

**ONE IF BY LAND, TWO IF BY SEA, THREE IF BY AIR:  
THE CHANGING FACE OF ENVIRONMENTAL REGULATION  
OF PRODUCTION AGRICULTURE**

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**10<sup>th</sup> ANNUAL**  
**JOHN HUFFAKER AGRICULTURAL LAW COURSE**  
May 26-27, 2016  
Lubbock

**CHAPTER 6**



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# ONE IF BY LAND, TWO IF BY SEA, THREE IF BY AIR: THE CHANGING FACE OF ENVIRONMENTAL REGULATION OF PRODUCTION AGRICULTURE

## I. INTRODUCTION

### A. Abstract

While agriculture faces a continually growing array of federal and state regulations, recent environmental litigation has impacted the legal landscape for environmental regulation of both livestock and crop production. While there have been no statutory changes to RCRA, CERCLA, the Clean Water Act, or the Clean Air Act, these cases show much remains unsettled in how these statutory systems are applied to production agriculture.

### B. Preface

Land, sea, and air – not only do they represent the fundamental elements of antiquity (along with fire); they also succinctly summarize the media regulated by three of the major environmental laws of the United States: the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the federal Clean Water Act (CWA), and the federal Clean Air Act (CAA). While little has changed in these statutes themselves in recent years, litigation and shifts in federal agency policy and regulations has shifted the ways in which these laws are applied to production agriculture operations.

This article will look at how these changes have come to regulation of the environmental media of land, sea, and air. First, the *Cow Palace* case will be examined for its implications to livestock operations and their nutrient management under RCRA and CERCLA. Next, the *Des Moines Water Works* case will provide an example of how the Clean Water Act can affect crop production, along with an illustration of the importance of the proposed changes to the regulatory definition of “Waters of the United States.” Finally, *Waterkeeper Alliance* case will illustrate the connection of livestock operations to air emission regulation under both CERCLA and the CAA.

## II. COW PALACE AND RCRA APPLICATIONS TO AGRICULTURE

The orders in the case of *Community Association for Restoration of the Environment, Inc. v Cow Palace, LLC* (E.D. Washington, Case No. CV-13-3016-TOR) illustrate a number of ways in which RCRA may be applied to livestock production operations, but also suggests ways the CWA and regulations promulgated

thereunder could also influence livestock operations. This discussion will focus on the facts and findings contained in the case’s Order Re: Cross Motions for Summary Judgment (“Cow Palace Order”) 2015 WL 199345, 96 Fed. R. Evid. Serv. 483, 2015) and the Consent Decree (“Cow Palace Decree,” filed May 19, 2015).

### A. Background of the *Cow Palace* Case

The Cow Palace Dairy (“Dairy”) is one of a number of such operations in the Lower Yakima Valley of Washington, and at the time of the lawsuit had a total herd size of approximately 11,000 animals, including 7,372 milking cows, 897 dry cows, 243 springers, 89 breeding bulls, and 3,095 calves, with most of the livestock kept in open lot pens (Cow Palace Order, \*1, \*2).

The dairy handled its manure through three primary systems – composting of the manure for sale or exchange with other parties, land application, or impoundment in storage lagoons (Cow Palace Order, \*2). Composting of 35,000 tons of finished product took place on open soil pads that did not contain runoff barriers or concrete pads to prevent leaching of nutrients to groundwater (Cow Palace Order, \*11). Land application of manure to crops was undertaken pursuant to the Dairy’s nutrient management plan (DNMP) with some Washington State Department of Agriculture oversight (*see* Cow Palace Order, \*4), but as discussed below, a significant issue in the case was compliance with the DNMP (Cow Palace Order, \*11). The Dairy’s earthen impoundments totaled over nine acres with a total storage capacity of approximately 40 million gallons (Cow Palace Order, \*9). With the exception of one lagoon, the Dairy did not have complete as-built documentation for each lagoon, though the Dairy admitted none of the lagoons had a synthetic liner. (Cow Palace Order, \*9).

