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TIMELY INFORMATION

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Wet Weather Lagoon/Storage Pond Management: Protecting Natural Resources during Chronic Rainfall Periods

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Protection of our natural resources in Alabama, especially our rich water resources, is of concern to us all. The Alabama Cooperative Extension System (ACES), the Alabama Department of Environmental Management (ADEM), and the Natural Resources Conservation Service (NRCS) are working closely together to provide educational information and support to help prevent wastewater discharges from the many Animal Feeding Operations (AFOs) in the state.

The Pollution Prevention section, 335-6-7.28, of the ADEM AFO/CAFO⁴ Rule talks about preventing/controlling wastewater discharges from confinement buildings, lagoons, storage ponds/sumps, and other structures holding liquid animal wastes. Section 335-6-7.32, Other Requirements, actually says "AFO owners/operators *shall at all times properly operate and maintain all facilities and systems of treatment and control*" that are in-place on-site to prevent/control any "about-to-happen" or actual waste/wastewater discharge.

An up-to-date Waste Management System Plan (WMSP) that "meets or exceeds" current NRCS guidelines and ADEM regulations, and records that document "proper operation and maintenance" according to the WMSP, will avoid or minimize any potential enforcement action by ADEM. Do not wait for a Wet Weather Emergency to happen. Contact NRCS or ACES now to begin planning for wet weather in an Emergency Action Plan (EAP) and be prepared. Let's take a look at typical "routine" and "emergency" operation.

Typically, to "properly operate and maintain" liquid waste containment structures the owner/operator follows the specific operation and maintenance plan for each liquid waste system. This "O & M" plan is written according to *ADEM's Pollution Prevention requirements* and applicable *NRCS Codes, particularly 359, Waste Treatment Lagoons, and 313, Waste Storage Facilities*. It includes making sure all of the *pumping equipment and waste containment facilities are in good working order; all liquid levels are monitored; future liquid inputs anticipated, and backup or emergency facilities are in place*. Properly trained personnel should be *on hand* to handle the *normal and emergency operation* of the facilities and equipment.

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The typical *waste containment facility portion* of the O&M plan will also include *daily/weekly monitoring and recording: wastewater levels; rainfall on the containment facility; the condition of all structural containment controls (berms, pits, pipes, markers, etc.) and pumpout activities. Pumpout records will include the dates and times of pumpout operations, amount pumped, and the weather conditions at time of pumpout.*

A Liquid Level Marker should be installed in the waste containment structure that quickly shows all critical volumes/depths in accordance with your WMSP in a way that encourages proper liquid level management. ACES Publication BSEN-01C4 (REV JUN03), Liquid Animal Waste System Operation and Inspection Guide (www.aces.edu/dept/aawm/LiqAnWasteSys-Guide.pdf) gives an example of a Liquid Level Marker, with basic operation descriptions, inspection requirements, and examples of acceptable record keeping forms.

But what if, with proper routine operation, record keeping and maintenance as described above, the waste containment structure *IS* about to discharge? The owner/operator should take the following steps:

1. Call ADEM IMMEDIATELY if a *DISCHARGE IS IMMINENT or OCCURRING*. Failure to call/contact and coordinate with ADEM in this circumstance is a significant violation of ADEM's AFO/CAFO Rule.
2. Call ADEM any time the liquid level rises into the designed reserve storage volume AND soil and vegetative condition of the land application sites, weather conditions and forecasts, etc., ***appear to be unfavorable for normal land application for the next 3-5 days. THIS COULD BE AN EMERGENCY SITUATION.***
3. Call NRCS or another ADEM-approved Qualified Credentialed Professional (QCP) (see ANR-1206, Qualified Credentialed Professionals under Alabama's AFO/CAFO Rules, www.aces.edu/dept/extcomm/publications/anr/anr-1206/pdf/anr-1206.pdf), as soon as possible for *onsite technical assistance with developing AND/OR implementing an Emergency Action Plan (EAP) as needed.*
4. Get ADEM acceptance of the EAP *before implementing* and prior to a potential discharge situation.
5. If the EAP is to *alter a containment structure*, the alteration MUST be done *under the supervision of an engineer QCP*. The engineer QCP must also *inspect the entire structure* as soon as alteration is completed and again when the alteration is dismantled at the end of the emergency event.
6. If the containment structure IS ALTERED FOR THE EMERGENCY, the owner/operator *should inspect/watch the containment structure throughout the emergency event* for possible problems, **consult with your engineer QCP**, and take remedial action as necessary.
7. If emergency land application is approved, the *application sites should be inspected* during application for condition and saturation at least once every 3-4 hours and by a QCP at least once a week.
8. During the emergency situation the operator should *keep detailed records* of emergency actions taken, rainfall, liquid levels, land application site conditions, volumes discharged or applied and ALL inspections.

Following these steps to *request onsite assistance* before an emergency situation occurs, and to *document all actions* to comply with ADEM rules will provide a reasonable defense in case of citizen complaints, bad public perception / reaction, and/or civil lawsuit.