGRESS AVENUE<br>TYNGSBOROUGH, MA 01879<br>Contact: BETTY GANTZ<br>P: 978-649-1970 F:978-649-1971 | Westnet Inc.<br>Westnet Inc 30A North Street<br>Canton, MA 02021<br>Contact: Tina McLean<br>P: 781-828-7772 F:781-828-7772 |

### **Rental Equipment**

Contract: FAC37designatedDOC, Miscellaneous Rentals

Effective Date: 01/26/2001 to 03/31/2008 [EXPIRED see HLS01, Hazardous Incident Response Equipment for support]

**Example:** Air Compressors (HVAC), Air Tools, Backhoes, Bulldozers, Concrete Saws, Earth Moving & Material Handling Equipment, Excavation Hammers, Fans/Blowers, Folding Chairs, Fork Lifts, Generators (all), Heaters, High Voltage Cables, Highway Message Boards, Hydraulics, Jackhammers, Personal Lifts, Pumps, Rental Equipment, not otherwise identified, Scaffolding, Screeners, Tents, Tractors, Traffic Control Devices, Trailers, Transformers, Welders

| Baker Tractor Corp.                            | Boston Party Rental (under Rent All of Boston) |
|--|--|
| 2283 G.A.R. Hwy.                               | 367 Neponset Avenue                            |
| Swansea, MA 02777                              | Boston, MA 02122                               |
| Contact: William Chadwick                      | Contact: Richard McCabe                        |
| P: 508-379-3673 F:508-379-3610                 | P: 617-265-6221 F:617-265-5538                 |
| E: billchadwick@bakertractor.com               | E: noemail@noemail.com                         |
| Hertz Equipment Rental Corporation             | Rent All of Boston                             |
| 45 Gerard Street                               | 1161 Adams Street                              |
| Boston, MA 02119                               | Boston, MA 02124                               |
| Contact: Chris Manley                          | Contact: Dennis Shea                           |
| P: 800-316-4372 F:617-442-9259                 | P: 617-296-0500 F:617-296-5470                 |
| E: noemail@noemail.com                         | E: noemail@noemail.com                         |
| United Rentals (North America), Inc.           | Baker Tractor Corp.                            |
| 9 Thurber Blvd.                                | 2283 G.A.R. Hwy                                |
| Smithfield, RI 02917                           | Swanse, 02777                                  |
| Contact: Dave Ritz                             | Contact: William Chadwick                      |
| P: 401-231-1944 F:401-231-2729                 | P: 508-379-3673 F:508-379-3610                 |
| E: Dritz@ur.com                                | E: billchadwick@bakertractor.com               |
| Boston Party Rental (under Rent All of Boston) | Hertz Equipment Rental Corporation             |
| 367 Neponset Avenue                            | 45 Gerard Street                               |
| Boston, 02122                                  | Bostonb, 02119                                 |
| Contact: Richard McCabe                        | Contact: Chris Manley                          |
| P: 617-265-6221 F:617-265-5538                 | P: 800-316-4372 F:617-442-9259                 |
| E: noemail@noemail.com                         | E: noemail@noemail.com                         |
| Rent All of Boston                             | United Rentals (North America), Inc            |
| 1161 Adams Street                              | 9 Thurber Blvd.                                |
| Boston, 02124                                  | Smithfield, 02917                              |
| Contact: Dennis Shea                           | Contact: Dave Ritz                             |
| P: 617-296-9500 F:617-296-5470                 | P: 401-231-1944 F:401-231-2729                 |
| E: noemail@noemail.com                         | E: Dritz@ur.com                                |

### **Respirators**

#### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

## Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company           | Government Scientific Source       |
|-------------------------------------|------------------------------------|
| 2000 Park Lane Drive                | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275                 | Reston, VA 20191                   |
| Contact: Jeannie Deegan             | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609 | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com     | E: jruiz@govsci.com                |

Revision 0.0 Initial Issue Date June 2009

#### VWR Scientific Products 161 Grove Street Franklin, MA 02038 Contact: Bob Dearth P: 800-947-4270x4248 F: 508-520-1935 E: bob\_dearth@vwr.com

#### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.                          | Invacare Supply Group          |
|--|--------------------------------|
| 220 Tosca Drive                                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072                            | Milford, MA 01757              |
| Contact: Paul Paisner                          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451                 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET                        | E: bleonard@invacare.com       |
| McKesson Medical-Surgical Minnesota Supply Inc | Medline Industries,Inc.        |
| 8121 10th Ave No Government Sales              | One Medline Place              |
| Golden Valley, MN 55427                        | Mundelein, MA 60060            |
| Contact: Therese Mugge                         | Contact: Keith White           |
| P: 800-328-8111x6588 F:800-237-9766            | P: 508-478-3713 F:508-478-6588 |
| E: government.sales@mckesson.com               | E: kwhite@medline.com          |
| TRANS MED USA INC                              | Westnet Inc.                   |
| 31 PROGRESS AVENUE                             | Westnet Inc 30A North Street   |
| TYNGSBOROUGH, MA 01879                         | Canton, MA 02021               |
| Contact: BETTY GANTZ                           | Contact: Tina McLean           |
| P: 978-649-1970 F:978-649-1971                 | P: 781-828-7772 F:781-828-7772 |
| E: BETTY @TRANSMED-USA.COM                     | E: tina@westnetmed.com         |

### **Safety Gloves**

#### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

# Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company           | Government Scientific Source       |
|-------------------------------------|------------------------------------|
| 2000 Park Lane Drive                | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275                 | Reston, VA 20191                   |
| Contact: Jeannie Deegan             | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609 | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com     | E: jruiz@govsci.com                |

Revision 0.0 Initial Issue Date June 2009

#### VWR Scientific Products 161 Grove Street Franklin, MA 02038 Contact: Bob Dearth P: 800-947-4270x4248 F: 508-520-1935 E: bob\_dearth@vwr.com

#### **Contract: HSP28, Medical Commodities**

Effective Date: 03/01/2008 to 03/31/2011

**Example:** Respirators N95 (all types), Bandages, Batteries, Cone Masks, Coveralls Dupont Tyvek w/hood & boots, CPR Kits, Diapers/Incontinent Care, Eye Shields, First Aid Kits (all), First Aid Supplies, Flashlights, Full Face Shields, Gauze Wraps/Bandages, Gloves Code Blue, Gloves Nitrile, Gloves Powder-free, Gloves Vinyl exam, Gloves Viton, Gowns, Impervious Polygowns, Gowns, tie back protective isolation, Hearing Protectors, IV Poles, IV Solutions, Ointments, Respirators Acid Gas, Respirators Disposable, Respirators Half Mask and Particulate Regulators (NIOSH standards), Toiletries

| H ERIC RICHARDS, INC.                          | Invacare Supply Group          |
|--|--------------------------------|
| 220 Tosca Drive                                | 508 634-5131 9 Industrial Road |
| Stoughton, MA 02072                            | Milford, MA 01757              |
| Contact: Paul Paisner                          | Contact: Bill Leonard          |
| P: 781-344-7400 F:781-344-1451                 | P: 508-634-5135 F:508-482-0201 |
| E: PAULPHER@COMCAST.NET                        | E: bleonard@invacare.com       |
| McKesson Medical-Surgical Minnesota Supply Inc | Medline Industries,Inc.        |
| 8121 10th Ave No Government Sales              | One Medline Place              |
| Golden Valley, MN 55427                        | Mundelein, MA 60060            |
| Contact: Therese Mugge                         | Contact: Keith White           |
| P: 800-328-8111x6588 F:800-237-9766            | P: 508-478-3713 F:508-478-6588 |
| E: government.sales@mckesson.com               | E: kwhite@medline.com          |
| TRANS MED USA INC                              | Westnet Inc.                   |
| 31 PROGRESS AVENUE                             | Westnet Inc 30A North Street   |
| TYNGSBOROUGH, MA 01879                         | Canton, MA 02021               |
| Contact: BETTY GANTZ                           | Contact: Tina McLean           |
| P: 978-649-1970 F:978-649-1971                 | P: 781-828-7772 F:781-828-7772 |
| E: BETTY @TRANSMED-USA.COM                     | E: tina@westnetmed.com         |

### Self Contained Breathing Apparatus (SCBA)

#### Contract: FAC28, Industrial/Commercial Equipment and Supplies

Effective Date: 02/10/2003 to 02/10/2013

**Example:** Biohazard Waste Cans, Biohazard Waste, Safety Disposal Cans, Chemical Protective Masks, Commercial Face Protection, Cooling Vests, Face Mask, Face shields, Gloves Butyl Rubber, Gloves Neoprene, HazMat Boots, North and WorkMask SCBAs., Respirators Acid Gas, Respirators Air Purifying Masks, Respirators Confined Space, Respirators Emergency Escape, Safety Disposable Cans and Other Safety Items., Safety Gloves, other, Splash Suits, Vapor tight suit

| A&A Industrial Supply/Albeco Fastners        | Carr Hardware                               |
|--|---|
| 792R Main Street                             | 547 North St.                               |
| Tewksbury, MA 01876                          | Pittsfield, MA 01201                        |
| Contact: Ted Morang                          | Contact: Bart Raser                         |
| P: 877-425-2326 F:978-851-4483               | P: 413-443-5611 F:413-443-4136              |
| E: ted@4albeco.com                           | E: chardware@rnetworx.com                   |
| Kaufman Company                              | R.I. Baker Company, Inc. (DBA Ribco Supply) |
| 19 Walkhill Rd.                              | 163 River Road                              |
| Norwood, MA 02062                            | Clarksburg, MA 01247                        |
| Contact: Dan Clark                           | Contact: Glenn Ethier                       |
| P: 617-491-5500 F:617-491-5526               | P: 413-663-3791 F:413-664-7597              |
| E: DanC@kaufmanco.com                        | E: glenn.ribco@verizon.net                  |
| SID tool company (DBA MSC Industrial Supply) | W. W. Grainger Inc. (DBA Grainger)          |
| 20 Blanchard Road Suite #9                   | 121 Martson Street                          |
| Burlington, MA 01803                         | Lawrence, MA 01841                          |
| Contact: Mike O,Connor                       | Contact: Kevin Fleury                       |
| P: 800-617-3671x8253 F:                      | P: 978-552-1351 F:978-683-7261              |
| E: OconnorM@mscdirect.com                    | E: kevin.fleury@grainger.com                |

# Contract: HSP22, Laboratory & Monitoring Products: Clinical/Diagnostic, Educational, Forensic Environmental & Industrial Applications

Effective Date: 06/30/2006 to 06/29/2009

**Example:** Biohazard Waste Containers, Body Fluid Spill Cleaning Kits, Bomb Disposal Kits, Chemical Agent Detector Kits, Chemical Bio-Gas Masks, Chemical Protective Masks, Civil Defense Kits, Decontamination Kits, Decontamination Shower Systems, Dupont Responder Apparel, Escape Hoods, Firefighting/Decontamination Systems, First Responders Kits, Gas Masks, Gloves Butyl Rubber, HazMat Boots, HazMat Simultest Kit (detects gases and vapors), HazMat spray canisters, HEPA Vacuum, Negative and Positive Pressure Respirators, Oil Sorbents, Polyliner Bags, Portable Showers, Respirators OSHA Substance specific respirators Shroud protector hoods, SCBA Head Harnesses (nuclear biological & chemical canisters available), Smoke Escape Hoods, Splash Suits, Vapor tight suit

| Fisher Scientific Company           | Government Scientific Source       |
|-------------------------------------|------------------------------------|
| 2000 Park Lane Drive                | 12351 Sunrise Valley Drive         |
| Pittsburg, PA 15275                 | Reston, VA 20191                   |
| Contact: Jeannie Deegan             | Contact: Jeannie Ruiz              |
| P: 800-955-9999x6231 F:508-428-0609 | P: 800-248-8030x160 F:703-734-1803 |
| E: jeannie.deegan@fishersci.com     | E: jruiz@govsci.com                |

Revision 0.0 Initial Issue Date June 2009

#### VWR Scientific Products 161 Grove Street Franklin, MA 02038 Contact: Bob Dearth P: 800-947-4270x4248 F: 508-520-1935 E: bob\_dearth@vwr.com

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### Solid Waste Removal, Non-Hazardous

### Contract: FAC33, Solid Waste and Recycling Services (FAC33)

Effective Date: 02/14/2001 to 02/13/2013

**Example:** Asphalt Waste, Brick/Concrete plus solid waste recycling, Bulky Waste, Construction/Demolition Waste, Municipal solid waste

| Bills Trucking Co  | ABC Disposal Sycs.   |
|--|--|
| 9 Southern Ave.  | 1245 Shawmut Ave.  |
| Essex, MA 01929  | New Bedford, MA 02756  |
| Contact: Renay Allen   | Contact: Carlton Parker  |
| P: 978-768-6900 F:   | P: 800-310-9111 F:508-993-5090   |
| E: renaynh@comcast.net   | E: sales@abcdisposal.com   |
| Acme Metals & Recycling  | Allied Waste Services  |
| 64 Napier  | 385 Dunstable Road   |
| Springfield, MA 01101  | Tyngsboro, MA 01879  |
| Contact: George Sachs  | Contact: Adam Kneissler  |
| P: 413-737-3112 F:413-733-3156   | P: 978-649-7564x588 F:978-649-0135   |
| E: Grsax@acmerecycling.com   | E: adam.kneissler@awin.com   |
| American Waste Brokers   | American Waste Services  |
| PO Box 6546  | 1958 Broadway  |
| Holliston, MA 01746  | Raynham, MA 02767  |
| Contact: Dave Sullivan   | Contact: Peter Cevoli  |
| P: 508-429-8894 F:508-429-0982   | P: 508-977-0552 F:   |
| E: d.sullivan31@verizon.net  | E: noaddress@noaddress.com   |
| B & G Services, Inc. (New)DBA 1-800- GOT JUNK                                  | Berger & Company Recycling, Inc.   |
| 171 Main St. Suite #310  | 126 Front St.  |
| Ashland, MA 01721  | Pawtucket, RI 02860  |
| Contact: Judy Briggs   | Contact: Sam Sinel   |
| P: 508-881-7227 F:   | P: 401-723-7240 F:401-725-2760   |
| E: jbriggs@1800gotjunk.com   | E: sam@bergerrecycling.com   |
| BP Trucking Inc.   | Capital Paper Recycling (New)  |
| PO Box 386/47-55 Nickerson Rd.   | 200 Liberty Industrial Parkway   |
| Ashland, MA 01721  | East Weymouth, MA 02159  |
| Contact: Gary DePaolo  | Contact: Craig Lovett  |
| P: 508-231-1000 F:508-881-6123   | P: 800-337-3778 F: 781-337-5077  |
| E: Gary.DePaolo@bptrucking.com   | E: craig@mass-hauling.com  |
| Capital Waste Services, LLC. (New)   | Charter Environmental, Inc.  |
| 1222 Bennington St.  | 75 Jonspin Rd.   |
| East Boston, MA 02128  | Wilmington, MA 01887   |
| <b>Contact:</b> Joseph Ricupero  | Contact: Robert Delhome  |
| P: 01/-30/-3830 F:   | P: 9/8-038-2232  F: 9/8-038-1/73   |
| E: Capitolwasteservices@verizon.net  |  |
| Cintas Document Management.  | Dave Wickles Trucking  |
| PU Box 540   | PO Box 382 15 / Prospect Street  |
| Windham, NH USU8/<br>Contact: Devi Melzone                                     | Hameld, MA 0508/   |
| <b>Contact:</b> Faul Maizone $\mathbf{D}_{1} \in 500 500 1200  \mathbf{E}_{1}$ | <b>Contact:</b> David wickles $\mathbf{D}_{1}$ 412 247 0221 $\mathbf{E}_{2}$ |
| F: malzonen@cintas.com   | F: noaddress@noaddress.com   |