Complicating matters were the facts the groundwater aquifer underlying the dairy was a shallow one, located only 30 to 190 feet below grade, and that the aquifer also served as a source of residential drinking water. Reports of nitrate contamination in local drinking water supplies for the area led to an EPA investigation of the issue which determined the Cow Palace Dairy and a number of other dairies in the area were the likely source of the nitrate contamination (Cow Palace Order, \*17). Cow Palace entered into an Administrative Order on Consent with the EPA in 2013 which required the following:

- (1) provide a permanent, safe alternative drinking water supply to residents with wells that exceed maximum contaminant levels within a one-mile radius (MCLs),

- (2) take specific actions to further control potential sources of nitrogen at the Dairy,
- (3) establish a network of monitoring wells to measure the effectiveness of the nitrogen source reduction actions, and
- (4) ensure effective nutrient management at the Dairy to reduce the introduction of nitrate to an underground source of drinking water.

(Cow Palace Order, \*17).

After finding the plaintiffs did indeed have standing and that the vast majority of environmental expert testimony and sampling was admissible, the Cow Palace order addressed four main environmental issues:

- (1) Whether animal waste, when over-applied onto soil and leaked into groundwater is a “solid waste,”
- (2) Whether the Dairy’s manure management practices constitute “open dumping,”
- (3) Whether the Dairy’s manure management practices could cause or contribute to an “imminent and substantial endangerment to public health and the environment,” and
- (4) Whether the Dairies are “responsible parties.”

## B. Issues in the Cow Palace Order

### 1. Could the Dairy’s Land Application of Manure Constitute “Solid Waste” under RCRA?

RCRA’s definition of solid waste (42 U.S.C. § 6903(27)) specifically includes “[a]ny garbage, refuse... and other discarded material... resulting from industrial, commercial, mining, and agricultural operations.” Clearly, manure could be considered a solid waste under this definition, but the RCRA regulations also contain an exemption from the definition for “agricultural wastes, including manures and crop residues, returned to the soil as fertilizer or soil conditioners.” (40 C.F.R. § 257.1(c)(1)).

As a result, when examining a case involving the handling animal waste, the question is not whether the animal waste fits the definition of solid waste, but whether it fits the definition of the exemption. Although there are no published cases on this point, litigation on this point has frequently focused on either the adequacy of the facility’s nutrient management plan or the facility’s adherence to that plan. It should be noted, though, that nutrient management plans themselves have nothing to do with RCRA; they are, instead, a requirement for facilities permitted as Concentrated Animal Feeding Operations (CAFOs) under the regulations of the Clean Water Act’s National Pollutant Discharge Elimination System (NPDES) (*see* 40 C.F.R. 122.23, 40 C.F.R. § 122.42(e)). The theory linking the RCRA agricultural waste exemption and the NPDES nutrient management plan requirement is that manure

application under the nutrient management plan is a proxy for whether the manure is truly “solid waste.” If a nutrient management plan is carefully constructed and adhered to, the manure is simply fertilizer fitting squarely within the animal waste exemption, but if the plan is disconnected from the reality of the manure applied or the land receiving it, or if the plan is ignored, the applicator must be simply disposing of the manure, and it is truly a solid waste.

This formula found application in the instant case as well. Testimony from Dairy employees indicated the DNMP frequently used average or approximated values for both manure nutrient content and the nutrient needs of the land receiving it (*see, e.g.* Cow Palace Order, \*7-\*8). As a result, the court found

there is no triable issue that when Defendants excessively over-apply manure to their agricultural fields -- application that is untethered to the DNMP and made without regard to the fertilization needs of their crops -- they are discarding the manure and thus transforming it to a solid waste under RCRA. Because the excess manure is not "returned to the soil as fertilizers," it is not exempt from RCRA's provisions.

