

**Oil Storage on U.S. Farms: Risks and  
Opportunities for Protecting Surface Waters**

U.S. Environmental Protection Agency  
Office of Emergency Management

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## Acknowledgments

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## Executive Summary

### **Motivation for the Study**

The U.S. Environmental Protection Agency (EPA) Office of Emergency Management (OEM) prepared this report in response to a provision included in Section 1049<sup>1</sup> of the Water Resources Reform and Development Act (WRRDA) of 2014. The WRRDA provision calls for the Agency to conduct a study to determine the aggregate aboveground oil storage capacity threshold for farms subject to the Spill Prevention Control and Countermeasure (SPCC) regulation at 40 CFR part 112 based on a significant risk of discharge to water.<sup>2</sup>

The WRRDA provisions modify the applicability of the SPCC regulation to facilities defined as farms. For more information about the effects of the WRRDA on SPCC rule applicability, see the Fact Sheet “Farms and the Water Resources Reform and Development Act (WRRDA).”<sup>3</sup>

This report summarizes the research EPA conducted to address the mandate for a study. It provides information regarding the amount of oil stored by farms, oil storage practices, and discharge history. EPA consulted with USDA to gather the most recent and complete information about characteristics of farms, particularly as they pertain to oil storage.

### **Farms and the SPCC Regulation**

Farms meeting the rule applicability criteria have been subject to the SPCC regulation since its inception in 1974. The regulation addresses discharges of oil not otherwise permitted under the Federal Water Pollution Control Act (FWPCA) (aka Clean Water Act). These requirements include preparing a written Plan – which, for most farmers, may be met by completing a simple Plan template and self-certification – ensuring that containers are designed and operated in a way to prevent discharges (such as installing secondary containment), spill response procedures and resources to quickly address spills that affect or threaten navigable waters or adjoining shorelines are identified, and training is conducted for all oil-handling personnel. When it amended the SPCC rule in 2008, EPA estimated that approximately 150,000 farms may have sufficient aggregate oil storage capacity to be subject to the SPCC requirements (based on greater than 1,320 gallons aggregate aboveground oil storage capacity at the time). See *Section 1.2*.

Detailed data on oil storage practices on farms are not readily available. This is in part because the SPCC regulation does not require subject facilities to identify and report to EPA through a registration program. Likewise, USDA does not gather information on oil storage quantities or handling practices.

While national data on oil storage are not available, the USDA compiles data on fuel expenditures, which provide some insight on uses of diesel, gasoline, and other oils on U.S. farms. Additional insight is available from selected states that require registration of oil storage containers on farms. Based on fuel expenditure data compiled by USDA, EPA estimates that the vast majority of U.S. farms – 81 to 96 percent – store less than 2,500 gallons of oil on site (either in aboveground or underground containers),

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<sup>1</sup> Section 1049. Applicability of Spill Prevention, Control, and Countermeasure Rule, Public Law 113-121, June 10, 2014. Paragraph (d) states: “(d) STUDY.— (1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall conduct a study to determine the appropriate exemption under paragraphs (2) and (3) of subsection (b), which shall be not more than 6,000 gallons and not less than 2,500 gallons, based on a significant risk of discharge to water.”

<sup>2</sup> See relevant text from the WRRDA in *Appendix A*.

<sup>3</sup> *Appendix B* provides a copy of the fact sheet, also available at [http://www2.epa.gov/sites/production/files/2015-06/documents/final\\_wrrda\\_fact\\_sheet\\_4-24-15.pdf](http://www2.epa.gov/sites/production/files/2015-06/documents/final_wrrda_fact_sheet_4-24-15.pdf)

and only a very small fraction of farms – less than about 1 percent – store more than 20,000 gallons of oil (*Section 2.1*). This is supported by review of tank registration data and by anecdotal information compiled by EPA (*Section 2.2*).

Available information suggests that many farmers are not aware of their obligations under the SPCC regulation and do not provide adequate secondary containment for their oil containers (*Section 2.2*). Given this lack of awareness, many farmers may also not be aware of the federal criteria and reporting requirements for oil spills. State and local regulations (*Section 2.4*) are not necessarily able to fulfill the environmental protection objectives because these regulations often do not cover aboveground oil containers at farms. Some states specifically refer to the federal SPCC rule for pollution prevention requirements that tank owners must comply with. In fact, since 1974, the SPCC regulation has served as the national standard for spill prevention measures at facilities with a reasonable expectation of an oil discharge causing harm to navigable waters or adjoining shorelines.

EPA identified examples of spills from farm bulk storage containers (*Section 3.1*), and ample evidence that discharges of oil – even in the relatively small quantities stored on farms – cause significant harm to the environment (*Section 3.2*).

### ***Threshold Determination***

The WRRDA amendments to the SPCC rule call for EPA to study and address the appropriateness (based on a significant risk of discharge to water) of the interim conditional threshold, which provides that farms with aggregate aboveground oil storage capacities greater than 2,500 gallons and less than 6,000 gallons are not subject to SPCC regulation based on aggregate aboveground oil storage capacity so long as they have a clean spill history.

Based on evidence that small discharges cause significant harm and lack of evidence that farms are inherently safer than other types of facilities, this study shows that its existing threshold aggregate aboveground oil storage capacity of 1,320 gallons is appropriate for all facilities in order to provide an adequate level of environmental protection of the nation's waters. This threshold establishes a baseline for the implementation of spill planning and use of rudimentary prevention measures, avoids the regulation of small capacity end users, while addressing the FWPCA mandate that there shall be no oil discharges to waters of the United States. This is also consistent with the Agency's previous findings as discussed in the record supporting amendments to the SPCC regulation that provided relief to farmers and other small facilities (see *Section 1.4*). EPA realizes, however, that the WRRDA amendments create a new minimum regulatory threshold of 2,500 gallons aggregate aboveground oil storage capacity specifically for farms.

Based on this study, which includes the agency's record and the lack of data to support any higher threshold, it is appropriate to set the threshold at the minimum of 2,500 gallons aggregate aboveground oil storage capacity provided by the WRRDA amendments for farms, instead of the interim exemption of up to 6,000 gallons. EPA maintains that requiring simple measures such as adequate containment, periodic inspection of containers, and regular review of oil handling practices, is an appropriate way to address the risk of spills to waters for farms storing even small quantities of oil, such as the 2,500-gallon minimum aggregate aboveground oil storage capacity allowed under the WRRDA amendments.

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## List of Abbreviations

AST	Aboveground storage tank
CAFO	Concentrated Animal Feeding Operation
CWA	Federal Water Pollution Control ACT (FWPCA) (aka Clean Water Act)
EPA	United States Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
IFC	International Fire Code
FDA	Food and Drug Administration
FLDEP	Florida Department of Environmental Protection
FR	Federal Register
NAICS	North American Industry Classification System
NFPA	National Fire Protection Association
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NRDA	Natural resource damage assessment
OSLTF	Oil Spill Liability Trust Fund
SPCC	Spill Prevention Control and Countermeasure (40 CFR part 112)
STI	Steel Tank Institute
USDA	United States Department of Agriculture
UST	Underground storage tank
WRRDA	Water Resources Reform and Development Act of 2014

# 1 Introduction

The Spill Prevention, Control, and Countermeasure (SPCC) regulation at 40 CFR part 112, promulgated under the authority of the Federal Water Pollution Control Act (FWPCA) (also known as the Clean Water Act), aims to prevent oil discharges (spills) into navigable waters or adjoining shorelines. The SPCC rule applies to all facilities, including farms, that store, transfer, use, handle or consume oil or oil products in quantities above a specified threshold and could reasonably be expected to discharge oil to navigable waters or adjoining shorelines. A key element of the SPCC program is the development and implementation of oil spill prevention plans, referred to as SPCC Plans.

On June 10, 2014, the President signed the Water Resources Reform and Development Act (WRRDA) of 2014. The Act amended certain applicability provisions of the SPCC rule for farm facilities and modified the criteria under which a farmer may self-certify a SPCC Plan. Thus, farms that have an aggregate aboveground oil storage capacity of 2,500 gallons or less are no longer subject to SPCC based on aggregate aboveground oil storage capacity, and farmers are allowed to self-certify their Plans if they have an aggregate aboveground oil storage capacity greater than 6,000 gallons and less than 20,000 gallons; no individual container with a capacity greater than 10,000 gallons; and no reportable discharge history. The Act also amends the SPCC rule to establish a temporary exemption for farms that have an aggregate aboveground oil storage capacity of 6,000 gallons or less and no reportable oil discharges. This conditional applicability threshold is meant to be an interim measure until EPA completes a study to determine the appropriate aggregate aboveground oil storage capacity threshold level (between 2,500 and 6,000 gallons), based on a significant risk of discharge to water. *Appendix A* provides relevant text of the WRRDA pertaining to SPCC.

WRRDA provides for EPA to complete the study within one year. Within 18 months of completing this study, EPA is to promulgate a regulation to amend the SPCC requirements for farms to set an appropriate aggregate aboveground oil storage capacity threshold for farms; that threshold must fall within the range of 2,500 to 6,000 gallons.

The purpose of this study is to inform the determination of an appropriate facility threshold for farms, within a range of 2,500 to 6,000 gallons aggregate aboveground oil storage capacity, based on a significant risk of discharge to water. This report summarizes information EPA reviewed, in consultation with USDA, to respond to the WRRDA charge. The study is organized as follows:

- The remainder of this introduction provides additional background on the SPCC regulation and on the scope of the study, specifically on applicable storage thresholds and significant risk of discharge to water.
- *Section 2* describes oil storage at farms, including discussion of state regulations applicable to oil containers at farms.
- *Section 3* summarizes findings from EPA's review of oil discharge incidents from farms and discussion of the environmental impacts of discharges of even relatively small quantities of oil.
- *Section 4* summarizes recommendations and highlight important considerations for evaluating threshold options.

## 1.1 SPCC Rule Authority and Regulatory History

The FWPCA of 1972, as amended, commonly known as the Clean Water Act (CWA), is the principal federal statute for protecting navigable waters, adjoining shorelines, and the waters of the contiguous zone



from pollution.<sup>4</sup> The Clean Water Rule: Definition of “Waters of the United States”, 80 FR 37053, clarifies the waters regulated by the SPCC program (“navigable waters”). Section 311 of the CWA addresses the control of oil and hazardous substance discharges, and provides the authority for promulgation of a regulation to prevent, prepare for, and respond to such discharges. Specifically, CWA §311(j)(1)(C) provides for regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges. Section 311 does not provide a facility specific exemption for farms.<sup>5</sup>

The SPCC rule implements EPA’s authority under CWA §311, as delegated through various Executive Orders. Pursuant to Executive Order 11548, EPA was delegated the authority to regulate non-transportation-related onshore and offshore facilities that could reasonably be expected to discharge oil into navigable waters or adjoining shorelines (35 FR 11677, July 22, 1970). Executive Order 11548 was superseded by Executive Orders 11735 and 12777, respectively (38 FR 21243, August 7, 1973; 56 FR 54757, October 22, 1991). These Executive Orders delegated authority to the U.S. Department of Transportation (DOT) over transportation-related onshore facilities, deepwater ports, and vessels, and to the U.S. Department of the Interior (DOI) over specific offshore facilities, including associated pipelines.

The SPCC rule was initially promulgated in 1973 and became effective on January 10, 1974 (38 FR 34164). The regulation established oil discharge prevention procedures, methods, and equipment requirements for non-transportation-related facilities with an aboveground (non-buried) oil storage capacity greater than 1,320 U.S. gallons (or greater than 660 U.S. gallons aboveground in a single container). Regulated facilities were also limited to those that, because of their location, could reasonably be expected to discharge oil into the navigable waters or adjoining shorelines. The rule included sections on general applicability, relevant definitions, and requirements for preparation of SPCC Plans; provisions for SPCC Plan amendments; civil penalty provisions; and requirements for the substance of the SPCC Plans. Farms meeting the SPCC applicability criteria have been subject to its requirements since 1974.

EPA made subsequent revisions and further modifications to the SPCC requirements on several occasions. Some of these modifications were specifically aimed at streamlining the rule requirements for farms and other small facilities.

On July 17, 2002, EPA published a final rule amending the Oil Pollution Prevention regulation (67 FR 47042). The final rule became effective on August 16, 2002, and incorporated revisions EPA proposed in 1991, 1993, and 1997. The 2002 amendments to the performance-based regulation provided flexibility to the regulated community in meeting many of the oil discharge prevention requirements and the overall goal of preventing oil spills that may impact navigable waters or adjoining shorelines. In addition, the final rule included new subparts outlining the requirements for various classes of oil, revised the applicability of the regulation, amended the requirements for completing SPCC Plans, and made other modifications. The final rule also contained a number of provisions designed to decrease regulatory burden on facility owners and operators subject to the rule. For example, the 2002 rule added “environmental equivalence” and “impracticability” provisions to allow facilities to deviate from specified substantive requirements and to implement alternative measures. The amendments also exempted many completely buried underground storage tanks (USTs) and containers that store less than 55 U.S. gallons, and increased the oil capacity threshold for the applicability of the rule, among other changes.

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<sup>4</sup> See 33 USC 1321(b)(1) and 33 USC 1362.

<sup>5</sup> Section 311 applies to onshore facilities, defined as “(10) “onshore facility” means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land”

In December 2006, EPA amended the SPCC rule to streamline the requirements for a subset of facilities, including farms, in an effort to improve compliance and enhance environmental protection (71 FR 77266, December 26, 2006). The 2006 amendments provided an option to allow the owner or operator of a facility that meets qualifying criteria (i.e., a “qualified facility”) to self-certify the facility’s SPCC Plan in lieu of review and certification by a licensed Professional Engineer (PE). To qualify for self-certification, the facility must have an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less and not have reportable discharges. (Note that WRRDA revised this criterion for farms by allowing self-certification for farms with an aggregate aboveground oil storage capacity greater than 6,000 gallons and less than 20,000 gallons; no individual container with a capacity greater than 10,000 gallons; and no reportable discharge history.)

In December 2008, EPA again amended the rule to provide increased clarity, to tailor requirements to particular industry sectors (including farms), and to streamline certain requirements (73 FR 74236, December 5, 2008). Several of the revisions were specifically tailored for farmers. For example, EPA exempted residential heating oil containers such as those found at a farmer’s primary residence, further streamlined requirements for a subset of qualified facilities (building on the 2006 amendments above) that have no container greater than 5,000 gallons, clarified the definition of facility as it applies to operations covering different parcels of land, and provided additional flexibility for meeting facility security requirements. As EPA noted at the time in the rule preamble, the revisions provided significant relief to farmers (72 FR 58378-58431):

*[...] In providing the option for an owner or operator of a facility that stores 10,000 gallons of oil or less and meets other qualifying criteria to self-certify his SPCC Plan in lieu of review and certification by a Professional Engineer, the December 2006 amendments offered relief to an estimated 95 percent of all SPCC-regulated farms.*

*[...] As discussed in Section G of this preamble, EPA is proposing an additional option for a subset of qualified facilities (“Tier I”) that have a maximum individual oil storage container capacity of 5,000 gallons, by allowing these facilities to complete a simplified self-certified SPCC Plan template in lieu of a full SPCC Plan. This option would be available to any facility that meets the Tier I qualification criteria, including a farm. EPA expects that at least 128,000 farms (or more than 84% of the farms regulated by the SPCC rule) may be eligible for this proposed option.*

*EPA is also proposing to clarify the definition of “facility” in the SPCC rule, as discussed in Section D of this preamble. The proposed definition would clarify the existing flexibility for a facility owner or operator, particularly for a farmer, to define oil storage areas located on either contiguous or noncontiguous parcels of land (e.g., satellite storage areas) as separate facilities for the purpose of determining SPCC applicability and preparing/implementing an SPCC Plan.*

*Under this proposal (see Section C), EPA would exempt heating oil containers at single-family residences. EPA understands that farms often include, within the geographical confines of the facility, the residence of the owner or operator, and so the Agency believes this proposed amendment also will be of benefit to farms.*

*This proposal (see Section I) also addresses streamlining of the security requirements under §112.7(g) to allow more flexibility in determining how best to secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges. This amendment will particularly benefit the owner or operator of a farm, because it allows for consideration of site-specific factors in determining how best to design security for the facility to prevent vandalism and detect spills from oil-handling areas. An owner or operator of a farm may also benefit from the currently proposed amendments related to loading/unloading racks (Section F of this preamble) and integrity testing (Section J).*

*The Agency believes that both the amendments finalized in 2006 and those being proposed in this notice provide significant flexibility to the agricultural sector. In this action, the Agency also is proposing further amendments to the SPCC rule to address concerns specific to the agricultural community regarding pesticide application equipment and related mix containers used at farms.*

*[...] EPA proposes certain tailored requirements benefiting farms. Specifically, EPA proposes to exempt pesticide application equipment and related mix containers used at farms, that may currently be subject to the SPCC rule when crop oil or adjuvant oil are added to formulations. In addition, EPA seeks to clarify that the amendment related to mobile refuelers, as promulgated in the December 2006 rule amendments (71 FR 77266, December 26, 2006), can be used by farmers to address oil spill prevention requirements for fuel nurse tanks.*

EPA promulgated additional revisions to the December 2008 amendments in November 2009 (74 FR 58784, November 13, 2009).

EPA finalized one additional amendment to the SPCC rule in April 2011 to exempt milk and milk product containers, associated piping and appurtenances from the SPCC regulation (76 FR 21652, April 18, 2011).

Throughout these various actions, EPA extended the compliance dates for amending and implementing existing SPCC Plans. EPA also extended the compliance dates for developing and implementing new Plans developed under 40 CFR part 112. Thus, on eight occasions following the 2002 final rule, EPA extended the compliance dates in §112.3 for existing facilities to update (or for new facilities to prepare) and implement an SPCC Plan that complies with the revised requirements. EPA specifically gave farmers more time to prepare or amend and implement the farm's SPCC Plan. All compliance dates have now passed. If the owner or operator of a facility did not comply with the SPCC rule and does not have an SPCC Plan, the owner or operator must develop a Plan immediately in accordance with the amendments to the rule from 2002 forward.

EPA has developed several tools to facilitate development of SPCC Plans by qualified facilities, including farms. The Agency also developed farm-specific outreach material such as Web pages, fact sheets, guidance, templates and other compliance assistance tools, training aids, and other material to help farmers develop SPCC Plans with minimal cost and effort.

## **1.2 SPCC Aggregate Aboveground Oil Storage Capacity Requirements Applicable to Farm Facilities**

SPCC currently applies to a farm<sup>6</sup> that:

- Stores, transfers, uses, or consumes oil or oil products, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil, or animal fat; and
- Has containers with a total aggregate aboveground oil storage capacity greater than 2,500 U.S. gallons<sup>7</sup>; and

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<sup>6</sup> For the purpose of 40 CFR 112, "farm" means 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.

<sup>7</sup> The 2,500-gallon aggregate aboveground oil storage capacity threshold reflects farm-specific changes made under the WRRDA amendments, relative to a threshold of 1,320 gallons aggregate aboveground oil storage capacity for other types of facilities. Note that WRRDA amendments provide an interim conditional exemption for farms with an aggregate aboveground oil storage capacity less than 6,000 gallons and no reportable oil discharge history.

- Could reasonably be expected to discharge oil to navigable waters or adjoining shorelines, such as interstate waters, intrastate lakes, rivers, and streams.

When calculating the aggregate aboveground oil storage capacity, farmers do not need to count containers on separate parcels that have a capacity that is 1,000 U.S. gallons or less, or containers holding animal feed ingredients approved for use in livestock feed by the Food and Drug Administration (FDA).<sup>8</sup>

Further, farmers may treat adjacent or non-adjacent parcels, either leased or owned, as separate facilities for SPCC purposes. Aggregate aboveground oil storage capacity of containers on separate facilities (as identified based on how they are operated) do not need to be added together in determining whether the 2,500-gallon aggregate aboveground oil storage capacity applicability threshold is met.

Upon determining that their farm is subject to SPCC, farmers must prepare and implement an SPCC Plan. The Plan describes procedures for preventing, containing, and removing oil discharges, as well as critical information to ensure prompt response and reporting in the event of a discharge. Farmers must amend and update their SPCC Plan when implementing changes to their farm that affect the risk of an oil discharge. They must also review their Plan every five years to make sure it reflects the most current information.

Farms required to have an SPCC Plan should already be implementing their Plan and must maintain or amend their existing Plan if needed as soon as possible. For new farms that are not yet operational, the farm owner or operator must prepare and implement a Plan, if one is required, before the start of operations.

A farm can fall into one of three categories depending on the requirement for a Plan and level of certification, as summarized in *Exhibit 1* based on the rule at 40 CFR part 112 and the WRRDA amendments, and as illustrated in the flow chart of *Exhibit 2*.

Note that the streamlining and self-certification option available to almost all (99 percent) farms with a clean spill history have dramatically reduced the cost and effort of preparing and maintaining an SPCC Plan for the very small fraction of farms required to have a Plan.

