

EPA CAFO ACTIVITIES IN THE ILLINOIS RIVER WATERSHED

September 14, 2010

EPA Performance-Based CAFO Strategy

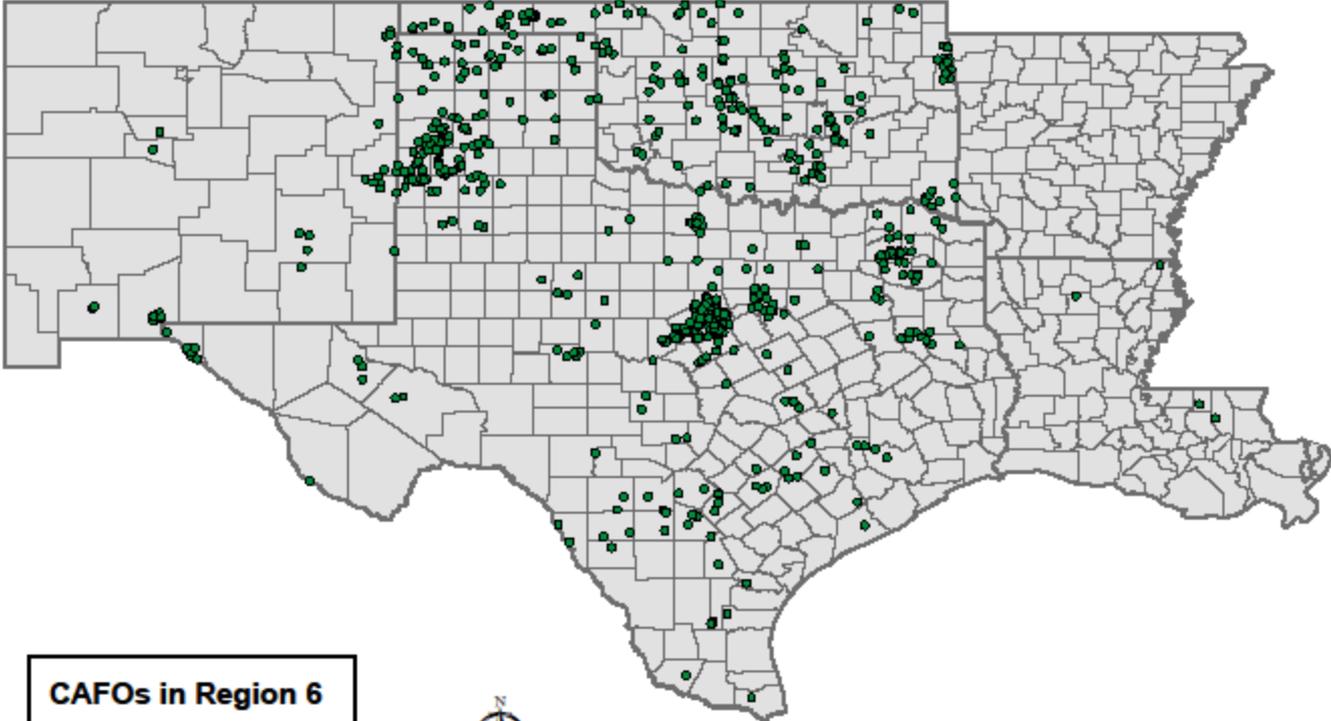
- ▣ Region selected two priority watersheds
- ▣ Evaluation criteria for high-risk watersheds
 - Densities of CAFOs
 - Number of total animals
 - Impaired waters
- ▣ Three year project

Regulatory

▣ Federal definition of CAFO includes:

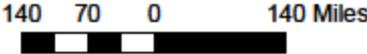
- Dairies w/ 700 or more (dry and milk cows) *or* Dairies w/ 200 or more (dry and milk cows) that discharge
- Egg-laying operations w/ 82,000 layers *or* Egg-laying operations w/ 25,000 layers that discharge
- Broiler operations w/ 125,000 birds *or* Broiler operations w/ 37,500 birds that discharge
- Swine operations w/ 2,500 hogs greater than 55 lbs. *or* Swine operations w/ 750 hogs greater than 55 lbs. that discharge

