BRINK, INC.
Environmental Solutions

July, 2015

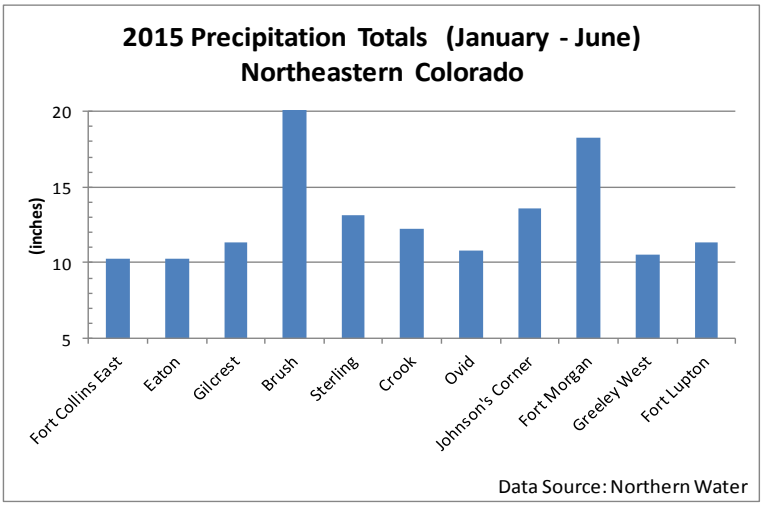
What's Going On…?

Compliance | Nutrient Management | Permitting | Engineering | Sampling and Testing | Site Assessment

Full Ponds Are Great…for Ducks!

The first half of 2015 has been a soggy one in many parts of Colorado. Some areas of the state have already received precipitation totals exceeding their annual average. National Weather Service (NWS) data indicate that in just the first 10 days of May, several stations around Fort Morgan and Brush received more than seven inches of rainfall. The chart below displays 2015 precipitation totals through June for select locations around northeastern Colorado.

One benefit to the abundant rainfall is that it has officially ended the multi-year drought in most areas of southcentral and southeastern Colorado according to the NWS Drought Monitor.



Full wastewater impoundments have been a problem at many animal feeding operations, and saturated fields have complicated dewatering efforts. The value of being covered by a discharge permit is driven home in years such as this one. Legal discharges are allowed under the state permit as long as the facility is fully compliant with the conditions of its permit when the discharge occurs.

If you don't have a wastewater discharge permit, we can assist you in obtaining one. If you prefer to operate without a permit, below are some options for dealing with excess waste-water. Note: Most require up-front planning.

Options for Managing Excess Wastewater:

- **Running portable pipe to neighboring fields**. Soil testing and agronomic balancing must be completed before wastewater is land applied. If the neighbor controls the timing and rate of application, a completed manure transfer worksheet is required, which identifies the party receiving wastewater, the quantity removed, the date(s) of removal, and confirmation that recent wastewater test results were provided to the third party recipient.
- **Planting winter cover crops** to boost the amount of wastewater that can be agronomically applied.
- **Utilizing small acreage areas around facilities** that are normally not irrigated. Like any land application area, appropriate best management practices must be utilized, and wastewater must be agronomically applied.
- **Building additional storage capacity**. Small acreage corners and unused implement storage areas can be dual-purposed to provide additional storage when needed. Soil testing and engineering is needed in advance of construction.
- **Expanding existing storage structures**. Where shallow groundwater prevents deepening of structures, lateral expansion may be possible. In some cases, embankments can be raised and lined to provide additional storage.
- **Apply nutrients for the next crop:** Regulation 81 requires that plant available nitrogen applied on cropland via manure or wastewater must be utilized within 12 months of application. This allows for a short-term buildup of nitrogen ahead of the next crop, which will then utilize the nitrogen. The 12-month time window helps facilitate timely impoundment dewatering even when land application soils are not immediately in need of nitrogen.

Buying or Selling Property?

When you are looking at property to buy, you're excited about the property's features and how you'll use them in your business. What you're not thinking about is the unseen environmental liability that might be lurking in the soil and groundwater.

Before you buy any commercial or agricultural property, a Phase 1 environmental assessment should be performed. For properties with livestock facilities, a CAFO compliance assessment should also be included.