| Franklin County, Massachusetts                | Revision 0.0                            |  |  |
|---|---|--|--|
| Agricultural Emergency Response               | Initial Issue Date                      |  |  |
| Procurement and Record Keeping                | June 2009                               |  |  |
| DBI Waste Systems Inc                         | EL Harvey & Son                         |  |  |
| PO Box 250                                    | 68 Hopkinton Rd., Rte 135               |  |  |
| Everett, MA 02149                             | Westborough, MA 01581                   |  |  |
| Contact: Doreen Cusolito                      | Contact: Kenneth Sivret                 |  |  |
| P: 617-389-9656 F:                            | P: 508-836-3000 F:                      |  |  |
| E: noaddress@noaddress.com                    | E: Customerservice@elharvey.com         |  |  |
| EOMS Recycling Services (New)                 | EZ Disposal Services (New)              |  |  |
| PO Box 3608                                   | 20 Railroad St.                         |  |  |
| Brockton, MA 02304                            | Revere, MA 02151                        |  |  |
| Contact: Donna Milhomme                       | Contact: Mark Camarata                  |  |  |
| P: 508-587-9686 F:                            | P: 617-567-2524 F:                      |  |  |
| E: dmilhomme@kingofcardboard.net              | E: nacmjc@gis.net                       |  |  |
| Frades Disposal Inc.                          | Jet- A-Way (New)                        |  |  |
| 781 Church St.                                | 47 Kemble St.                           |  |  |
| New Bedford, MA 02746                         | Roxbury, MA 02119                       |  |  |
| Contact: Richard Frade                        | Contact: Robert Katilus                 |  |  |
| P: 508-995-9121 F:                            | P: 617-541-4000x590 F:                  |  |  |
| E: r.frade@comcast.net                        | E: rkatilus@jet-a-way.com               |  |  |
| Mass Hauling Disposal & Recycling Corp. (New) | New England Recycling Co Inc            |  |  |
| 200 Liberty Industrial Parkway                | 565 Winthrop St.                        |  |  |
| East Weymouth, MA 02159                       | Tauton, MA 02780                        |  |  |
| Contact: Craig Lovett                         | Contact: Karin Brady                    |  |  |
| P: 781-844-4845 F:                            | P: 508-822-4345 F:                      |  |  |
| E: craig@mass-hauling.com                     | E: kbrady@nerecycling.com               |  |  |
| Office Paper Recovery Systems                 | Save That Stuff, Inc.                   |  |  |
| 235 Andover Street                            | PO Box 391515                           |  |  |
| Wilmington, MA 01877                          | Cambridge, MA 01239                     |  |  |
| Contact: Mark Cohen                           | Contact: Adam Mitchell                  |  |  |
| P: 978-694-1450 F:978-658-5884                | P: 617-241-9998 F:                      |  |  |
| E: mcohen@oprsystems.com                      | E: Adam@savethatstuff.com               |  |  |
| Shred it                                      | The Institution Recycling Network, Inc. |  |  |
| 2C Gill St                                    | 7 South State St.                       |  |  |
| Woburn, MA 01801                              | Concord, NH 03301                       |  |  |
| Contact: Jose Gonzalez                        | Contact: E. Dana Draper                 |  |  |
| P: 781-937-0888 F:                            | P: 603-229-1962 F:                      |  |  |
| E: Bostoncss@shredit.com                      | E: ddraper@ir-network.com               |  |  |
| Waste Management                              | WeCare Environmental (New)              |  |  |
| 204 Merrimac St.                              | 856 East Boston Post Rd.                |  |  |
| Woburn, MA 01801                              | Marlborough, MA 01752                   |  |  |
| Contact: John Henry                           | Contact: Chris Ravenscroft              |  |  |
| P: 781-933-2113 F:                            | P: 508-480-9922 F:                      |  |  |
| E: jhenry@wm.com                              | E: chrisr@nantucket.net                 |  |  |

#### Solid Waste Removal Service Areas by Contractors

Note: Not all contractors offer recycling

MSW = Municipal Solid Waste C& ABC = Asphalt, Brick and Concrete C&D = Construction & Demolition

= Solid Waste and Recycling = Solid Waste and Recycling

|   |   |   | Solid Waste |     |             | Recycling       |         |
|---|---|---|-------------|-----|-------------|-----------------|---------|
| Contractor Name   | Service A<br>R – means service<br>within            | Areas Key<br>e restrictions apply<br>county | MSW         | C&D | Bulky Waste | ABC             |         |
| <b>ABC Disposal Svcs</b> .<br>Carlton Parker<br>P: 800-310-9111               | Barnstable<br>Boston Harbor<br>Bristol ( R )        | Norfolk<br>Plymouth (R)                     | x           | X   | X           | X               | <br>+w# |
| Acme Metals & Recycling<br>George Sachs<br>P: 413-737-3112                    | Bershire (So)<br>Franklin<br>Hampton                | Hampsire<br>Worcester                       |             |     |             |                 |         |
| American Waste Brokers<br>Dave Sullivan<br>P: 508-429-8894                    | Bristol<br>Essex<br>Middlesex<br>Norfolk            | Plymouth<br>Suffolk<br>Worcester            | x           | x   | X           | X               | +4009   |
| B & G Services, Inc.<br>DBA 1-800- GOT JUNK<br>Judy Briggs<br>P: 508-881-7227 | Bristol<br>Essex<br>Middlesex<br>Norfolk            | Plymouth<br>Suffolk<br>Worcester            |             | x   | x           |                 | +       |
| Berger & Company<br>Recycling, Inc.<br>Sam Sinel<br>P: 401-723-7240           | Barnstable<br>Boston Harbor<br>Bristol<br>Middlesex | Norfolk<br>Plymouth<br>Suffolk<br>Wocester  |             |     |             |                 |         |
| <b>Bills Trucking Co., Inc.</b><br>Renay Allen<br>P: 978-768-6900             | Essex<br>Middlesex<br>Norfolk                       | Plymouth<br>Suffolk                         | x           | x   | x           | X               |         |
| BP Trucking Inc.<br>Joseph DaPaolo<br>P: 508-231-1000                         | Bristol<br>Essex<br>Middlesex                       | Norfolk<br>Suffolk<br>Worcester             | X           | X   | X           | No<br>Asp.<br>X | +~~     |
| Browning Ferris Industries<br>Glen Wilkinson<br>P: 781-289-0500 Ext 235       | Statewide<br>EXCEPT<br>Nantucket                    |   | X           | X   | X           | X               |         |
| Capital Paper Recycling<br>Bill Hollis<br>P: 781-337-9807                     | Statewide<br>EXCEPT<br>Nantucket,<br>MarthVineyard  |   | x           | X   | x           | X               | + 500   |
| Capital Waster Services,<br>Joseph Ricupero<br>P: 617-567-5830                | Essex<br>Middlesex                                  | Suffolk<br>Worcester                        | x           | x   | x           | X               | +53     |

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| Charter Environmental,<br>Robert Delhome<br>P: 978-658-2232            | Statewide   |  |   | x | X | X | +97        |
|--|---|--|---|---|---|---|------------|
| Conigliaro Industries<br>Gregory Conigliaro<br>P: 508 872-9668         | Statewide<br>Boston Harbor<br>Is.   |  |   |   |   |   |            |
| Dave Wickles Trucking<br>Dave Wickles<br>P: 413-247-9231               | Franklin<br>Hampden   | Hampsire                                   | X | X | X | X | +479       |
| DBI Waste Systems, Inc<br>Doreen Cusolito<br>P: 617-389-9656           | Essex (R)   | Suffolk<br>Middlesex (R)                   | x | x | x | x | <br>+ 1975 |
| Data Destruction Services<br>Paul Malzone<br>P: 603-893-9636           | Statewide<br>EXCEPT<br>Nantucket, Marth.<br>Vineyard, Boston<br>Harbor Is |  |   |   |   |   |            |
| EL Harvey & Son<br>Kenneth Sivert<br>P: 508-836-3000                   | Bristol<br>Essex<br>Middlesex   | Norfolk<br>Plymouth<br>Suffolk<br>Wocester | X | X | X | X |            |
| EOMS Recycling Services<br>Mary Farrell<br>P: 508-587-9686             | Bristol<br>Essex<br>Middlesex   | Norfolk<br>Plymouth<br>Suffolk             |   |   |   |   |            |
| <b>EZ Disposal Services</b><br>Mark Canarata<br>P: 617-567-2524        | Essex<br>Middlesex  | Suffolk<br>Worcester                       | x | x | X | X | +          |
| Frade's Disposal Inc.<br>Richard Frade<br>P: 508-995-9121              | Bristol<br>Plymouth   | Mart. Vineyard<br>Nantucket                | x | X | X | X | +          |
| Fred Fijal Rubbish Removal<br>Fred Fijal<br>P: 413-477-6948            | Hampden (R)   | Worcester<br>Hampshire(R)                  | x | X | X | X | +@9        |
| George Apkin & Sons<br>William Apkin<br>P: 413-664-4936                | Bershire (N)<br>Bershire (S)<br>Franklin                                  | Hampden<br>Hampshire                       |   |   |   |   |            |
| Herbs Disposal<br>Valerie Savage<br>P: 800-500-1439                    | Boston Harbor<br>Essex<br>Middlesex                                       | Norfolk<br>Suffolk                         |   |   |   |   |            |
| The Institution Recycling<br>Network<br>Dana Draper<br>P: 603-229-1962 | Statewide   |  |   | X | X | X | +459       |
| JANCO Environmental<br>Services<br>John Nunes<br>P: 508-356-2229       | Bristol<br>Norfolk  |  | x | X | X | X | +67        |

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| Jet- A-Way<br>Robert Katilus<br>P: 617-541-4000 Ext 590   | Barnstable<br>Bristol<br>Essex<br>Middlesex                     | Norfolk<br>Plymouth<br>Suffolk<br>Wocester             | x | X | X | X | <br>+ 😴   |
|---|---|--|---|---|---|---|-----------|
| Mass Hauling Disposal &<br>Recycling Corp<br>P: 781-340-9807                                      | Statewide   |  | x | X | X | X | +55       |
| Mid-City Scrap Iron &<br>Salvage Co<br>Mark Gitlin<br>P: 508-675-7831                             | Barnstable<br>Bristol   | Plymouth   |   |   |   |   |           |
| Millis Industries, Inc.<br>Robert Valchus<br>P: 800-962-4100                                      | Bristol<br>Middlesex<br>Norfolk                                 | Suffolk<br>Worcester                                   |   |   |   |   |           |
| New England Recycling<br>Norman Crowley<br>P: 508-823-8838  | Barnstable<br>Boston Harbor<br>Bristol<br>Franklin<br>Middlesex | Norfolk<br>Plymouth<br>Marth.<br>Vineyard<br>Nantucket |   | X |   | X | <br>+ 937 |
| N. Shore Recycled Fibers<br>Kathy Whelan<br>P: 978-744-4330                                       | Statewide   |  |   |   |   |   |           |
| PA. Landers<br>Steve Rose<br>P: 781-826-8318  | Barnstable<br>Bristol<br>Norfolk<br>Plymouth                    | Suffolk<br>Worcester<br>Mart. Vineyard<br>Nantucket    |   |   |   | X | +***      |
| PRO-Tech Shredding<br>Marc Pontbriant<br>P: 508-791-7880  | Statewide   |  |   |   |   |   | · _ ·     |
| Save That Stuff, Inc.<br>Adam Mitchell<br>P: 617-241-9998   | Boston Harbor<br>Essex (R)<br>Middlesex(R)                      | Norfolk (R)<br>Suffolk                                 |   |   |   |   |           |
| Shred it<br>Anthony Cergueira<br>P: 978-671-1469  | Essex<br>Middlesex  | Suffolk  |   |   |   |   |           |
| Southeastern New<br>England Data Destruction,<br>d/b/a Shred-it<br>Steve Rooks<br>P: 401-722-2303 | Bristol<br>Middlesex<br>Norfolk                                 | Plymouth<br>Worcester                                  |   |   |   |   |           |
| USA Town & Country,<br>Hauling & Recycling, Inc.<br>Joanne Parlante<br>P: 860-627-5753            | Hampden (R)   | Hampshire(R)   | X | X | X | X | +87       |
| Waste Management<br>John Henry<br>P: 781-933-2113   | Statewide   |  | X | X | X |   | <br>+ep   |
| WeCare Environmental<br>Robert Spencer<br>P: 508-480-9922   | Statewide   |  | X | X | X |   | +477      |

### Televisions, VCR, Multi-Media Equipment, Video Conferencing, Surveillance & Security

#### **Contract: OFF18 - Multi-Media Equipment, Systems and Services, Surveillance and Security Effective Date:** 09/30/2005 to 09/30/2008