(Cow Palace Order, \*36). Going a step further, the court also found material leaked from lagoons and infiltrating the soil profile and groundwater from composting on bare soils could also constitute solid waste. (Cow Palace Order, \*37-\*39).

### 2. Could the Dairy’s Manure Management Constitute “Open Dumping” under RCRA?

RCRA prohibits “any solid waste management practice or disposal of solid waste or hazardous waste which constitutes the open dumping of solid waste or hazardous waste.” (42 U.S.C. § 6945(a)). In turn, the statutes define “open dump” as “any facility or site where solid waste is disposed of which is not a [permitted] sanitary landfill.” (42 U.S.C. § 6903(14)). Since RCRA allows an exemption for agricultural waste land-applied as fertilizer (and since land-application of other RCRA wastes is also allowed as a waste management practice in other industries, such as land application of wastewater treatment biosolids), the criteria for whether land application ceases being a valid waste management practice and becomes “open dumping” is whether the waste management practice in question causes contamination of “an underground drinking water source beyond the solid waste boundary.” (40 C.F.R. § 257.3, 40 C.F.R. 257.4).

The court concluded that nitrates originating from the dairy would migrate to the underlying aquifer and eventually be extracted from a groundwater well or

eventually discharged to surface water, and thus, that nitrate contamination extended beyond the perimeter of the Dairy and its land application areas. (Cow Palace Order, \*41).

3. Could the Dairy's Manure Management Practices "Cause or Contribute to an Imminent and Substantial Endangerment to Public Health and the Environment"

The plaintiffs in the Cow Palace case were Community Association for Restoration of the Environment, Inc. and Center for Food Safety, Inc., claiming association standing for the case. Their ground for bringing the case, though, was the RCRA citizen suit provision, which allows such suits "against any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment." (42 U.S.C. § 6972(a)(1)(B)).

Unpacking that language takes a bit more of a trip than perhaps it should, but in short, "imminent" "does not require a showing that actual harm will occur immediately so long as the risk of threatened harm is present." (*Price v. U.S. Navy*, 39 F.3d 1011, 1019 (9th Cir. 1994)). Endangerment is "substantial" when it is "serious" (which is admittedly a lot like saying something is "bad" when it's "really not good"). (*Burlington N. & Santa Fe Ry. Co. v. Grant*, 505 F.3d 1013, 1021 (10th Cir. 2007)). And, finally, a substantial endangerment does not require proof of actual harm but rather "a threatened or potential harm." (*Price*, 39 F.3d. at 1019).

The Cow Palace court found

The undisputed facts are that residential wells downgradient of the Dairy exceed the maximum contaminant level, as established by the EPA, and even if the Dairy's AOC obligations are helping to "reduce" the risk of the adverse health effects of the nitrate-contaminated water to nearby residents, the risk still remains to these residents...

(Cow Palace Order, \*42) and that "there can be no dispute that the Dairy's operations may present an imminent and substantial endangerment to the public who is consuming the contaminated water." (*Id.*).

4. Is the Dairy a "Responsible Party" under RCRA?

Finding that there are grounds for a citizen suit alone is not enough under RCRA; there must be a causal link between the defendant's alleged conduct and the harm. Put another way, "[T]o state a claim predicated on RCRA liability for 'contributing to' the disposal of

hazardous waste, a plaintiff must allege that the defendant had a measure of control over the waste at the time of its disposal or was otherwise actively involved in the waste disposal process." *Hinds Invs. L.P. v. Angioli*, 654 F.3d 846, 852 (9th Cir. 2011). The court noted "Congress intended that the term 'contribution' be 'liberally construed,' and such term includes 'a share in any act or effect' giving rise to disposal of the wastes that may present an endangerment." *United States v. Aceto Agric. Chems. Corp.*, 872 F.2d 1373, 1383-84 (2d Cir. 1989).