CAFOs in Region 6

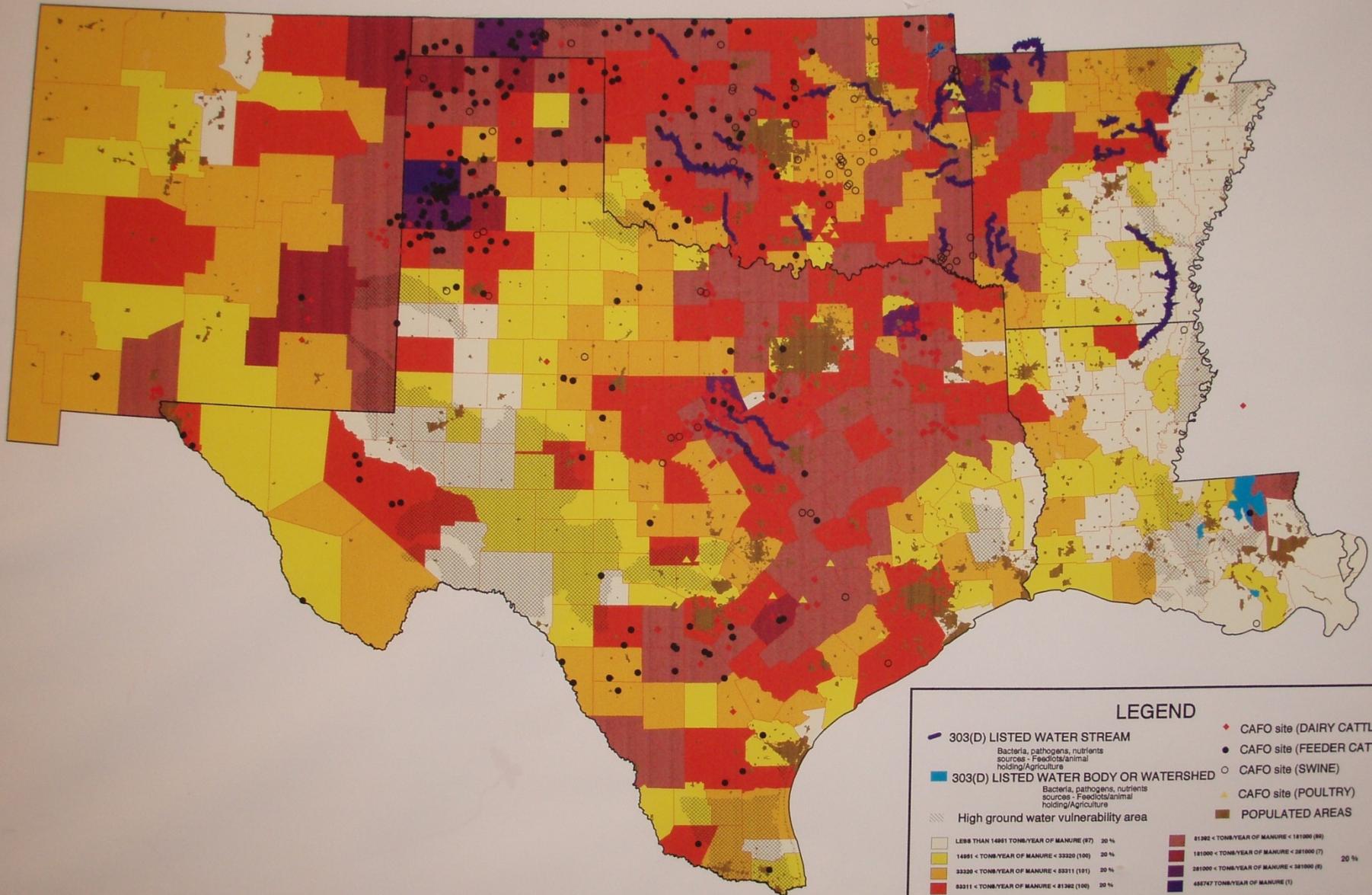


CAFOs in Region 6

- Permitted_cafos_2009
- State boundary
- ▒ County boundary



ANIMAL OPERATIONS - MANURE PRODUCTION BY COUNTY



LEGEND

- 303(D) LISTED WATER STREAM
Bacteria, pathogens, nutrients sources - Feedlots/animal holding/Agriculture
- 303(D) LISTED WATER BODY OR WATERSHED
Bacteria, pathogens, nutrients sources - Feedlots/animal holding/Agriculture
- High ground water vulnerability area
- CAFO site (DAIRY CATTLE)