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<sup>8</sup> The SPCC rule also provides exemptions for containers storing heating oil used solely at a single-family residence (e.g., the personal residence as the farm owner or operator); pesticide application equipment or related mix containers (with adjuvant oil); any milk and milk product container and associated piping and appurtenance; and completely buried oil tanks and associated piping and equipment that are subject to all of the technical requirements under 40 CFR part 280 or 281.

**Exhibit 1: Farm SPCC Plan preparation and certification requirements**

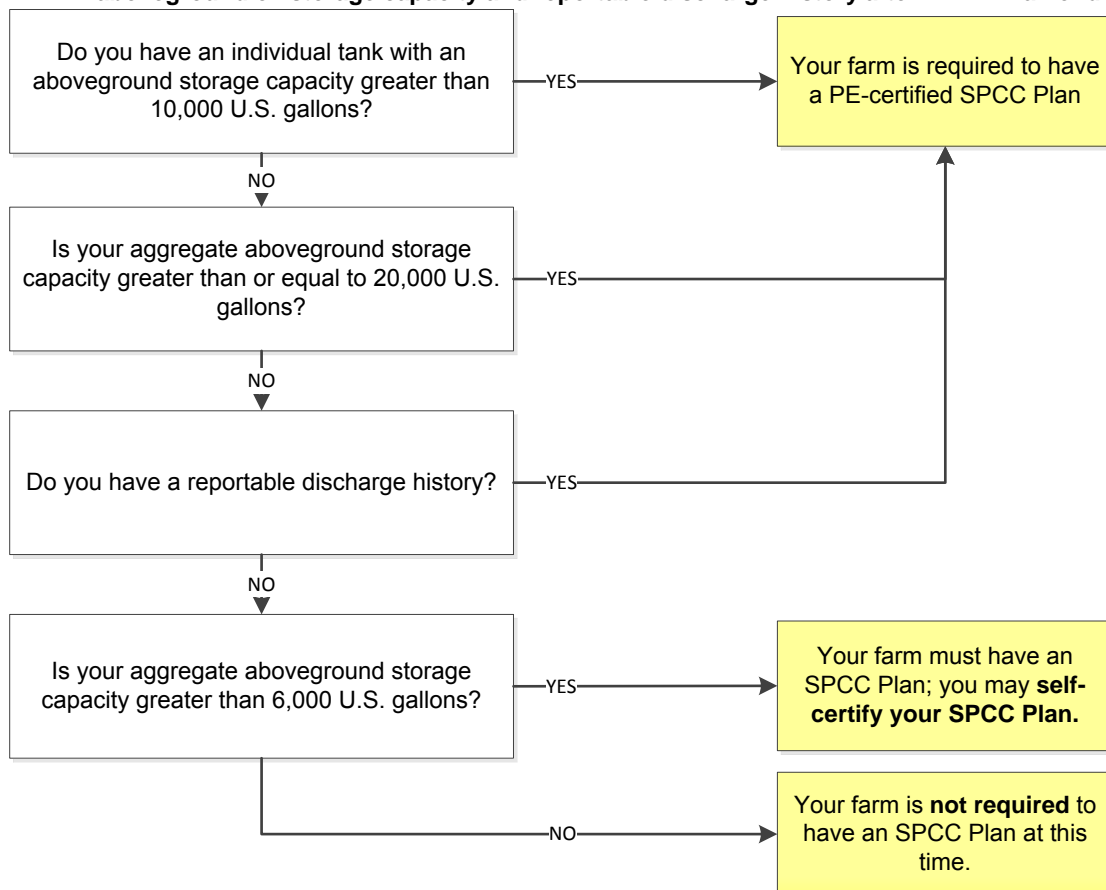
Category	Aggregate Aboveground Oil Storage Capacity and Reportable Discharge Criteria
Farms that are not required to have an SPCC Plan based on aggregate aboveground oil storage capacity.	<ul style="list-style-type: none"> <li>Aggregate aboveground oil storage capacity less 2,500 gallons; OR</li> <li>Aggregate aboveground oil storage capacity greater than 2,500 gallons and less than 6,000 gallons;<sup>1</sup> and no reportable discharge history.</li> </ul>
Farms that can have a self-certified SPCC Plan based on aggregate aboveground oil storage capacity	<ul style="list-style-type: none"> <li>Aggregate aboveground oil storage capacity greater than 6,000 gallons and less than 20,000 gallons;<sup>1</sup></li> <li>No individual container with a capacity greater than 10,000 gallons; and</li> <li>No reportable discharge history.<sup>2</sup></li> </ul> <p>Some farmers in this category need to have their Plan certified by a Professional Engineer (PE) if they decide to use certain alternate measures allowed by the SPCC rule</p>
Farms that must have a PE-certified SPCC Plan based on aggregate aboveground oil storage capacity	<ul style="list-style-type: none"> <li>An individual container with an aboveground oil storage capacity greater than 10,000 gallons; OR</li> <li>Aggregate aboveground oil storage capacity greater than or equal to 20,000 gallons; OR</li> <li>A reportable discharge history<sup>2</sup></li> </ul>

Notes:

<sup>1</sup> 6,000-gallon aggregate aboveground oil storage capacity threshold is subject to revisions; see Appendix B.

<sup>2</sup> WRRDA defines “reportable oil discharge” as: a single oil discharge as described in section 112.1(b) of the SPCC rule that exceeds 1,000 gallons, or 2 oil discharges that each exceed 42 gallons, within any 12-month period—(i) in the 3 years prior to the certification date of the SPCC Plan (as described in section 112.3 of the SPCC rule); or (ii) since becoming subject to the SPCC rule (40 CFR part 112) if the facility has been in operation for less than 3 years.

**Exhibit 2: Flowchart to determine current SPCC applicability to farms and type of Plan based on aggregate aboveground oil storage capacity and reportable discharge history after WRRDA amendments.**



### 1.3 Significant Risk of Discharge to Water

In the WRRDA, Congress did not define the term “significant risk.” However, the CWA and its implementing regulations provide context for interpreting the meaning and scope for the term. One important consideration is the amount of discharged oil that is defined as “harmful” under the Discharge of Oil regulation at 40 CFR part 110, also referred to as the “sheen rule.” The regulation defines harmful quantities as those oil discharges that violate applicable water quality standards; cause a film or “sheen” upon, or discoloration of the surface of the water or adjoining shorelines; or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

The sheen rule has a long history as a reasonable, effective and scientifically based method to determine what quantities of oil may be harmful. For its 1987 amendment to the Discharge of Oil regulation, EPA described some of the harmful effects referenced in the scientific literature, in response to a suggestion by a commenter that volumetric limits, rather than the “sheen” test would provide sufficient water quality protection. For example:

*EPA has carefully reviewed the recent scientific literature on environmental effects of oil pollution, including documents submitted by commenters and other documents referenced in comment letters or compiled in the public docket during the comment period. EPA believes that the literature clearly demonstrates that discharges of small quantities of oil cause environmental harm.*

*[...] Many types of adverse effects from oil have been extensively documented proving harmful effects from oil spills and chronic pollution in inland waters, in coastal environments, and in waters beyond 12 miles from shore. Evidence from reviews of laboratory studies further demonstrates that very small amounts of oil, e.g., less than 1 mg/L (1 ppm), can have lethal and sublethal effects on a wide variety of organisms. The National Academy of Sciences (NAS), in its 1985 comprehensive review, noted that "low concentrations (less than 1 mg/L) of petroleum hydrocarbons can apparently interfere with the normal behavior of marine organisms, especially the more fragile components such as the larval and juvenile forms of the marine food chain.*

*Moreover, some commenters appear to have defined potential harm as permanent biological harm on a broad scale. There simply is no persuasive indication in the statute that Congress intended this narrow interpretation of the harmful quantity standard. In fact, the Congressional policy expressed in CWA section 311(b)(1) "that there should be no discharges of oil" (emphasis added) suggests just the opposite. Equally important, nothing in the legislative history of the CWA or in judicial interpretations of the Act suggests that a demonstration of permanent harm on a broad scale is required. Congress stated in the 1978 CWA Amendments that a prohibited discharge need only be a quantity that may be harmful. In cases such as *U.S. v. Atlantic Richfield Company*, 429 F Supp. 830, 837 (E.D. Pa., 1977), the courts have suggested that Congress believed that even transitory pollution of waters was deleterious to the environment. Many of the studies submitted by commenters support the fact that small oil spills do cause harm in certain waters (e.g., spawning grounds, estuaries). Many opponents of the sheen test concede that coastal and inland areas and sensitive habitats may be vulnerable to damage from low levels of oil pollution, and many admit that there may be at least temporary harm. Documents compiled in the public docket clearly show that small amounts of oil are harmful in a variety of locations and circumstances, including spawning grounds and sensitive habitats beyond 12 miles from shore. (April 2, 1987; 52 FR 10714 -17)*

EPA also discussed the deleterious impacts small quantities of oil can have on the environment in the SPCC record. For example:

*Additionally, the co-location of oil production facilities with other land users, including farmers and ranchers, raises additional concern over potential contamination of water resources that are essential to agricultural production. One comment expressed concern that produced water could contaminate surface waterways, groundwater and drinking water; kill fish, birds, and wildlife; and cause severe health effects*

*in humans and impact wildlife habitats. The comment also noted that it takes only a small amount of oil to affect a large area of water. EPA agrees with this comment. Under 40 CFR part 110, a discharge of oil in such quantities as “may be harmful” is defined as one that may violate applicable water quality standards; or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines; or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. In the Federal Register notice published when EPA provided revisions to 40 CFR part 110, EPA stated that “[e]vidence from reviews of laboratory studies further demonstrates that very small amounts of oil, e.g., less than 1 mg/L (1 ppm) can have lethal and sublethal effects on a wide variety of organisms.” (52 FR 10716, April 2, 1987). Therefore, even if a produced water container has a very small amount of oil, the container still holds the potential to cause harm. (November 13, 2009; 74 FR 58803)*

For this study, EPA considers discharges in any amount meeting the harm criteria as potentially “significant” based on the legislative and regulatory record that established that harmful discharges are not necessarily those associated with some specific discharge quantity.<sup>9</sup>

#### 1.4 Oil Storage Thresholds

In developing the SPCC regulation, EPA considered the significant harm that can be caused by small discharges to set a protective regulatory threshold for requiring SPCC Plans. The SPCC regulatory framework is consistent with the policy expressed in section 311 of the FWPCA (see preamble discussion below), which states that there shall be “no discharges of oil... into... waters of the United States [or] adjoining shorelines...”, as well as authority provided in section 311 for the President (through EPA for relevant purposes here) to require the development of oil spill prevention plans. As established in the rulemaking record and discussed above, small oil spills (resulting in concentrations in the range of 1 ppm) can cause significant harm to aquatic environments. EPA has set a reasonable applicability threshold by requiring spill prevention plans for facilities that have more than 1,320 gallons in aggregate aboveground oil storage capacity, a volume that is significantly greater than the quantities of oil that may be harmful in the event of discharge.

In response to a comment about the regulatory thresholds and small facilities EPA stated (67 FR 47055; July 17, 2002):

*Large or small facility regulation, in general. We have decided not to regulate facilities differently based merely on storage capacity, provided that the capacity is above the regulatory threshold of over 1,320 gallons. This decision is based on environmental reasons. Small discharges of oil that reach the environment can cause significant harm. Sensitive environments, such as areas with diverse and/or protected flora and fauna, are vulnerable to small spills. EPA noted in a recent denial of a petition for rulemaking: “Small spills of petroleum and vegetable oils and animal fats can cause significant environmental damage. Real-world examples of oil spills demonstrate that spills of petroleum oils and vegetable oils and animal fats do occur and produce deleterious environmental effects. In some cases, small spills of vegetable oils can produce more environmental harm than numerous large spills of*

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<sup>9</sup> Alternatives to the concept of “harmful quantity” had initially been considered by Congress. The original House bill required the reporting of discharges of oil in “substantial quantities”, while the original Senate bill would have prohibited oil discharges in any quantity, except as permitted by regulations. These concepts were found to be impractical, as they would have required further definitions (e.g., what is “substantial”), *a priori* determination of allowable quantities, or the reporting of even *de minimis* discharges. Congress instead gave the President (and in turn EPA) the authority to determine “harmful quantity.”

In 40 CFR part 110, EPA established discharge of oil in such quantities as may be harmful pursuant to section 311(b)(4) of the Act as including “discharges of oil that: (a) Violate applicable water quality standards; or (b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.”

*petroleum [\*47056] oils." 62 FR 54508, 54530, October 20, 1997. Describing the outcome of one small spill of 400 gallons of rapeseed oil into Vancouver Harbor, we noted that " \* \* \* 88 oiled birds of 14 species were recovered after the spill, and half of them were dead. Oiled birds usually are not recovered for 3 days after a spill, when they become weakened enough to be captured. Of the survivors, half died during treatment. The number of casualties from the rapeseed oil spills was probably higher than the number of birds recovered, because heavily oiled birds sink and dying or dead birds are captured quickly by raptors and scavengers."*

EPA considered the risk posed by facilities with different aggregate quantities of oil on site when amending the SPCC regulation to provide additional flexibility to small facilities and reduce the burden of preparing SPCC Plans. In particular, the Agency considered the risk posed by facilities with less than 10,000 gallons in aggregate aboveground oil storage capacity when it amended the SPCC regulation to allow self-certification of Plans by qualified facilities.

Further, in proposing to extend compliance dates for farms, EPA noted that (70 FR 73542; December 12, 2005):

*"EPA proposes the 10,000-gallon threshold for farms [for an extension of compliance dates] to be consistent with the threshold quantity used in the NCP to classify oil discharges to inland waters as "major" (40 CFR 300.5). Thus, a facility storing less than 10,000 gallons of oil could not be involved in a major discharge based on the NCP quantitative criterion alone, although use of this numerical criteria [sic] is not meant to imply that smaller discharges are not harmful. This same 10,000-gallon threshold discharge volume is also one factor used in identifying facilities that must prepare and submit a Facility Response Plan (FRP) under § 112.20(f)(1). In addition, 10,000 gallons is a common storage capacity and such a threshold would extend the compliance dates for a significant portion of the farm sector. Data provided by the agricultural industry and the U.S. Department of Agriculture indicate that the average aggregated aboveground oil storage capacity at farms surveyed in 2005 was 5,550 gallons; approximately 83 percent of surveyed farms have aggregated oil storage below 10,000 gallons. Farms with less than 1,000 acres had an average oil storage capacity of less than 2,500 gallons; farms with over 1,000 acres had an average oil storage capacity of almost 8,000 gallons. (See "Fuel/Oil Storage and Delivery for Farmers and Cooperatives," USDA, March 2005, in the docket for today's proposal.)"*

And while EPA has recognized that differentiated requirements may be warranted and is consistent with treatment of different size containers by standard setting organization, EPA has historically maintained that small containers can still pose a risk of a discharge.

*"EPA believes that a differentiated option for users of smaller amounts of oil has merit as other official bodies, such as standards setting organizations have provided differentiations in their standards for smaller users of oil. For example, the National Fire Protection Association (NFPA) provides differentiated requirements based on type of facility and size of tanks. Specifically, NFPA 30 (Flammable and Combustible Liquids Code, 2000 Edition) applies to tanks that exceed 3,000 liters (793 gallons) and does not apply to facilities storing flammable and combustible liquids as covered by NFPA 395, Standard for the Storage of Flammable and Combustible Liquids at Farms and Isolated Sites." (71 FR 77273; December 26, 2006)*

The EPA SPCC threshold of 1,320 gallons aggregate aboveground oil storage capacity was designed to require even small facilities to develop spill prevention plans if they could cause a harmful discharge.

It is also worth noting that EPA has not used spill history as a basis for applicability of the SPCC rule requirements; rather spill history is a criterion to determine a facility's eligibility for self-certification of its plan (see 71 FR 77271; December 26, 2006):<sup>10</sup>

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<sup>10</sup> Further note that determination of eligibility based on reportable discharge history is made at the time the SPCC Plan is certified. Discharges occurring from a qualified facility after the SPCC Plan has been certified do not impact the eligibility



*While EPA recognizes that past discharge history does not necessarily translate into a predictor of future performance, the Agency believes that discharge history is a reasonable indicator of a facility owner or operator's ability to develop an SPCC Plan for his smaller oil storage capacity facility without the involvement of a PE.*

The reportable discharge history criterion was intended to limit the option of self-certification to owners and operators of those facilities that had demonstrated an effective implementation of spill prevention measures in the past.

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of an owner or operator of the qualified facility to take advantage of the self-certification option, unless the RA requires an amendment to the SPCC Plan in accordance with §112.4(d) and specifically requires PE certification (see 71 FR 77272).

## 2 Farm Facilities

The agricultural sector covers a broad spectrum of farming operations, including, but not limited to, oilseeds, grains, vegetables, and other field crops, fruit orchards, greenhouses and nurseries, poultry production and livestock husbandry. In this study, EPA used the most current data from the U.S. Census of Agriculture on the characteristics of farm operations and USDA data on farm expenditures in 2013 to develop a profile of oil use on U.S. farms.<sup>11</sup> EPA also reviewed other relevant data, such as data from a 2005 survey that USDA conducted on fuel storage at farms, site visits EPA conducted at farms between May 2005 and January 2007 to understand oil use and storage practices, and SPCC inspections EPA conducted at agricultural facilities. According to these sources, and as described in more detail in this section, the key characteristics of the U.S. agricultural sector include:

- Ninety-one percent of farms are small farms with less than \$250,000 in annual sales.
- Approximately 98 percent of farms are family farms.<sup>12, 13</sup>
- Most farms are small in terms of surface area, with only fifteen percent of all farms having more than 500 acres of land,<sup>14</sup> although certain types of farms tend to be larger in surface area than others. For example, oilseed, grain, and cotton farms tend to have larger acreage than farms growing other types of crop.
- Expenditures on gasoline, fuel, and oil at farms tend to positively correlate with farm acreage.
- Average gasoline, fuel, and oil expenditures per acre further vary by type of crop.
- As of 2005, farmers were often not aware of the SPCC requirements and often did not have secondary containment (i.e., berms, spill kits) to prevent oil discharges.
- Inspected farms store varying quantities of oil, with total capacity ranging from less than 2,000 gallons to upward of 50,000 gallons. These farms often lacked adequate spill containment to prevent the discharge of oil to navigable waters on adjoining shorelines.

### 2.1 Farm Size

As shown in *Exhibit 3*, approximately 40 percent of the roughly two million farms in the United States are less than 50 acres in size, and about 15 percent of farms are 500 acres or larger.

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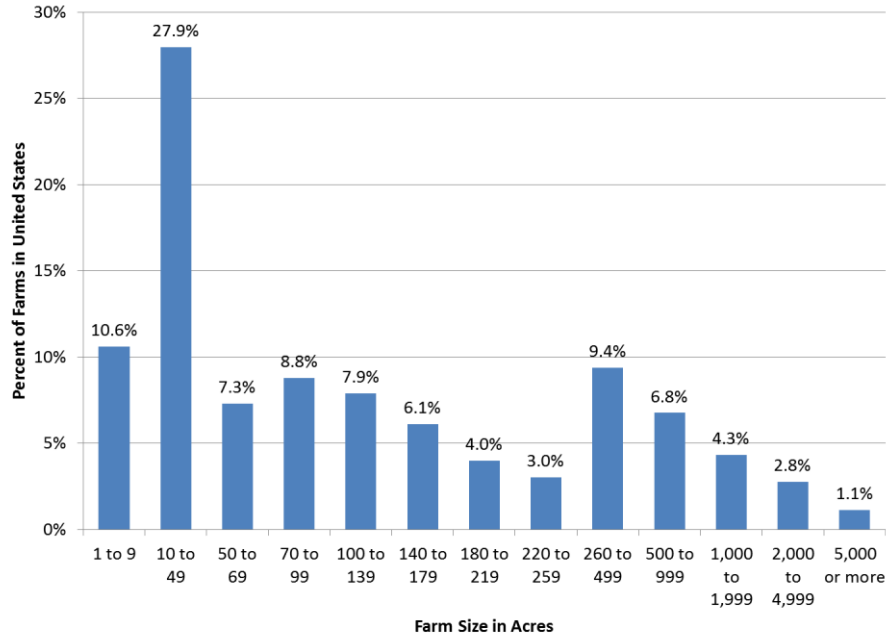
<sup>11</sup> To support this study, USDA provided a breakout of farm production expenses for 2013 that includes fuel expenditures by region (Northeast, Lake States, Corn Belt, Northern Plains, Appalachia, Southeast, Delta, Southern Plains, Mountain, and Pacific), fuel type (gasoline, diesel, natural gas, LP gas, etc.), and economic class (Less than \$100,000, \$100,000 to \$274,999, \$275,000 to \$499,999, etc.)