Unsurprisingly, the Cow Palace Court found the Dairy had a direct connection to the disposal actions at issue in the case and was thus a responsible party. Cow Palace Order, \*43. The court also found the holding company owning the dairy (the sole member of Cow Palace, LLC – Dolsen Companies) and a land holding company (Three D Properties – which transferred 425 acres of land on which the Dairy operated to the Dairy after the case was filed) to be responsible parties as well. Cow Palace Order, \*43.

**C. Case Epilogue: Consent Order**

After issuance of the Cow Palace Order on January 14, 2015, the parties entered a consent decree on May 19, 2015, which required the Dairy to undertake the following:

- (1) Continue inspection and nutrient application recordkeeping under EPA oversight
- (2) Redesign the lagoons with the inclusion of synthetic liners
- (3) Continue and expand the monitoring well program started under the previous AOC
- (4) Provide alternative drinking water supplies for affected landowners
- (5) Deploy a centrifuge manure separator, and commence aerated composting of manure.

**D. Take-aways from the Cow Palace Case**

There are a number of lessons to be learned from the Cow Palace case.

One could say the first is "location, location, location." Locating a potential source of water contaminants over a shallow and permeable groundwater aquifer is discouraged, but when it must be done, extra care should be taken to avoid potential infiltration of contaminants to that aquifer. For example, the relevant Natural Resource Conservation Service (NRCS) guidance documents for construction of animal waste impoundments specifies synthetic liners or compacted clay liners with documented permeability limits. *See generally* NRCS Practice 313. It seems clear from the evidence offered in the Cow Palace case that few if any of the waste storage structures met these specifications. Additionally, the Dairy lacked any

compelling evidence of the specifications for the structures as they were built; especially where waste management systems are concerned, through and detailed documentation of as-built specifications should be retained.

Another lesson is the importance of nutrient management plans and adherence to them. This language from the case is particularly instructive: “Defendants contend [Cow Palace’s general manager] ‘engaged in a series of calculations’ when applying manure to the Dairy’s agricultural fields... Considering [the manager’s] declaration, as well as his deposition testimony, it is clear that characterizing his practices as ‘engag[ing] in a series of calculations’ is a stretch.” Cow Palace Order, \*6. Following a carefully planned nutrient plan based on proper sampling procedures for both the manure and receiving crops and soils is not only a best management practice, it may be critical to avoid civil (and potentially criminal) liability. While there remain no published cases stating application of animal waste outside the specifications of a nutrient management plan constitutes disposal of a solid waste under RCRA), this theory continues to be tested and may eventually find precedential value. Perhaps even more concerning is the fact that similar theory could be used to attempt to attach CERCLA response liability.

### III. DES MOINES WATER WORKS AND CWA APPLICATIONS TO AGRICULTURE

The *Des Moines* case represents another definitionally-driven case that challenges a long-standing agricultural exception while also bringing into play traditional common-law tort elements.

#### A. Background of the *Des Moines Water Works* Case

On March 16, 2015, the Board of Water Works Trustees of the City of Des Moines Iowa (hereinafter “DMWW”) brought suit against the respective Boards of Supervisors for Sac, Calhoun, and Buena Vista Counties in Iowa in their capacities as trustees for thirteen drainage districts in Northwest Iowa (collectively, “Drainage Districts”) (the case N.D. Iowa, Western Division, Case 5:15-cv-04020 will hereinafter be referred to as “*Des Moines Water Works*”).

The primary thrust of the case (Counts I and II) was a citizen suit under the CWA (33 U.S.C. § 1365) (and the Iowa state law equivalent (Iowa Code § 455B.111) alleging the Drainage Districts were discharging pollutants to the Raccoon River (the primary source of drinking water treated by DMWW for its approximately 500,000 customers) without an NPDES permit. *Des Moines Water Works* Complaint ¶2.