**Example:** Access Control Systems, Amplifiers, Audio/Visual Duplicators, Camcorders, Cameras, CD Players, Closed Circuit TV, Combo Recorders/Players, DVD, Editing Systems, Equalizers, Headphones, Identification Systems, Interactive White Boards, Intrusion Protection Systems, Lamination Equipment, Lecterns, Microphones, Mixers, Patch Panels, Plasma Displays, Projectors, Public Address Systems, Racks, Receivers, Screens, Sound Systems, Speakers, Stands, Televisions, Tripods, VCR, VCR 4-head, VHS, Visual Presenters

| ADT Security Services, Inc.   | Adtech Systems, Inc.   |
|---|--|
| 111 Morse Street  | 522 B Boston Post Road   |
| Norwood, MA 02062   | Wayland, MA 01778  |
| Contact: Kimberly Pufky   | Contact: David Gormley   |
| P: 518-951-7338 F:518-951-7361  | P: 978-261-1100 F:978-261-1123   |
| E: kpufky@adt.com   | E: dgormley@adtech-sys.com   |
| Advanced Presentation Systems, Inc. DBA: CCS<br>Presentation Systems<br>CCS Presentation Systems 101 Brick Kiln Road<br>Chelmsford, MA 01824<br>Contact: Chris Gamst<br>P: 978-256-2001 F:978-256-2002<br>E: cgamst@ccsprojects.com | American Alarm & Communications, Inc.<br>297 Broadway<br>Arlington, MA 02474<br>Contact: Wells Sampson<br>P: 781-641-2000x2032 F:<br>E: wsampson@americanalarm.com |
| BCM Controls Corporation  | City Lights Electrical Co, Inc.  |
| 30 Commerce Way   | 5 Woodworth Street   |
| Woburn, MA 01801  | Boston, MA 02122   |
| Contact: Steven Feinberg  | Contact: John Deady  |
| P: 781-933-8878x160 F:  | P: 617-822-3300 F:617-822-2937   |
| E: feinbergs@bcmcontrols.com  | E: jdeady@citylightselectrical.com   |
| Expedite Video Conferencing Services, Inc   | GreenPages, Inc  |
| 1025 Old Country Road   | 33 Badgers Island West   |
| Westbury, NY 11590  | Kittery, MA 03904  |
| Contact: Charles Marasco  | Contact: Jake Brown  |
| P: 800-937-8436 F:516-338-7711  | P: 207-439-7310 F:207-439-7334   |
| E: cmarasco@expeditevcs.com   | E: jbrown@greenpages.com   |
| Signet Electronic Systems, Inc.   | Valley Communications  |
| 106 Longwater Drive   | 20 1st Avenue  |
| Norwell, MA 02061   | Chicopee, MA 01020   |
| Contact: Daniel Chauvin   | Contact: Robert Tremble  |
| P: 781-871-5888x1229 F:781-871-4757   | P: 413-592-4136 F:413-592-4682   |
| E: dchauvin@signetgroup.net   | E: bobt@valleycommunications.com   |

## **Telephone Service**

Contract: ITT09, Communication Network Services Procurement, ITT09

Effective Date: 11/07/2000 to 06/30/2010

Example: Telephone Service, cellular, Telephone Service, local, Telephone Service, long distance

| AT&T                                  | AT&T Mobility National Accounts, LLC |
|---------------------------------------|--------------------------------------|
| 5 West Service Road Room 1032         | 100 Lowder Brook Drive Suite 400     |
| Hartford, CT 06020                    | Westwood, MA 02090                   |
| Contact: Daniel Marti                 | Contact: Jim Leonard                 |
| P: (617) 217-1459 F:                  | P: (617) 365-0124 F:(978) 824-2304   |
| E: DM3352@att.com                     | E: james.leonard.1@att.com           |
| Paetec Communications                 | Qwest Communications                 |
| 230 Congress Street                   | 255 Black Brook Road                 |
| Boston, MA 02110                      | Goffstown, NH 03045                  |
| Contact: Jack Parsons                 | Contact: Pati Edelmann               |
| P: (617) 532-3229 F:                  | P: (603) 384-1201 F:(603) 384-1201   |
| E: john.parsons@paetec.com            | E: patricia.edelmann@qwest.com       |
|                                       |                                      |
| <b>Qwest Interprise America, Inc.</b> | Sprint Solutions, Inc. / Nextel      |
| 255 Black Brook Road                  | PO BOX 4181                          |
| Goffstown, NH 03045                   | CAROL STREAM, IL 60197               |
| <b>Contact:</b> Pati Edelmann         | Contact: Bennett Rudomen             |
| P: 603-384-1201 F:603-384-1201        | P: (617) 839-6674 F:                 |
| E: patricia.edelmann@qwest.com        | E: bennett.rudomen@NexTel.com        |

## **Temporary Help Services/Personnel**

#### Contract: PRF34, Statewide Temporary Help Services

Effective Date: 07/12/2008 to 07/11/2011

**Example:** Accounting Staff, Administrative & Accounting Support Staff, Light Labor, Office Computer Operators, Paralegal, Temporary workers: General & Senior Clerks

| Ace Employment Services<br>50 Congress Street #336 | American Personnel, Inc<br>133 Federal Street |
|--|---|
| Boston, MA 02109                                   | Boston, MA 92119                              |
| Contact: Marc Cirino                               | Contact: Ron Porter                           |
| P: 617-523-7779 F:                                 | P: 617-350-0080x238 F:                        |
| E: mcirino@aceboston.net                           | E: rporter@americanpersonnel.com              |
| Cleary Consultants, Inc.                           | Contemporaries, Inc SOMWBA                    |
| 21 Merchants Row                                   | 55 Court Street Suite 330                     |
| Boston, MA 02109                                   | Boston, MA 02108-2101                         |
| Contact: Mary Cleary                               | Contact: Donna Fitzgerald                     |
| P: 61/-36/-/189 F:61/-36/-3202                     | P: 617-723-9797 F:617-723-4140                |
| E: career@clearyconsultants.com                    | E: info@bostoncontemporaries.com              |
| CQ Personnel, Inc. WBE SOMWBA                      | Express Services, Inc.                        |
| 224 Claredon Street, Suite 51                      | 108 Grove Street                              |
| Boston, 02116                                      | WORCESTER, MA 01605                           |
| Contact: Daniel Landerfin                          | Contact: William Stark                        |
| P: 617-262-1313 F:617-262-1322                     | P: 508-799-5627 F:508-799-5620                |
| E: dan@cqpersonnel.com                             | E: bill.stark@expresspros.com                 |
| John Leonard Employment Services, Inc.             | Johnson & Hill Staffing Services, Inc.        |
| 75 Federal Street Suite 1120                       | 95 State Street Suite 501                     |
| Boston, MA 02110                                   | Springfield, MA 01103                         |
| Contact: Brian Boyd                                | Contact: Andrea Hill                          |
| P: 617-348-2621 F:                                 | P: 413-746-3535 F:                            |
| E: bboyd@johnleonard.com                           | E: andrea@jhstaffing.com                      |
| Kforce Professional Staffing                       | KNF&T Staffing Resources                      |
| 1001 East Palm Avenue                              | 3 Post Office Square                          |
| Tampa, FL 33605                                    | Boston, MA 02109                              |
| Contact: Robert Demac                              | Contact: Beth Cabrera                         |
| P: 617-368-6600 F:617-542-8570                     | P: 617-574-8200 F:617-574-8223                |
| E: mkelley@kforce.com                              | E: bcabrera@knft.com                          |
| Marathon Temps-Tyngsboro, Inc.                     | Paratemps, Inc. (M/WBE SOMWBA)                |
| 164 Westford Rd. Suite 26                          | 191 Chestnut Street, #2E                      |
| Tyngsboro, MA 01879                                | Springfield, MA 01103                         |
| Contact: Chris Panagiotopoulos                     | Contact: Marge Fauteux                        |
| P: 978-649-6230x215 F:978-649-9906                 | P: 413-731-7780 F:413-739-3224                |
| E: cpanagiotopoulos@marathonstaffing.com           | E: info@paratemps.net                         |
| Professional Staffing Group                        | R.A.D. Employment Services Inc.               |
| 89 Devonshire Street                               | 11 Beacon Street Suite 910                    |
| Boston, MA 02109                                   | Boston, MA 02108                              |
| Contact: Michael Connors                           | Contact: Kerrin Dorne                         |
| P: 617-250-1000 F:                                 | P: 617-742-9180 F:                            |
| E: mconnors@psgstaffing.com                        | E: info@radtemps.com                          |

Revision 0.0 Initial Issue Date June 2009

| Resource Connection, Inc., The, SOMWBA Certified<br>(WBE)<br>161 South Main Street<br>Middleton, MA 01949<br>Contact: Janet Santa Anna<br>P: 978-777-9333x11 F:<br>E: Janet@resource-connection.com | Robert Half International Inc.<br>101 Arch Street Suite 2000<br>Boston, MA 02110<br>Contact: Bill Stewart<br>P: 617-330-1651x62365 F:617-330-6947<br>E: william.stewart@rhi.com    |
|---|--|
| S & S Staffing, LLC<br>50 Lake Avenue<br>Worcester, MA 01604<br>Contact: Karen DeMichele<br>P: 508-799-7171 F:<br>E: karen@savvystaffing.com  | Total Clerical Services Inc.<br>18 Tremont Street Ste 135<br>Boston, MA 02108, MA 02108<br>Contact: Timothy Puglielli<br>P: 617-248-0780x204 F:<br>E: tpuglielli@tcsemployment.com |
| Travis Associates, Inc.<br>Travis Associates, Inc. 203 Middlesex Turnpike<br>Burlington, MA 01803<br>Contact: Diane Stack<br>P: 781-272-6750 F:<br>E: Dstack@travispersonnel.com                    |  |

## Transportation

Contract: VEH61, Short-Term Rental of Various Light Duty Vehicles

Effective Date: 11/15/2004 to 11/14/2008 Example: Cargo van rental, Compact rental, Enterprise Rent-A-Car Rentals, Hybrid rental, Intermediate rental, Minivan rental, Standard rental, Wagon rental

| Enterprise Rent-A-Car           |  |
|---------------------------------|--|
| 3A Enterprise Road              |  |
| Billerica, MA 01821             |  |
| Contact: Michelle Brodigan      |  |
| P: 781-389-9513 F:781-935-1982  |  |
| E: michelle.b.brodigan@erac.com |  |

### **APPENDICES**

- ✤ Animal Census
- ✤ References and Sources
- Traffic Control Plan for Disease-Related Disasters
- Decontamination and Disinfection Plan for Disease-Related Disasters
- ✤ Town-Specific Map with Farm Locations

| Town        | Beef<br>Cattle | Dairy<br>Cows | Chickens/Ducks/<br>Turkeys | Sheep/<br>Goats | Swine | Horses/<br>Donkeys | Other                      | Total  |
|-------------|----------------|---------------|----------------------------|-----------------|-------|--------------------|----------------------------|--------|
| Ashfield    | 319            | 517           | 1140                       | 351             | 45    | 85                 | 7 oxen                     | 473    |
| Bernardston | 161            | 1418          | 138                        | 265             | 1     | 192                | 6 bulls                    | 380    |
| Buckland    | 68             | 341           | 185                        | 165             | 0     | 34                 | 8 steers                   | 801    |
| Charlemont  | 143            | 125           | 246                        | 152             | 3     | 56                 | 12 oxen<br>13 emus         | 599    |
| Colrain     | 94             | 928           | 210                        | 372             | 4     | 63                 | 65 llamas                  | 1309   |
| Conway      | 281            | 388           | 161                        | 99              | 0     | 133                | 9 oxen                     | 703    |
| Deerfield   | 59             | 830           | 22                         | 107             | 90    | 26                 | 13<br>bulls/steers         | 520    |
| Erving      | 3              | 0             | 0                          | 0               | 0     | 0                  | 0                          | 3      |
| Gill        | 176            | 251           | 187                        | 43              | 0     | 45                 | 4 steers                   | 575    |
| Greenfield  | 49             | 152           | 104                        | 122             | 35    | 174                | 7 bulls/steers<br>2 llamas | 157    |
| Hawley      | 78             | 178           | 80                         | 52              | 10    | 53                 | 26 llamas<br>3 oxen/bull   | 410    |
| Heath       | 45             | 0             | 41                         | 18              | 1     | 22                 | 0                          | 45     |
| Leverett    | 22             | 0             | 32                         | 56              | 4     | 90                 | 2 llamas                   | 128    |
| Leyden      | 209            | 116           | 263                        | 215             | 7     | 66                 | 8 llamas                   | 709    |
| Monroe      | 0              | 0             | 0                          | 0               | 0     | 0                  | 0                          | 0      |
| Montague    | 39             | 68            | 280                        | 73              | 0     | 118                | 15 llamas                  | 83     |
| New Salem   | 13             | 0             | 60                         | 37              | 0     | 60                 | 15 alpacas                 | 15     |
| Northfield  | 72             | 511           | 154                        | 135             | 4     | 151                | 28 oxen                    | 638    |
| Orange      | 130            | 453           | 497                        | 165             | 75    | 208                | 17 oxen                    | 1242   |
| Rowe        | 25             | 28            | 116                        | 50              | 0     | 25                 | 0                          | 20     |
| Shelburne   | 355            | 690           | 546                        | 620             | 12    | 127                | 0                          | 308    |
| Shutesbury  | 3              | 3             | 202                        | 11              | 5     | 29                 | 0                          | 6      |
| Sunderland  | 1              | 220           | 45                         | 4               | 0     | 1                  | 0                          | 270    |
| Warwick     | 20             | 55            | 407                        | 38              | 26    | 56                 | 4 oxen<br>11 alpacas       | 319    |
| Wendell     | 27             | 0             | 21,100                     | 19              | 2     | 27                 | 0                          | 21,126 |
| Whately     | 226            | 137           | 388                        | 59              | 8     | 45                 | 28 alpacas                 | 755    |
| TOTALS      | 2837           | 7409          | 26,604                     | 3228            | 332   | 1886               | 303                        | 42,599 |

 Table 1. Animal Data for Franklin County Towns (2006-2008 data\*)

sources: town assessors, town reports, MA Department of Agricultural Resources

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FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

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# TRAFFIC CONTROL FOR A CONTAGIOUS DISEASE OUTBREAK IN LIVESTOCK OR POULTRY IN FRANKLIN COUNTY, MASSACHUSETTS

An Agricultural Emergency Response Planning Tool

Developed by

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

**JUNE 2009** 

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

#### ACKNOWLEDGEMENTS AND CREDITS

This plan was written by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments to assist local law enforcement officials with conducting traffic control in the event of a contagious disease outbreak in the livestock or poultry population. A companion document addresses decontamination and disinfection procedures during a contagious animal disease outbreak. There is also a Franklin County Comprehensive Response Plan for Animal Carcass Management Related to a Disaster.

This plan is based almost exclusively on the Nebraska Department of Agriculture's *Agricultural Response Monograph Number 001*. A copy of Nebraska's Agricultural Response Plans is available at www.agr.ne.gov/homeland/homeland.htm. We appreciate the willingness of Nebraska state officials to allow us to use their plan as a template for Franklin County, Massachusetts.