- CAFO site (FEEDER CATTLE)
- CAFO site (SWINE)
- CAFO site (POULTRY)
- POPULATED AREAS

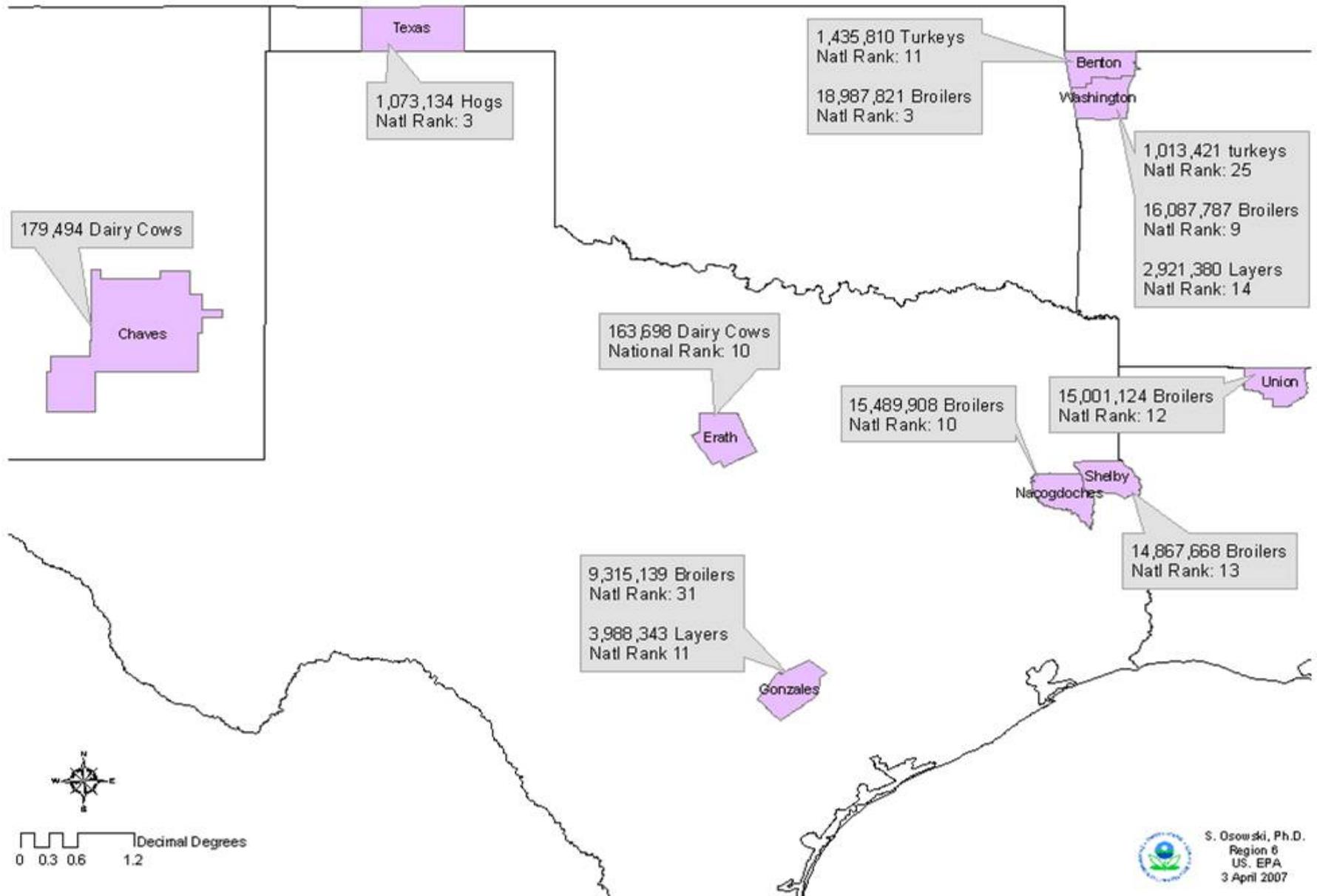
LESS THAN 14891 TONN/YEAR OF MANURE (87)	20 %	81262 < TONN/YEAR OF MANURE < 181000 (8)	
14891 < TONN/YEAR OF MANURE < 33220 (106)	20 %	181000 < TONN/YEAR OF MANURE < 281000 (7)	
33220 < TONN/YEAR OF MANURE < 53211 (181)	20 %	281000 < TONN/YEAR OF MANURE < 381000 (8)	20 %
53211 < TONN/YEAR OF MANURE < 81262 (100)	20 %	452747 TONN/YEAR OF MANURE (1)	