Since it is a “public water system” (defined by 42 U.S.C. 300f(4)), DMWW must comply with the federal Safe Drinking Water Standards, which set a maximum

contaminant level (MCL) of 10 mg/L for nitrate. In its complaint, DMWW alleged the Drainage Districts’ discharges of nitrate caused the Raccoon River to exceed the MCL for nitrate for extended periods of time, which in turn required DMWW to construct a \$4.1 million nitrate removal facility costing up to \$7,000 per day to operate. *Des Moines Water Works* Complaint ¶¶ 95-97. Thus, in addition to the CWA citizen suit claim, DMWW also sought damages to compensate for the cost of water treatment under Iowa statutory and common law theories of nuisance (Counts III - V), trespass (Count VI), negligence (Count VII), and takings (Count VIII). As perhaps the cherry on top, DMWW also alleged that any state immunity for the Drainage Districts constituted a due process violation (Count IX).

#### B. Can the Drainage Districts’ Flows be Considered Point Source Discharges under the Clean Water Act?

Since the authors grew up in Western Oklahoma and Eastern New Mexico, respectively, “drainage tile” is an alien concept to them since excess soil moisture was never a problem they had to confront. In simplest terms, drainage tile is a system often used in wetter areas of the country to manage soil moisture. Perforated pipes (originally made out of clay “tile” but mostly made from plastics now) are laid below the soil surface; the perforations allow excess water to infiltrate the pipes, which carry the water to a nearby ditch or stream.

At the heart of the *Des Moines Water Works* case is whether the water released by a tile drainage system can be regarded as a point source discharge under the CWA. That determination is more difficult than one might think, and again requires a walk through a number of definitions, including the controversial definition of “waters of the United States.”

Perhaps the very essence of the CWA lies with 33 U.S.C. § 1311: “Except as in compliance with this section...the *discharge* of any *pollutant* by any person shall be unlawful” (emphasis added). “Discharge” and “pollutant” are both defined terms under the CWA.

33 U.S.C. § 1362(12) defines “discharge of a pollutant” as “any addition of any *pollutant* to *navigable waters* from any *point source*” (emphasis added).

“Pollutant” may be the easiest definition to unpack in this entire scheme, since it basically includes everything. To be more precise, though, 33 U.S.C. § 1362(6) defines “pollutant” as “spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and *agricultural waste* discharged into water.”

So, could nitrate resulting from the application of commercial nitrogen fertilizers to corn fields that has infiltrated groundwater collected via a field tile system be properly regarded as “agricultural waste” and thus be regarded as a “pollutant” under the CWA? There is no definition of “agricultural waste” under the CWA. Should one then look to the concept of agronomic use as discussed above in the *Cow Palace* case? In that case, and others, plaintiffs have advanced the theory that if nutrients are applied well above the capacity of the crops receiving them to utilize those nutrients, such use must constitute disposal of a waste rather than use of a commercially beneficial fertilizer. Note, though, that this theory has seen virtually all of its use in manure or poultry litter cases where farmers or ranchers have been trying to capture the benefit of what is admittedly a by-product of the animal production process. That is very different from the purchase and application of commercial nitrogen fertilizers. It is much harder to argue one is disposing of a product for which they likely paid a significant sum. This issue, and the context of the pollutant definition (which revolves around a “disposal” theme) poses a challenge to whether the specific nitrate at issue would be a “pollutant.”

Then comes the issue of whether a drainage tile system could constitute a “point source.” “Point source” is defined by 33 U.S.C. § 1362(14) as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged...” Since drainage tile could clearly be regarded as a “pipe” discharging to a “ditch,” it would seem that drainage tile discharges clearly would be “point sources.”

To quote the great philosopher Columbo, “not so fast.” The definition of point source also contains an exclusion of “agricultural stormwater discharges and return flows from irrigated agriculture” at 33 U.S.C. § 1362(14), which is expanded at 40 C.F.R. § 122.3(e),(f) as “[a]ny introduction of pollutants from non point-source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands [and] [r]eturn flows from irrigated agriculture.”