This project is funded through a USDA Rural Utilities Program Solid Waste Management grant. This plan is one component of a comprehensive emergency response project related to Franklin County's livestock population.

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The Franklin Regional Council of Governments and the Franklin County Solid Waste Management District are equal opportunity providers and employers.

For more information about agricultural emergency response planning contact the Franklin Regional Council of Governments at 413-774-3167 or visit www.frcog.org. Information is also available through the Franklin County Solid Waste Management District at 413-772-2438 or at www.franklincountywastedistrict.org.

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#### 1.0 SCOPE AND APPLICATION

The purpose of this plan is to provide functional guidance about the establishment, operation and maintenance of traffic-control points associated with a contagious animal disease (CAD) outbreak and a resulting livestock or poultry quarantine. It is assumed that local law enforcement officials are well trained in traffic control procedures. It is also assumed that local law enforcement officials will be the first law enforcement personnel to respond in the initial phase of testing for a CAD and maintaining traffic control away from areas harboring a potential contagious animal disease outbreak. This plan provides information specific to a CAD. It is assumed that local law enforcement officials will determine if and when to use an incident command system in their response.

#### 2.0 SUMMARY OF PROCEDURES

This plan presents the operational considerations and details associated with controlling traffic in the event of a suspected or actual CAD outbreak which results in the need to establish an animal or livestock quarantine. Owners of livestock and poultry will be educated to identify the signs and symptoms of contagious animal diseases. If they notice any of these signs and symptoms they are instructed to contact their local veterinarian and the Massachusetts State Veterinarian. If there is a valid possibility of a CAD then testing will be initiated. This is the first point in the CAD response process at which local law enforcement officials will need to be involved, by diverting traffic away from the farm and area of the suspected CAD outbreak.

Should the test results be positive for a CAD, then the Massachusetts Department of Agriculture and the Massachusetts State Veterinarian will issue a quarantine order. This order isolates specific livestock, premises, counties, districts, or sections of the state and restricts the movement of livestock in order to prevent the spread of a disease. In the event that an animal quarantine is necessary, the area cordoned off would be incident or disease dependent, and may be divided into zones. This scenario might involve an expansion of the initial traffic control plan implemented during the testing phase.

To prevent the spread of a contagious animal disease, movement into and out of a quarantine area must be minimized. Control of the movement of people as well as that of animals, animal products, vehicles, equipment, and other materials is critical to the maintenance of biosecurity. Only movement which is absolutely necessary, such as transportation of a medical emergency patient, and which poses minimal risk to animal health should occur under certain conditions.

Restricted movement of people may be voluntary until authorized by specific language in a Governor's Declaration of Emergency. Prior to an emergency declaration, officials may be able to garner compliance in the general population by encouraging behavior in the best interest of their communities, which would include a sanitizing process before exiting a contaminated area. Defeating the purpose of a quarantine may result in personal liability to others harmed by such action.

Under a quarantine situation, two types of traffic control must be provided: stopping traffic (no access) and controlled access (access corridors). While both forms of traffic control share common components, they are addressed separately under this plan. Decontamination and disinfection are critical components of establishing access corridors and they are addressed in a separate plan for emergency responders entitled "*Decontamination and Disinfection for a Contagious Disease Outbreak in Livestock or Poultry*." Initially in a CAD response it may be necessary to stop all movement out of an infected area until proper biosecurity measures can be implemented.

The National Animal Health Emergency Management System (NAHEMS) has established specific terminology associated with a CAD outbreak and the potential for disease spread (NAHEMS 2003). This terminology is critical for instituting traffic control measures associated with a CAD outbreak. Premises that have animals that are confirmed as being infected or exposed to a CAD are considered **Infected Premises** (IP). Premises that are linked to a known IP through epidemiological evidence (direct or indirect contact with infected animals, or contaminated equipment or personnel) but have not been diagnosed as having the disease are know as **Contact Premises** (CP). The area around the IPs and CPs is referred to as the **Infected Zone** (IZ). In some cases the distribution of the Contact Premises and logistical concerns may make it impractical to include all of them in the IZ. The Infected Zone may have a minimum initial radius of 6.2 miles from the outermost Infected Premise or presumptive positive operation. The radius is dependent on the disease and will be determined by the State Veterinarian.

A presumptive positive determination is based on clinical signs, epidemiology and in some cases field sample analysis. An additional zone will be established around the IZ. This zone is called the **Buffer Surveillance Zone** (BSZ) and will include any Contact Premises not in the Infected Zone. This zone may be defined by a border parallel to the IZ boundary and may have a minimum radius of 6.2 miles from the IZ. In some cases, the initial BSZ may encompass the entire state where the CAD was confirmed. The area encompassing the Infected Zone and the Buffer Surveillance Zone is called the **Control Zone** (CZ). The CZ will constitute the general quarantine area associated with a CAD outbreak.

Personnel working in the Infected Zone that come into direct contact with infected animals, equipment or other organic material (manure, soil etc.) will undergo decontamination and disinfection procedures discussed in this Plan and in a separate plan for emergency responders entitled "*Decontamination and Disinfection for a Contagious Disease Outbreak in Livestock or Poultry*." Even after personal decontamination and disinfection, these personnel should not come into contact with susceptible animals for several weeks. A listing of susceptible animals and incubation periods for some foreign animal diseases is shown in Table 1.

This plan contains information from and is consistent with current NAHEMS guidelines, as of June 2006.

#### 2.1 Locating Traffic-Control Points

Traffic control associated with a potential CAD outbreak (while awaiting test results) should be established by local law enforcement officials around the perimeter of the suspected Infected Premise (IP). Traffic, including deliveries to and from the potential IP, should be limited. This precaution is necessary should the test results be positive and a confirmed CAD is identified at the suspected IP. Local law enforcement officials may need to request assistance through mutual aid agreements.

Once a CAD has been confirmed and a quarantine order is in place, traffic control should be established around the perimeter of the Infected Zone (IZ) (NAHEMS 2005). In this scenario, local law enforcement officials may have a subordinate role to state and federal officials. In a CAD outbreak, the specific location of traffic-control points will be determined by the Unified Command (UC), which will include state and/or federal veterinarians, staff from the Massachusetts Department of Agriculture, and the USDA.

In all situations, traffic control should have the following goals:

- Preventing the movement of susceptible or infected animals out of the Infected Zone (without specific movement controls).
- Preventing animal products from susceptible or infected animals from leaving the Infected Zone (without specific movement controls).
- Controlling movement of vehicles, equipment, personnel and non-susceptible animals out of the Infected Zone, to allow only essential transport and ensure appropriate biosecurity procedures are followed.
- Conducting a public awareness campaign to increase compliance with movement restrictions.

Specific state or federal approved plans may allow the movement of live animals or animal products out of an infected zone based on approved biosecurity and safety protocol.
# TABLE 1

#### Highly Contagious Animal Diseases, Susceptible Animals and Incubation Periods<sup>1</sup>

| Disease                                    | Incubation<br>Period<br>(days) | Cattle | Sheep | Goats | Swine | Poultry | Wildlife   |
|--|--------------------------------|--------|-------|-------|-------|---------|--|
| Foot-and-<br>Mouth Disease                 | 2-14                           | X      | X     | X     | X     |         | Ruminants, rats and mice   |
| Highly<br>Pathogenic<br>Avian<br>Influenza | 3 – 5                          |        |       |       | x     | X       | It is reasonable to assume that<br>all avian species are<br>susceptible to infection |
| Newcastle<br>Disease                       | 4 – 6                          |        |       |       |       | Х       | Most avian species,<br>especially waterfowl and<br>parrots                           |
| Rinderpest                                 | 3 – 15                         | X      | Х     | X     | X     |         | Most wild cloven-hoofed animals  |
| Peste des Petits<br>Ruminants              | 3 – 10                         |        | Х     | X     |       |         | White-tailed deer  |
| African Swine<br>Fever                     | 5 – 15                         |        |       |       | X     |         | Feral pigs   |
| Classical<br>Swine Fever                   | 2-14                           |        |       |       | X     |         | Feral pigs   |
| Swine<br>Vesicular<br>Disease              | 2-7                            |        |       |       | X     |         |  |

Note: <sup>1</sup> The listed incubation periods were obtained from the World Organization for Animal Heath (OiE) disease cards. The remainder of the table was taken from NAHEMS 2003.

The actual Infected Zone boundaries will be based on geographical, epidemiological, social, and economic criteria. The UC is responsible for locating access corridors and no-access points associated with the requested traffic control zone. The UC should include, or at least coordinate with, local highway departments and MassHighway personnel when locating access-control points. Expansion or contraction of traffic control boundaries will be determined by the UC. It will be the lead veterinarian's responsibility to communicate the need for boundary shifts to the UC. Operations staff will communicate the changes to personnel staffing the traffic-control points and direct their resulting actions.

If possible, the location of access corridors should be based on prevailing winds in the Infected Zone. Access corridors should be situated upwind from the IZ.

# 2.2 Stopping Traffic

The following information identifies personnel, equipment, and other supporting services that should be provided to establish, operate, and maintain no-access traffic-control points. Two types of no-access traffic-control points are possible: staffed and unstaffed. Clearly, staffed traffic-control points are preferable to unstaffed. However, if personnel and resources are limited, local law enforcement officials should consider unstaffed traffic-control points on outlying secondary roads and secondary roads that are at the outer perimeter of the Infected Zone.

#### 2.2.1 Personnel - No Access Points

Staffed no-access traffic-control points will generally be situated on heavily traveled routes. These points should be operated by at least two people. The use of two people provides backup in the event of injury and allows traffic control and detour assistance to occur simultaneously. Generally, it is best to have at least one law enforcement officer associated with a staffed noaccess traffic-control point. Local law enforcement officials might need assistance through mutual aid from other towns. If this is not possible, available law enforcement officers should be assigned groups of traffic-control points that they can monitor and respond to quickly if requests for assistance are made.

Possible law enforcement officials who could provide additional support at no-access traffic-control points include: Franklin County Sheriff, Massachusetts State Police, Massachusetts Environmental Police officers, and military police from the Massachusetts National Guard. Non-law enforcement federal, state, regional, or municipal personnel should be used in a supporting role to staff no-access traffic-control points. Possible municipal departments that could be used for support include the fire and public works departments. Officials might also access citizen corps or other volunteer organizations as appropriate. If these groups are used, the municipal attorney should evaluate volunteers' liability relative to assisting the town in the response to a livestock or poultry emergency. Every effort should be made to limit or remove associated liabilities for volunteers.

In many cases, traffic control will be an extended operation. Individuals staffing no-access traffic control points will need to be provided food, water, and sanitary facilities.

# 2.2.2 Equipment - No Access Points

It is assumed that local law enforcement officials are trained in traffic control and understand the equipment needed to maintain traffic control points. However, in most CAD situations there will not be time to consider what equipment is and isn't needed; therefore the following list of equipment is identified for ease of implementation. Each no-access traffic-control point should have the following:

- Barricades (plastic, concrete, metal, hay bales, etc.): Any material can be used to create barriers to stop the flow of traffic. If there is a need to establish unmanned no-access points due to limited personnel resources, barricades must be of sufficient size and design to prevent the movement of traffic along the chosen road. While the possibility exists that travelers may try to bypass an unmanned no-access point, the use of signage and temporary fencing may help prevent this practice.
- Signage: Signage should be constructed of waterproof materials. Signs will be necessary to:
  - Identify the traffic-control point.
  - Identify alternate detours.
  - Explain why the traffic-control point has been established.

- Communication: Each access-control point should be provided a means of communication through the chain of command with the incident command (IC). Generally, this will consist of portable radios tied into the IC's frequency.
- Reflective vests
- Shelter: Shelter for the personnel staffing the no-access points, depending on the season, should provide protection against temperature extremes, winds, and precipitation.
- Lighting: Lighting should be established to mark the no-access point and provide general area illumination for staff working at the no-access point. Flashers attached to barriers or signs can be used to alert approaching travelers of the impending traffic-control point. With any lighting system, it will be necessary to provide electricity, either with batteries, generators, or drop service from power lines. The use of a drop service will require coordination with the local power company.
- Portable sanitary facilities: Since it is likely these services will be needed over an extended time, portable sanitary facilities should be considered. A cleaning and pumping schedule will need to be established.
- Maps: It may be necessary to provide travelers, rerouted at a no-access point, a physical map to help them navigate a detour. These maps can be as simple as a general county map with the detour highlighted.

Equipment can be purchased through the Massachusetts Statewide Contract for Emergencies. This contract includes emergency response supplies, services, and equipment. Municipal departments do not need to go out to bid to use this contract. The contract can be found on line through the Massachusetts Operational Services Division.

# 2.2.3 Methodology - No Access Points

The specific methodology that applies to personnel and equipment to prevent road access into a quarantine area will be dependent on the specific resources available and the number of no-access points involved. It may include a combination of staffed and unstaffed no-access points. The method(s) used must reasonably ensure that vehicular traffic across the access-control point does not occur, either into or out of the suspected Infected Premise and the Infected Zone. It is assumed that local law enforcement officials have pre-existing standard operating procedures or

guidance for stopping and rerouting traffic. These procedures should be directly applicable for traffic control during a suspected or actual CAD outbreak.

# 2.3 Access Corridors

An access corridor is a location where essential personnel and equipment are allowed, under certain conditions, to enter and exit a quarantine area. Access corridors will utilize many of the same resources associated with a no-access point. Access corridors will have additional requirements associated with providing decontamination and disinfection (personnel, pets, vehicles, and other possessions) and documenting and regulating access. Specific considerations of decontamination and disinfection are in a separate plan for emergency responders entitled *"Decontamination and Disinfection for a Contagious Disease Outbreak in Livestock or Poultry."* The following information identifies the personnel, equipment, and other supporting services that should be provided to establish, operate, and maintain access corridors for the controlled movement of people, animals, and vehicles into and out of a quarantine zone.

# 2.3.1 Personnel - Access Corridors

Access corridors will require two groups of staff. One group will control traffic and restrict access. The second group will provide inspection and disinfection services to people, vehicles, pets, and other possessions leaving the quarantine zone. Both groups should consist of at least two people. Operations will assign personnel to the various tasks associated with an access corridor. Generally, these workers will need to be provided food, water, and sanitary facilities.

Personnel assigned to access corridors and who can potentially come in contact with infected materials or equipment should be advised to stay away from susceptible animals several weeks after they leave the access corridor. This is referred to as no-contact time. The state-level Incident Command will likely provide additional guidance on no-contact times. In some cases the no-contact time will be based on the potential for exposure associated with each job at an access corridor.