<sup>12</sup> USDA defines family farms as "...operations organized as proprietorships, partnerships, or family corporations that do not have hired managers," and classifies small family farms as those with annual sales of less than \$250,000. USDA, Economic Research Service, "Structure and Finances of U.S. Farms: 2005 Family Farm Report"/EIB-12, May 2006.

<sup>13</sup> USDA, Economic Research Service, "Structure and Finances of U.S. Farms: 2005 Family Farm Report"/EIB-12, May 2006.

<sup>14</sup> According to USDA, land in farms includes "land owned and operated as well as land rented from others." (Appendix B. General Explanation and Census of Agriculture Report Form. 2012 Census of Agriculture)

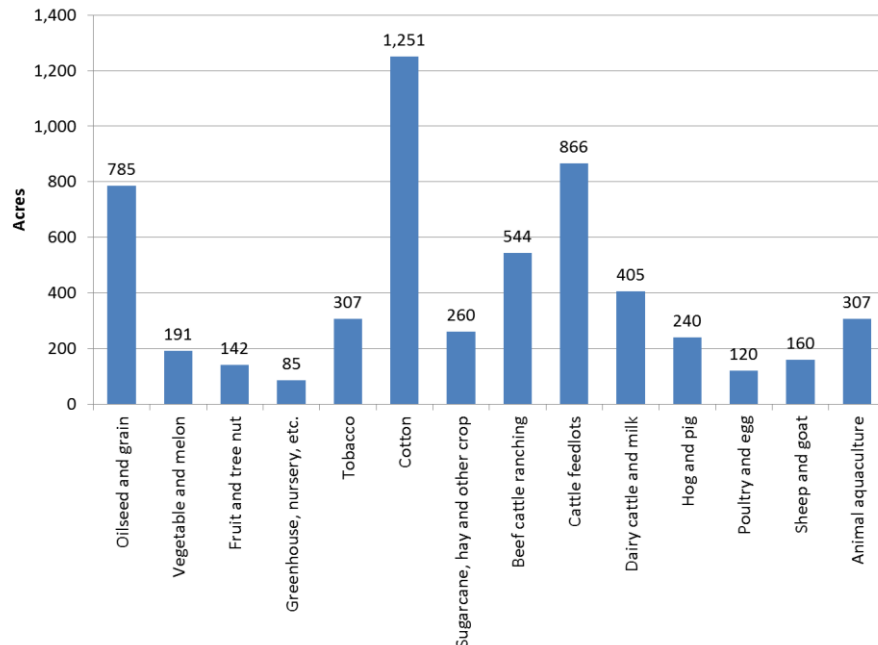
**Exhibit 3: Percent of farms by farm size (acres of harvested cropland).**



Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

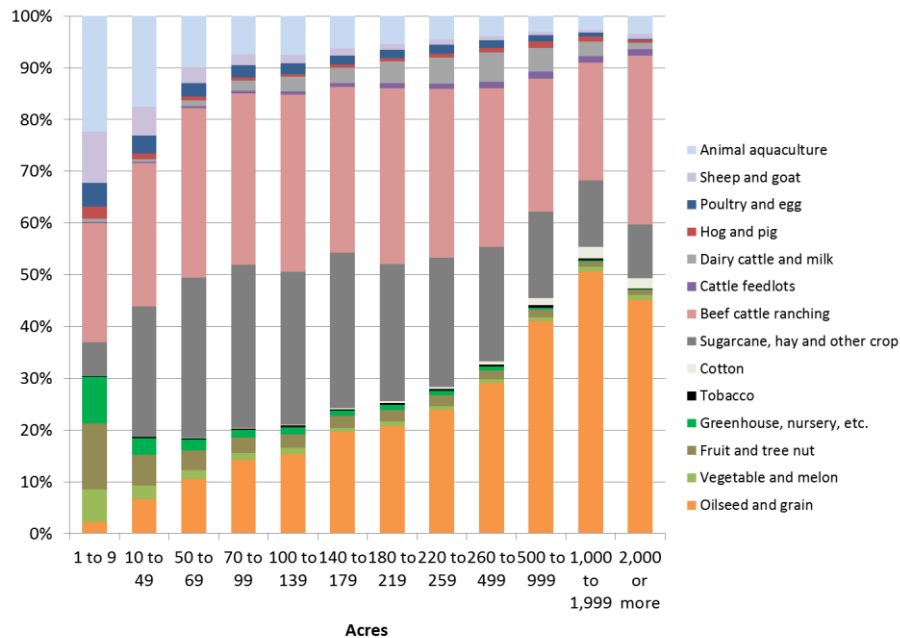
The size of farms in acres varies by type of crop, with cotton, cattle feedlots and oilseed and grain farms having the largest number of acres on average (*Exhibit 4*). *Exhibit 5* shows the distribution of farms of various types across farm size categories. As shown, oilseed and grain farms represent a significant share of the larger farms by size, with cotton farms and cattle feedlots also concentrated in the larger farm size categories. Other farm types such as nursery and fruit and tree nut farms tend to be smaller farms.

**Exhibit 4: Average farm size by type (in order of NAICS code).**



Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

**Exhibit 5: Distribution of farms by farm size and type.**



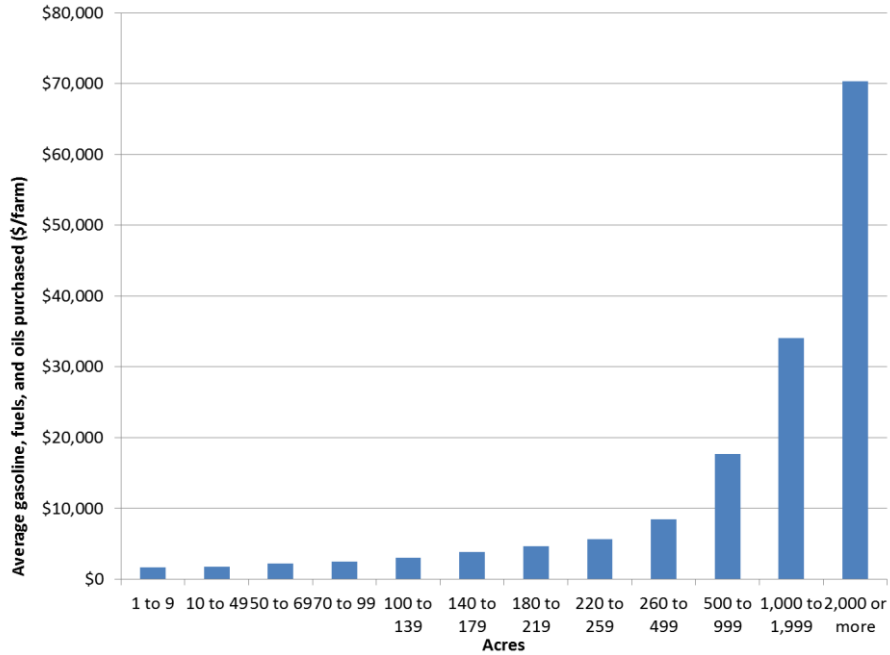
Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

### 2.1.1 Gasoline, Fuel, and Oil Expenditures at Farms

SPCC applicability is determined, in part, by a facility’s aggregate oil storage capacity. While data on the size and location of individual oil storage containers on farms are not available, USDA collects data on fuels expenditure. For example, data from the 2012 U.S. Census of Agriculture presented in *Exhibit 6* suggest that average expenditures on gasoline, fuel, and other oils increase with increasing farm size. *Exhibit 7* shows that these expenditures per acre also vary across farm types. Greenhouses and nurseries and vegetable farms tend to spend the most on gasoline, fuel, and oil per acre of operation, while beef cattle ranching tend to spend the least. At the farm level, however, total expenditures vary according to both the type and size of operations, with cotton farms having the highest average expenditures (*Exhibit 8*). Overall, expenditures on gasoline, fuel and oil represented approximately 4 percent of total sales in 2012.

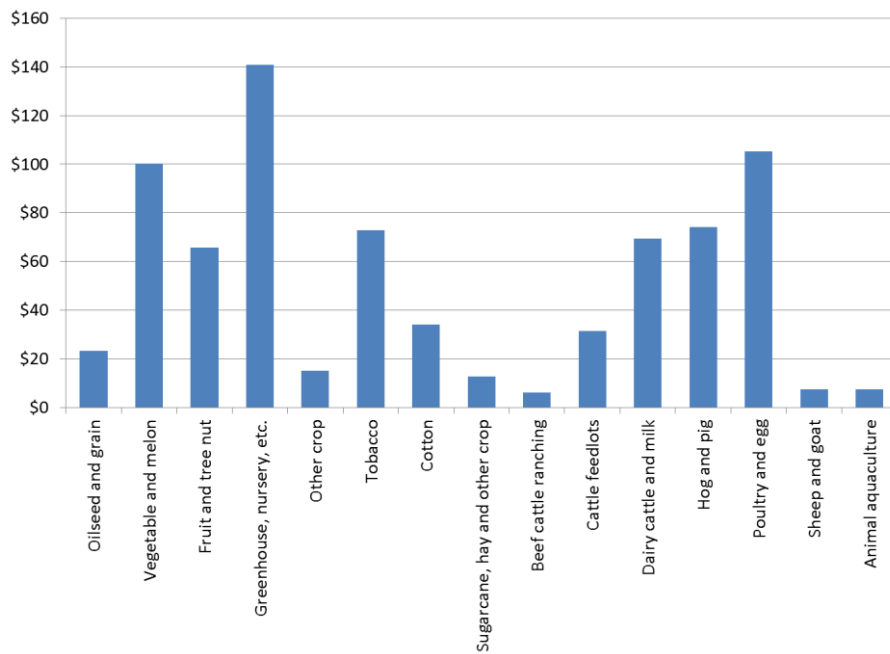
These fuel expenditure data may be used as an indicator of the quantity of fuel (and therefore the quantity of certain types of oil) that may be stored on farms.

**Exhibit 6: Average expenditure on gasoline, fuel, and oil by farm size.**



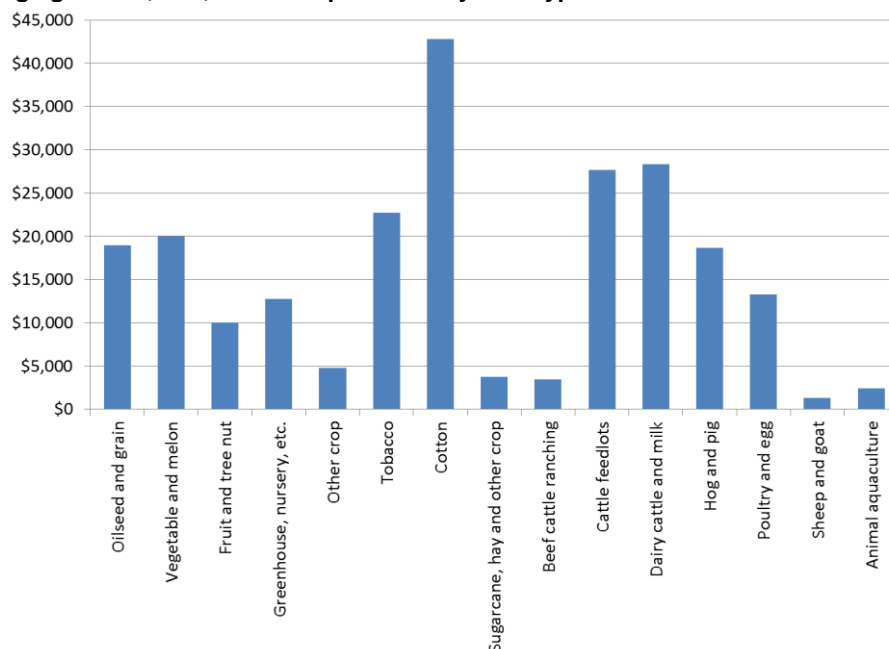
Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

**Exhibit 7: Average per acre gasoline, fuel, and oil expenditure by farm type (in order of NAICS code).**



Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

**Exhibit 8: Average gasoline, fuel, and oil expenditure by farm type.**



Source: Developed using data from USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

### 2.1.2 Estimates of the Number of SPCC-Regulated Farms

In the Regulatory Impact Analysis (RIA) supporting the final amendment to the SPCC rule (U.S. EPA, 2008), EPA estimated that there were approximately 150,000 farms subject to the SPCC rule. In developing this estimate, EPA relied on data from the U.S. Census of Agriculture data on farm fuel expenditures and on assumptions regarding the quantity of fuel corresponding to reported fuel expenditures and the fraction of that fuel that is stored on site.<sup>15</sup> For the purpose of this study, EPA used a similar approach to estimate the quantities of fuel used by farms and infer aggregate storage capacity, based on more detailed data provided by USDA for 2013.

*Exhibit 8* presents the distribution of farms by economic class, as well as their estimated aggregate oil storage capacity. *Exhibit 10* shows the estimated distribution of farms by oil storage capacity. The ranges in the tables reflect different assumptions regarding the average number of fuel deliveries received by farms in a given year. While there is considerable variability across farms, the fuel expenditure data suggest that the vast majority of farms (81 to 89 percent) have an aggregate storage capacity below 1,320 gallons of oil, 81 to 96 percent have less than 2,500 gallons, and 92 to 99 percent have less than 6,000 gallons. An estimated 99 to 99.9 percent of farms have aggregate storage capacity below

<sup>15</sup> The SPCC rule does not have a notification requirement that would identify the existence and storage characteristics of each SPCC-regulated facility. Therefore, estimates of the number of facilities that are regulated under the SPCC rule are usually developed from census figures of the number of establishments operating in oil-related industry sectors, and reasonable assumptions on the characteristics of these facilities. The U.S. Census of Agriculture provides a count of the number of farms operating in the United States. To accurately estimate the number of SPCC-regulated farms, additional data on the size and location of oil storage tanks on all farms in the United States would be required; however, these data are not readily available. As discussed above, while data on farm fuel expenditures are available, these data do not typically provide details on the proportion of oil purchased that is stored on the farm. For these reasons, estimates of the number of SPCC-regulated farms are based on various assumptions regarding oil consumption and storage that contribute to uncertainty in the estimates.

20,000 gallons and may be eligible to self-certify their SPCC Plan, provided they meet the other qualified facility criteria, including a clean spill history.

**Exhibit 9: Number and aggregate storage capacity of farms by economic class in 2013**

		<b>\$10M or more</b>	<b>\$5M to \$9.99M</b>	<b>\$3M to \$4.99M</b>	<b>\$1M to \$2.99 M</b>	<b>\$500,000 to \$999,999</b>	<b>\$275,000 to \$499,999</b>	<b>\$100,000 to \$274,999</b>	<b>Less than \$100,000</b>
Number of farms		2,643	6,926	11,979	70,235	68,887	80,408	156,421	1,697,970
Estimated average aggregate storage capacity (gallons/farm)	Low <sup>1</sup>	26,105	13,609	7,246	4,069	2,340	1,652	898	154
	High <sup>1</sup>	87,570	44,522	25,160	14,116	7,876	5,551	2,920	463

Based on 2013 data from USDA on fuel expenditures by fuel type and by farms in different revenue categories (USDA NASS, personal communication).

<sup>1</sup> Range represents different assumptions of the number of fuel deliveries. For low bound (smaller storage capacity), EPA assumed 2 deliveries for gasoline and 4 deliveries for diesel per year; for high bound (greater storage capacity), EPA assumed 1 delivery each for gasoline and diesel per year.

**Exhibit 10: Distribution of farms by aggregate storage capacity range in 2013**

		<b>Less than 1,320 gallons</b>	<b>1,320-2,500 gallons</b>	<b>2,500-6,000 gallons</b>	<b>6,000-10,000 gallons</b>	<b>10,000-20,000 gallons</b>	<b>20,000 gallons or higher</b>
Number of farms	Low <sup>1</sup>	1,854,391	149,295	70,235	11,979	6,926	2,643
	High <sup>1</sup>	1,697,970	0 <sup>2</sup>	236,829	68,887	70,235	21,548
% of farms	Low <sup>1</sup>	88.5%	7.1%	3.4%	0.6%	0.3%	0.1%
	High <sup>1</sup>	81.0%	0.0%	11.3%	3.3%	3.4%	1.0%

Based on 2013 data from USDA on fuel expenditures by fuel type and by farms in different revenue categories (USDA NASS, personal communication).

<sup>1</sup> Range represents different assumptions of the number of fuel deliveries. For low bound (smaller storage capacity), EPA assumed 2 deliveries for gasoline and 4 deliveries for diesel; for high bound (greater storage capacity), EPA assumed 1 delivery each for gasoline and diesel.

<sup>2</sup> USDA provides average annual fuel expenditures by economic class. As shown in Exhibit 9 above, the estimated average aggregate storage capacities for farms with expenditures in the two smallest fuel expenditure categories fall either below (463 gallons) or above (2,920 gallons) the 1,320- to 2,500-gallon range.

## 2.2 Oil Storage Practices on Farms

Since the 1920s, many farmers in the United States have relied on agricultural cooperatives for fuel supply and distribution, and some cooperatives have incorporated wholesale, refining, and even exploration and production of petroleum to guarantee a reasonably priced supply of fuel to their members. Local cooperatives typically handle retailing and farm facility delivery, while larger regional cooperatives handle other aspects of agricultural petroleum supply (USDA, 2011). According to the USDA, seven regional and 2,500 local cooperatives distributed petroleum products to farmers in 1993 (USDA, 1996). Cooperatives represented approximately 41 percent of the total fuel sold for U.S. farm production, with 90 percent of the 2,500 local agricultural cooperatives delivering petroleum products to farms (USDA, 1996).

In 2006, EPA reviewed information on farm oil storage provided by USDA and by local agricultural cooperatives that deliver fuel to farm facilities to characterize oil storage at farms. The characteristics

included bulk storage container types, fuel types, container sizes, location and distribution within the farm facility (e.g., central vs. satellite oil storage areas), and frequency of fuel deliveries.<sup>16</sup>

Sources consulted in researching farm oil storage practices included the USDA report *Fuel/Oil Storage and Delivery for Farmers and Cooperatives* (USDA, 2005), a USDA study on cooperative petroleum operations (USDA, 1996), information provided by the Steel Tank Institute (STI) in response to EPA questions, and eight telephone interviews — six with representatives from local farm cooperatives from different states and two with individual fuel/oil delivery companies in states where no local farm cooperatives that deliver fuel could be identified.<sup>17,18</sup> These sources provide detailed data on oil storage practices on farms. For this study, EPA augmented the information with data provided by USDA, reports of SPCC inspections EPA conducted at farm facilities, EPA site visits at selected cotton ginning operations, dairy farms, and rice farms, and state tank registration data. The following sections summarize the findings.

Note that given the lack of a comprehensive national database of oil containers at farms, the information provided below is necessarily anecdotal and based on a small subset of the very large and diverse number of farm operations in the United States. Additionally, while some of the information is based on data and interviews from the early to mid-2000s, EPA expects that the information still provides relevant insight on oil storage practices given the expected life of oil storage containers, although the Agency also recognizes that farmers may have changed their oil storage practices following amendments to the SPCC rule requirements for farms, multiple extensions to compliance dates, and outreach and compliance assistance by EPA and USDA.

### **2.2.1 Aboveground and Underground Oil Storage on Farms**

Farms store fuel in both aboveground and underground storage containers.

In interviews EPA conducted in 2006 with farm cooperatives and fuel delivery companies, cooperatives from Minnesota, Iowa, Kansas, Nebraska, the Eastern Region, and Florida noted that they delivered exclusively to aboveground tanks on farms (although EPA’s review of Florida Department of Environmental Protection (FLDEP) tank registration data discussed further in *Section 2.2.3* did reveal the presence of underground storage tanks at farms).

### **2.2.2 Types of Fuel Stored on Farms**

Farms typically have more than one oil storage container to accommodate different types of fuel (diesel or gasoline), and the type of fuel stored may influence the container size.

The interviewees suggested that the type of fuel stored influence the size of storage tanks farmers used. For example, two interviewees noted that dyed diesel (off-road) tanks typically had at least twice the storage tank capacity of clear (on-road) diesel and gasoline tanks. Because most farms store more than one type of fuel, interviewees estimated that 90 to 95 percent of farms have more than one storage tank

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<sup>16</sup> While EPA’s review focused on the storage of fuels used in farming operations, other types of oils may also be present at farm facilities (e.g., lubricants, animal fats and vegetable oils). EPA is assuming that these other oils would generally represent a small fraction of a farm’s total oil storage capacity.

<sup>17</sup> The 2005 USDA Survey collected data from 1,712 farmers and 387 farmer cooperatives regarding oil storage tank capacity and location; the 1996 USDA Report is an industry overview of cooperative petroleum operations, including the history of the farmer cooperative petroleum system and summary statistics.

