

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
PATHOGEN MANAGEMENT**

New York (no.)
Code NY783

DEFINITION

Use of preventative measures, livestock management and established conservation practices to provide multiple barriers to the introduction, replication and survival of pathogens in domestic livestock and transport of pathogens to surface and groundwater resources.

- Establishing appropriate biosecurity measures, including those controlling people, pets, pests and other animals, equipment or materials that may transport pathogens from other sources.
- Maintain good hygiene and minimize herd or flock contact with manure from other animal groups.

PURPOSE

To reduce the threat to surface and ground water from contamination by pathogenic organisms found in farm animals.

The second barrier minimizes cross-contamination among animals and amplification of infection within a herd or flock.

CONDITIONS WHERE PRACTICE APPLIES

On agricultural land where the potential to contaminate surface and ground water by pathogens exists.

This shall be accomplished by actions such as:

- Keeping animal raising areas clean and dry.
- Proper worker hygiene when moving between facilities or animal groups.
- Ensuring that all feeds are stored and handled properly, and feeding utensils are clean, specifically avoiding manure contamination of feed.
- Implementing rodent and pest control programs.
- Separating pre-weaned animals to prevent direct contact with another young animal and with adult manure.
- Isolating infected animals until they are no longer infectious.
- Identifying the order in which animals should be fed, i.e. youngest to oldest,

CRITERIA

A plan incorporating a 3-barrier approach, as described below, shall be developed. A veterinarian, utilizing the protocol from the New York State Cattle Health Assurance Program (NYSCHAP), or other similar protocols for appropriate species, shall develop the first two barriers

The first barrier is reducing the potential for pathogens to enter the farm. This shall be accomplished by carrying out actions such as the following:

- Testing non-chlorinated water supplies that serve the herd for fecal coliform bacteria according to the Water Testing conservation practice standard (NY731).

etc. depending upon the pathogen of concern.

The third barrier restricts movement of contaminated feces into watercourses. This shall be accomplished by practices such as:

- Diverting clean water away from livestock facilities (NY707).
- Treating confinement area runoff according to the Waste Management System conservation practice standard (NY312).
- Spreading manure according to the Nutrient Management conservation practice standard (NY590).
- Excluding animals from water bodies, such as streams, creeks, rivers and lakes.
- Isolating septic systems, leach fields and filter areas, and other septage disposal areas from grazing animals. Protecting aquifer recharge areas and wellheads from manure runoff.
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CONSIDERATIONS

Consider establishing an isolation period for animals coming onto a property.

Consider testing non-chlorinated water supplies that serve the herd for fecal coliform bacteria during droughts, local disease outbreaks, and after extreme rainfall events.

Consider composting, anaerobic digestion and other treatment practices as a method to reduce pathogens.

Consider participating in the New York State Cattle Health Assurance Program.

Consider developing an appropriate vaccination program.

Consider cleaning rearing housing flooring and air drying for 2 weeks between animal occupation cycles.

Consider steam cleaning and disinfecting of livestock facilities between animal occupation cycles.

Consider separate feed utensils and buckets for each animal.

Consider washing and drying water buckets between feedings.

Consider if continuous rearing activities occur on farm, to rotate animals across locations in order to allow previously used areas to be thoroughly cleaned and sun dried prior to receiving new animals.

Consider delaying the use of pasture or hay land for one year after fertilization with manure.

Consider participation in the Agricultural Environmental Management Program.

PLANS AND SPECIFICATIONS

Plans and specifications shall be in accord with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATIONS AND MAINTENANCE

The operation and maintenance of pathogen management is critical to the success of reducing the threat to surface and ground water. The owner/client shall be responsible for implementing the pathogen management plan. Operation and maintenance shall address the following:

- periodic plan review to determine if adjustments or modifications to the plan are needed
- implementation and annual adjustment of the waste management system (NY312).

- inspection and maintenance of animal exclusion.

REFERENCES

NYS Agricultural Environmental Management (AEM) Tier 2 worksheet titled **“Waterborne Pathogens”**

Waterborne Pathogen Information Sheet:

Principles of Pathogens of Concern:

Cryptosporidium and Giardia

Escherichia coli 0157:H7

Watershed Science Institute, USDA, NRCS

Waterborne Pathogens in Agricultural Watersheds, Watershed Science Institute, USDA, NRCS, June 2000 (NRAES 147)

NYSCHAP Core and Environmental Pathogen Modules