Dry manure tonnage were computed using average numbers of animals (by different types), multiplied by a scale adjusted yearly manure production per animal.

Data Compiled from the 1992 Census of Agriculture, U.S. Dept. of Commerce, Bureau of the Census (County level, EPA Region 1) (1988) (CAFO's, 10/87) (1992), 303 (D) (1990) (see from American Livestock, New Mexico, Oklahoma and Texas.

Map produced March 31st, 1998.

Regional Map: Animal Operations Numbers



R6 Priority Watersheds

- ▣ Lake Fork watershed, TX
 - 2nd highest density of dairies in TX
 - Identified by TX as Dairy Outreach Program Area
 - Impaired streams

- ▣ Illinois River watershed, AR
 - Rank high nationally in numbers of animals
 - Impaired waters
 - TMDL activity

Watershed Activities

- ▣ Surveillance and Data Collection
- ▣ Inspections
- ▣ Compliance Assistance Activities
 - Invitational
 - EPA developed programs
- ▣ Formal Enforcement Actions
 - Compliance orders
 - Penalty orders



Runoff from Compost/Mortality Pile
to Waters of U.S.



NH₄-N 131 ppm
P 74 ppm
Arsenic 22 ppb
BOD, 5-Day 907 mg/L
Total Col. 62,500,000 CFU/100ml
Fecal Col. 1,800,000 CFU/100ml
***E. Coli* 1,700,000 CFU/100ml**