<sup>18</sup> EPA identified eight geographically diverse areas and found local cooperatives or fuel delivery companies that delivered fuel to farms. The term “interviewees” in this discussion refers to the eight representatives EPA contacted in 2006.



for fuel products. One interviewee, however, noted that only large operations have all three types of fuel on site, and that smaller farm operations typically only have dyed diesel and gasoline. For farms with relatively larger tanks (over 5,000 gallons storage capacity), the largest tank is typically used to store diesel for agricultural use. Interviewees from Pennsylvania and Florida and the Eastern Region indicated that all farms have dyed diesel, and a small percentage of farms store additional types of fuel (an estimated five percent in Eastern states, and one percent in Pennsylvania).

EPA's review of the FLDEP tank registration data (see *Section 2.2.3* for more details) provides a more nuanced picture of oil used on Florida farms, with relative storage capacities of different types of oils seeming to vary depending on the type of farms. While most farms store diesel, many nurseries and citrus groves also have significant quantities of fuel oil for onsite heat.

All 28 Concentrated Animal Feeding Operation (CAFO) facilities EPA inspected between 2001 and 2005 stored diesel and/or gasoline on site, with some facilities also storing waste oil.<sup>19</sup>

### **2.2.3 Oil Storage Container Size on Farms**

The 1996 USDA report cited the typical on-farm storage tank capacity as 250 to 1,000 gallons.<sup>20</sup> But there is considerable variation across farms depending on the region, type of operations and size.

With one exception, all interviewees contacted in 2006 agreed that 1,000-gallon tanks are typical on farms; however, large farm operations commonly have tanks between 7,000 and 10,000 gallons according to the interviewees, or between 10,000 and 12,000 gallons according to STI.<sup>21</sup> All interviewees agreed that large farm operations (defined by the interviewees as farms covering over 2,500 acres) have larger tanks, with storage tank capacities ranging from 7,000 to 10,000 gallons. For example, interviewees from the local cooperatives and STI noted that a 1,000-gallon tank size was typical, and added that the overall trend has been towards increasing tank storage capacity. One interviewee noted that farms with storage tank capacities less than 1,000 gallons were typically farms of only a "few hundred acres" in size. Most interviewees represented regions with row crops (corn, soybean, wheat), which, as noted in *Section 2.1*, tend to be larger farm operations in terms of acreage. Interviewees from states with significant shares of non-row crops such as Oregon and Pennsylvania, however, noted similar capacity ranges and relationship to farm size. Information provided by STI noted a higher average tank size at farms of between 10,000 and 12,000 gallons. According to STI, tanks of this size are vertical, single-walled with emergency vents, whereas 1,000-gallon tanks do not have emergency vents.

In contrast, the interviewee from Florida estimated the average farm AST capacity at 500 gallons, and noted that the average has been decreasing in recent years, which the interviewee indicated was due to state registration requirements for containers with storage capacity of 1,000 gallons or greater (see *Section 2.4* for a discussion of state requirements applicable to ASTs at farms in Florida). This observation is confirmed by EPA's separate review of FLDEP petroleum storage system data conducted in January 2015. Specifically, EPA obtained registration data for active aboveground storage tanks at facilities

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<sup>19</sup> Personal communication, Melissa Payan, EPA Region 8, November 26, 2014.

<sup>20</sup> The 2005 USDA Survey gathered data on aggregate oil storage capacity for farm operations, and did not include questions about storage container capacity.

<sup>21</sup> Farm cooperatives and fuel delivery companies from Minnesota, Iowa, Kansas, Nebraska, the Eastern Region, and Florida noted that they delivered exclusively to aboveground tanks on farms. Interviewees from Oregon and Pennsylvania suggested that as many as half of the farms receiving fuel deliveries did so to underground storage tanks, with the interviewee from Pennsylvania indicating that underground storage tanks are primarily for greenhouses and mushroom farms, whereas open crop farms typically have aboveground storage tanks.

categorized by FLDEP as “agricultural”. These facilities include various types of farms such as citrus groves, nurseries, cattle farms and ranches, tomato and other vegetable farms, and dairies. *Exhibit 11* summarizes farm AST registrations from a sample of counties that include the three Florida counties with the largest number of farm operations, according to the 2012 U.S. Census of Agriculture, as well as a random sample of four other counties among the total of 67 counties in the state. The county with the largest number of farms in the state, Marion County with 3,870 operations, has only 24 facilities with ASTs registered with FLDEP. Of these, only three farms have at least 2,500 gallons in aggregate capacity, two have at least 6,000 gallons in aggregate capacity and none exceed 20,000-gallon threshold. Therefore, farms in that county are either exempt from SPCC altogether (the vast majority), or can self-certify their plan, provided they meet other criteria such as a clean spill history. A somewhat larger number of farms have registered ASTs in Hillsboro County (87 farms), but this is still a very small subset (4 percent) of the total farms operating in the County, and 82 percent of the farms have less than 2,500 gallons of oil in registered ASTs and are therefore exempt from SPCC altogether.

**Exhibit 11: Distribution of farm aggregate storage capacity in selected counties in Florida.**

Florida County	2012 Census of Agriculture		Number of farms with registered ASTs	Number of farms by registered AST capacity range <sup>1</sup>			
	Number of farms	County ranking		Less than 2,500 gallons	2,500-6,000 gallons	6,000-20,000 gallons	20,000 gallons or greater
Brevard	513	34	3	0	0	1	2
Broward	615	29	1	1	0	0	0
Clay	402	42	1	0	1	0	0
Collier	319	48	7	0	3	2	2
Dade	2,954	2	12	7	3	2	0
Hillsboro	2,466	3	87	71	6	6	4
Marion	3,870	1	24	21	1	2	0
State Total	47,740	N/A		Information not available			

<sup>1</sup> Florida regulations at Chapter 62-762 require only AST systems with individual storage tank capacity greater than 550 gallons to be registered with the state. EPA notes, however, that the registration database lists individual ASTs with capacity below this threshold.

Source: U.S. EPA Analysis of FLDEP data, 2015

Site visits EPA conducted at three different types of farm operations in May 2005 (cotton ginning operations in North Carolina), June 2006 (dairy farms in Western New York) and January 2007 (rice farms in Arkansas) provide additional insight on oil use and storage on these types of farms. Cotton ginning used oil in hydraulically powered bale presses. Dairy farms tended to use diesel, as well as small quantities of other oils (e.g., lubricants). Rice farms used diesel-powered wellhead and re-lift pumps to flood or drain the fields. Containers at rice farms tended to be distributed across the farm, with close to half of the total storage capacity at satellite locations.

As summarized in *Exhibit 12*, of the six cotton ginning operations EPA visited, four had more than 2,500 gallons in aggregate oil storage and only one had more than 6,000 gallons. As shown in *Exhibit 13*, two of the seven dairy farms EPA visited had less than 2,500 gallons of oil (primarily diesel, but also gasoline, waste oil, and lubricants, excluding milk containers) on site, one dairy farm had less than 6,000 gallons, and one farm had more than the 20,000-gallon threshold for self-certification. Both rice farms had more than 20,000 gallons of aggregate oil storage on site.

**Exhibit 12: Oil storage capacity for cotton ginning operations.**

Type of Facility and Location	Farm Production (cotton bales per year)	Number of bulk storage containers	Oil Storage Capacity (gallons)		
			Bulk storage containers	Oil-Filled Equipment	Total
Cotton gins, NC	60,000	6	6,500	2,350	8,850
	40,000	8	2,555	1,750	4,305
	30,000	2	1,055	850	1,905
	28,000	2	2,000	840	2,840
	25,000	3	2,305	1,640	3,945
	25,000	2	500	1,410	1,910

Source: U.S. EPA, 2005

**Exhibit 13: Oil storage capacity for dairy and rice farms.**

Type of Facility and Location	Farm Production	Number of bulk storage containers	Oil Storage Capacity (gallons)	
			Largest tank	Total
Dairy farms, NY	Dairy and crop: 3,200 acres, 1,600 cows	4	14,000	15,000
	Dairy and crop: 2,500 acres	15	15,000	30,660
	Dairy only: 2,500 acres, 750 cows	5	10,000	16,050
	Dairy only: Unknown acres, 1,000 cows	3	10,000	12,300
	Dairy and crop: 1,200 acres, 800 cows	3	3,500	4,500
	Dairy only: 550 acres, 170 cows	5	500	915
	Dairy only: 200 acres, 600 cows	3	500	610
Other farms, NY	Hog and vegetables: 1,200 acres	2	2,000	2,500
	Orchard	2	500	1,000
Rice farms, AR	3,500 acres	18	15,000	30,350
	2,300 acres	23	12,000	42,000

Source: U.S. EPA, 2006 and 2007

Finally, other information obtained from EPA regional staff reveals similar variations across regions. EPA inspectors in Region 7 typically see 1,000- to 10,000-gallon single- and double-walled ASTs, drums and totes for reuse, and 200- to 1,000-gallon nurse tanks at farms. CAFO facilities EPA inspected between 2001 and 2005 in Region 8 had container sizes ranging from less than 200 gallons to over 12,000 gallons. Almost all the facilities had several containers, with an average slightly below three containers per facility; for example, one inspected facility had one 4,200-gallon container for gasoline, one 500-gallon container for diesel, and one 300-gallon container for waste oil. Farms inspected in EPA Region 10 between 2008 and 2012 had similar varying characteristics, with container sizes ranging between 660 gallons and 10,000 gallons, number of containers ranging from 2 to 11, and total storage capacity ranging from 1,320 gallons (a vegetable/melon farm) to over 50,000 gallons (a dairy farm).<sup>22</sup>

**2.2.4 Oil Storage Container Distribution on Farms**

Inquiries into the distribution of storage containers on farms yielded mixed results. Interviewees contacted in 2006 suggested that 10 to 30 percent of farms have more than one fuel storage tank location. This proportion is lower than suggested in the 2005 USDA Survey, in which 47 percent of farmers had storage tanks in more than one location. All sources indicated that farms with storage capacities of 7,000 to

<sup>22</sup> Personal communication from inspectors in EPA regions, 2014.

10,000 gallons typically have storage in one central location, presumably because they may be using a single larger storage tank.

Six of eight interviewees, and all interviewees from local cooperatives, agreed that the majority of farms have centralized storage locations, and, when asked how many farmers have more than one fuel storage tank location, their responses ranged from 10 to 30 percent. Six out of seven interviewees agreed that all larger farms have centralized fuel storage in one location. One interviewee who stated that large farm operations had storage in more than one location noted that large farm operations still comprised only 25 to 30 percent of farms with multiple oil storage locations, citing the existence of multiple farmsteads as the primary reason for larger farms to have several fuel storage locations. Interviewees noted that farms with multiple storage locations were typically 1,000 to 2,000 acres in size, citing distance between farm parcels as the primary reason for farms having multiple oil storage location. Interviewees also noted that farms with multiple storage locations typically have smaller storage tanks that are less than 1,000 gallons each at the satellite locations. The fuel delivery service interviewees from Pennsylvania and Florida were the exceptions. The Pennsylvania interviewee indicated typically delivering fuel in multiple locations for greenhouses, the type of farm serviced by this particular delivery company. The Florida interviewee indicated that almost all citrus farmers have dispersed fuel storage because diesel engines are needed to pump water from wells around the farm for irrigation purposes. The Florida interviewee noted that storage for other farm equipment was centralized (e.g., in the barn). The interviewee further noted that while farmers typically have two or three diesel tanks around wells, one large farm operation had 50 tanks dispersed throughout the facility.

**Exhibit 14: Excerpted results of 2005 USDA Survey: Farmer questionnaire responses to Questions 9a and 9b.**

Response	All Respondents		Total Aggregate Oil Storage Capacity (gallons)									
			< 1,320		1,320-5,000		5,001-12,000		12,001-29,999		> 30,000	
	#	%	#	%	#	%	#	%	#	%	#	%
<i>Question 9a. Are storage tanks in one location?</i>												
YES	<b>810</b>	<b>53%</b>	331	72%	304	47%	105	50%	63	36%	3	6%
NO	<b>717</b>	<b>47%</b>	131	28%	338	53%	103	50%	114	64%	29	94%
<i>Question 9b. How many tank sites exist?<sup>1</sup></i>												
Number	<b>4,174</b>	-	334	8%	2,489	60%	462	11%	559	13%	330	8%

Notes:

<sup>1</sup> Responses to this question indicate the number of tank sites for all 1,527 farmers responding to this question, and the total number of tank sites at farms by total aggregate oil storage capacity. For example, there were 4,174 total tank sites reported for all 1,527 farmers responding to the questions.

Source: USDA, 2005 (Table 1).

Data presented in *Exhibit 14* suggest that the proportion of farms with multiple storage locations increases with total storage capacity. In contrast, the interviewees indicated that larger farms tend to centralize fuel storage. While this disparity may result from the small number of interviewees relative to the diversity of farm operations, a closer look at the 2005 USDA Survey data shows some similarity between the two data sources.

Interviewees indicated that large farm operations typically had tanks of 7,000 to 10,000 gallon capacities centralized in one location. The trend of larger tank sizes at larger farms would mean that farms with a total fuel storage capacity of 5,001 to 12,000 gallons would most likely purchase a larger tank, and therefore more readily centralize fuel storage to one location.

While the overall trend in the 2005 USDA Survey indicates that larger farms have an increasing likelihood of storage in more than one location, the survey data also show a lower number of farms with multiple storage sites (Survey Question 9a) and number of tank sites (Survey Question 9b) in the 5,001- to 12,000-gallon category. In addition, the USDA Survey shows a slightly lower incidence of multiple storage locations (three percent decrease) between the 1,320 to 5,000 and 5,001 to 12,000-gallon ranges. Moreover, responses to Question 9b indicated that the number of other storage tank sites for farms in the 1,320 to 5,000-gallon range represented 60 percent of the other storage tank sites, a significantly higher proportion than any other storage capacity category. This is consistent with information provided by the interviewees, who indicated that farms with total fuel storage between 1,320 and 5,000 gallons are more likely to purchase multiple tanks of a readily available size (500 or 1,000 gallons). These multiple tanks are then more easily distributed among multiple fuel storage locations.

### **2.2.5 Frequency of Fuel Delivery to Farms**

All interviewees EPA contacted in 2006 agreed that commonly sized fuel storage tanks (1,000 gallons) are typically refilled three to four times per year, and that larger tanks (7,000 to 10,000 gallons) require less frequent deliveries — typically one per year. This delivery frequency suggests that fuel demand for larger farms (with larger storage tanks) may be 14,000 to 20,000 gallons per tank per year. At the other extreme, one interviewee noted that about ten percent of farmers have oil deliveries 10 to 15 times per year. Farmers with frequent deliveries typically have tanks of 500 gallons or less, or high fuel consumption. The Florida interviewee noted that most farms receive delivery to their 500-gallon tanks weekly during the peak season. Another interviewee stated that some farmers have extremely frequent delivery, sometimes twice a week, and noted that these farms are the highest priority for “right-sizing,” or matching tank capacity with farm fuel needs in order to reduce the frequency of fuel deliveries.<sup>23</sup>

Apart from the fuel delivery cost savings associated with increasing storage tank capacity, one interviewee noted that it is more opportunistic to purchase fuel at certain times during the year, outside the peak season when prices are higher. This interviewee noted that the cost savings that result from buying off-peak, as well as the possibility of fuel supply disruption, may explain why some farmers, especially large operations, increase storage tank capacity.

### **2.2.6 Spill Containment Structures**

Spill containment is one of the most effective methods for preventing discharges of oil to navigable waters or adjoining shorelines and is a core element of the SPCC Plan.

Inadequate secondary containment is often noted as a contributing factor in discharges of oil to navigable waters or adjoining shorelines, from a wide range of facilities, including farms (see *Section 3.1*). Yet, of the 28 CAFOs EPA inspected between 2001 and 2005, more than half (16 facilities) lacked SPCC-mandated secondary containment for bulk storage containers at the time of the inspection.<sup>24</sup> Further, inspectors noted evidence of past or active oil discharges at several of these facilities,<sup>25</sup> highlighting the potential for oil to reach waters of the United States.

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<sup>23</sup> The interviewee from Florida stated that farmers are specifically down-sizing storage capacity and purchasing 500-gallon tanks due to state registration requirements for tanks 1,000 gallons or larger. The interviewee noted that while this trend goes against the fuel needs for these farms (citrus growers), farmers may purposely not “right-size” due to state regulatory concerns.

<sup>24</sup> Personal communication, Melissa Payan, EPA Region 8, November 26, 2014.

<sup>25</sup> In their inspection notes, EPA inspectors noted one farm that had reported a discharge 100 to 300 gallons due to an overflow, and another five farms showing signs of past discharges such as large areas of contaminated soil around the tanks.

These findings are consistent with the 2005 USDA survey<sup>26</sup> which indicated that over 90 percent of the surveyed facilities lacked adequate containment. The need to address current inadequacy of containment is one reason cited for farmers to want to remove tanks they no longer use as these tanks are not compliant with spill prevention and control requirements (KWCH12 News, 2014).

As discussed in *Section 2.4*, secondary containment is required not only under the SPCC rule, but also by state regulations and local ordinances that follow the fire code. Preparation of an SPCC Plan may be what prompts farmers to consider the potential spill risk from their facility and to address that risk before they incur the potentially higher costs of cleaning a spill. However, correcting inadequate secondary containment is likely the most significant cost to a farmer of complying with the SPCC rule, as compared to the relatively low cost of preparing the actual Plan, particularly in the case of a self-certified Plan.<sup>27</sup>

The USDA Natural Resources Conservation Service (NRCS) conducted a pilot program to assist producers in developing SPCC Plans and construct adequate secondary containment. The pilot program ran for three years during 2011, 2012, and 2013. Under the Pilot, farmers that were required to have a plan prepared and certified by a registered PE (i.e., farms exceeding 10,000 gallons aggregate above-ground storage capacity) could receive funding through the Environmental Quality Incentives Program (EQIP) to develop a plan and/or install secondary containment.<sup>28</sup> Farmers requesting assistance to construct secondary containment for their tanks had to provide an SPCC Plan (either PE-certified or self-certified) indicating the need for such containment. The NRCS Pilot was carried out in eight states (Idaho, Louisiana, Montana, North Carolina, North Dakota, New York, Oklahoma, and Texas), and of the plans produced, 93 percent came from three states (North Dakota, Louisiana, and Montana) with 79 percent coming from North Dakota alone. Additionally, the plans were all for facilities with greater than 10,000 gallons of aboveground aggregate storage capacity, so these plans do not provide information on the characteristics of farms with aggregate above ground storage between 2,500 and 6,000 gallons.

As of September 2014, NRCS has released a new national conservation practice standard for On-Farm Secondary Containment Facility (Code 319).<sup>29</sup> *Exhibit 15* shows the typical cost of secondary containment estimated by NRCS to calculate incentive payment rates for Farm Bill programs for Fiscal Year 2015. The typical cost of secondary containment is expected to vary depending on the region, containment approach (e.g., replace single walled tanks with double walled tanks, add concrete wall enclosure, add earthen storage lined with a flexible membrane), and storage volume. The Payment Share Rate depends on the state.<sup>30</sup> Note that the typical facility cost estimates in *Exhibit 15* are speculative given

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<sup>26</sup> Fuel/Oil Storage and Delivery for Farmers and Cooperatives (USDA, 2005)

<sup>27</sup> In the 2008 RIA, EPA estimated that small facilities such as farms (Tier 1 qualified storage facility) spend \$1,320 to \$19,800 (2007 dollars) on installing secondary containment for their bulk storage containers, depending on berm dimensions and material, as compared to less than \$200 on Plan preparation when following the template (U.S. EPA, 2008).

<sup>28</sup> A primary purpose of EQIP is to assist agricultural producers comply with environmental regulation and permit requirements. Under the Pilot, NRCS defined two interim EQIP practices: SPCC Conservation Activity Plan (Code 150) and Agricultural Secondary Containment Facility (Code 710).

<sup>29</sup> Description of the practice is available at [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1263508.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1263508.pdf) (accessed January 20, 2015)

<sup>30</sup> The payment rate is a percentage of the determined typical cost. The percentage is determined on a state to state basis and may also vary from year to year. The payment rate can be higher for Historically Underserved (HU) groups including socially disadvantaged, beginning and limited resource farmers, Indian tribes and veterans. For example, in Delaware the payment rate in FY 2015 for Practice 319 was 75 percent (90 percent for HU) of the estimated average cost, or \$100.76 per cubic yard (\$120.91/cubic yard for HU) for earthen containment. Idaho's payment rate was \$21.22 per cubic yard (\$31.83/cubic yard for HU) for earthen containment. State by state information is available at [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?&cid=nrcs143\\_008223](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?&cid=nrcs143_008223) (accessed May 14, 2015)

the very limited experience of NRCS State Offices with this practice so far. Data are not yet available on the number of farmers receiving funding for the practice and the amount received.