#### 2.3.1.1 Traffic Control and Restricting Access - Access Corridors

At least one law enforcement officer should be staffing this portion of an access corridor. Local law enforcement officials might need assistance through mutual aid from other towns. If this is not possible, available law enforcement officers should be assigned groups of traffic-control points that they can monitor and respond to quickly if requests for assistance are made.

Possible law enforcement officials who could provide additional support at access corridor traffic-control points include: Franklin County Sheriff, Massachusetts State Police, Massachusetts Environmental Police officers, and military police from the Massachusetts National Guard. Non-law enforcement federal, state, regional, or municipal personnel should be used in a supporting role to staff access corridor traffic-control points. Possible municipal departments that could be used for support include the fire and public works departments. Officials might also access citizen corps or other volunteer organizations as appropriate. If these groups are used, the municipal attorney should evaluate volunteers' liability relative to assisting the town in the response to a livestock or poultry emergency. Every effort should be made to limit or remove associated liabilities for volunteers.

#### 2.3.1.2 Decontamination and Disinfection Personnel

It is not necessary to use law enforcement personnel at a Decontamination and Disinfection station at an access corridor. Generally, staff working here will require training in the following areas: operation and maintenance of a disinfection or cleaning station, biosecurity, and foreign animal disease (FAD). Training in the latter two areas can be provided by local veterinary staff. The training will allow these personnel to make informed decisions regarding the need for, and adequacy of, disinfection; as well as the background to identify possible disease spread vectors inside vehicles otherwise associated with travelers. This information can be found in a separate plan for emergency responders entitled "Decontamination and Disinfection for a Contagious Disease Outbreak in Livestock or Poultry."

Often, local fire and rescue personnel have had training in decontamination and disinfection. In some cases, these groups will have pre-established procedures for the setup and operation of personal and vehicle cleaning stations relative to a hazardous waste incident. These procedures will be directly applicable to the decontamination and disinfection needed at an access-control point set up for a CAD response.

However, law enforcement officials should emphasize to their personnel the need to practice measures at traffic control points that will prevent the spread of disease. This means having no contact with any person, vehicle, or equipment in the quarantined area.

# 2.3.2 Equipment - Access Corridor

The equipment needed to create and support an access-control point is the same as that needed to stop traffic. See page 7-8 for details on barricades, signage, communication, shelter, lighting, portable sanitary facilities, and maps. The exception is associated with the decontamination and disinfection activities conducted at access-control points. The process of decontamination and disinfection is addressed in a separate plan for emergency responders entitled "*Decontamination and Disinfection for a Contagious Disease Outbreak in Livestock or Poultry*."

The following list identifies additional equipment that could be used at an access corridor.

- Traffic control personnel should be given specific information, with illustrative photographs if possible, on susceptible animals that should not be allowed to leave the Infected Zone. (Susceptible animals should not be allowed movement unless appropriate documentation can be provided.) In the event of any question about personnel's ability to identify the designated species of animals correctly, photographs or other information about unique characteristics should be provided.
- Traffic control personnel should be given specific information, with illustrative photographs if possible, on non-susceptible animals and the conditions under which they can be allowed to leave the Infected Zone. Movement of non-susceptible animals may require a permit and could be contingent upon specific, rigorous Decontamination and Disinfection requirements. Animals coming from an IZ should be assumed to have been

in close contact with infected or contact animals or premises, unless otherwise directed by the Incident Command. This may also extend to personal pets within the IZ.

Traffic control personnel should be given a list of companion animals that may be allowed movement in the company of their owners. The owners may be responsible for seeing that their pets are clean so that the animals do not act as carriers of disease pathogens. In some instances the Incident Command may determine that pets will need Decontamination and Disinfection prior to leaving an Infected Zone.

Proposed movements of all other animals should be checked with Incident Command personnel.

# 2.3.3 Access Screening

Quarantine zone ingress and egress control is a crucial part of disease containment and response management. This control directly affects disease containment, and it provides security for residents living within the quarantine areas. Only responders and residents should be allowed to enter the quarantine zone. In either case, *personnel staffing the access corridor should be provided lists of responders and residents cleared for access*. A state or federally issued form of identification should be required to verify the identification of anyone desiring entry into the quarantine zone. After the initial identity verification, the issuance of a temporary access card, or other traceable indicator of approved access, could be issued to responders and residents to speed up flow through the access corridor. Depending on the security level required, examples of these indicators can range from simple color-coded dashboard cards to computer scanned barcoded access cards.

As responders and residents exit or enter a quarantine zone, their identities must be verified, and their names, time of entry, and exit should be documented. If there are unusual circumstances associated with an entry or access, this should be documented as well.

Documentation will be essential to tracking vehicles, animals, and people who exit and enter the quarantine area.

# 2.3.4 Methodology - Access Corridor

The specific methodology used to control access into and out of a quarantine area will be dependent on the specific resources available to the UC, as well as the number of access points involved. As with traffic-control no-access points, the method(s) must reasonably ensure that vehicular traffic across the access-control point is controlled, and Decontamination and Disinfection protocols are maintained, either into or out of the quarantine area.

*If a person in the Infected Zone is injured or becomes seriously ill*, every effort must be made to obtain medical care for the person as quickly as possible. The very nature of a CAD response means that there is a risk of transporting the infection with the injured person. To minimize this potential, the following steps should be taken as soon as arrangements for an ambulance or other vehicle have been made (NAHEMS 2003):

- The Incident Commander should be notified of the incident.
- An individual experienced in biosecurity and Decontamination and Disinfection procedures should be sent—along with Decontamination and Disinfection supplies—to meet the emergency vehicle at the medical facility.
- The Incident Commander or their designee should inform authorities at the medical facility of the existence of the risk of CAD transmission and ensure that Decontamination and Disinfection procedures for the patient and medical personnel are initiated as soon as appropriate.
- The patient's clothing and any of the medical personnel's clothing that may have become contaminated should be sealed in a plastic garbage bag. The clothing then should either be (a) discarded safely or (b) removed from the bag and laundered, with care taken to dispose of the contaminated bag safely. Any contaminated medical equipment should be cleaned thoroughly (if possible, autoclaved) and disinfected with an approved disinfectant.
- Any surface—inside or outside the medical facility—that may have become contaminated should be cleaned thoroughly and disinfected with an approved disinfectant.
- The emergency vehicle should be cleaned and disinfected, including the interior, underside, wheels, and wheel wells, and then taken through an automated carwash facility. (See "Biosecurity," Appendix A.)
- Any clothing or boots of emergency vehicle attendants, orderlies, or other personnel that may have become contaminated should be removed, sealed in a plastic garbage bag, and laundered, dry cleaned, or disinfected with an approved disinfectant or discarded.

The continuation of public services that are deemed essential will be critical to supporting residents in an Infected Zone. The Incident Command will determine what types of restrictions are necessary for community institutions and businesses that must operate within the IZ. Examples of possible activities include: (a) delivery of groceries, fuel, mail, and other items and (b) necessary trips for medical and dental care, counseling, banking, or other important reasons. Restrictions may range from entry into the Buffered Surveillance Zone or Infected Zone under permit only to informal agreements between the businesses or institutions and the Incident Command. These restrictions or arrangements must be conveyed to access corridor personnel.

An example of human movement restriction associated with an IZ could involve school children not residing at an Infected Premise. Incident Command may determine that these children can be moved between their residence and a school located outside the IZ with minimal risk to animal health if the following policies are followed (NAHEMS 2003):

- Each child should take a bath or shower before leaving for school.
- Each child should wear freshly laundered clothing.
- Each child should wear clean shoes and/or boots.
- Children should not visit any animal facilities.

In evaluating proposed movements of children (and adults) residing on IPs, further evaluation and more stringent restrictions would likely be in order.

# 2.4 Health and Safety

General first aid and access to emergency medical services must be provided at all traffic-control locations that are staffed. Law enforcement personnel staffing no-access points will require personal protective equipment only if they are involved in decontamination and disinfection. Decontamination and disinfection workers should wear waterproof clothing or rain suits, with hoods that can be disinfected and reused. Rubber gloves and rubber boots also will be needed.

These items can be disinfected and reused. Under gloves, cotton or nitrile, should be worn under the outer rubber glove. The personnel also should wear hardhats fitted with face shields to protect their faces. Unless stipulated by the Safety Officer, respiratory protection may not be necessary. In addition, dust masks can also be worn to protect the workers' mouths and to prevent ingesting splashed materials.

Equipment can be purchased through the Massachusetts Statewide Contract for Emergencies. This contract includes emergency response supplies, services, and equipment. Municipal departments do not need to go out to bid to use this contract. The contract can be found on line through the Massachusetts Operational Services Division.

# 2.5 Communication

Due to the dynamic nature of an emergency response to a CAD, the establishment, maintenance and relocation of traffic-control points must be coordinated with the ever-changing understanding of the nature and extent of the disease. In order to allow the traffic-control points to quickly respond to changing field conditions, communication between the traffic-control point personnel and the EOC must be maintained through the chain of command. Real-time communication and preshift meetings constitute the required communication needed to support traffic-control points.

It will be helpful to provide citizens impacted by traffic control with information sheets that address the causes, response, and future relative to the incident. An information sheet should address the following topics (NAHEMS 2003):

- Provide information on the reason for the traffic control measures used, reinforcing the concepts conveyed verbally by traffic control personnel.
- Provide information on how to obtain a permit for animal movement.
- Provide information, including maps, on alternative routes to major destinations.
- Provide information on basic biosecurity measures, including decontamination and disinfection, as well as a list of readily available approved disinfectants for use by the public along with information on the safe use and disposal of these disinfectants. This

information should be coordinated through the Massachusetts State Veterinarian's office and the Incident Command.

- Anticipate and deflect at least some of the drivers' questions and provide the driver with the opportunity to learn more about the animal health emergency and the response to it while waiting.
- Allow for uniform information dissemination and foster increased public support for and cooperation with animal health emergency response efforts. The information sheet should list the appropriate Incident Command Post and MA Department of Agriculture telephone numbers that can be used by members of the public wishing further information. Traffic control personnel should refer individuals with questions to the information sources and telephone numbers provided.

#### 2.6 Documentation

Documentation is critical to providing an accurate record of creating, operating, and maintaining traffic-control points. This information is important in managing an emergency response, managing disease containment, providing liability protection, and in cost recovery efforts.

Due to the nature of an emergency response, it is critical to identify personnel who will be responsible for documenting these issues or monitoring and verifying that the needed documentation is being collected by other parties. In some cases, identifying a specific response job that includes documentation will be preferable, especially if personnel will be rotated through shifts and response jobs.

Documentation should be maintained in written form. Video, photographs, and tape-recorded messages can be used to supplement the written documentation. Written documentation can be maintained in a logbook format, using documentation worksheets, or a combination of both. Documentation should be recorded with an ink pen, and any entry errors should have a single line drawn through them with the author's initials and date recorded at one end of the line. If a logbook is used, it should have numbered pages and the spine should be sewn, making the removal of pages both difficult and obvious. Pages should never be removed from a logbook. Anyone making entries in the logbook should sign and date the bottom of each page. If

documentation worksheets are used, the author should sign and date the bottom of each worksheet. Logbooks and worksheets should be assigned unique identification numbers. When the logbooks or a group of worksheets is issued to a responder, the identification numbers of the logbooks and worksheets should be recorded and the recipient should sign them out in a document tracking log. This establishes a chain-of-custody for the documentation.

If pictures, video, or taped messages or interviews are used to supplement the written documentation record, the following information should be documented for each picture, video segment, or audio taped message or interview: photographer or interviewer, subject, time, date, person interviewed (video or audio taped), photo and film roll number, direction (pictures and video) and general weather conditions (e.g., temperature, wind direction, humidity, sky condition, etc.).

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# 2.6.1 Resources Used

Throughout the process of providing traffic-control associated with a CAD, it will be necessary to provide various types of documentation. For indemnity payments to the responding agency or other forms of state or federal reimbursement or cost sharing, it will be necessary to document the resources applied and expended in providing traffic control. These costs can include labor charges, equipment rentals or purchase, costs of expendable equipment or supplies, subcontractor costs, or any other costs associated with providing the traffic-control services. Possible items that should be included in a documentation checklist include:

Responder time (hours) Number of responders Identity of responders Responder's commuting mileage to the traffic-control point Sanitation services provided Meals provided Location of each responder Equipment at each point Usage time for equipment Specific quantities of expendables used

# 2.7 Training

Personnel training will be a critical component of planning to initiate traffic-control measures in the event of a suspected or actual CAD situation. Tension and conflict can be created between a civilian and a responder when a resident is stopped at a traffic control point and either sent on an alternate route or asked to undergo some type of vehicular or personal decontamination and disinfection. This conflict can occur regardless of the importance of the measures needed to protect the local and regional economies. Public concern and potential conflict associated with traffic control will require training to comfort and defuse potentially volatile citizens. Law enforcement personnel have this training and can be a training resource for non-law enforcement personnel who would support the traffic-control portion of a no-access or access corridor trafficcontrol point. Personnel staffing the decontamination and disinfection stations will require training in: Foreign Animal Diseases, biosecurity, the operation and maintenance of the decontamination and disinfection equipment, disinfection procedures, associated environmental protection issues, personal protective equipment, and the inspection of people, vehicles, pets, and other possessions at quarantine zone access points. The quarantine access-control training will require basic training in biosecurity and Foreign Animal Diseases.

Personnel associated with the movement of vehicles through an access corridor will need to be familiar with the documentation requirements and the access screening protocols. Access screening will allow only authorized people to enter a quarantine zone.

# 2.8 Public Information

During the initial response by local law enforcement officials for a suspected CAD, it will be important to limit the amount of information disseminated so as not to create unnecessary fear among residents and neighbors. Restricting information at this phase also protects the farmer from unnecessary negative publicity which could affect the farm's future financial situation if a CAD is not identified.

Once the quarantine is issued, federal and state officials will initiate a public information and media plan to inform the local community of the existence and location of traffic-control points, and the associated alternate routes. This notification may involve public announcements via radio, television, web site, newspaper, signage announcing the traffic-control points, or any other appropriate mechanisms to inform the public of the areas involved with the traffic control. Local responders should identify and make use of approved state or federal prepared information or press releases that could be used in responding to a CAD. Public notification can help citizens plan alternate routes around quarantine areas or help them understand possible travel delays associated with the traffic-control activities.

Revision 0.0 Initial Issue Date June 2009

In general, response workers should be trained to refer any press or other project-specific inquiries to the federal or state Public Information Officer.

