Production Ag and Water Quality

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Summary

Introduction

CAFOs and AFOs

Ag needs high quality water

Ag in Larimer County

Buy and Dry and Water Quality

Discharges and opportunities to enter surface and ground water

Nitrogen Deposition In RMNP- A Unique collaboration to reduce environmental impacts

Nitrogen and Phosphorus reduction for compliance with Reg 85



CAFOs and AFOs

AFO=(a) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12month period, and (b) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility

Large CAFO an AFO>999 head of cattle (699 dairy cows)

Medium CAFO is an AFO=300-999 head of cattle(200-699 dairy cows)

Reg 81-includes BMPs and requirements for both CAFO types

Agriculture needs good clean water.

Use water for cleaning equipment that holds or touches milk or food.

Salts and minerals

Bacteria (Rocky Ford Cantaloupes)

Milk is 87% water; livestock have to be willing to drink it.

Crops sensitive to salinity (TDS)

Ag in the Poudre Basin

Agriculture is contracting

- In 2002: 521,599 acres in farming/66,651 irrigated
- In 2017 482,456/60,191. Loss of almost 10% of irrigated ground and 8% of total farm ground in 15 years.
- Cattle and Calves in LC decreased almost 1.8 MM in this same period.
- Sheep reduced 381,000

LC is growing: 359,800 now projected to be 452,000 in 2035; (25%+ in 15 years)

Weld County 333,000 now and projected to grow to 506,000 by 2035 (52% in 15 years!)



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Larimer County Population Projection

Buy and Dry

Removes prime farm ground and strips away water (for development)

Impervious surfaces (concrete) replace pervious surfaces (farm ground)

Well managed farm ground actually can protect waterways.Crop ground acts as a "green filter".

Discharges from Stormwater collection systems are the number one source of water pollution in the U.S.

Ag Discharges

Runoff from fields

Soil testing

Application of agronomic rates of fertizler/manure.

Discharge from CAFO and AFO

- Lagoon Management, 10 and 25 year storms
- Capture precipitation
- Proper use of effluent

Seepage or discharge to ground water (wastewater lagoons) Airborne pollutants

Urban Sources

WWTP

- Nitrogen and Phosphorus
- Reg 85

Stormwater

- Municipal Separate Storm Sewer System (MS4)
- Reg 85

Transportation

Regulations to Control Water Pollution

Reg 85-Nutrient Management and Control (point and non point source regs)

Reg 31-Basic Standards for surface water

Reg 41 and 42-Ground water standards.

Reg 61-Discharge permits

Reg 81-Animal Feeding and Control Reg (regulates impoundments)

What Ag is doing-Collaborations

Rocky Mountain National Park

- NH3, NOX and Nitrogen Deposition
- Multiple partners and Stakeholders

Regulation 85

- BMPS for Nitrogen and Phosphorus reductions
- Colorado Dept of Ag
- CDPHE

Poudre River Forum February 28,2020

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