**Exhibit 15: Approximate cost of on-farm secondary containment facility EQIP practice**

<i>Capacity (gallons)</i>	<i>Estimated typical cost</i>
1,000	\$2,400 - \$6,000
3,000	\$3,700 - \$6,000
4,700	\$3,200 - \$11,200
10,000	\$6,600 - \$15,000

Source: USDA, 2015 (personal communication)

### 2.3 Uniqueness of Farms and Similarity in Storage Practices to Other Facilities

As reflected in the farm profile of *Section 2.2*, farms share similar characteristics with other types of SPCC-regulated facilities with respect to the types of oil products stored on site, the number and size of oil tanks, and oil storage practices. EPA evaluated these storage practices as part of its rulemakings to streamline the rule requirements for facilities with smaller aboveground storage capacities, including farms (see *Section 1.1*).

As noted in the regulatory record, after reviewing the information provided by the agricultural industry on proposed rulemakings, EPA concluded that there was insufficient evidence to provide an exemption specific to farms or make changes to regulatory thresholds since the types of tanks and oil storage conditions at farms were generally similar to those of other facilities, with similar potential for discharge (see relevant excerpts below). EPA did recognize some unique characteristics of farms in terms of geographic scale, configuration, land ownership and lease structure, and on-farm activities, and provided flexible rule provisions that benefit all small facilities and specifically farmers. For example, as described in *Section 1.1*, EPA considered the characteristics of farms when it amended the SPCC regulation to provide additional flexibility for a number of the regulatory requirements (see 72 FR 58383, October 15, 2007) or to define farms for the purpose of the SPCC regulation. It also considered the need of the agricultural industry in providing farm-specific extensions to the compliance dates.

EPA concluded that while farming operations may be unique, the storage tanks found at farms are similar in function and design as those found at other types of facilities, and therefore have a similar potential for discharge (see 73 FR 74242, December 5, 2008). Specifically, as stated at 73 FR 74242:

*EPA continues to believe that there is insufficient data to support an outright exemption exclusively for farms beyond the existing aboveground storage capacity threshold of 1,320 U.S. gallons that applies to all facilities (§ 112.1(d)(2)(ii)). As noted previously, no data was provided by the commenters to support such an exemption.*

*[...] Commenters did not provide sufficient data to support an increase in the Tier I threshold for farms higher than proposed. For more information on Tier I and Tier II qualified facilities, see Section V.G of this notice. EPA also disagrees that the amendments to the SPCC rule in December 2006 provide “special treatment” to any eligible facility. Farmers, small businesses, and other small oil storage facilities may be eligible to self-certify their SPCC Plans if they meet the eligibility criteria for qualified facilities in §112.3(g). In providing this option for facilities handling smaller amounts of oil, the Agency sought to focus on those smaller, less complex operations that may be concerned about the impact of using a PE on their limited budget. Some of the current noncompliance with the SPCC regulation may be attributed to those concerns. The Agency believes that providing a streamlined option for owners and operators of these smaller, less complex facilities should improve the overall compliance for the SPCC regulation, ultimately resulting in greater environmental protection (71 FR 77270, December 26, 2006). The owners and*

operators of farms, small businesses and other small oil storage facilities may be eligible to self-certify their SPCC Plans if they meet the eligibility criteria for qualified facilities in §112.3(g).

[...]With respect to an alternative “qualified facility” threshold, EPA considered the commenters’ suggestions for modifying the existing qualified facilities threshold of 10,000 U.S. gallons total aboveground storage capacity. However, the agricultural community did not provide information that would lead the Agency to conclude that farms are sufficiently different to warrant further differentiation from other facilities that store oil. In fact, EPA believes that many non-farm facilities could have similar needs to purchase identical storage needs as identified by agricultural stakeholders. Thus, EPA is not persuaded by these comments to raise the existing qualified facilities threshold solely for farms beyond 10,000 U.S. gallons. In setting the qualified facilities threshold at 10,000 U.S. gallons in the December 2006 amendments, EPA sought to provide an alternative for facilities, among other things, with simple oil storage configurations and smaller quantities of oil handled (see 71 FR 77271, December 26, 2006). EPA continues to maintain that the focus of the qualified facilities alternative should be on simple configurations and small quantities of oil stored or handled. It should also be noted that, as described in Section V.G of this notice, EPA is finalizing a multi-tiered approach to allow the owner or operator of a facility that meets the eligibility criteria for a qualified facility to self-certify his SPCC Plan, and allow the owners or operators of a subset of qualified facilities (i.e., “Tier I qualified facilities”) to complete the SPCC Plan template in Appendix G of this part in lieu of preparing a full SPCC Plan. EPA believes that the Tier I qualified facility alternative should focus on facilities with the simplest configurations and smallest oil storage containers.

## 2.4 State Regulations of Oil Storage at Farms

This section summarizes state AST programs and discusses the applicability of these programs to oil tanks at farms.<sup>31</sup> Appendix A provides a state-by-state summary of requirements applicable to farm tanks, based on EPA review of program information and regulations in each state.

A unified format for state AST programs does not exist. Two primary state agencies regulate ASTs: state fire marshals and state environmental departments. Of the 44 states that operate formal AST programs,<sup>32</sup> 24 states have AST programs administered by the environmental department (or its equivalent). In the other 20 states, the State Fire Marshal has authority over ASTs through implementation of a fire code, such as the National Fire Protection Association (NFPA)<sup>33</sup> Uniform Fire Code or the International Fire Code (IFC), both of which have guidelines for flammable and combustible liquid storage and handling.<sup>34</sup> Specific requirements and thresholds for state AST program regulatory applicability vary. Several states

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<sup>31</sup> States also typically have programs specific for USTs but these containers are of lower interest for this study given the focus on farms that store between 2,500 and 6,000 gallons of oil in aboveground containers.

<sup>32</sup> For the purpose of this report, a “formal” state AST program consists, at a minimum, of a registration or permitting requirement for ASTs with a state agency. Note that the seven states without a formal state AST program still regulate ASTs through the fire code, but registration and permitting (if any) is done through county or local governments.

<sup>33</sup> NFPA is an international nonprofit that serves as an advocate of fire prevention primarily through NFPA codes and standards, which number over 300 and address building, process, service, design, and installation. NFPA codes are referenced in many state fire codes, frequently with state deferral to NFPA standards.

<sup>34</sup> The fire codes contain requirements for tanks containing flammable liquids by specifying design and construction standards (e.g., material, design, venting), installation requirements (e.g., location including separation from buildings, public ways and other tanks, signage), overfill protection, and requirements for dispensing equipment. Note that states regulations may have additional requirements beyond those in the fire codes, for example regarding secondary containment for fuel storage areas.



require permitting and/or registration of ASTs that exceed a specified individual or aggregate capacity.<sup>35</sup> States may also have additional requirements such as inspection and secondary containment for tanks above a specified capacity.

*Exhibit 16* summarizes state AST programs. Nine states, identified separately in the table (i.e., Arkansas, Colorado, Kentucky, Minnesota, New Mexico, Oklahoma, South Dakota, Vermont, and Wyoming), exempt farms from AST requirements applicable to other types of facilities. As discussed later in this section, other states may provide specific exemptions for farm tanks below a specified individual or aggregate capacity threshold. These exemptions do not necessarily mean that farm tanks have no requirements. Farmers still need to comply with any applicable fire safety ordinances, but they are not required to register the tanks, obtain a permit, etc. under the state-wide program that otherwise applies to other types of ASTs.<sup>36</sup>

<b>Agency Administering State AST Program</b>	<b>Number of States</b>	<b>States</b>
Programs administered by Environment Protection Department or Equivalent	16	AL, DE, FL, KS, LA, MD, NC, NH, NJ, NY, PA, RI, TX, VA, WI, WV
... but exempt farm tanks	8	<b>AR, CO, MN, NM, OK, SD, VT, WY</b>
Programs administered by State Fire Marshal or equivalent	19	AK, AZ, CA, IL, IA, IN, GA, MA, ME, MI, MO, MT, NE, ND, NV, OH, OR, SC, WA
... but exempt farm tanks	1	<b>KY</b>
Subtotal – States with AST Program	44	
No State AST Program (Requirements administered by local/county governments)	6	CT, HI, ID, MS, TN, UT

*Exhibit 17* summarizes the oil storage capacity thresholds for farms tanks covered under state AST programs. As shown, the thresholds for farm tank storage capacity vary by state, and tend to mirror other federal regulations, such as the SPCC Rule (1,320-gallon threshold) and the UST rule at 40 CFR part 280 and 281 (1,100-gallon threshold). EPA identified 29 states that include applicability capacity thresholds for ASTs, of which seven states specify a different, higher threshold for farm tanks. The remaining states either do not have thresholds for farm tanks, or exempt farm tanks from state AST regulation altogether.

<b>AST Threshold for Farm Tanks (Gallons)</b>	<b>Number of States</b>	<b>States</b>
>60	2	GA, ME
>110	2	IL, WI
>500	1	RI
>550	1	FL

<sup>35</sup> Where oil storage tanks must comply with flammable and combustible liquid storage and handling sections of state and local fire codes, the absence of more formally organized state AST programs, such as those administered by state environmental agencies or the State Fire Marshal, does not preclude ASTs from regulation.

<sup>36</sup> Note that other types of ASTs (e.g., ASTs at construction sites) may also be exempted from state programs or have higher applicability thresholds. Further, some state programs apply only to certain ASTs. For example, Wyoming requires registration of ASTs used to dispense fuel for retail sales, which excludes, by definition, farm tanks and ASTs that store fuel for on-site use.

**Exhibit 17: Farm AST Capacity Thresholds**

<b>AST Threshold for Farm Tanks (Gallons)</b>	<b>Number of States</b>	<b>States</b>
>660	2	LA <sup>1</sup> , NH <sup>1</sup>
>1,000	1	OR
>1,100	4	IA, MI <sup>2</sup> , NY, TX
>1,100 (specific to farms)	7	AL, DE, KS, MA, ND, PA, VA
>1,320	5	AK, CA, LA <sup>1</sup> , NH <sup>1</sup> , WV
>10,000	1	MD
>21,000	1	NC
>30,000	1	MT <sup>3</sup>
>200,000	1	NJ
Subtotal, State AST Programs with Thresholds for Farms	29	
No Threshold Located	6	AZ, IN, MO, NE, SC, WA
All Farm Tanks Exempt	9	AR, CO, KY, MN, NM, OK, SD, VT, WY
Subtotal, State AST Programs without Thresholds for Farms or Exempting Farms	15	
Total, State AST Programs	44	

## Notes:

<sup>1</sup> State has an aggregate threshold as well as a tank threshold.

<sup>2</sup> Michigan limits tanks holding Class I liquids to 6,000 gallons and tank systems holding Class II or IIIA liquids to 15,000 gallons per tank or 30,000 gallons in the aggregate.

<sup>3</sup> Maximum capacity for compensation fund eligibility.

Beyond the type of state or local program to which farm tanks are subject, and any applicable threshold, there may also be differences in the level of attention farm tanks receive from state or local authorities charged with ensuring compliance with environmental protection or safety requirements. EPA's review of public information on local Fire Ordinances and Fire Department programs suggests that the level of inspection and compliance enforcement varies depending on the jurisdiction. California's Health and Safety Code specifically calls for the triennial inspection of each farm to verify compliance with hazardous material (including gasoline and diesel) storage requirements for quantities above 55 gallons.<sup>37</sup> Other jurisdictions specifically exclude farms from their inspection program.<sup>38</sup>

<sup>37</sup> The program started in 2001 after an audit performed by the State of California in 1999 revealed that implementation of the hazardous material disclosure program on farms was incomplete.  
[http://www.solanocounty.com/depts/rm/environmental\\_health/hazmat/farm\\_hazmat\\_faq.asp](http://www.solanocounty.com/depts/rm/environmental_health/hazmat/farm_hazmat_faq.asp)

<sup>38</sup> For example, the City of Baraboo, WI specifically excludes farms from inspections conducted either once or twice a year at other types of commercial facilities within the City Fire Department's jurisdiction.  
[http://www.cityofbaraboo.com/index.asp?Type=B\\_BASIC&SEC=%7BB55D077F-2005-4BE3-AABC-7447CCA3F2C6%7D&DE=%7BB3073C9F-4670-4183-A5B6-0646FA271A5C%7D](http://www.cityofbaraboo.com/index.asp?Type=B_BASIC&SEC=%7BB55D077F-2005-4BE3-AABC-7447CCA3F2C6%7D&DE=%7BB3073C9F-4670-4183-A5B6-0646FA271A5C%7D)

## 3 Oil Discharges

The 2005 USDA Study cited in *Section 2.2* asked respondents to indicate whether they had experienced a fuel spill in excess of 1,320 gallons.<sup>39</sup> Of the six respondents that had experienced this size spill (less than 1 percent of the farmers surveyed), five had aggregate oil storage capacity of 5,000 gallons or less. Based on these responses, USDA concluded that the data suggest that the frequency of spills of that size from farms is small. However, these data also reveal that facilities with relatively small storage capacity may still be the source of discharges to navigable waters or adjoining shorelines well in excess of quantities that may be harmful. Further, the study did not address discharges of less than 1,320 gallons of oil.

The sections below describe past incidents from farm facilities (*Section 3.1*) and highlight the harmful effects that even small amounts of fuel oil discharges can have on receiving ecosystems (*Section 3.2*).

### 3.1 Reported Discharges

The National Response Center (NRC) is the federal government's national communications center and the sole federal point of contact for reporting hazardous substances releases and oil discharges that trigger federal notification requirements under several laws. Under 40 CFR part 110, the quantity of oil which causes harm and is reportable is a sheen (note that there are other triggering criteria other than a sheen, 40 CFR part 110). Upon receipt of an incident report, NRC ensures the deployment of appropriate response capabilities. NRC maintains a database of all incidents reported to the Center and publishes the data on its website.

EPA reviewed the NRC data for the period of 2010 through 2014 to identify reported oil spills that may be attributable to farms. An initial search focused on incidents where the responsible party or the incident description recorded by the NRC mentioned a farm or agricultural activities, but excluded those incidents that did not relate to farming activities (e.g., releases from a pipeline crossing farm land or from co-located oil production site), involved oils not typically used by farmers (e.g., crude oil, transformer oil), or for which the description of the incident did not enable EPA to conclusively determine that the incident was, in fact, farm-related.<sup>40</sup> EPA then conducted additional searches to get more information about incidents reported to the NRC and to identify additional incidents not identified during the NRC data review. For example, EPA reviewed information from Pollution Reports prepared by EPA On-Scene Coordinators (OSCs) participating in response activities prompting expenditures from the National Oil Spill Liability Trust Fund (OSLTF) resources, and information provided by EPA regional staff who responded to, or were informed of, spills from farm facilities. This second search revealed additional incidents that were either not reported to the NRC or for which the information provided in the NRC report was not sufficiently detailed to flag the incident in the first search (i.e., the report did not identify the responsible party, type of oil spilled, or otherwise provide any indication that it was related to a farm).

This approach highlights the significant limitations of using the NRC data to evaluate spill risk. Spill incidents are not always reported due to lack of awareness of the reporting requirements or the information provided is preliminary and incomplete, making it difficult to conclusively establish the

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<sup>39</sup> The survey did not solicit information on the location of the spills to determine whether the discharges affected waters or adjoining shorelines, nor did the survey address smaller spills that may also reach waters.

<sup>40</sup> For example, EPA did not include NRC incident #1024352 since it could not conclusively establish that the incident was, in fact, due to the farm operations ("caller stated that there is an unknown amount of diesel fuel discharging from the river embankment from a farm field into the Kalamazoo River. Caller stated that this has been ongoing for several days and they discovered spontaneous sheening at this location.")

source, cause, and impacts of the discharge. For example, a spill may be reported to the NRC and described only as a “mystery sheen” that upon further investigation turns out to have originated from a tank at a facility. The NRC report will not reflect the latter information. Incidents that do not prompt activation of state or federal government responders may not get investigated or recorded in other sources (e.g., newspaper, state or Federal emergency response reports), making it difficult to confirm the circumstances, magnitude, and impacts of a discharge. As discussed in *Section 2.2*, since available information suggests that many farmers are not aware of their obligations under the SPCC regulation and do not provide adequate secondary containment for their oil containers, many farmers may also not be aware of the federal criteria and reporting requirements for oil spills.

The following example incidents are indicative of the types of spills originating from farms. In EPA’s experience, the causes and circumstances of incidents from farms are similar to those from other types of facilities. These causes include overfills, tank settling, equipment failures (e.g., piping, appurtenances), and operator errors. In several cases, the lack of secondary containment contributed to the discharge reaching waters or adjoining shorelines. A good prevention plan helps to avoid spills in the first place, and lessens environmental impacts caused when accidents occur. Spill prevention regulations require non-transportation-related facilities that store large amounts of oil to have a spill prevention plan that addresses the facility’s design, operation, and maintenance procedures to prevent spills from occurring. The plan must also include countermeasures to control, contain, clean up, and mitigate the effects of oil spills on waterways. Note that the examples below do not include the costs incurred responding to the discharge, nor do they include the costs for restoration, rehabilitation, or replacement of injured natural resources, unless noted).

- On January 5, 2002 approximately 564 gallons of diesel oil drained from an Arizona farm’s storage tank and reached the Colorado River 30 feet away. The farm operates an irrigation pumping facility in connection with farming activities. The facility had three storage tanks holding a total capacity of 11,000 gallons of diesel oil. Two hunters noticed a strong odor of fuel coming from the Colorado River and notified the California Department of Fish and Game and the La Paz county sheriff’s office, who discovered that the piping connecting the diesel tanks and the irrigation pump was disconnected. EPA officials responded to the spill, arranged for soil cleanup, and set up booms along the river to protect the local drinking water supplies and the Cibola Wildlife Refuge downstream. The responsible parties claimed that the spill was a result of vandalism. The farm did not have an oil spill response plan. EPA fined the landowner and the operator \$11,000 for violations stemming from the incident. Following the spill, the responsible party replaced its tanks with a new tank located within secondary containment, and installed a new fuel line within the piping. The farm also prepared a spill response plan.<sup>41</sup>
- On June 30, 2006, a diesel-powered pump, located on the bank of the Cuivre River, used to pump irrigation water to a nearby sod farm, developed a leak and released an estimated 80 to 100 gallons of diesel fuel to the Cuivre River. EPA and the Missouri Department of Natural Resources (MDNR) responded. The EPA activated the OSLTF to pay for response costs in the event the responsible party did not cooperate in the clean-up efforts. The EPA and MDNR monitored the clean-up. The pump was about 15 feet above the river on a bench, walled with concrete and filled with gravel. The gravel was stained with diesel fuel under the pump motor. The pump was off when responders arrived and no fuel was leaking from it at that time.