#### REFERENCES

- Nebraska Department of Agriculture Agricultural Response Monograph Number 001. Traffic Control. June 2007. www.agr.ne.gov/homeland/homeland.htm
- NAHEMS Guidelines. (2003). *Quarantine and Movement Control: Highly Contagious Disease*. United States Department of Agriculture. May 5, 2003.
- NAHEMS Guidelines. (2005). *Highly Contagious Diseases*. United States Department of Agriculture. September 2005.
- World Organization for Animal Health (OiE), Technical Disease Cards, Website: http://www.oie.int/eng/maladies/en\_fiches.htm , November 2006

# **APPENDIX A**

**BIOSECURITY** (adapted from NAHEMS 2003)

#### Before ENTERING a premise (infected or suspected of being infected),

#### DO:

- Park your vehicle away from site production facilities and ensure that your vehicle's tires and wheel wells have been hosed so they are free of dirt and debris and that your vehicle has been taken through a pressure car wash.
- Designate a "clean" area in your vehicle—usually the passenger compartment. Keep it separate from the "dirty" area—usually the trunk or cargo area.
- Put on clean coveralls, boots, hat, gloves, and other apparel and use only clean equipment and supplies.
- Wash your hands with soap and water.
- Consult with the owner to identify an arbitrary line on the site demarcating a "clean" side and a "dirty" side.

#### DON'T:

- Enter a site's or vehicle's "clean" area unless you have disposed of or cleaned and disinfected all clothes, footwear, hats, gloves, equipment, supplies, and other sources of disease transmission.
- Attempt to disinfect a surface unless it first has been thoroughly cleaned.
- Drive your vehicle on premises any more than necessary. An on-site vehicle should be used for on-site transportation whenever possible.

# Before LEAVING a premise (infected or suspected of being infected),

#### DO:

- Use a brush and approved disinfectant to clean and disinfect all reusable equipment and clothing, including eyewear and boots, thoroughly.
- Hose down vehicle tires and wheel wells so they are free of dirt and debris.
- Place disposable coveralls (turned "inside out"), boots, and other soiled items in a plastic garbage bag to be left with the owner or placed in the "dirty" area of your vehicle.
- Dispose of the disinfectant solution according to label instructions.
- Dispose of all plastic garbage bags containing soiled supplies in a manner that prevents exposure to other people or animals.
- Wash your hands with soap and water.
- Clean and launder all reusable clothing and equipment.
- Take a shower and shampoo your hair, clean under your fingernails, and clear your respiratory passages by blowing your nose, clearing your throat, expectorating into a sink with running water, and washing your hands with soap and water.

# DON'T:

- Bring "dirty" paperwork into the clean area of your vehicle.
- Visit another susceptible site until 12 hours have passed, or as directed by the Incident Commander or the State Veterinarian. The minimum waiting period of 12 hours applies only to official animal health emergency personnel who follow biosecurity procedures on their premises visits. For other premises visitors, the minimum waiting period is 5 days.

Additional information is available in the NAHEMS 2003.

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# DECONTAMINATION AND DISINFECTION FOR A CONTAGIOUS DISEASE OUTBREAK IN LIVESTOCK OR POULTRY IN FRANKLIN COUNTY, MASSACHUSETTS

# An Agricultural Emergency Response Planning Tool

Developed by

# FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

# FRANKLIN COUNTY SOLID WASTE MANAGEMENT DISTRICT

**JUNE 2009** 

Funded through a grant by the United States Department of Agriculture Rural Utilities Program

#### ACKNOWLEDGEMENTS AND CREDITS

This plan was written by the Franklin County Solid Waste Management District and the Franklin Regional Council of Governments to assist local emergency responders with disinfection and decontamination efforts in the event of a contagious disease outbreak in the livestock or poultry population. A companion document addresses traffic control during a contagious animal disease outbreak. There is also a Franklin County Comprehensive Response Plan for Animal Carcass Management Related to a Disaster.

This plan is based almost exclusively on the Nebraska Department of Agriculture's *Agricultural Response Plan Number 004*. Nebraska's Agricultural Response Plans are available at www.agr.ne.gov/homeland/homeland.htm. We appreciate the willingness of Nebraska state officials to allow us to use their plan as a template for Franklin County, Massachusetts.

This project is funded through a USDA Rural Utilities Program Solid Waste Management grant. This plan is one component of a comprehensive emergency response project related to Franklin County's livestock population.

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The Franklin Regional Council of Governments and the Franklin County Solid Waste Management District are equal opportunity providers and employers.

For more information about agricultural emergency response planning contact the Franklin Regional Council of Governments at 413-774-3167 or visit www.frcog.org. Information is also available through the Franklin County Solid Waste Management District at 413-772-2438 or at www.franklincountywastedistrict.org.

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#### **1.0 SCOPE AND APPLICATION**

The purpose of this plan is to provide functional guidance to local emergency responders about the establishment, operation, and maintenance of disinfection and decontamination areas during a contagious animal disease (CAD) outbreak. This plan also covers biosecurity procedures needed for responders to prevent the additional spread of a CAD. Several sections of this plan contain general descriptions of the scope of operations necessary to implement a particular component of decontamination and disinfection.

In the event of a CAD outbreak state and federal officials would control the response and set up an incident command system. However, local emergency responders, especially fire departments and hazmat-trained individuals, would most likely be asked to assist with disinfection and decontamination efforts.

#### 2.0 SUMMARY OF PROCEDURES

When responding to a CAD, local responders play an important role in preventing the additional spread of the disease. The actions taken to disinfect equipment, vehicles, and personnel involved in the response will directly impact the ability to quickly contain the disease. This plan is designed to outline general decontamination and biosecurity procedures. Most of the information covered pertains to any disinfection and decontamination needed; however, this plan specifically covers special concerns associated with access corridors and mortality disposal.

Micro-organisms, viruses, and spores associated with a CAD can spread to non-infected animals in many ways. Many mechanisms for disease spread cannot be controlled by responders; for example, disease spread through the atmosphere via wind. However, some mechanisms for spread can be directly controlled by responders. These mechanisms involve the spread of a disease through human and animal movement, the reuse of contaminated equipment, and vehicle movement. CAD agents can be found in the soil, fodder, manure, feed, bedding, and on building surfaces, equipment, animals and in the atmosphere at an infected location. Responders can be exposed to, and become carriers of, the CAD agent by simply being in the atmosphere of an infected location or stepping in, handling, or otherwise contacting materials or objects that are contaminated. Besides being found in visible contamination, such as dirty boots or coveralls, the CAD agents can adhere to clothing, respiratory tract, hair, and skin. Decontamination and disinfection are the tools that responders have to limit the potential for CAD spread outside a quarantine zone.

All vehicles, equipment, and personnel that exit a quarantine area and/or infected premises must be decontaminated and disinfected or their disposable coverings removed and then disposed of. This will be achieved through the physical removal of potentially contaminated materials and through the application of appropriate disinfectant(s). A common problem for all contact disinfectants is maintaining the agent's liquid state on the applied surface. These solutions are generally composed of water, which tends to evaporate prior to the completion of the required contact time. Monitoring of the applied disinfectant and repeated application as it dries can solve this challenge.

The appropriate place to operate and maintain a disinfection station is at an access corridor and at the entrance/exit of disposal areas and infected premises. The equipment, design, and method for implementing personnel, equipment, and vehicle decontamination and disinfection stations are described below.

# 2.1 Equipment

The equipment needed to supply a disinfection station is presented below. Three distinct classes of decontamination and disinfection equipment are discussed: personal protective equipment (PPE), equipment for decontamination and disinfection, and disinfectants.

• PPE: water, hard hat, safety glasses or face shield, rubber boots, rain suit (jacket and coveralls), disposable coveralls, disposable synthetic impermeable under gloves (nitrile, latex, etc.), disposable synthetic impermeable over gloves (nitrile, rubber, etc.), heavy-

duty over gloves (cotton or leather), boot tray or bucket, one-to two-gallon hand-operated pressure sprayer, short-handled scrubbing brushes, and heavy duty plastic garbage bags.

- Decontamination equipment: vacuum cleaner, water, high- and low-pressure sprayer, power or fuel for sprayer, plastic sheeting (> 2 mil thick), long-handled scrubbing brushes, sponges, buckets (pet wash), towels (disposable or cotton), heavy duty plastic garbage bags, berming material (e.g., 4x4's, sand, sand tubes, sand bags, etc.), framing materials to build containment structures, sump pump and power supply, and drums or plastic totes to contain spent decontamination and disinfection fluids.
- Disinfectants: The choice of disinfectants will depend on the particular disease being addressed. State or federal veterinarians will determine the best disinfectant to use. Disinfectants can range from dilute solutions of common household products, such as bleach or vinegar, to commercially available disinfectants. Broad spectrum disinfectants, such as Virkon® may be an alternative to identifying and stockpiling multiple types of disease-specific disinfectants. Appendix A briefly describes the disinfectants that might be used.

# 2.2 Location Criteria

The selection of an appropriate area to establish a disinfection station is critical to the successful operation. The operation of the disinfection station should not negatively impact the environment, and its location should provide easy access for residents and responders.

The following is a check list of considerations for selecting an appropriate location for a decontamination and disinfection station:

- Adjacent to or part of an existing traffic-control point.
- Generally, flat terrain that is large enough on either side to house the following: disinfection station, water supply, waste water containment, sanitary facilities, and parking for vehicles waiting for disinfection and those that will not be disinfected. To increase efficiency, responders may not leave the quarantine zone in the same vehicle that transported them through the zone; rather, they will undergo personal disinfection and exit onto the non-quarantine side of the station to acquire transportation away from the response.
- The site should not be located in a sensitive environment (e.g., wetlands, well head protection area, etc.).

- The site should not naturally drain into a sensitive environment such as a wetland, pond, or flowing water.
- The site should have good ground cover to increase infiltration during precipitation and to minimize the potential for creating muddy areas.
- It would be beneficial if the site had access to potable water and a sanitary sewer.
- It would be beneficial if the site were adjacent to an electric power source. The use of a drop service will require coordination with the local power company.
- The site should be on a maintained road, preferably with a concrete or asphalt surface.
- Close to burial trenches, areas where the surface soil is considered grossly contaminated, septic tanks, or manure storages so that treated disinfection fluid can be disposed of properly.

The location of a decontamination and disinfection station associated with a mortality disposal area should be at the entrance to the area. This will generally be at a gate or door. This location should be considered a transition zone from potentially contaminated on the livestock or poultry side to "clean" on the opposite side, probably the side where non-contaminated vehicles are parked.

# 2.3 Design

A disinfection station must be designed to provide disinfection on two scales: small scale for portable equipment (i.e., cameras, clothing, boots, radios, etc.) and personnel, and large scale for vehicles, heavy machinery, and construction equipment.

#### 2.3.1 Small-Scale Disinfection Station

Small-scale decontamination and disinfection stations should be set up on an impermeable surface such as plastic sheeting. This will help prevent spent fluids from infiltrating into the soil, help contain the spent fluids, and allow for easier clean-up of the decontamination and disinfection area. The staging of wash/disinfection stations within this area should provide for

gross decontamination and disinfection closest to the quarantine side of the area, leading up to a final rinse at the opposite side of the decontamination and disinfection area, the "clean zone."

A small-scale decontamination and disinfection station should provide mechanisms for removing gross contamination and applying disinfectant to equipment or clothing. This type of disinfection area should have three stations. The first station provides the initial decontamination and disinfection. The second station provides a second disinfection. The third station provides a final rinse.

Tubs are appropriate for equipment that can be submerged, or scrubbed with a disinfectant, such as boots or rain suits. Once the equipment has been thoroughly wetted with the decontamination and disinfection solution, it can be scrubbed with a brush to break up any foreign materials that are adhering to the surface. More delicate equipment that cannot be submerged or is otherwise sensitive to moisture can be sprayed with disinfectant and wiped down with disposable towels. Spraying can be accomplished by putting the decontamination and disinfection solution in a hand-operated sprayer (garden-type sprayer) or through the use of commercial disinfectants in pressurized spray cans. If commercial sprays are used, caution should be taken to select commercial sprays that will not melt plastic or otherwise damage equipment. After a disinfectant is applied, the clothing or equipment should be set aside for a prescribed period of time to allow the disinfectant sufficient contact time to kill the target bacteria or virus. In some cases, it may be necessary to periodically rewet the materials with disinfectant to keep them from drying out.

Once the contact time has been reached for the equipment or clothing decontaminated and disinfected at the first station, it should be moved to the second disinfection station. The same procedures applied at the first station are repeated at the second. After the equipment or clothing, disinfected at the second station, has reached the required contact time, it can be moved to station three where it should be rinsed with clean water. While this rinse water should not contain any live organisms, viruses, or spores, it should be treated in the same manner as the other spent decontamination and disinfection fluids. Decisions regarding the need to

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containerize spent fluids from the small scale decontamination and disinfection stations should follow the same rationale as described below for the large scale decontamination and disinfection stations.

Trash receptacles should be placed alongside the first two stations to allow disposable items to be discarded and contained.

#### 2.3.2 Large-Scale Disinfection Station

The design of a large scale disinfection station for vehicles and heavy machinery will be dependent on whether or not spent decontamination and disinfection fluid must be contained pending analysis or some other criteria. The chemical make-up of the decontaminant and disinfectant, its biodegradability, the disease(s) being addressed, the amount of organic matter potentially suspended in the spent fluid, and the influence of public perception issues will all be considered when determining the need to contain the spent fluids. This determination should be made through consultation between local Emergency Operations Center (EOC) personnel, the Massachusetts Department of Agricultural Resources (DAR), and the Massachusetts Department of Environmental Protection (DEP). To facilitate response planning, EOC personnel should work with local veterinarians and State personnel to select appropriate general purpose disinfectants and determine how the spend fluids will be handled.

The vehicle and heavy machinery decontamination and disinfection station should be designed to efficiently deliver and direct a decontamination and disinfection solution to all areas of equipment or vehicles that have been exposed to a contaminated environment. In addition, it will be necessary for the decontamination and disinfection equipment to be able to dislodge soil, bedding, manure, or other potential contaminated matter from the exterior of vehicles or equipment. Generally, this will be accomplished through the use of low-pressure sprayers and scrubbing brushes. If a target disease can spread in an aerosol form, the use of high-pressure sprayers water sprayers, with water alone, at the access corridor is not recommended. High-pressure water spray into grossly contaminated foreign matter (e.g., soil, manure, bedding, etc.) can move the

disease agent into an aerosol form, increasing the potential for spreading the disease. A mix of water and disinfectant should always be used with high-pressure sprayers. Gross contamination should be removed at the farm or location where the vehicle or heavy equipment was grossly contaminated. The responding lead veterinarian should be consulted prior to establishing the vehicle and heavy equipment decontamination and disinfection station at access corridors. They can assist in determining the risk associated with the use of high-pressure sprayers.

