

# Reducing Pollution Potential of Animal Feeding Operations

Michael Christian, Watershed Specialist, Kansas State University  
Manhattan, Kansas, mchristi@ksu.edu

## Background

Most older animal feeding operations are located on sites more for convenience and practicality rather than concern for water quality. Being convenient to water and other factors, often allow these sites to be high risk for pollution. Our goal has been to help these operations make the necessary modifications with best management practices to reduce the risk for pollution potential.



## Site Assessment Worksheet

- Capacity
- Pen Slope
- Slope Below Pen
- Distance to Stream
- Utilization
- Soil Type
- Buffer Type
- Buffer Size
- Extraneous Drainage
- Annual Rainfall
- Rainfall Intensity



## Impacts

The following represents animal feeding operations that implemented Best Management Practices to reduce pollution potential:

- 2005 - 44 Operations, 9,696 Animal Units
- 2006 - 42 Operations, 13,599 Animal Units
- 2007 - 40 Operations, 10,328 Animal Units
- 2008 - 29 Operations, 6,673 Animal Units

## Potential Load Reduction

Using the impacts listed above, the potential load reduction can be estimated for the following years:

- 2005 - Nitrogen, 257 Tons; Phosphorus, 145 Tons
- 2006 - Nitrogen, 360 Tons; Phosphorus, 204 Tons
- 2007 - Nitrogen, 274 Tons; Phosphorus, 155 Tons
- 2008 - Nitrogen, 177 Tons; Phosphorus, 100 Tons

## Best Management Practices Incorporated

- Grass Buffers
- Berms
- Adjust Animal Numbers and Sizes
- Abandon Pens
- Relocate Pens
- Resize Pens
- Clean and Reshape Pens
- Sediment Basins
- Lagoons
- Waste Storage Structures
- Manure Management