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<sup>41</sup> Sources :  
<http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/1d737bb67d4296ac852570d8005e1593!OpenDocument&Start=12.10&Count=5&Expand=12.11>

Responders observed diesel leaching into the river. The Old Monroe Fire Department reported that the day before they had seen a sheen with pools as far as a mile downstream of the spill site. Absorbent booms and hard booms were placed to secure the area of release. The pump base was excavated and diesel-contaminated gravel was removed for disposal.<sup>42</sup>

- On March 9, 2009, MDNR requested assistance from EPA concerning a diesel fuel spill that threatened the Chariton River. A relatively new 10,000-gallon AST at a farm had apparently settled due to heavy rains causing a pipe to fracture releasing almost all of the tanks' 7,000-gallon content. The material traversed a crop field and reached the Chariton River. A contractor was secured to assist with the cleanup with MDNR remaining on scene to document recovery of the material. By March 16, 2009, the contractor had recovered 15,000 gallons of water that had an oil sheen, 5,300 gallons of diesel water mixture, and two 40-cubic-yard roll off boxes of contaminated boom and sorbent material. EPA assessed a civil penalty of \$18,750 to the responsible party.<sup>43</sup>
- On February 23, 2010, a caller reported a spill of approximately 2,500 gallons of diesel from an aboveground storage tank at a farm to an irrigation canal that is a tributary of the Owyhee River near Nyssa, Oregon to the NRC (*Exhibit 18*). The spill occurred as a tanker truck was transferring fuel into an already nearly-full 10,000-gallon bulk storage tank. The spill was controlled by deploying a boom and pads to divert the flow of the irrigation canal. Information from the local chamber of commerce describes the farm as consisting of about 1,300 acres of land, organized into four distinct areas. They mostly raise onions, but also some corn, wheat, hay, and mint. The farm had a total oil storage capacity of 16,000 gallons, of which the largest of three tanks was 10,000 gallons. All tanks were housed in buildings. The farm and trucking company involved in the discharge agreed to pay a penalty of \$34,000 for the discharge. EPA noted that the spill could have been prevented had the farm had an SPCC Plan and provisions in place to ensure the safe storage of oil. Notably, the farm did not have adequate secondary containment to prevent the migration of the spilled oil some 200 feet from the tank. Further, the farm could not provide records indicating that the tank had been inspected, or that employees were trained in how to prevent and respond to a spill.<sup>44</sup>

**Exhibit 18: Booms deployed to contain and collect diesel spilled by a farm in Oregon in February 2010.**



<sup>42</sup> Sources: EPA Pollution/Situation Report, available at [http://epaosr.org/site/site\\_profile.aspx?site\\_id=2338](http://epaosr.org/site/site_profile.aspx?site_id=2338)

<sup>43</sup> Sources: EPA Pollution/Situation Report, available at [http://epaosr.org/site/site\\_profile.aspx?site\\_id=4844](http://epaosr.org/site/site_profile.aspx?site_id=4844); [http://www.epa.gov/region7/public\\_notices/CWA/2011/brownfield\\_oil\\_moberly\\_mo\\_and\\_grisby\\_farms\\_elmer\\_mo.htm](http://www.epa.gov/region7/public_notices/CWA/2011/brownfield_oil_moberly_mo_and_grisby_farms_elmer_mo.htm)

<sup>44</sup> Sources: EPA Pollution/Situation Report, available at [http://epaosr.org/site/site\\_profile.aspx?site\\_id=5847](http://epaosr.org/site/site_profile.aspx?site_id=5847); NRC Report ID 932146; [http://www.argusobserver.com/news/nyssa-chamber-of-commerce-honors-local-residents---larry/article\\_10514273-eb92-5f6d-9990-29bc27f31624.html?mode=jqm](http://www.argusobserver.com/news/nyssa-chamber-of-commerce-honors-local-residents---larry/article_10514273-eb92-5f6d-9990-29bc27f31624.html?mode=jqm); <http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/9efe7b30cea0b3568525784e006df898!OpenDocument>

- On July 14, 2010, California Office of Emergency Services responded to a 2,000-gallon spill of diesel from a 10,000-gallon aboveground storage tank at an orchid nursery. The discharge affected a tributary to Frenchmans Creek. The spill had started about two weeks earlier (around June 30<sup>th</sup>) when a pipe linking the tank to an abandoned boiler room was inadvertently perforated by a backhoe, causing diesel to discharge unnoticed into an adjacent small creek that is a tributary to Frenchmans Creek. Neighbors reported the spill to the state authorities on July 11<sup>th</sup>, after having observed diesel in Frenchmans Creek as early as July 8<sup>th</sup>. Emergency response personnel, including San Mateo County and California Department of Fish and Game staff, contained the spill and did not observe any impacts to wildlife, although they reported over an inch of floating product over an emulsified layer in the small creek, immediately upstream of its confluence with Frenchmans Creek. The responsible party retained an environmental contractor to clean the spill under the County's supervision. The cleanup involved flushing the small creek and removing soil. The County later oversaw the removal of the facility's three 10,000-gallons aboveground tanks and their content. The responsible party agreed to pay \$139,000 in civil penalties for violations stemming in part from the incident and as reimbursement of costs incurred by the county (\$5,700).<sup>45</sup>
- On January 1, 2011, a spill was reported to the NRC from a farm in Arkansas. The cause of the spill was operator error; the nozzle from a diesel tank was left outside of the secondary containment. Approximately 5,000 gallons of diesel were discharged, of which 4,000 gallons reached water.<sup>46</sup>
- On September 13, 2012, possibly as much as 5,000 gallons (later estimated as potentially up to 15,000 gallons) of used oil was discharged from an AST that leaked from a faulty valve at a plant nursery into the North Raccoon River in Iowa. Reportedly, some time on September 12 or 13, 2012, the facility realized the tank was leaking but did not notify anyone or attempt to stop the leak because it was raining. According to personnel on the scene, the spilled material was heavy with some of it sinking and covering the stream bed. The sheen reportedly extended several miles downstream.<sup>47</sup>
- On November 29, 2012, approximately 7,000 gallons of Off-Road Diesel was released at a farm in Donalsonville, Georgia (*Exhibit 19*). The EPA OSC in charge of the case noted the cause of the release as human error; a farmhand left the pump running while filling up a piece of equipment at the end of the day, but failed to remember to come back and turn off the pump.<sup>48</sup>

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<sup>45</sup> Sources: [http://www.waterboards.ca.gov/sanfranciscobay/board\\_info/agendas/2010/August/EO\\_Report.pdf](http://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2010/August/EO_Report.pdf); <http://w3.calema.ca.gov/operational/mal haz.nsf/eeeb9c701ac0f14688257ac60077383d/2745f8799c4e5add882577610003b831?OpenDocument>; <http://patch.com/california/belmont-ca/hmb-orchids-to-pay-damages-for-environmental-pollutio927d1f4f8a>. The company was also fined for diverting or obstructing a stream without prior authorization from the Department of Fish and Game and failing to immediately report the release of hazardous materials to the proper authorities, obtain a project permit from CalOSHA, and protect employees in an excavation from cave-ins by an adequate protective system.

<sup>46</sup> Source: NRC report ID 963479

<sup>47</sup> Sources: EPA Pollution/Situation Report, available at [http://epaosc.org/site/site\\_profile.aspx?site\\_id=8173](http://epaosc.org/site/site_profile.aspx?site_id=8173).

<sup>48</sup> Sources: EPA Pollution/Situation Report, available at [http://epaosc.org/site/site\\_profile.aspx?site\\_id=8321](http://epaosc.org/site/site_profile.aspx?site_id=8321); NRC report ID: 1031830; Personal communication with EPA OSC responsible for the case (Personal communication, 1/26/2015).

- On March 4, 2012, a caller reported a spill of diesel fuel from a storage tank on a farm in Louisiana. The cause of the release was unknown but the discharge reached an irrigation ditch and affected an unnamed creek. The caller estimated the quantity released at several hundred gallons.<sup>49</sup>
- On December 28, 2012, a caller reported two spills to the NRC involving two tanks at a farm in North Carolina. One tank contained diesel (7,000 gallons spilled) and the other containing liquid nitrogen fertilizer (unknown amount spilled). The incident occurred when valves on the two tanks were opened, releasing the content onto the ground. Given the proximity of a wetland/swamp, cleanup actions were undertaken by the responsible party.<sup>50</sup>
- On April 3, 2013, there was a release of fuel through the tank vent on a 5,000-gallon double-walled storage tank at a farm in Alabama. The first report of the incident to the NRC attributed the cause of the release to operator error, with the fuel coming through the tank vent and causing the discharge of approximately 200 gallons of diesel fuel. A second report to the NRC updated the quantity discharged to 4,800 gallons (which is almost the entire capacity of the tank) and the cause to over-pressurization which resulted in a pipe break.<sup>51</sup>
- On January 27, 2015, EPA received a report of a discharge from a farm irrigation fuel tank that released into the Salt Bayou in Arkansas. The spill was estimated to be less than 100 gallons based on visual evaluation, but may have been several days old.

**Exhibit 19: Discharge of off-road (red dyed) diesel from a farm in Georgia in November 2012.**



Other incidents potentially relevant to characterizing the risk posed by oil discharges from farms include discharges from other types of facilities involving tanks of a similar size and service as those used on farms. Each year, the NRC receives hundreds of reports of discharges from storage tanks and fixed facilities. Unfortunately, the information provided in the NRC reports is generally not sufficiently detailed to ascertain the size of the container or circumstances of the release and conclude whether similar discharges may occur on farms. Additionally, as noted above, NRC reports often provide only preliminary information on the discharges to allow the prompt notification of authorities and deployment of cleanup resources, as needed. What the NRC data indicate, however, is that causes of discharges described above are fairly common across sources. For example, of the 1,690 incidents reported to the NRC between 2010 and 2013 involving the release of diesel from fixed facilities or storage tanks, 28 percent were reportedly due to equipment failure, 16 percent were due to operator error, and 25 percent were due to other causes (the remaining 31 percent had an unknown cause).

<sup>49</sup> Sources: NRC report ID 1004739

<sup>50</sup> Sources: NRC report ID 1034368

<sup>51</sup> Sources: NRC report IDs 1042818 and 1042879

### 3.2 Environmental Impacts of Oil Discharges

The impacts of oil discharges depend on the type of oil, quantities, spill circumstances (e.g., weather conditions, speed and effectiveness of the response) and ecosystem-specific characteristics (e.g., land, small stream, large river, pond, wetland). There is ample evidence that discharges of even relatively small quantities of fuel oil, such as the quantities commonly stored on farms, into waters or adjoining shorelines can have significant adverse impacts on soil, vegetation, and wildlife. For example, *Exhibit 20* summarizes selected cases that illustrate the type and the significant magnitude of natural damages assessed for fuel spills ranging between 2,000 and 30,000 gallons, which are within the range of farm fuel storage capacities.<sup>52</sup> As shown by these cases and assessed natural resource damages ranging from thousands to millions of dollars, such spills can affect miles of rivers and acres of wetlands and terrestrial habitats, and cause significant injury to aquatic and terrestrial habitats and wildlife. In particular four of the seven cases involved discharges of less than 6,000 gallons, and therefore could occur at a farm storing up to 6,000 gallons of oil. The settlement values for damages from these four spills ranged from \$145,000 to \$418,000. Such values are two orders of magnitude the costs that a farmer may incur to provide adequate secondary containment to prevent an oil discharge from reaching waters of the United States or adjoining shorelines, and an even greater multiplier of the relatively small costs of preparing an SPCC Plan.<sup>53</sup>

**Exhibit 20: Example natural resource damages from fuel spills between 2,000 and 30,000 gallons**

Case	Date	Spill volume, oil type, and source	Summary of damages (from Department of Interior description of the case)	Settlement Value <sup>1</sup>
Pilot Diesel Spill, Bill Williams River National Wildlife Refuge	12/7/2000	6,000 gallons; diesel, tanker truck	Contaminated soils adjacent to the highway and overlooking the Bill Williams River just 300 feet from the waters' edge, directly impacting soil, vegetation, and wildlife	\$145,000
Texmo Oil Co. tanker truck accident diesel spill	7/28/2006	7,600 to 7,800 gallons; diesel fuel; tanker truck	The spilled, burning diesel ignited the cattails in the marsh below the bridge and the fire eventually spread to include woody riparian and upland vegetation along the shoreline and the riparian forest upstream of the bridge. Approximately 348 acres of marsh and terrestrial habitats were burned or partially burned by the fire.	\$1,217,383
East Walker River fuel oil spill	12/30/2000	3,600 gallons; #6 fuel oil; tanker truck	The spill impacted at least 15 miles of river. The oil cleanup was complicated by cold weather and ice in the river. The resources impacted included Instream habitat and wildlife (fish, macroinvertebrates); human recreational uses (fishing); and other wildlife (1 Virginia rail, 2 dippers, 1 mink, and 6 beavers collected dead).	\$418,000 (\$358,000 for NRDA)

<sup>52</sup> EPA's case selection focused on fuel spills to land and reaching waters or adjoining shorelines. EPA excluded cases involving historical pollution (e.g., NPL sites), crude oil and other chemical substances, and vessels.

<sup>53</sup> In the 2008 RIA, EPA estimated that small facilities such as farms (Tier 1 qualified storage facility) spend \$1,320 to \$19,800 (2007 dollars) on installing secondary containment for their bulk storage containers, depending on berm dimensions and material, and less than \$200 on Plan preparation, when following the template EPA developed (U.S. EPA, 2008).



**Exhibit 20: Example natural resource damages from fuel spills between 2,000 and 30,000 gallons**

Case	Date	Spill volume, oil type, and source	Summary of damages (from Department of Interior description of the case)	Settlement Value <sup>1</sup>
Fish Creek	9/15/1993	30,000 gallons; diesel; pipeline	Diesel was spilled into a crop field in DeKalb County Indiana. The fuel made its way into a small drainage ditch that discharges to Fish Creek. This oil entered Fish Creek and spread downstream, crossing into Williams County, Ohio, exposing the lower 7 miles of the creek to contamination. Mortality of mammals, migratory birds, fish, reptiles, amphibians, and mussels was observed from the spill plume area of Fish Creek following the discharge.	\$2,507,500
Marathon Oil Co. jet fuel/kerosene and slop oil spills	11/25/199, 2/15/1992	3,000 gallons of jet fuel / kerosene (1990); 1,470 gallons of slop oil (1992); facility	The spills entered Oil Creek, Crooked Creek and other Waters of the United States and the State of Indiana. In total, approximately 9.24 miles of riverine habitat and 50 acres of wetland habitat were impacted.	\$304,630
Farmland Industries oil discharge	7/23/2001	2,000 gallons; oil; pipe	The discharged oil flowed into the unnamed intermittent creek bed and subsequently flowed approximately 1,000 feet to Cedar Creek (an intermittent stream) and then flowed approximately 2 miles to Buck Creek (a perennial stream). The potential pathway of discharged oil, should it have continued downstream another 2 miles from Buck Creek to Sand Creek (a perennial creek) and then another 5 to 6 miles into the Caney River, would have threatened this navigable-in-fact body of water. The USFWS calculated the actual extent of habitat affected by the discharge as approximately 15 miles of streams and adjacent banks along Cedar Creek,	Not available
Puget Sound Energy-Crystal Mountain diesel spill	11/3/2006	18,000 gallons, an undetermined fraction of while entered waters; diesel; facility	Diesel fuel flowed to the ground and groundwater, and an undetermined amount of diesel fuel entered Silver Creek and flowed towards the confluence with the White River, approximately four miles downstream.	\$49,614

Source: U.S. Department of Interior NRDAR Case Documents, Available at [http://www.cerc.usgs.gov/orda\\_docs/DamageCases.aspx](http://www.cerc.usgs.gov/orda_docs/DamageCases.aspx) (accessed 1/14/2015)

<sup>1</sup> Value shown is in the dollar year of the settlement date, not adjusted for inflation.

EPA is aware of other examples of spills involving what may seem as small amounts of oil causing significant environmental damages. For example, in March 1, 2015, the release of 1,500 to 2,200 gallons of used oil from an aboveground storage tank at a former farm (feedlot) in Washington State caused heavy oiling of Sulphur Creek and a sheen of the Yakima River downstream. The tank had no secondary containment. The oil left the facility, entered a ditch leading to Sulphur Creek and flowed through about seven miles of irrigation ditches and canals and about 12 miles down the Yakima River. Responders deployed absorbent pads, protective booms and collection equipment to contain and recover the oil. A final report on oiled wildlife noted that 22 oiled wild mallards were captured, of which 6 died in care,

16 oiled mallards were observed already dead in the wild, and 57 oiled greylag domestic geese were captured, one of which had to be euthanized.<sup>54</sup>

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<sup>54</sup> Washington Department of Ecology. Final update on Sulphur Creek Oil Spill (available at <http://www.ecy.wa.gov/programs/spills/incidents/SulphurCreekSpill/> accessed March 25, 2015) and Associated Press, March 3, 2015.

## 4 Conclusions

The exact number of farms subject to the SPCC rule is uncertain, since EPA does not collect registration data for SPCC facilities, but fuel expenditure data compiled by USDA suggests that the vast majority of U.S. farms – 81 to 96 percent – store less than 2,500 gallons of oil on site, and only a very small fraction of farms – less than about 1 percent – store more than 20,000 gallons of oil. Based on capacity alone, therefore, the vast majority of farms are already exempt from the SPCC requirements following the WRRDA amendments to the SPCC rule, which provided an exemption for farms with an aggregate aboveground oil storage capacity of less than 2,500 gallons. This is supported by review of tank registration data, site visits, and other information presented in this report (see *Section 2*).

Further, a vast majority of the small subset of farms that are subject to the SPCC requirements are eligible to self-certify their plan. Over the last decade, EPA has promulgated several changes to the SPCC rule that specifically streamlined the rule requirements and provided significant regulatory flexibility and cost reductions for farms, including providing most farmers the option of using an EPA provided self-certification template to develop their plan. The WRRDA amendments expanded the eligibility of the self-certification option to farms with an aggregate aboveground oil storage capacity up to 20,000 gallons (provided they also meet other criteria), further reducing the SPCC burden for the small fraction of farms that must prepare a plan. Preparation of a self-certified SPCC Plan represents a small burden to a facility owner and is primarily aimed at ensuring that the oil containers are designed, installed, and operated to ensure safe storage of oil, including, at a minimum, by providing appropriate secondary containment to prevent spills from reaching the navigable waters or adjoining shorelines, regularly inspecting the tanks and appurtenances, and outlining procedures to be followed in the event of a spill. Moreover, the cost of developing an SPCC Plan is relatively small in comparison to the costs associated with spill cleanup and environmental damages (*Section 3.2*).

Data on the characteristics of oil storage at farms (e.g., types of containers, container locations, and secondary containment) are limited. As stated in the regulatory record, EPA asked for data during notice and comment rulemaking related to farms to determine how farms differ from other facilities of similar storage capacities. EPA did not receive information to justify exempting farms or otherwise treating oil storage at farms any differently than oil storage at other businesses with similar storage capacities. Data from the 2005 USDA survey discussed in *Section 2.2* suggested that many farmers were not aware of their obligations under the SPCC regulation and did not provide adequate secondary containment of their oil containers. State regulations (*Section 2.4*) may not cover farm tanks, or when they do, they may focus on fire hazards rather than spill prevention and environmental protection. In fact, several states specifically refer tank owners to the SPCC rule at 40 CFR part 112 when describing required preventive measures applicable to facilities that store oil and have the potential to cause a discharge to navigable waters or adjoining shorelines. In fact, the storage threshold applicable to state AST programs often parallel those in 40 CFR part 112 with 25 states having aggregate aboveground oil storage capacity thresholds of 1,320 gallons or less. As discussed in *Section 2.4*, however, requirements applicable to these containers differ across the states, from simple registration of the containers with state agencies, to more extensive pollution prevention requirements that more closely follow those of the SPCC rule.

The data reviewed by EPA show that farms are sources of oil spills. EPA highlighted multiple examples of spills from farm tanks (*Section 3.1*), and there is ample evidence that discharges of oil – even in the relatively small quantities stored on farms – cause significant damage to the environment (*Section 3.2*). Under the WRRDA amendments, the SPCC regulation currently provides an exemption for farms with aggregate aboveground oil storage capacity less than 2,500 gallons, with an interim conditional exemption for farms with up to 6,000 gallons aggregate aboveground oil storage capacity. This is several

orders of magnitude greater than the long-established criteria for discharges of oil that may be harmful, which were based on evidence of significant harm at concentrations in the range of parts per million.

Given the number of farms with significant quantities of oil on-site, past discharges from farms, and environmental harm posed by even small discharges of oil, EPA maintains that requiring simple measures such as adequate containment, periodic inspection of containers, and regular review of oil handling practices, is an appropriate way to address the risk of spills to waters for farms storing even small quantities of oil, such as the 2,500-gallon minimum aggregate aboveground oil storage capacity provided for under the WRRDA.

Review of the data led EPA in the past to conclude that oil storage on farms is not unique. As explained in the rulemaking record, EPA has received no data or found any rationale to treat farm-related oil storage differently than other sector oil storage. EPA has provided targeted rulemaking and guidance for farms and several compliance date extensions that reduced the SPCC burden for farms where appropriate. The new regulatory threshold established by the WRRDA, which exempts farms with less than 2,500 gallons in aggregate aboveground oil storage capacity, means that 81 percent to 96 percent of U.S. farms are not subject to the SPCC rule on the basis of aggregate aboveground oil storage capacity. The new self-certification tiers established by the WRRDA amendments currently allow an estimated 99 to 99.9 percent of the remaining farms with aggregate aboveground oil storage capacities greater than 2,500 gallons but less than 20,000 gallons to self-certify their SPCC Plan (assuming a clean history and no container greater than 10,000 gallons). Additional farms may not be subject to the rule's requirements because they do not pose a reasonable expectation of discharge to waters of the United States or adjoining shorelines.

For the few farms still subject to the SPCC rule, the cost and burden of developing an SPCC plan has been partially addressed with the regulatory streamlining efforts. EPA recognizes, however, that many farms (90 percent according to USDA data, as of 2005) lack secondary containment required under the SPCC regulation and by state and/or local ordinances, and the cost of secondary containment may remain a concern for farmers. Containment is the simplest passive method of spill prevention and the cornerstone of the Federal spill prevention program. EPA believes that it is possible to provide effective containment at low cost, for example by placing the farm oil storage tanks in an earthen berm constructed using equipment typically found on a farm (which, in some instances, could require moving tanks), thereby addressing farmers concerns with complying with the SPCC rule. This change, when implemented in the context of a facility-specific spill prevention strategy contained in the SPCC Plan provides essential protection of the nation's waters.

The WRRDA provides for EPA to study and address the appropriateness (based on a significant risk of discharge to water) of the interim conditional threshold, which currently exempts farms from the SPCC rule with aboveground storage capacity greater than 2,500 gallons and less than 6,000 gallons, provided they have a clean spill history. The study shows that it is appropriate to maintain its existing threshold of 1,320 gallons for all facilities in order to maintain adequate level of environmental protection of the nation's waters. This is consistent with the Agency's previous findings as discussed in the record supporting amendments to the SPCC regulation that provided relief to farmers and other small facilities. EPA realizes, however, that the WRRDA amendments create a new minimum regulatory threshold of 2,500 gallons aggregate aboveground oil storage capacity specifically for farms.