Similar to the smaller scale decontamination and disinfection station, it will be necessary to keep the disinfected areas wet until the appropriate contact time for the disinfectant has been reached. To increase throughput for this stage of decontamination and disinfection, it may help to provide a holding area where disinfected vehicles or equipment can wait until contact times have been reached. This will allow the physical decontamination and initial disinfection to continue at a faster pace.

Generally, it is preferable to set up a large-scale decontamination and disinfection site with the intent to containerize the spent fluids and other matter removed from the vehicles and equipment. This will prevent the work area from becoming a quagmire, and it will help reduce impact on the environment. To do this, it will be necessary to build a bermed area that drains into a corner containing a sump from which the spent fluids and material can be pumped into a holding tank. Berming can be constructed from sandbags, posts, straw bales, or other available material. The berming on the entrance and exit side should be constructed to withstand vehicle or equipment weight or ramps should be constructed to protect the berms at the entrance and exit. This area must be covered with an impermeable material to prevent the fluids from infiltrating into the soil. The dimensions of this containment should be made at least twice as big as the largest vehicle or equipment expected to be disinfected. The additional size will allow adequate working room for decontamination and disinfection personnel.

When dealing with heavy vehicles and equipment, making the area impermeable can be challenging. Initially, the area must be cleared of all loose debris or objects that could puncture any liner material used. In one corner of the area, a sump pit should be excavated. This pit

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should be large enough to hold a sump pump and 10 to 20 gallons of liquid. The pit should be located along an edge of the area. Building this area on one travel lane of an engineered road will produce a natural drainage toward the edge of the area, assuming the road has the typical crowning at the center. If the area does not naturally drain to this point, a layer of sand should be put down, with a slope or drainage toward the sump. On top of the soil or sand, one or more layers of plastic sheeting or liner material should be put down to make the area impermeable. Thinner sheeting or liner material will require multiple layers to ensure continued impermeability. To further protect the impermeable layer, plywood sheeting should be placed on top of the material to minimize the impact of vehicles and equipment, and disinfection personnel walking on the material. The heavier the vehicles or equipment, the thicker the plywood needed. Generally, a single layer of 0.5 inch plywood will be appropriate for passenger vehicles. As the size and weight of the vehicles being decontaminated and disinfected increase, thicker plywood or multiple layers of thinner plywood will be required to protect the plastic liner.

Along with this containment base, the large-scale disinfection area will need some form of structure to contain spray drift and splash. This can be assembled by framing a wall around the containment base. The framing should be covered with plastic sheeting to contain the spray drift and splash. This wall should be at least as high as the tallest vehicles being disinfected. The walls on the two ends will need to be moveable to allow vehicles to enter and exit. If high-pressure sprayers are used, these walls may need to be taller to contain the spray drift.

#### 2.4 Methodology

When heavy equipment or a vehicle approaches the access corridor from inside the quarantine zone, it will be inspected for external sources of contamination (e.g., manure, mud, soil, bedding, etc.). If the vehicle is grossly contaminated, it will be turned away and the occupants will be directed to return to the place where it became contaminated for decontamination to remove the gross contamination.

If the decontamination and disinfection personnel deem that the vehicle is free enough of contamination to enter the decontamination and disinfection area, it will be driven into the area. At this time, the occupants will be asked to move to an adjacent staging area while the vehicle is decontaminated and disinfected. After the exterior of the vehicle or heavy equipment has been decontaminated and disinfected, its interior will be inspected for contamination. If necessary, the interior will be decontaminated and disinfected as practical. If the interior or exterior cannot be decontaminated or disinfected to the level required, the vehicle will not be allowed to pass through the access corridor. After the interior and exterior have been decontaminated and disinfected, the vehicle will be moved to a holding area to allow sufficient contact time for the disinfectant to be effective. During this time, the vehicle will be monitored to make sure it does not dry off. If areas are drying, they will be sprayed with disinfectant using hand-held sprayers.

While the vehicle is being decontaminated and disinfected, the occupants will be inspected. The responding lead veterinarian will have developed an exit decontamination and disinfection procedure for residents leaving infected premises, and for any possessions or tools they plan to bring out of the quarantine zone. The occupants will be questioned about their implementation of the lead veterinarian's plan. Boot washes will be available if supplemental disinfection is required. If the occupants have not implemented the lead veterinarian's plan, they will not be allowed to pass through the access corridor until they have followed the exit plan developed by the lead veterinarian. A typical plan might include the following procedures for personal disinfection, particularly if there has been contact with livestock or contaminated areas.

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• Residents whose livestock or property is contaminated and responders who become grossly contaminated will need to wash and disinfect themselves and their clothing before they leave the infected premises. Showering and changing into clean clothing may be acceptable for residents not associated with infected premises, but inside a quarantine area. State and federal officials in charge of the emergency response should identify appropriate personal disinfectants for use by residents.

#### 2.4.1 Personal Decontamination/Disinfection

The following procedures can be used for response personnel and residents of infected premises before leaving a quarantine area. On arrival at the disinfection station, a disinfectant solution, safe for skin contact, should be ready in buckets and sprayers. Since there are no antiviral disinfectants that are both effective against all virus families and approved for use on human skin, warm, soapy water is recommended for washing face, hair, skin, etc. To increase the virucidal effect of this type of solution, the pH can be raised by adding sodium carbonate or lowered by adding acetic acid. The direction of the pH shift will be determined by the virus in question. If other skin decontaminants are used, responders must be sure they are effective virucides for the target virus. Heavy duty plastic garbage bags should be used for disposable items or for items to be removed from the site for further disinfection and cleaning.

Reusable clothing, such as rain suits, can be decontaminated and disinfected at this station by using a combination of a sponge, scrubbing brush, and a low-pressure sprayer. These items in combination with the appropriate disinfectant should be used to wash the clothing thoroughly, removing gross contamination. This cleaning must target the entire garment, including areas under the collar, zips and fastenings, and the insides of pockets. In most cases, jackets, pants, and boots will have the disinfectant applied through immersion in a disinfectant solution. A sprayer would be appropriate if an initial decontamination and disinfection was needed prior to doffing the protective clothing. In this case, the clothing would be grossly contaminated with organic matter. If underclothing has been contaminated, especially above boot level, it must be removed and placed in a plastic bag, the skin washed, and a clean pair of overalls used for leaving the site.

Reusable clothing, such as coveralls, can simply be removed, soaked in disinfectant, squeezed out, and placed in a plastic bag. Underclothes and rubber boots should be similarly treated. Plastic bags containing used clothing should be sealed, wiped down with a disinfectant, and placed at the outer limit of the area for collection by courier for laundering. It is best if reusable clothing is disinfected and laundered at the access corridor.

Disposable clothing (i.e., Tyvek® coveralls and gloves) and equipment should be removed and directly placed in plastic bags for disposal.

Once contaminated outer clothing has been removed, personnel should then shower with an appropriate disinfectant, exiting the shower into a "clean" area where clean clothing and footwear is available. After putting on the clean clothing, the personnel can leave the area.

#### 2.4.2 Decontamination/Disinfection in Emergency Medical Situations

The need may arise to initiate an emergency transport of personnel out of a quarantine area, for example in the event of a medical emergency or injury. The level of initial decontamination and disinfection of a person injured will vary with the seriousness of the injuries. Human life is a priority and every measure must be taken to minimize discomfort or pain. If decontamination and disinfection procedures for the personnel and vehicle must be abbreviated due to the extent of an injury or medical condition, the risk of spreading a disease could be great. In this case, the EOC should be notified. The EOC should then notify the appropriate hospital authorities of the risk and of the appropriate personal disinfection for the patient and vehicle, which should be carried out as soon as circumstances permit. The vehicle (e.g., ambulance wheels, underside, and interior) should be washed with approved disinfectant, at a minimum, as the vehicle leaves the access corridor. Personal clothing and boots of the emergency personnel should be removed for cleaning and disinfection if they had to enter the quarantine area. Disposable clothing can be worn by the emergency personnel and the victim to minimize the potential spread of contamination. The disposable clothing worn by the responders and the victim should be disposed of and secured in plastic bags and any clothing or equipment thought to be contaminated should be disinfected.

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#### 2.4.3 Vehicle and Heavy Equipment Decontamination/Disinfection

The following procedures can be used to decontaminate vehicles and equipment (i.e., cars, livestock carriers, feed trucks, milk trucks, carcass transporters, airplanes, etc.) that leave a quarantine area. All of these vehicles have the potential to spread a contagious disease out of the quarantine area. If at all possible, the movement of vehicles out of a quarantine area should be minimized. Clean vehicles should be available for responders to use after they have undergone the personal decontamination/disinfection described above.

Cars, pickup trucks, and other personal use vehicles can be decontaminated and disinfected using the following procedures. All floor mats should be removed for scrubbing with disinfectant. The inside of the vehicle that has had contact with passengers or the driver (e.g., dashboard, steering wheel, handbrake, gear shifter, and seats) should be wiped liberally with appropriate disinfectant. If the trunk or bed of a truck is considered contaminated, the contents must be removed and the interior of the trunk or truck bed wiped with disinfectant. The contents of the trunk or truck bed must be disinfected before being replaced, or they can be left in a secure location inside the quarantine area. The wheels, wheel wells, and underside of the car should be sprayed with disinfectant and all foreign material (e.g., soil, manure, bedding, etc.) must be removed. In some cases, it will be necessary to decontaminate and disinfect the entire outside of the vehicle if it is visibly contaminated or it has come from infected premises.

Heavy machinery used on a contaminated site will be grossly contaminated. Machinery may include: excavators and backhoes, bulldozers, front-end loaders, forklifts, tractors/trailers, dump trucks, a fire truck (incineration), roll-offs, cranes, chains, hooks, shovels, cargo nets, etc. This equipment must remain on the contaminated site until needed elsewhere. For example, once carcass disposal has been completed, this machinery must be decontaminated and disinfected prior to moving to another site within the quarantine zone. This gross decontamination and disinfection should follow the guidelines discussed below for livestock and poultry transport vehicles, but this should be conducted at the contaminated site where the equipment had been used. When a vehicle has undergone gross decontamination and disinfection and it needs to be

moved out of the quarantine zone, it should be moved to the access corridor for final decontamination and disinfection.

Decontaminating and disinfecting grossly contaminated vehicles by brushing with a combination of a disinfectant and soap, to dislodge encrusted dirt and organic matter, is preferable to washing with high-pressure water streams.

<u>Plain water should not be used with high-pressure sprayers, because the process could release</u> <u>mist and aerosols containing the virus. This can lead to the spread of disease.</u> A mixture of disinfectant and water should always be used with high-pressure sprayers.

Generally, decontaminating and disinfecting grossly contaminated vehicles should only be done on the premises where they became contaminated. Doing this gross cleaning at the access corridor raises the possibility of unintentionally spreading the disease.

Vehicles used to transport livestock and poultry will need to be decontaminated and disinfected if they are to leave a quarantine area. The gross decontamination and disinfection should not be carried out at an access corridor; rather, it should be conducted at the location where the trailer is unloaded, inside the quarantine zone. The gross decontamination and disinfection should involve removing all foreign matter (e.g., soil, manure, bedding, etc.) from trailers and bodywork. Vehicles should then be soaked in disinfectant and scrubbed down to bare metal, painted surfaces or wood with a detergent and disinfectant. Fixtures and fittings should be dismantled to ensure that infected material has been removed. Wooden surfaces must be cleaned and disinfected, where appropriate, before removal and disposal. When the crate structure of a trailer has been decontaminated, it should be lifted, if possible, from the chassis so the undersides and mounting points can be decontaminated. Livestock or poultry transport vehicles must be closely inspected to check whether there are double layers of metal or wood used in their construction. If there are two layers, the top layer should be removed to reach areas where contaminated material could be trapped. Any metal flooring that appears solid should be checked to be sure there is no foreign material under the flooring. Some trailers may carry extra
equipment under the chassis; this must be treated. Outer wheels and spare wheels must be removed to ensure adequate decontamination and disinfection and to inspect the spare wheel hangers, which can be hollow, creating a potential to contain contaminated material.

The driver's cab and, where fitted, the sleeping compartment must be thoroughly decontaminated and disinfected. The driver should be questioned as to the disposition of clothing and boots worn when in contact with diseased livestock or poultry. This clothing should be decontaminated and disinfected.

Specialized stock vehicles may carry their own water, food, and litter supplies for the animals. Water, feedstuff, and litter carried in the vehicles must be disposed of. Burning or burial are common methods of disposal for these materials.

If dairies are situated in the quarantine area, it may become necessary to decontaminate and disinfect milk trucks if it is essential for them to leave the quarantine area.

Disinfectants used to decontaminate and disinfect the inside of the tank must not leave a chemical or taste trace. If a tanker is carrying infected milk, the volume of milk must be determined and the milk mixed with the correct strength of disinfectant. It must be left standing for the appropriate contact time and then disposed of appropriately. The exterior and interior of the tanker must be decontaminated, along with all hoses and fittings. The procedures for general decontamination and disinfection follow the procedures discussed for livestock and poultry transport vehicles.

Feed trucks may need to enter and exit a quarantine area to service non-affected species or to service livestock or poultry that has not been confirmed infected. If it is necessary to allow a feed truck into a quarantine zone, a specific route should be planned to minimize the contamination of the vehicle. Wherever practical, animal feed should be delivered to the outer limits of a property and then transferred to the animals, so the vehicle and driver do not become grossly contaminated. The vehicle and driver must be thoroughly decontaminated before being

allowed to leave. Feed truck decontamination and disinfection will follow the procedures discussed for livestock and poultry transport vehicles. In addition, residual feed in the vehicle must be sprayed with disinfectant and removed for disposal. The insides of bulk trailers should be decontaminated with approved disinfectant.

If a quarantine zone encompasses an airport, potentially contaminated aircraft should be decontaminated and disinfected before they are allowed to leave the area. Aircraft construction prohibits the use of strong alkaline disinfectants, including caustic soda, because of corrosion problems with metals, such as aluminum. A mild alkaline disinfectant, such as sodium carbonate, can be suitable for use on aircraft. Care is required when disinfecting specialized equipment in the aircraft.

#### 2.4.4 Portable Equipment Decontamination and Disinfection

If electrical equipment, such as generators or motors, must be moved out of a quarantine area the following procedures can be used. If there is doubt, consult an electrical contractor. Consider whether decontamination of this type of equipment is a priority. It is unlikely that covered electrical equipment will be heavily contaminated. These items are best considered at the end of the decontamination process, when specialists can be more readily consulted.