Exposed dry litter piles



Improper Storage of Poultry Manure



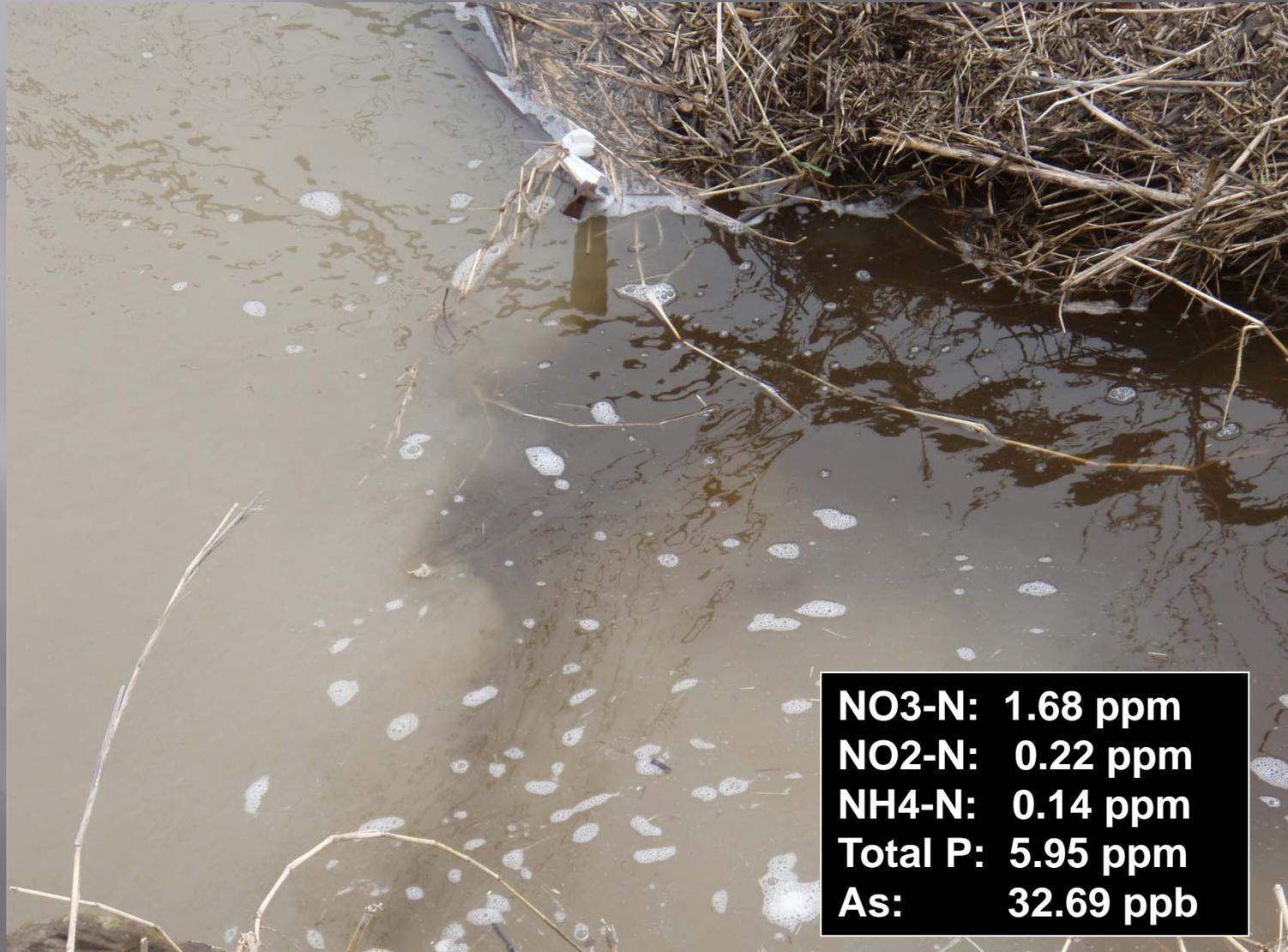
Surface Discharges from Lagoons



Discharge from Land Application Area



Runoff from Overapplication



NO₃-N:	1.68 ppm
NO₂-N:	0.22 ppm
NH₄-N:	0.14 ppm
Total P:	5.95 ppm
As:	32.69 ppb

For additional information

- ▣ CAFO Home
 - <http://www.epa.gov/npdes/home.cfm> , then click on Animal Feeding Operations

- ▣ CAFO Discharge Guidance
 - http://www.epa.gov/npdes/pubs/cafo_implementation_guidance.pdf

- ▣ Willie Lane – lane.willie@epa.gov or
- ▣ 214-665-8460