So is a discharge from a drainage tile system a point source discharge or is it an excluded non point-source? The answer is unclear. As mentioned above, a discharge from a pipe is, by definition, a point source. However, think for a moment about what a drain tile discharge is – infiltrated runoff (a non point source) that has entered the soil profile and been collected by the tile system. Essentially, then, the tile system has collected a non point-source and made it a point source. To be sure, the CWA regulates non point-source waters that have been

collected and discharged as a point source (for example, industrial and construction runoff sources; see 40 C.F.R. § 122.26). This raises another question, though, since those regulations apply to surface runoff. A tile system is discharging *groundwater*. Neither the statutory language of the CWA nor the regulations contemplate discharges of groundwater, and one could argue that such discharges are akin to “transfer flows” exempted from permitting requirements under EPA’s embattled “water transfers rule” (40 C.F.R. § 122.3(i)), exempting “an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use.”). The analogy is imperfect, but also illustrates that drainage tile discharges are not directly contemplated as traditional discharges of waste water.

Then, of course, assuming there is actually a “discharge” of “pollutants,” one must then inquire whether that discharge of pollutants was to a “navigable water.” The Clean Water Act defines “navigable waters” to include “the waters of the United States, including the territorial seas.” 33 U.S.C. § 1362(7). Quite unfortunately, Congress did not provide a definition of “waters of the United States.” Thus, past decades have been marked by a continuous string of regulations and litigation to determine the proper definition of waters of the United States, culminating with the current proposed regulatory definition notable not only for the controversy of the rule text itself but the campaigns both for and against its promulgation and the flurry of litigation following it. Currently, the rule has been stayed by an order of the Sixth Circuit. *In re EPA and Department of Defense Final Rule, “Clean Water Rule: Definition of Waters of the United States*, 6th Cir. Case Nos. 15-3799/3822/3853/3887 (order entered October 9, 2015). The *Des Moines Water Works* complaint alleges the discharges in question were to streams and open ditches. *Des Moines Water Works Complaint* ¶ 153. Streams would almost certainly be considered waters of the United States, but what about ditches? The question over what waters are jurisdictional to EPA has been a focal point of the debate regarding the current “waters of the United States” rule, and likely will remain so well after the fate of the current rule is decided in the courts.

### C. Take-aways from *Des Moines Water Works*.

There are no clear conclusions from the *Des Moines Water Works* yet, simply because the case is still in litigation. As of this writing, trial in the case was set for early August, 2016, but that date is uncertain given the certification of questions to the Iowa Supreme Court and stays of discovery regarding several elements of the case. See Order on Motion to stay District Court Proceedings Pending Certification of Questions to the Iowa Supreme Court, entered January 19<sup>th</sup>, 2016.

However, the filing of the case itself and its allegations raise some issues of importance for agricultural attorneys and their clients.

First, this discussion has focused largely on whether the drainage tile discharges at issue can, as a matter of law, constitute a regulated discharge under the CWA. Regardless of the eventual outcome of the case on that point, there remain the common law claims of nuisance, negligence, and trespass. Such claims will always haunt agricultural producers if there are downstream damages resulting from agricultural practices. Thus, the need has never been greater for farmer and ranchers to proactively manage nutrient runoff issues through their own best management practices. At the moment, all non point-source pollutants are managed through voluntary programs, and it is likely in the best interests of the agriculture industry to make sure that remains the case.

This leads to a second point. As discussed above, the case raises yet again the issue of nutrient runoff and how closely crop producers must manage their nutrient applications. While there is no requirement for most crop producers to have a nutrient management plan (unless they are applying CAFO-generated wastes), a thorough and well-documented program of soil testing, yield records, and nutrient application calculations could be an important evidentiary piece should litigation arise at some later date. Applying nutrients in amounts correlated to soil conditions and crop needs demonstrates that the producer is using all reasonable and prudent efforts to manage nutrient runoff. Fortunately, new sensor and variable-rate application technologies are making these efforts easier for producers.