And if you're considering selling property, wouldn't you rather know up front if there are compliance issues or other potential environmental red flags that might be identified during the due diligence process? Having an environmental assessment conducted before you list the property provides you with the knowledge you need to negotiate confidently during the sales process.

Brink, Inc. is not affiliated with any real estate company and provides an independent environmental assessment with results you can count on. Our CAFO compliance assessment report also provides an estimated cost for correcting deficiencies. Contact Phil to schedule an environmental site assessment.

Wastewater Impoundment Management Checklist

- ✓ *Adequate storage is available for design storm runoff*
- ✓ *Embankments are free of holes and deep rooted vegetation*
- ✓ *Liquid level markers are in place*
- ✓ *Top of embankment is level and provides at least 2 feet of freeboard*
- ✓ *Inlets and outlets are free of debris*
- ✓ *Spillway is in functional condition*
- ✓ *Eroded areas have been filled and properly compacted*

Whole Pond Seepage Testing = More Accurate Results

There are a few ways to test the seepage rate of an impoundment. Each method has its pros and cons, but the whole pond seepage test is the only method that captures the seepage rate of everything under the wetted perimeter of the pond, including the slopes. Our solar-powered impoundment seepage testing system monitors any changes in impoundment liquid levels and provides real-time updates in a web-based format. Perfected during a multi-year study of irrigation pond seepage rates in the Arkansas River Basin, the system represents the seepage rate of the whole storage structure, making it more representative of actual conditions than core sample or standpipe tests.

If you have a wastewater impoundment, irrigation or recreational pond or lake and you need to know how much water it is losing through the liner, contact us to get a system set up. Results are usually available in less than a month and are certified by a Professional Engineer.

Pre-Consumer Food Waste to Livestock Study

Ever wondered what your local supermarket does with their past-prime produce and deli trimmings? While more food processers, distributors and grocers are donating to food banks or composting their food waste, many are still sending it to the landfill. For example, one facility in metro-Denver discards up to 500 tons of bakery waste per year.

Brink, Inc. is currently looking at how the Colorado livestock industry can work more closely with food producers to utilize pre-consumer food waste for its highest and best purpose. In some cases, composting is the best option, however, clean (pre-consumer) vegetable, bakery, grain and fruit food waste can be mixed with other feedstuffs and fed to livestock. This method represents a superior use of a valuable product. Improved utilization of pre-consumer food waste by the livestock industry better conserves our natural resources, and can mutually benefit generators and livestock producers by reducing their respective production costs.

The food waste study is partially funded by a front range feedlot and the Colorado Department of Agriculture. The study will identify barriers and determine the conditions necessary to cost-effectively utilize pre-consumer food waste at livestock facilities.

Brink, Inc. is contacting pre-consumer food waste generators throughout Colorado and seeking input from livestock producers. Please contact Phil at 720-887-9944 if you are already utilizing food or brewers waste, or are interested in receiving pre-consumer food waste at your facility. Study results will be reported later this year.

LAND APPLICATION TIP: If manure or wastewater will be spread on warm days, do so in the morning. Air typically rises in the morning, which will help minimize odor travel along the ground surface. Incorporate manure into the soil if possible for increased nitrogen retention and odor control.

About Brink, Inc.

Since 1999, Phil Brink, CEP, M.S., has assisted Colorado livestock and ag producers with environmental compliance, state and county permitting, conservation planning and design, environmental assessment and field sampling. As a former Hydrologist for the Kansas Division of Water Resources, Phil is also experienced with water rights and permitting, stream sampling and water quality assessment.

Glenn Newlon, P.E., has more than 30 years of experience helping Colorado agricultural producers with their engineering challenges. He is a former NRCS Area Engineer, where he served as a trainer and lead engineer for all NRCS-funded projects in Northeast Colorado. His areas of expertise include livestock wastewater handling and storage, stream and river embankment restoration and protection, water control structures, public water supply systems, surveying, concrete structure design, and irrigation, including sub-surface drip systems.

Brink, Inc.
Box 401, Erie, CO 80516
www.brinkinc.biz
O: 720-887-9944
M: 303-475-3453
phil@brinkinc.biz
glenn@brinkinc.biz
NRCS TSP #B03-433