Given the information presented in this study, the agency's record and the lack of data to support any higher threshold, it is appropriate to set the threshold for farms at the minimum aggregate aboveground oil storage capacity of 2,500 gallons established under the WRRDA amendments. EPA maintains that requiring measures such as adequate containment, periodic inspection of containers, and regular review of

oil handling practices, is an appropriate way to address the risk of spills to waters for farms within the 2,500 to 6,000-gallon aggregate aboveground oil storage capacity range.

## Appendix A: Relevant Text from the Water Resources Reform and Development Act (WRRDA)

### SEC. 1049. APPLICABILITY OF SPILL PREVENTION, CONTROL, AND COUNTERMEASURE RULE.

(a) DEFINITIONS.— In this section:

(1) ADMINISTRATOR.— The term “Administrator” means the Administrator of the Environmental Protection Agency.

(2) FARM.— The term “farm” has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(3) GALLON.— The term “gallon” means a United States gallon.

(4) OIL.— The term “oil” has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(5) OIL DISCHARGE.— The term “oil discharge” has the meaning given the term “discharge” in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(6) REPORTABLE OIL DISCHARGE HISTORY.—

(A) IN GENERAL.—Subject to subparagraph (B), the term “reportable oil discharge history” means a single oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that exceeds 1,000 gallons or 2 oil discharges, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that each exceed 42 gallons within any 12-month period—

(i) in the 3 years prior to the certification date of the Spill Prevention, Control, and Countermeasure plan (as described in section 112.3 of title 40, Code of Federal Regulations (including successor regulations));  
or

(ii) since becoming subject to part 112 of title 40, Code of Federal Regulations, if the facility has been in operation for less than 3 years.

(B) EXCLUSIONS.—The term “reportable oil discharge history” does not include an oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that is the result of a natural disaster, an act of war, or terrorism.

(7) SPILL PREVENTION, CONTROL, AND COUNTERMEASURE RULE.—The term “Spill Prevention, Control, and Countermeasure rule” means the regulation, including amendments, promulgated by the Administrator under part 112 of title 40, Code of Federal Regulations (or successor regulations).

(b) CERTIFICATION.—In implementing the Spill Prevention, Control, and Countermeasure rule with respect to any farm, the Administrator shall—

(1) require certification by a professional engineer for a farm with—

- (A) an individual tank with an aboveground storage capacity greater than 10,000 gallons;
- (B) an aggregate aboveground storage capacity greater than or equal to 20,000 gallons; or
- (C) a reportable oil discharge history; or

(2) allow certification by the owner or operator of the farm (via self-certification) for a farm with—

- (A) an aggregate aboveground storage capacity less than 20,000 gallons and greater than the lesser of—
  - (i) 6,000 gallons; and
  - (ii) the adjustment quantity established under subsection (d)(2); and
- (B) no reportable oil discharge history; and

(3) not require compliance with the rule by any farm—

- (A) with an aggregate aboveground storage capacity greater than 2,500 gallons and less than the lesser of—
  - (i) 6,000 gallons; and
  - (ii) the adjustment quantity established under subsection (d)(2); and
- (B) no reportable oil discharge history; and

(4) not require compliance with the rule by any farm with an aggregate aboveground storage capacity of less than 2,500 gallons.

(c) **CALCULATION OF AGGREGATE ABOVEGROUND STORAGE CAPACITY.**—For purposes of subsection (b), the aggregate aboveground storage capacity of a farm excludes—

- (1) all containers on separate parcels that have a capacity that is 1,000 gallons or less; and
- (2) all containers holding animal feed ingredients approved for use in livestock feed by the Commissioner of Food and Drugs.

(d) **STUDY.**—

(1) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall conduct a study to determine the appropriate exemption under paragraphs (2) and (3) of subsection (b), which shall be not more than 6,000 gallons and not less than 2,500 gallons, based on a significant risk of discharge to water.

(2) **ADJUSTMENT.**—Not later than 18 months after the date on which the study described in paragraph

(1) is complete, the Administrator, in consultation with the Secretary of Agriculture, shall promulgate a rule to adjust the exemption levels described in paragraphs (2) and (3) of subsection (b) in accordance with the study.

## Appendix B: EPA Fact Sheet – Farms and the Water Resources Reform and Development Act (WRRDA)

[See next page]





## Oil Spill Prevention, Control, and Countermeasures (SPCC Program): Farms and the Water Resources Reform and Development Act (WRRDA)

This fact sheet explains impacts of the Water Resources Reform and Development Act (WRRDA) of 2014, as signed by the President on June 10, 2014, on the SPCC rule and farms. In addition, EPA anticipates revising the SPCC rule consistent with the WRRDA amendments through a future rulemaking.

### What is SPCC?

The goal of the Spill Prevention, Control, and Countermeasure (SPCC) program is to prevent oil spills into waters of the United States and adjoining shorelines. A key element of this program calls for farmers and other oil storage and handling facilities to have an oil spill prevention plan, called an **SPCC Plan**. These Plans can help farmers prevent oil spills which can damage water resources needed for farming operations.

### What is considered a farm under SPCC?

Under the SPCC rule, a farm is: "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."

### How does WRRDA affect SPCC for farms?

Section 1049 of the Act changes certain applicability provisions of the SPCC rule for farms, and modifies the criteria under which a farmer may self-certify an SPCC Plan.

### Under WRRDA, a farm is not required to have an SPCC Plan if it has:

- An aggregate aboveground storage capacity less than 2,500 gallons
- OR**
- An aggregate aboveground storage capacity greater than 2,500 gallons and less than 6,000\* gallons; and
  - No reportable discharge history.

### A farmer can self-certify the SPCC Plan if the farm has:

- An aggregate aboveground storage capacity greater than 6,000\* gallons but less than 20,000 gallons;
- No individual tank with a capacity greater than 10,000 gallons; and
- No reportable discharge history.

\*This 6,000-gallon threshold may be adjusted by EPA, following a study to determine the appropriate exemption.

### A farmer must have a licensed Professional Engineer (PE) certify the SPCC Plan if the farm has:

- An individual tank with an aboveground storage capacity greater than 10,000 gallons; **OR**
- An aggregate aboveground storage capacity greater than or equal to 20,000 gallons; **OR**
- A reportable discharge history.

### Is my farm covered by SPCC?

SPCC applies to a farm that:

- Stores, transfers, uses, or consumes **oil or oil products**, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil, or animal fat; and
- Stores more than **2,500 U.S. gallons** in aboveground containers; and
- Could **reasonably be expected to discharge oil to waters** of the United States or adjoining shorelines, such as interstate waters, intrastate lakes, rivers, and streams.

***If your farm meets all of these criteria, then your farm is covered by SPCC. Use this fact sheet to determine the kind of Plan you need.***

### What is 'reportable discharge history'?

WRRDA defines "reportable oil discharge history" as: a single oil discharge as described in section 112.1(b) of the SPCC rule that exceeds 1,000 gallons, or 2 oil discharges, that each exceed 42 gallons within any 12-month period—  
(i) in the 3 years prior to the certification date of the SPCC Plan (as described in section 112.3 of the SPCC rule); or  
(ii) since becoming subject to the SPCC rule (40 CFR part 112), if the facility has been in operation for less than 3 years.

**Will these thresholds change in the future?**

WRRDA provides for EPA to work with USDA to conduct a study to determine the appropriate applicability threshold for farms, based on a significant risk of discharge to water. The threshold quantity must be not more than 6,000 gallons and not less than 2,500 gallons. The study is scheduled to be completed by June 2015. EPA will then promulgate a rule amending the SPCC requirements to adjust the applicability thresholds.

**Under WRRDA, how do I determine what certification is required for my farm’s SPCC Plan?**

If your farm is subject to the SPCC rule (see the “Is my farm covered by SPCC?” text box on the previous page for applicability criteria):

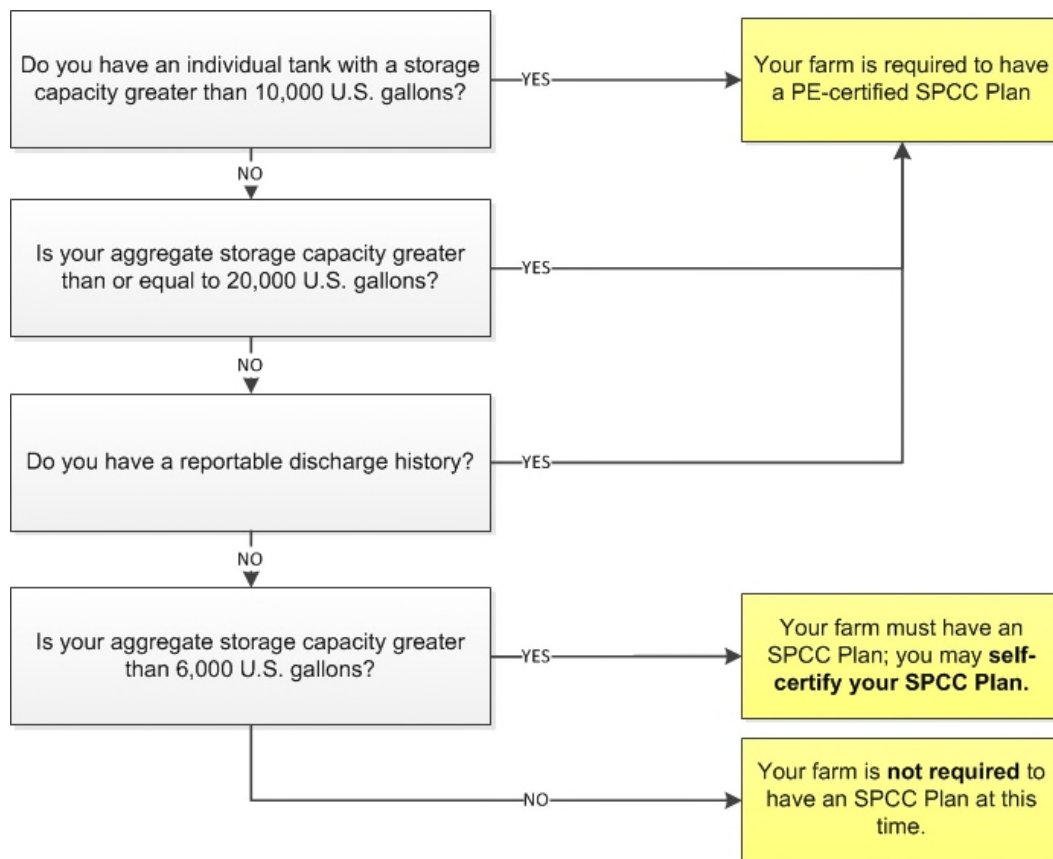
1. Calculate your *aggregate aboveground oil storage capacity*.

Do not count:

- All containers on separate parcels that have a capacity that is 1,000 gallons or less;
- Containers storing heating oil used solely at a single-family residence (e.g., your personal residence as the farm owner or operator);
- Pesticide application equipment or related mix containers (with adjuvant oil);
- Any milk and milk product container and associated piping and appurtenance;
- Completely buried oil tanks (underground storage tanks or USTs) and associated piping and equipment that are subject to all of the technical requirements under EPA’s underground storage tank regulations at 40 CFR part 280 or 281;
- Containers holding animal feed ingredients approved for use in livestock feed by the Commissioner of the Food and Drug Administration (FDA).

2. Review your *reportable discharge history*. (See the “What is ‘reportable discharge history?’” text box on the previous page)

3. Use the following flowchart to determine what kind of certification is needed for your farm’s SPCC Plan.



**For More Information**

**Read the SPCC rule and additional resources:** <http://www.epa.gov/emergencies/spcc>

- **Revised SPCC Guidance for Regional Inspectors:**  
[http://www.epa.gov/emergencies/content/spcc/spcc\\_guidance.htm](http://www.epa.gov/emergencies/content/spcc/spcc_guidance.htm)
- **EPA's SPCC for Agriculture webpage:**  
[http://www.epa.gov/emergencies/content/spcc/spcc\\_ag.htm](http://www.epa.gov/emergencies/content/spcc/spcc_ag.htm)

**Call the Superfund, TRI, EPCRA, RMP, and Oil Information Center:** (800) 424-9346 or (703) 412-9810  
TDD (800) 553-7672 or (703) 412-3323  
<http://www2.epa.gov/epcra/superfund-tri-epcra-rmp-oil-information-center>