This suggests a third point: as an industry, it is far preferable for agriculture to voluntarily manage nutrients than be forced to comply with nutrient restrictions. One need only look to the increasing restrictions on production agriculture in the Chesapeake Bay to see that regional compliance efforts can become necessary if water impairment becomes severe enough.

Finally, the case highlights once again the importance of the classification of any water receiving an agricultural discharge as a “water of the United States.” Much has been made of the definition of waters of the United States, and to be sure, the rule holds important implications for agriculture and all industry sectors. However, the changing definition of waters of the United States has had no impact on the exemptions for agricultural activities. The activities that were exempt before the rule remain exempt today. Further, most people miss the fact that the jurisdiction of the federal government over “waters of the United States” is probably far less important than the authority of the state to regulate “waters of the state.” “Water in the State” is defined by TEXAS WATER CODE § 26.001 as

groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

Thus, the state of Texas already has (and has had for decades) jurisdiction over any water body within the state, regardless of federal jurisdictional definitions.

#### IV. WATERKEEPER ALLIANCE AND AIR EMISSIONS ISSUES IN AGRICULTURE

Although a title like *Waterkeeper Alliance* evokes thoughts of water quality regulations, the matter actually relates to the long-running struggle of how to quantify air emissions from livestock operations and if such emissions should be regulated (or if they should already be subject to regulation under existing law).

Most air emissions are regulated under the CAA, but CAA permits are only required for facilities with a potential to emit 100 tons per year or more of “criteria pollutants” (sulfur dioxide, particulate matter, nitrogen oxide, carbon monoxide, ozone, and lead, *see* 40 C.F.R. Part 50) or 10 tons per year or more of a hazardous air pollutants (or 25 tons per year of a combination of hazardous air pollutants). Most livestock operations release only minimal amounts of criteria pollutants. There are potentially a number of hazardous air pollutants (primarily hydrogen sulfide [H<sub>2</sub>S] and volatile organic compounds) released from the processing of animal wastes in aerobic or anaerobic lagoons, but it is difficult to quantify the emissions of such materials from a dispersed source such as a lagoon (in contrast to measuring such emissions from the stack of an industrial facility). Most estimates using emissions factor calculations suggest the emissions would be below permit limits, though.

Another potential regulatory program applicable to air emissions from livestock operations are the release reporting requirements of the Emergency Planning and Community Right-to-Know Act (“EPCRA”). Under EPCRA, releases of listed materials in an amount exceeding the “reportable quantity” (“RQ”) triggers the requirement to report the release to the EPA’s National Response Center. 42 U.S.C. § 11004. Among the listed materials are ammonia (NH<sub>3</sub>) and hydrogen sulfide, which can be released from animal waste storage areas in amounts exceeding the RQs (100 lbs. in a 24 hour period).

The difficulties surrounding how to accurately quantify emissions from livestock operations led EPA to propose a consent decree in January of 2005 granting immunity for any potential past violations of emissions reporting requirements to livestock operations that took part in a National Emissions Monitoring Study to evaluate animal feeding operations emissions. In 2008, EPA issued a rule exempting “farms” from emissions reporting under the EPCRA reporting requirements, with “farm” defined as “a facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, \$1,000 or more of agricultural products during a year.” 40 C.F.R. § 355.31. Under the rule, all farms are exempt from reporting to the National Response Center, and farms smaller than the “Large AFO” thresholds under EPA’s CAFO rules (see Exhibit 1) were also exempted from reporting to state and local emergency coordinators. 73 FED. REG. 76951.

