



Chatfield Watershed Authority Policy

Manure Management Guidelines

Board Adopted May 21, 2018

PURPOSE

Manure is a contributing factor to nonpoint source pollution in the Chatfield watershed. The Chatfield Watershed Authority¹ (Authority) Manure Management Guidelines provide recommendations for manure management strategies to prevent excessive loading of nutrients into the watershed. Excess nutrients can degrade the water quality of surface water and alluvial groundwater; cause exceedance of Water Quality Standards; and increase risks to human health and the environment. The Manure Management Guidelines were developed pursuant to the Chatfield Reservoir Control Regulation (5 CCR 1002-73) (“Control Regulation 73”) and Amended and Restated Intergovernmental Agreement² (“IGA”). Under Control Regulation 73 the Authority is to implement point source, nonpoint source, and stormwater controls to protect water quality and beneficial uses of the Chatfield Reservoir.

APPLICABLE FACILITIES

The Manure Management Guidelines are intended for new facilities where animals are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period (“Animal Facility”) within the Chatfield watershed. It is also applicable to existing Animal Facilities that are enlarged, expanded, extended, increased, altered, or moved for any reason within the Chatfield watershed. If an existing Animal Facility discontinues use for any reason for a period of more than 12 consecutive months, the facility is encouraged to follow these recommended management strategies.

STATE AND COUNTY REGULATIONS

Animal Facilities are subject to the State of Colorado Control Regulation 81 Animal Feeding Operations (5 CCR 1002-81). Section 81.8 provides best management practices (BMPs) for Animal Facilities. Additionally, Douglas and Jefferson Counties have zoning regulations that contain special provisions requiring the protection of water quality. Section 24.G.4 of the Douglas County Zoning Resolution references animal requirements related to the type and quantity allowed, vegetation requirements, waste and odor

¹ The Chatfield Watershed Authority was formed by local governments and Title 32 Districts, industry, corporations and other entities within the Chatfield Watershed to implement point source, nonpoint source, and/or stormwater controls (Regulation 73.2.4).

² The purpose of the Authority is to provide for and promote a regional, coordinated approach for the provision of water quality in the Chatfield Watershed for recreation, fisheries, drinking water supplies, other beneficial uses, and for the public benefit of the Members of the Authority, their inhabitants, and the People of the State of Colorado, as deemed appropriate by the Board of Directors of the Authority, and may include but is not limited to: providing for the construction, operation, and maintenance of point and nonpoint source control projects; monitoring of the Chatfield Reservoir, South Platte River below Strontia Springs Reservoir, and Plum Creek and the water flowing into them; recommending water quality standards therefore; continuing to implement Colorado Water Quality Control Commission Chatfield Reservoir Control Regulations, 5 CCR 1002-73; and coordinating with state and federal agencies regarding water quality control measures.

regulations, and grazing capacity. Jefferson County prohibits manure to accumulate to a level that would cause hazard to the health, safety, or welfare of humans and/or animals.

Manure management strategies (solid waste and liquid waste stream) used in the Chatfield watershed should not increase the total annual load of total phosphorus above ambient conditions where such waste can or potentially can reach surface waters in the watershed or within the groundwater. As such, the Authority recommends the identification and implementation of BMPs to reduce nutrient contributions in coordination with other agencies to promote a regional, coordinated approach to water quality protection in the watershed.

BEST MANAGEMENT PRACTICE RECOMMENDATIONS

The Authority recognizes each Animal Facility is different and a one size-fits-all approach is not practical. The Authority encourages owners and operators to assess and implement BMPs that are most effective in preventing an accumulation of nutrients into surface and alluvial groundwater. Additionally, the Authority recommends owners and operators develop a monitoring and reporting plan that should prove effectiveness of the proposed management strategy selected for the Animal Facility.

The primary objective of choosing BMPs is to manage manure by minimizing its potential impact on water, health, and air quality. BMPs should support (1) reduction of surface area for confinement areas without vegetation; (2) reduce water that comes in contact with manure; and (3) minimize water containing nutrients from manure from leaching to groundwater. Appropriate BMPs to reduce nonpoint source pollution derived from Animal Facilities may include the below recommendations.

Recommendations for Best Management Practices

- 1) Divert runoff away from the operation
 - a. Construction of ditches, terraces, or other waterways
 - b. Installation of gutters, downspouts, and buried conduits to divert roof drainage
 - c. Construction of roof areas over animal confinement areas where practicable
 - d. Installation of confined storage containment and/or hard impervious surface to place manure for storage if water table is high to prevent runoff or groundwater leaching
- 2) Decrease open lot surface area
 - a. Practice good grazing management
 - b. Rotate grazing to allow pastures to rest
 - c. Plant permanent vegetation strips around surface waters and erosive fields
 - d. Reduce lot size
- 3) Minimizing manure transport to streams
 - a. Locate facilities down-gradient and at least 150-feet away from water supply wells and surface water
 - b. Locate facilities above 100-year floodplain
 - c. Avoid application of manure on saturated soils and lands subject to excess erosion
 - d. Regular inspections of facilities to ensure seepage does not exceed state and local restrictions

- e. Use lowest practical amounts of water for manure and wastewater flushing
 - f. Provide adequate manure storage capacity based upon manure and wastewater production
 - g. Create a buffer area around surface water and wells where no manure is applied to prevent possibility of water contamination
 - h. Prevent animals from direct contact with surface water
 - i. Minimize water with nutrients from manure from leaching into groundwater
 - j. Cover manure storage piles to prevent rain or snow accumulation
- 4) Follow the BMPs for [Manure Utilization Bulletin 568A](#) by the Colorado State University Cooperative Extension for planning sound management practices of animal waste as a nutrient source for crops.
- a. Apply manure to land application sites at an agronomic rate

ADDITIONAL RESOURCES

Additional resources to support the assessment and implementation of applicable BMPs for a manure management include U.S. Department of Agriculture, Colorado Water Quality Control Commission Control Regulation 81, Colorado State University Cooperative Extension, Colorado Agriculture Leadership Foundation (CALF), and Douglas and Jefferson Counties.