The most practical method of decontamination involves placing the equipment inside an airtight enclosure, possibly constructed from plastic sheeting, for fumigation. If the equipment can be easily dismantled, it should be, and all of its parts should be placed in a small enclosed space for fumigation. Some electrical items may be inherently airtight, in which case they can be safely decontaminated and disinfected by wiping down with disinfectant. A possible fumigant is formaldehyde gas. Serious consideration must be given to the practical and safety aspects of this procedure. It is important to remember that most viruses will inactivate spontaneously with time. Exposure to the ultraviolet light in sunlight may be another option for disinfecting complex equipment.

Hand-held radios, cameras, tape recorders, and clipboards are a few of the portable types of equipment that will be used inside a quarantine zone. All of these items can be used while protected inside plastic bags. Inexpensive waterproof cameras can be used to record response actions. The waterproof nature of the camera will allow it to be disinfected. When it is necessary to remove this type of equipment from a quarantine zone, the following procedure should be carried out at the small-scale decontamination and disinfection station at the access corridor:

- Wipe protective plastic bags with disinfectant and discard them;
- Wipe the body of the equipment with disinfectant; and
- Replace equipment in a clean plastic bag for removal.

There is a small residual risk of contamination; therefore, these items should only be used in a specific quarantine zone for the duration of the outbreak.

Equipment used to euthanize livestock (i.e., captive bolt guns and firearms) will generally be considered to be grossly contaminated. After use, these devices should be scrubbed with disinfectant at the location where they were used and again at the access corridor.

# **3.0 PERSONNEL**

Generally, staff working at decontamination and disinfection sites will require training in the following areas: operation and maintenance of disinfection or decontamination stations, biosecurity, and CAD. Training in the latter two areas can be provided by local veterinary staff. The training will allow these personnel to make informed decisions regarding the need for and adequacy of disinfection, and the background to identify possible disease spread vectors inside vehicles or otherwise associated with the travelers.

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Often, local fire and rescue personnel have had training in decontamination and disinfection. Other personnel may be obtained from the following organizations: public works department, the Massachusetts National Guard, local citizen's corps, or other organizations with appropriately trained personnel.

#### 4.0 HEALTH AND SAFETY

General first aid and access to emergency medical services must be provided at all traffic control locations that are staffed. This portion of a response would be coordinated by the Safety Officer, a member of the Command Staff supporting the Unified Command.

Decontamination and disinfection area personnel should be provided PPE to minimize their exposure to contaminated materials. Unless stipulated by the lead responding veterinarian, respiratory protection is probably not necessary. Decontamination and disinfection workers should wear waterproof clothing or rain suits, with hoods, that can be disinfected and reused. Rubber gloves and rubber boots will also be needed. These items can be disinfected and reused. Under gloves, cotton or nitrile, should be worn under the outer rubber glove. The personnel should wear hard hats fitted with face shields to protect their faces. In addition, dust masks can also be worn to protect the workers' mouths and to prevent ingesting splashed materials.

#### **5.0 COMMUNICATION**

Due to the dynamic nature of an emergency response to a CAD, the establishment and maintenance of decontamination and disinfection facilities must be coordinated with the ever-changing understanding of the nature and extent of the disease in question. In order to allow the teams in charge of the decontamination and disinfection areas to quickly respond to changing field conditions, communication between the teams and the EOC must be maintained. Real-time communication and pre-shift meetings constitute the required communication needed to support decontamination and disinfection areas.

### 6.0 DOCUMENTATION

Throughout the process of conducting decontamination and disinfection, it will be necessary to provide various types of documentation. For indemnity payments to the responding agency or other forms of state or federal reimbursement or cost sharing, it will be necessary to document the resources applied and expended in decontamination and disinfection. These costs can include labor charges, equipment rentals or purchase, costs of expendable equipment or supplies, subcontractor costs, or any other costs associated with providing the decontamination and disinfection services.

Because of the nature of an emergency response, it is critical to identify personnel who will have the responsibility of documenting these issues or monitoring and verifying that the needed documentation is being collected by other parties. In some cases, identifying a specific response job that includes documentation will be preferable, especially if personnel will be rotated through shifts and response jobs.

Possible actions or items that should be included in a documentation checklist include:

Responder time (hours) Number of responders Identity of responders Sanitation services provided Water provided Number of people/vehicles decontaminated Meals provided Location of each responder Equipment at each point Usage time for equipment Specific quantities of expendables used

Documentation will also be essential to tracking vehicles, heavy equipment, and people who exit and enter the area.

Documentation should be maintained in written form. Video, photographs, and tape-recorded messages can be used to supplement the written documentation. Written documentation can be maintained in a logbook format, using documentation worksheets, or a combination of both.

Documentation should be recorded with an ink pen, and any entry errors should have a single line drawn through them with the author's initials and date recorded at one end of the line. If a logbook is used, it should have numbered pages and the spine should be sown, making the removal of pages both difficult and obvious. Pages should never be removed from a logbook. Anyone making entries in the logbook should sign and date the bottom of each page. If documentation worksheets are used, the author should sign and date the bottom of each worksheet. Sets of logbooks and worksheets should be assigned to each response task (i.e., traffic control, decontamination/disinfection, mortality disposal, etc.) or a master set of logbooks and sheets can be maintained. Logbooks or a group of worksheets is issued from the EOC to a responder, the identification numbers of the logbooks and worksheets should be recorded and the recipient should sign them out in a document-tracking log maintained by the EOC. This establishes a chain-of-custody for the documentation.

If pictures, video, or taped messages or interviews are used to supplement the written documentation record, the following information should be documented for each picture, video segment, or audio-taped message or interview: photographer or interviewer, subject, time, date, person interviewed (video or audio-taped), photo and film roll number, direction (pictures and video), and general weather conditions (i.e., temperature, wind direction, humidity, sky condition, etc.).

# 7.0 TRAINING

Personnel staffing the decontamination and disinfection station would benefit from training in: the operation and maintenance of the decontamination and disinfection equipment, disinfection procedures, associated environmental protection issues; and the inspection of people, vehicles, pets, and other possessions prior to crossing the access corridor.

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# REFERENCES

- Nebraska Department of Agriculture Agricultural Response Monograph Number 004. Decontamination and Disinfection. August 2005. www.agr.ne.gov/homeland/homeland.htm
- Agriculture and Resource Management Council of Australia and New Zealand. (2000). AUSVETPLAN 2000 Operational Procedures Manual Decontamination.
- Bayer (1998). Foreign Animal Disease The Gray Book. Committee on Foreign Animal Diseases of the United States Animal Health Association.

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# **APPENDIX A**

# DISINFECTANTS

# DISINFECTANTS

This Appendix presents a brief description of the classes of disinfectants that might be used and other information, such as general contact times. State and federal officials will determine which disinfectant(s) to use. This information was adapted or modified from the AUSVETPLAN 2000 (Agriculture and Resource Management Council of Australia and New Zealand, 2000). Table 1 lists some potential contagious animal diseases, their transmission routes, and best available disinfectants. Table 2 summarizes the information about disinfectants presented below. Some chemicals in the list below are hazardous and will require special precautions. These chemicals should only be used under the supervision of properly trained personnel.

#### Soaps and Detergents

Soaps and detergents are commonly used to clean the surfaces of contaminated equipment or clothing. Often their primary function is to remove organic matter, soil, grease, and other surface contaminants. The use of hot water and physical abrasion (scrubbing) will enhance the soap or detergent's ability to remove contaminants. The surfactant action of soaps and detergents effectively removes most viruses from contaminated surfaces but is not effective for foot-and-mouth disease.

Many commonly used disinfectants associated with hospitals, dairies, and food processing areas involve soapy combinations of phenolics or quaternary ammonia compounds. These agents are bactericides; however, they have limited use as virucides. While these materials could be used in preparatory cleaning and decontamination, better bactericides and virucides are available that will decontaminate and disinfect at the same time.

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#### Oxidizing Agents

These agents are commonly recommended as disinfectants for many applications. A common oxidizing disinfectant is liquid bleach or chlorine powder for swimming pools (sodium hypochlorite). In a bleach solution, chlorine is released and is a powerful oxidizing agent and capable of killing all virus groups (Nalepa, 2000). Studies have shown that sodium hypochlorite solutions of around 0.18% provide an effective broad spectrum biocide. The effectiveness of these solutions is optimal in the pH range of 6-9. As the concentration of organic matter increases in the solution, the effectiveness of the solution as a biocide is reduced. Effective hypochlorite disinfecting solutions can be made from household bleach or chlorine powder used to maintain swimming pools. These solutions are negatively impacted at temperatures above 60°F; they rapidly decompose and lose effectiveness as a biocide.

Virkon® is a commercially available oxidizing disinfectant that incorporates a high percentage of surfactant. This yields a good cleaning/decontamination product with virucidal properties. This material is reported to have low environmental toxicity and to be effective against all 17 virus families. This material is not approved for use on skin.

#### <u>Alkalis</u>

High pH materials, alkalis, are effective disinfectants. Common alkalis include sodium hydroxide (caustic soda) and sodium carbonate (washing soda). These agents are low cost and have a natural saponifying action on fats, which can help in the decontamination process. These materials are virucidal, and they maintain their effectiveness even with high concentrations of organic matter. These agents are often used for the disinfection and decontamination of penning, buildings, and manure pits associated with livestock or poultry production.

#### Acids

Acids can be used as virucides. When using an acid, it is important to match appropriate acid or mixture with the virus being treated. These agents can be useful in disinfecting a broad range of materials from liquid effluent to personal decontamination. Citric acid and acetic acids are weak acids that can be useful against many acid-sensitive viruses (e.g., Foot-and-Mouth Disease) and they are mild enough to be used on clothing and for personal disinfection. In some applications, acids can be added to detergents to combine the decontamination power of the detergent with the disinfecting ability of the acid.

# Aldehydes

Gluteraldehyde is a virucide that is effective against all virus families and many other organisms. This agent can be effective at concentrations of 2% and its effectiveness is reduced as concentrations of organic matter increase. Recent studies have suggested possible negative long- and short-term health impacts associated with the inhalation of gluteraldehyde vapors.

Formalin is another aldehyde that is used as a virucide. A 40% aqueous solution of formaldehyde gas is an effective disinfectant. A 1:12 dilution of formalin in water produces an 8% solution that is effective against most virus families, but not against scrapie or bovine spongiform encephalopathy.

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#### Table 1

#### **Common Foreign Animal Diseases**

| Disease                          | Species affected      | Transmission              | Best         |
|----------------------------------|-----------------------|---------------------------|--------------|
|                                  |                       |                           | Disinfectant |
| Foot-and-Mouth Disease           | Cloven hoofed animals | Aerosols, ingestion       | $B^1$        |
| Influenza (avian, equine, swine) | Birds, horses, swine  | Aerosols, ingestion       | А            |
| Newcastle Disease                | Birds                 | Aerosols, ingestion       | А            |
| Renderpest                       | Ruminants, cattle     | Aerosols, ingestion       | А            |
| Peste des Petis                  | Small ruminants       | Aerosols, ingestion       | А            |
| African Swine Fever              | Swine                 | Ingestion, contact, ticks | А            |
| Swine Vesicular Disease          | Swine                 | Aerosols, ingestion       | А            |
| Classical Swine Fever            | Swine                 | Contact, ingestion        | А            |
| Porcine Respiratory and          | Swine                 | Contact, aerosols         | А            |
| Reproductive Syndrome (PRRS)     |                       |                           |              |

Notes: Modified from Agriculture and Resource Management Council of Australia and New Zealand, 2000

Α Best disinfectants are detergents, hypochlorites, alkalis, Virkon®, and gluteraldehyde.

Best disinfectants are hyporchlorites, alkalis, Virkon®, and gluteraldehyde. Bactericides, like quarternary B ammonia compounds and phenolics, are not effective against these viruses. 1

Acids are effective for foot-and-mouth virus.

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# Table 2Disinfectants Effective on Viruses

| Disinfectant                | Form   |   | Contact    |   |  |
|-----------------------------|--|---|------------|---|--|
| Group                       |  | Strength  | (minutes)  | Applications  |  |
| Soaps and                   | Solids or  | As appropriate  | 10         | Cleaning and decontamination. Can be used on                        |  |
| Detergents liquids          |  |   | 10         | Category A viruses (i.e., lipid containing virus).                  |  |
| Uxidizing Agents            |  |   |            |   |  |
| Sodium                      | Concentrated                                     | 1:5 dilution (2-3% available chlorine), 1 fl. oz. of              |            | Use for most viruses, loses effectiveness as organic                |  |
| nypochiorite                | liquid (bleach)                                  | nousenoid bleach per gallon of water                              | 10-30      | matter concentrations increase, rapidly decomposes at               |  |
| Calcium<br>hypochlorite     | Solid  | 4 oz. per gallon (2-3% available chlorine)                        |            | temperatures >60°F.   |  |
| Virkon®                     | Powder   | 3 oz. per gallon (2% weight (w)/volume (v))                       | 10         | Active against all virus families.                                  |  |
| Alkalis                     |  |   |            |   |  |
| Sodium<br>hydroxide Pellets |  | 3 oz. per gallon $(2\% w/v)$ , or a 2% solution can be            | 10         | Very effective on most viruses. Not compatible with                 |  |
|                             | Pellets  | made by mixing 1/3 cup of pellets per gallon of                   |            | aluminum or aluminum derived alloys.                                |  |
|                             |  | water   |            |   |  |
| Po<br>Sodium (an            | Powder<br>(anhydrous)                            | 6 oz. per gallon (4% w/v)   | 10         | Good when high concentrations of organic matter are expected.       |  |
| carbonate                   | Crystals<br>(hydrated)                           | 14 oz. per gallon (10% w/v)                                       | 30         |   |  |
| Acids                       |  |   |            |   |  |
| Acetic                      | Liquid<br>(vinegar is 4 to<br>8% acetic<br>acid) | 4 to 5 % (6.5 fl. oz. of glacial acetic acid per gallon of water) | Not listed | Not a broad spectrum virucide (e.g., effective for Foot-and-Mouth). |  |
| Citric                      | Powder   | $\frac{1}{4}$ oz. per gallon (0.2% w/v)                           | 30         |   |  |
| Aldehydes                   |  |   |            |   |  |
| Gluteraldehyde              | Concentrated solution                            | As appropriate (2% w/v)   | 10.20      | Effective against most viruses.                                     |  |
| Formalin                    | 40%<br>formaldehyde                              | 1:12 dilution (8% v/v)  | 10-30      | Releases irritating and toxic gas.                                  |  |

(Modified from Agriculture and Resource Management Council of Australia and New Zealand, 2000; and Bayer 1998)