In 2009, a group of petitioners filed suit in the D.C. Circuit for a review of the farm exemption (*Waterkeeper Alliance et al v. EPA*, D.C. Cir. Case No. 09-1017, January 15, 2009). In August, 2010, EPA filed for voluntary remand to reconsider the rule, and in October, 2010, the court granted remand. EPA then commenced reconsideration of the rule and continued the National Emissions Monitoring Study to create final Emissions Estimating Methodologies (“EEMs”) for Livestock Operations. In December, 2012, EPA issued a draft EEMs for some types of livestock operations, but no final action was taken. Finally, in April 2015, the petitioners in the original case filed a motion to recall the mandate and either proceed on the merits of the case or for the court to issue a writ of mandamus requiring EPA to finalize the rules. In early March of 2016, EPA issued a brief stating the D.C. Circuit should dismiss the case for a lack of standing by *Waterkeeper Alliance* or transfer the case to district court.

It is somewhat difficult to pick out take-aways from the case since it is a continuing string of things left undone. One point underscored by the case is that measuring air emissions from point-sources is hard enough; measuring air emissions from “non point-sources” of air emissions with widely variable biological processes at play is much, much more difficult. Much more work is needed to properly quantify the emissions from livestock facilities and to develop best management practices to manage those emissions.

A second point is that agriculture - and other industries - may need to be proactive in helping EPA find a “right tool for the job” approach. For example, much of the controversy surrounding the proposed Clean Power Rule regulating greenhouse gas (“GHG”) emissions from electrical utility generators has focused

on the fact the Clean Air Act was not designed to regulate GHGs. Be that as it may, the Supreme Court required EPA to regulate GHGs (*Massachusetts v. EPA*, 549 U.S. 497 (2007)), and thus EPA is required to use the statutory framework it has at hand to try to fit a square emission into a round regulation. Similarly, EPCRA was meant to address emergency response to accidental releases of hazardous substances, and arguably was meant to address releases of highly concentrated amounts of those substances rather than the emissions byproducts of biological processes such as those at work in livestock waste storage systems. It was not meant to govern the monitoring of air emissions. Rather than waiting for the results of litigation to force an awkward fit with an existing regulatory system, the agriculture industry may be better served by increasing efforts to quantify livestock facility emissions and develop voluntary best management practices to reduce emissions of pollutants and manage odor concerns (which are frequently the underlying cause of cases ostensibly based on pollution concerns).

## V. CONCLUSIONS

For years, agriculture has enjoyed the benefit of numerous exclusions and exemptions from environmental regulations. Those exemptions and exclusions continue to be eroded by pressure from a number of sectors. The good news, however, is that the advancement of agricultural production technologies now give farmers and ranchers unprecedented tools to produce food, fiber, and fuel for the world with even fewer inputs and less environmental impact. Embracing these tools, and actively engaging with legislators and regulators may be key to maintaining the freedom to manage environmental impact through voluntary compliance with the best standards of our industry rather than by regulatory mandate.





**EXHIBIT 1: ANIMAL FEEDING OPERATION THRESHOLDS**

Animal Sector	Size Thresholds (number of animals)		
	Large CAFOs	Medium CAFOs <sup>1</sup>	Small CAFOs <sup>2</sup>
cattle or cow/calf pairs	1,000 or more	300 - 999	less than 300
mature dairy cattle	700 or more	200 - 699	less than 200
veal calves	1,000 or more	300 - 999	less than 300
swine (weighing over 55 pounds)	2,500 or more	750 - 2,499	less than 750
swine (weighing less than 55 pounds)	10,000 or more	3,000 - 9,999	less than 3,000
horses	500 or more	150 - 499	less than 150
sheep or lambs	10,000 or more	3,000 - 9,999	less than 3,000
turkeys	55,000 or more	16,500 - 54,999	less than 16,500
laying hens or broilers (liquid manure handling systems)	30,000 or more	9,000 - 29,999	less than 9,000
chickens other than laying hens (other than a liquid manure handling systems)	125,000 or more	37,500 - 124,999	less than 37,500
laying hens (other than a liquid manure handling systems)	82,000 or more	25,000 - 81,999	less than 25,000
ducks (other than a liquid manure handling systems)	30,000 or more	10,000 - 29,999	less than 10,000
ducks (liquid manure handling systems)	5,000 or more	1,500 - 4,999	less than 1,500