## Appendix C: Summary of State Regulations and Programs for Oil Storage on Farms

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
<b>States with State-Specific AST Program that Exempt Farm Tanks (Regulations Specifically Exempt Farm Tanks)</b>	
Arkansas	<p>Regulation No. 12; Storage Tanks; June 27, 2014 generally requires that ASTs be inspected and registered under the state program <b>but farm tanks are exempt.</b></p> <p><i>"Reg.12.201 Registration Requirement (C) The provisions of this Regulation shall not apply to aboveground storage tanks located on farms, the contents of which are used for agricultural purposes and not held for resale."</i></p> <p>Arkansas pollution Control and Ecology Commission  <a href="https://www.adeq.state.ar.us/regs/files/reg12_final_20140714.pdf">https://www.adeq.state.ar.us/regs/files/reg12_final_20140714.pdf</a></p>
Colorado	<p>Storage Tank Regulations at 7 C.C.R. 1101-14 generally apply to tanks greater than 660 gallons capacity and less than 40,000 gallons. Regulations require permits, registration and facility inspection.</p> <p>The regulation specifically <b>exempts "farm and residential tanks</b> or tanks used for horticultural or floricultural operations" where farm tanks are defined as "tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations."</p> <p>Department of Labor &amp; Employment; Oil Inspection Section  <a href="https://www.colorado.gov/pacific/sites/default/files/PetroleumRegulations101514.pdf">https://www.colorado.gov/pacific/sites/default/files/PetroleumRegulations101514.pdf</a></p>
Kentucky	<p>In accordance with 815 KAR 7:120(3)(7)(i), a permit must be obtained for the installation or repair of an aboveground, or underground storage tank of flammables, combustible liquids, or gases. Tanks in excess of 25 gallons inside of a building &amp; excess of 100 gallons outside a building for Class IA, IB, IC, II &amp; IIIA liquids require a permit.</p> <p>However, <b>farm tanks are generally exempt from permit requirements:</b> "in accordance with the Kentucky Building Code, tanks for the use on farms located which are incidental to the operation of farm and located outside the boundary of a municipality but only if they are not used in the business of retail trade, as a regular place of work for 10 or more people or for the processing or storage of timber products."</p> <p>State Fire Marshal's Office  <a href="http://dhbc.ky.gov/sfm/Informational%20Bulletins/Bulletin%20August%202011%20Permit%20Fees%20Permit%20Requirements%20Aboveground%20and%20Underground%20Storage%20Tanks%20%20AGST%20%20UGST%20permit.pdf">http://dhbc.ky.gov/sfm/Informational%20Bulletins/Bulletin%20August%202011%20Permit%20Fees%20Permit%20Requirements%20Aboveground%20and%20Underground%20Storage%20Tanks%20%20AGST%20%20UGST%20permit.pdf</a></p>
Minnesota	<p>ASTs which store liquid substances that may pollute the waters of the state are regulated by Minnesota Rules, Chapter 7151: Aboveground Storage of Liquid Substances.  <a href="https://www.revisor.mn.gov/rules/?id=7151&amp;version=2014-01-18T09:33:03-06:00&amp;format=pdf">https://www.revisor.mn.gov/rules/?id=7151&amp;version=2014-01-18T09:33:03-06:00&amp;format=pdf</a></p> <p><b>Farm tanks are exempt:</b></p> <p>"Subp.2. Exclusions. The following aboveground storage tank systems are excluded from the requirements of this chapter... K. an aboveground storage tank, located on a farm, in which the contents of the tank are used by the tank owner or operator for farming purposes, and the contents are not being commercially distributed"</p> <p>Minnesota Pollution Control Agency</p>
New Mexico	<p>New Mexico Petroleum Storage Tank Regulations (20.5 NMAC) apply to ASTs that are 1,320 gallons or more, and less than 55,000 gallons. The general requirements include registration, design, construction and installation standards, release detection, record-keeping and financial responsibility.</p> <p>ASTs as defined in the regulation <b>specifically excludes: (a) farm, ranch or residential tank</b> used for storing motor fuel for noncommercial purposes;</p> <p>Department of Environment</p>
Oklahoma	<b>Farm and ranch tanks are exempt from all requirements.</b>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<p>Other aboveground petroleum storage tanks (110 gallons or greater at retail, public airports, marinas, and emergency generators or 2100 gallons or greater at fleet and commercial facilities) must be registered and have notification, fees, containment, overfill protection, design, security, inspection and release reporting requirements.</p> <p>Oklahoma Corporation Commission (<a href="http://www.occeweb.com/ps/Forms/ABC's%20of%20AST's/The%20ABC's%20of%20AST's.pdf">http://www.occeweb.com/ps/Forms/ABC's%20of%20AST's/The%20ABC's%20of%20AST's.pdf</a>)</p>
South Dakota	<p><b>All farm or residential tanks that store motor fuel for noncommercial purposes are exempt from all AST regulations</b> under Codified Law of South Dakota, chapter 34A-2-100 .</p> <p>Department of Environment and Natural Resources (<a href="http://denr.sd.gov/des/gw/tanks/ASTbrochure.pdf">http://denr.sd.gov/des/gw/tanks/ASTbrochure.pdf</a>)</p>
Vermont	<p>ASTs are regulated under 10 V.S.A. Chapter 59 Section 1929a and 10 V.S.A. Chapter 159.</p> <p>The regulation establishes general requirements for ASTs. The requirements include siting, design and installation standards. Additional requirements apply to ASTs at bulk facilities (i.e., facilities that store fuel for sale or distribution) and to fuel suppliers. While farms are not explicitly exempted from the rule, the <b>definition of bulk storage tank facility does not cover farms</b> since they do not further distribute or sell fuel.</p> <p>Agency of Natural Resources (<a href="http://www.anr.state.vt.us/dec/wastediv/ust/regs/ASTRules.pdf">http://www.anr.state.vt.us/dec/wastediv/ust/regs/ASTRules.pdf</a>)</p>
Wyoming	<p>State requires registering and fees <b>only for ASTs used by dealers to dispense gasoline and diesel fuels</b>. There is no state program for other types of ASTs, but the state presumably applies requirements under the adopted state fire code (IFC).</p> <p>State Fire Marshal's Office</p>
<p><b>States with State-Specific Program – Environmental Department or Equivalent (Regulations Generally Apply to Farm Tanks, but with Potential Exceptions)</b></p>	
Alabama	<p>State notification program. Each facility with an AST is required to complete a form with information on location, tank capacity, substance and usage. For owners of ASTs to be eligible to the Trust Fund, they must register their tanks, comply with state ADEM Admin. Code rs. 335-6-6-.03 and 335-6-6-.12(r) and Code of Federal Regulations (CFR) Title 40 Part 112 (40 CFR 112), and maintain financial responsibility.</p> <p>The definition of AST in the regulation specifically excludes "<b>Farm or residential tank of 1,100 gallons or less capacity</b> used for storing "motor fuel" for noncommercial purposes."</p> <p>Department of Environmental Management (<a href="http://www.adem.state.al.us/alEnviroReglaws/files/Division6Vol2.pdf">http://www.adem.state.al.us/alEnviroReglaws/files/Division6Vol2.pdf</a>)</p>
Delaware	<p>Delaware Administrative Code, Title 7/1000/1300 Section 1352: Aboveground Storage Tanks.</p> <p>All ASTs greater than 250 gallons must register, <b>except farm tanks less than 1,100 gallons</b>. Additional requirements may apply depending on tank size:</p> <ul style="list-style-type: none"> <li>• Signage (ASTs greater than 1,100 gallons)</li> <li>• Secondary containment</li> <li>• Fees (ASTs greater than 12,500 gallons)</li> <li>• Other technical requirements inspection, monitoring, release detection, prevention and corrective action (ASTs greater than 40,000 gallons).</li> </ul> <p>Department of Natural Resources and Environmental Control, Division of Air and Waste Management (<a href="http://regulations.delaware.gov/AdminCode/title7/1000/1300/1352.shtml#TopOfPage">http://regulations.delaware.gov/AdminCode/title7/1000/1300/1352.shtml#TopOfPage</a>)</p>
Florida	<p>FAC Chapter 62-762: Aboveground Storage Tank Systems</p> <p>ASTs with <b>greater than 550 gallons capacity</b> storing petroleum products and hazardous substances are regulated and required to have inspections and secondary containment</p> <p>Department of Environmental Protection</p>
Kansas	<p>Permanent Administrative Regulations, Article 44 – Aboveground Storage Tanks</p> <p>State regulations for tanks 660 gallons or greater of capacity or <b>1,100 gallons capacity at farms or residences used for non-commercial purposes</b>. Owners of tanks below the threshold may register their tank if they desire, but no permit or fee are needed.</p> <p>Other tanks are subject to requirements that include:</p>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<ul style="list-style-type: none"> <li>• Registration and AST permit</li> <li>• Siting</li> <li>• Secondary containment (110 percent of largest tank volume)</li> </ul> <p>Department of Health and Environment (<a href="http://www.kdheks.gov/tanks/download/ast_overview.pdf">http://www.kdheks.gov/tanks/download/ast_overview.pdf</a>)</p>
Louisiana	<p>LAC Title 33 Chapter 9 establishes requirements for contingency planning and implementation of operating procedures and best management practices to prevent and control the discharge of pollutants resulting from spill events.</p> <p>The requirements apply to facilities with <b>minimum aboveground storage capacity of 1,320 U.S. gallons</b> for two or more individual containers in aggregate within a common storage area (counting only containers with a capacity of 55 gallons or greater), <b>or 660 U.S. gallons for an individual container</b>.</p> <p>The requirements for the plan are very similar to those contained in 40 CFR part 112.</p> <p>Department of Environmental Quality</p>
Maryland	<p>Regulations at COMAR 26.10.01, Oil Pollution and Tank Management requires that facilities with aboveground oil storage capacities of <b>10,000 gallons or more</b> obtain oil operations permits issued by the Oil Control Program. All regulated ASTs are required to have secondary containment, such as dikes.</p> <p>Facilities with less than 10,000 gallons or more of oil capacity are permitted by right under a general oil operations permit, provided that they meet the general requirements in other sections of the regulations (which pertain primarily to USTs).</p> <p>Department of Environment (<a href="http://www.dsd.state.md.us/comar/subtitle_chapters/26_Chapters.aspx#Subtitle10">http://www.dsd.state.md.us/comar/subtitle_chapters/26_Chapters.aspx#Subtitle10</a>)</p>
New Hampshire	<p>NH's Aboveground Storage Tank Program (Env-Or 300) is designed to prevent releases of oil from aboveground Petroleum Storage Tanks (ASTs) in New Hampshire. Petroleum ASTs are regulated by both the Department of Environmental Services (DES) and the New Hampshire Fire Marshal's Office.</p> <p>The rules apply to facilities with a single AST system having a <b>capacity greater than 660 gallons or facilities with two or more ASTs that have a total storage capacity greater than 1,320 gallons</b>.</p> <p>Requirements include registration, construction standards, release detection and prevention, secondary containment, and SPCC Plan (certified by PE licensed in NH).</p> <p>Department of Environmental Services and State Fire Marshal's Office</p>
New Jersey	<p>N.J.A.C. 7:1E – Discharges of Petroleum and Other Hazardous Substances Rules sets requirements for "major facilities", which include facilities with <b>200,000 gallons or more</b> of hazardous substances (including petroleum) in total aggregate oil storage capacity; the threshold is 20,000 gallons for non-petroleum hazardous substances.</p> <p>The rule includes design, installation (including facility drainage and secondary containment), operation (including inspection, training, security, integrity testing, etc.), and planning requirements.</p> <p>Department of Environmental Protection</p>
New York	<p>Article 17, Title 10 of the Environmental Conservation Law, entitled "Control of the Bulk Storage of Petroleum" applies both to USTs and ASTs, or groupings of such tanks with a <b>combined storage capacity of more than 1,100 gallons</b>.</p> <p>The regulations includes:</p> <ul style="list-style-type: none"> <li>• Tank registration (every five years)</li> <li>• Notification for modifications</li> <li>• Use of color coding of fill ports, shutoff valves, gauges and check valves.</li> <li>• Secondary containment (i.e., berms or other devices to contain spills).</li> <li>• Monthly visual inspections.</li> <li>• Every 10 years, clean out tanks that are resting on grade, remove the sludge from the bottom, inspect for structural integrity and test for tightness.</li> <li>• New ASTs must be constructed of steel. If their bottom rests on the ground, the tank must have cathodic protection. An impermeable barrier must be installed under the tank bottom, with monitoring between the barrier and the bottom.</li> </ul> <p>Additional requirements apply to "major oil storage facilities" with storage capacity of 400,000 gallons or</p>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<p>more under New York’s Oil Spill Prevention, Control and Compensation Act" (Article 12 of the Navigation Law). These facilities must: Obtain an operating license from DEC; Pay a license fee of up to 12 1/4 cents per barrel of throughput at the facility; Submit data to DEC on operating activities, such as average daily throughput and storage capacity; Implement a spill prevention (SPCC) plan; Comply with license conditions and State petroleum bulk storage regulations, 6NYCRR Parts 613 and 614; and Report discharges to DEC.</p> <p>Department of Environmental Conservation (<a href="http://www.dec.ny.gov/chemical/2642.html">http://www.dec.ny.gov/chemical/2642.html</a>)</p>
North Carolina	<p>NC Department of Environment and Natural Resources (DENR) only regulates ASTs if they meet the definition of an oil terminal facility, i.e., capable of being used for the purpose of transferring, transporting, storing, processing, or refining oil; have 21,000 gallons or higher in storage capacity; and not a retail gasoline dispensing operation serving the motoring public. Oil terminal facilities must register with the NC DENR within 30 days of beginning of operations, and include site plan and description of procedures for the prevention of oil spills.</p> <p>ASTs are also covered by the North Carolina Fire Code (follows NFPA Standard 30 and 30A), administered by the Office of State Fire Marshal. There is no state-wide AST registration or permitting. More specific requirements may be in place at the local and/or county levels.</p> <p>Department of Environment and Natural Resources (<a href="http://portal.ncdenr.org/web/wm/ust/otfmain">http://portal.ncdenr.org/web/wm/ust/otfmain</a>); Office of State Fire Marshal</p>
Pennsylvania	<p>The Storage Tank and Spill Prevention Act of Jul. 6, 1989 (P.L. 169, No. 32) applies to systems with storage greater than 250 gallons. The requirements include tank registration, permitting, inspections (tanks &gt;5,000 gallons) and establishment of technical, operational and closure standards for ASTs and for reporting releases. A state certified tank handler must perform work on these tanks and inspections must be by a certified inspector.</p> <p>The regulatory definition of aboveground storage tank specifically exempts “(12) <b>A tank of 1,100 gallons or less in capacity located on a farm</b> used solely to store or contain substances that are used to facilitate the production of crops, livestock and livestock products on such farm.”</p> <p>Department of Environmental Protection, Bureau of Environmental Cleanup and Brownfields, Division of Storage Tanks  <a href="http://files.dep.state.pa.us/EnvironmentalCleanupBrownfields/StorageTanks/StorageTanksPortalFiles/act32of1989.pdf">http://files.dep.state.pa.us/EnvironmentalCleanupBrownfields/StorageTanks/StorageTanksPortalFiles/act32of1989.pdf</a></p>
Rhode Island	<p>Registration is required for AST(s) with a single or combined capacity of 500 gallons or greater (owners of ASTs with a combined capacity of less than 500 gallons are exempt).</p> <p>The regulation establishes requirements for AST facilities with a combined storage capacity over 500 gallons, including</p> <ul style="list-style-type: none"> <li>• Overfill protection</li> <li>• Secondary containment to contain 110 percent of the tank volume.</li> <li>• Inspections. The owner/operator must inspect the facility at least monthly. Additionally, if the tank is 10,000 gallons or more, the owner must conduct a detailed inspection within 10 years of the tank installation (with some exceptions for tanks meeting specified criteria).</li> </ul> <p>Department of Environmental Management  <a href="http://www.dem.ri.gov/pubs/regs/regs/compinsp/oilpollu.pdf">http://www.dem.ri.gov/pubs/regs/regs/compinsp/oilpollu.pdf</a></p>
Texas	<p>Regulated ASTs include those which have a capacity of more than 1,100 gallons and which store a petroleum substance capable of being used as a motor fuel. Requires registration of regulated tanks as well as notification of changes in operational status, product stored, and ownership.</p> <p>Texas Commission on Environmental Quality  <a href="http://www.tceq.texas.gov/permitting/registration/pst/Am_I_Regulated.html">http://www.tceq.texas.gov/permitting/registration/pst/Am_I_Regulated.html</a></p>
Virginia	<p>The State Water Control Board in adopted 9 VAC 25-91-10 et seq. in 1998, which consolidated three previous regulations (i) Oil Discharge Contingency Plans and Administrative Fees for Approval, 9 VAC 25-90-10 et seq. (VR 680-14-07), (ii) Facility and Aboveground Storage Tank Registration Requirements, 9 VAC 25-130-10 et seq. (VR 680-14-12), and (iii) Aboveground Storage Tanks Pollution Prevention Requirements, 9 VAC 25-140-10 et seq. (VR 680-14-13), relating to facilities and ASTs located in the Commonwealth that have an aboveground storage capacity of 25,000 gallons or more of oil into a single</p>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<p>regulation.</p> <p>The requirements under the Chapter do not apply to... (3) an <b>AST with a storage capacity of 660 gallons or less of oil; or (20) an AST located on a farm or residence used for storing motor fuel for noncommercial purposes with an aggregate oil storage capacity of 1,100 gallons or less.</b></p> <p>The regulation establishes requirements for the registration, notification, and closure of ASTs for owners of facilities with aggregate aboveground storage capacity of more than 1,320 gallons of oil or an operator of an individual AST located within the Commonwealth with a storage capacity of more than 660 gallons of oil.</p> <p>It also establishes pollution prevention standards and procedures (e.g., inventory control, inspections, secondary containment, cathodic protection, training, leak detection, etc.) for tanks meeting specified criteria.</p> <p>Any operator of a regulated AST facility having an aggregate oil storage capacity of 25,000 gallons or a tank storage capacity of 15,000 gallons must also have an Oil Discharge Contingency Plan, including inspections, testing, overfill protection equipment and secondary containment, as well as demonstrate financial responsibility.</p> <p>Department of Environmental Quality (<a href="http://www.deq.state.va.us/Portals/0/DEQ/Land/Tanks/astfin.pdf">http://www.deq.state.va.us/Portals/0/DEQ/Land/Tanks/astfin.pdf</a>)</p>
West Virginia	<p>Senate Bill 373, containing the Aboveground Storage Tank Act §22-30 and the Public Water Supply Protection Act §22-31 was signed into law on April 1, 2014. The law officially took effect on June 6, 2014. The bill requires an inventory and registration of aboveground storage tanks. The bill also requires development of a variety of aboveground storage tank regulations for consideration in the 2015 Legislative session.</p> <p>The rule applies to owners/operators of ASTs with a <b>storage capacity of more than 1,320 gallons</b>, including mobile tanks that stay at the same location or 60 or more days. The rule sets minimum design, construction, inspection, secondary containment, leak reporting and performance standards. It also requires registration (including payment of fee)</p> <p>Effective November 20, 2014, owners of tanks meeting specified criteria for risk levels must submit a spill prevention response plan (SPRP) and annual inspection certification.</p> <p>Level 1 ASTs are those that, among various criteria, have a capacity of 50,000 gallons or more. Level 3 ASTs pose low risk (e.g., contain water or food grade material or are empty). Level 2 ASTs do not meet the Level 1 or Level 3 criteria. Thus, Level 2 ASTs may be inspected by the owner or operator whereas Level 1 ASTs must be inspected by a PE or certified inspector.</p> <p>Department of Environmental Protection (<a href="http://www.dep.wv.gov/WWE/abovegroundstoragetanks/Pages/default.aspx">http://www.dep.wv.gov/WWE/abovegroundstoragetanks/Pages/default.aspx</a>)</p>
Wisconsin	<p>Wisconsin Administrative Code Comm 10 regulates <b>all aboveground storage tanks (ASTs) 110 gallon capacity and larger</b> storing liquids that are classified as flammable, combustible and/or hazardous chemical. Regulated tanks must have approval of construction plan, registration, permitting, inspections and fees. Streamlined requirements apply to certain farm tanks. For example, the code provides some measures to accommodate the installation of aboveground tanks less than 1,100 gallon capacity on farms via an expedited plan submittal and sign-off.</p> <p>Department of Commerce</p>
<p><b>States with State-Specific Program – under the Office of the State Fire Marshal (Regulations Generally Apply to Farm Tanks, but with Potential Exceptions)</b></p>	
Alaska	<p>Regulations depend on the tank capacity as follows:</p> <ul style="list-style-type: none"> <li>• Aboveground storage tanks and facilities with an effective storage capacity under 1,320 gallons are regulated by the State Fire Marshal and/or local Fire Marshal.</li> <li>• Tanks with storage capacity between 1,320 gallons and 420,000 gallons (including a collection of 55 gallon drums that add up to 1,320 gallons) are regulated by the Environmental Protection Agency and the State Fire Marshal.</li> <li>• Aboveground storage tank facilities with an effective storage capacity of 420,000 gallons (10,000 barrels) or greater of refined petroleum product or over 210,000 gallons of crude oil are regulated by the Alaska Department of Environmental Conservation (DEC) under the Alaska</li> </ul>



**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<p>Administrative Code, Title 18, Chapter 75. Oil and Hazardous Substances Pollution Control. State Fire Marshal's Office (for smaller facilities); Alaska Department of Environmental Conservation (for larger facilities)</p>
Arizona	<p>ASTs must be registered with the State Fire Marshal. Application must include site plans. State Fire Marshal's office.</p>
California	<p>CAL FIRE-Office of the State Fire Marshall administers the Aboveground Petroleum Storage Act (APSA) element of the Unified Program (Health and Safety Code, Chapter 6.67. Aboveground Storage of Petroleum [25270 - 25270.13].</p> <p>APSA regulates facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or more, which include aboveground storage containers or tanks with petroleum storage capacities of 55 gallons or greater. These facilities typically include large petroleum tank facilities, aboveground fuel tank stations and vehicle repair shops with aboveground petroleum storage tanks. The Act does not regulate non-petroleum products.</p> <p>Facilities with total petroleum storage quantities at or above 10,000 gallons are inspected at least once every three years by a Unified Program Agency and have reporting and fee requirements, while facilities with petroleum storage quantities equal to or greater than 1,320 gallons but less than 10,000 gallons have reporting and fee requirements only. All regulated facilities must meet the federal SPCC rule requirements.</p> <p>CAL FIRE-Office of the State Fire Marshall (<a href="http://osfm.fire.ca.gov/cupa/apsa.php">http://osfm.fire.ca.gov/cupa/apsa.php</a>; <a href="http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&amp;division=20.&amp;title=&amp;part=&amp;chapter=6.67.&amp;article=">http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&amp;division=20.&amp;title=&amp;part=&amp;chapter=6.67.&amp;article=</a>)</p>
Illinois	<p>State program regulates all new tanks over 110 gallons that store flammable substances. Requires permits and registration for new ASTs, with secondary containment and site plans.</p> <p>Dispensing tanks are limited to 2,500 gallons in capacity each (except for mining facilities and coal-fired electric generating facilities) and any one facility is limited to two dispensing storage tanks.</p> <p><b>Farms are limited to four dispensing storage tanks of 2,500 gallons each, not exceeding 5,000 gallons per type of fuel.</b></p> <p>The regulations specify requirements for dispensing tanks, including vents, locks on permanently connected pumping devices, labeling, siting.</p> <p>Office of the State Fire Marshal, Division of Technical Services (<a href="http://www.ilga.gov/commission/jcar/admincode/041/041001800000200R.html">http://www.ilga.gov/commission/jcar/admincode/041/041001800000200R.html</a>)</p>
Indiana	<p>ASTs are regulated by the Indiana Fire Prevention Code (675 IAC 22-2.3; following IFC) with specifies the design, installation and permitting requirements.</p> <p>Department of Homeland Security</p>
Iowa	<p>State registration program requires tanks with greater than 1,100 gallons capacity to register and to receive approval of their plan prior to being placed in service.</p> <p>State Fire Marshal's Office (<a href="http://coolice.legis.iowa.gov/cool-ice/default.asp?category=billinfo&amp;service=iowacode&amp;ga=83&amp;input=101">http://coolice.legis.iowa.gov/cool-ice/default.asp?category=billinfo&amp;service=iowacode&amp;ga=83&amp;input=101</a>)</p>
Georgia	<p>ASTs are regulated under Chapter 120-3-11: Flammable and Combustible Liquids.</p> <p>Storage tanks having a liquid capacity that exceed 60 gallons are covered. Plans for storage installations must be submitted for review by the State Fire Marshal; however, plans for tank installations with a storage capacity of 660 gallons or less may be submitted to the local fire authority, where one exists.</p> <p>Georgia Safety Fire Commissioner</p>
Maine	<p>All ASTs greater than 60 gallons must be registered with the State Fire Marshal's Office under Title 25, M. R. S. A. §2482. The law stipulates registration, siting, containment and other requirements:</p> <ul style="list-style-type: none"> <li>• The state requires that plans to be submitted with the permit application for a facility with a total aggregate capacity greater than 1,320 gallons must be certified by a professional engineer.</li> <li>• Secondary Containment must be provided for every tank. (NFPA 30-2003, 4.3.2.3). Secondary Containment may be a liquid tight dike with a capacity of 110% of the largest tank in the dike (NFPA 30-2003, 4.3.2.3.2). A "Secondary Containment" commonly called a "double wall" tank</li> </ul>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

State	AST Regulation and Applicable Requirements
	<p>not more than 12,000 gallons nominal capacity (NFPA 30-2003, 4.3.2.3.3) meets this requirement.</p> <ul style="list-style-type: none"> <li>Facilities with an aggregate capacity of greater than 1,320 gallons must comply with the Federal Environmental Protection Agency Spill Prevention Control &amp; Countermeasures Plan requirements. (40 CFR 112)</li> </ul> <p>State Fire Marshal's Office: <a href="http://www.maine.gov/dps/fmo/plans/storage_tanks.html">http://www.maine.gov/dps/fmo/plans/storage_tanks.html</a></p> <p>New motor fuel ASTs with underground piping must be registered with the State Bureau of Remediation &amp; Waste Management, Tank Registration Section.</p> <p>Department of Environmental Protection:  <a href="http://www.maine.gov/dep/waste/abovetank/onsitemotorfuel.html">http://www.maine.gov/dep/waste/abovetank/onsitemotorfuel.html</a></p>
Massachusetts	<p>Notification, registration and permitting are required for all tanks less than 10,000 gallons capacity under 527 CMR 9.00 (Tanks and Containers). Tanks are subject to annual inspections by the local Fire Department.</p> <p>Separate, more stringent requirements apply to tanks greater than 10,000 gallons under 502 CMR 5.00 (Permit and Inspection Requirements of Aboveground Storage Tanks of More than Ten Thousand Gallons Capacity).</p> <p><b>Farm ASTs are exempt from permitting if less than 1,100 gallons capacity and used for storing motor fuel for noncommercial purposes.</b></p> <p>State Fire Marshal's Office</p>
Michigan	<p>Michigan regulates the fees, plan reviews and registration of aboveground storage tanks (ASTs) under the Michigan Fire Prevention Code and Storage and Handling of Flammable and Combustible Liquids (FL/CL) Rules.</p> <p>Tank systems with storage tank capacity of 1,100 gallons or less must comply with the FL/CL Rules, but do not need a plan review, and are not inspected or certified by the Storage Tank Division. Approval by the local authority having jurisdiction (fire marshal, fire chief) is required.</p> <p>Motor vehicle fueling at farms, isolated construction projects, and rural areas has specific siting and operating requirements. The separation distances from the tank system, including the vehicle being fueled, to any building must be not less than 40 feet and the separation distances to property lines must be not less than 25 feet. The dispensing area, which is usually adjacent to the storage tank system, is required to be protected to prevent spills from entering the groundwater, surface water, or subsurface soils. Only three tanks are allowed at each site and a 100 feet separation distance must be provided between sites at the same property.</p> <p>A permit is required for ASTs containing flammable and combustible liquids or heating oil for consumptive use and with a capacity greater than 1,100 gallons.</p> <p><b>Farm storage tank systems that exceed 1,100 gallons in capacity are regulated under the same requirements as private motor vehicle fueling locations.</b> Private motor vehicle-fueling storage tank systems are limited in capacity:</p> <ul style="list-style-type: none"> <li>Tanks holding Class I liquids are limited to 6,000 gallons;</li> <li>Tank systems holding Class II or IIIA liquids are limited to individual capacity of 15,000 gallons or 30,000 gallons in the aggregate.</li> </ul> <p>Department of Licensing and Regulatory Affairs , Storage Tank Division</p>
Missouri	<p>Safety inspections on ASTs are performed by the Department of Agriculture, Weights and Measures Division.</p> <p>Facilities must meet the Fire Code.</p> <p>Facilities with an aggregate capacity of 2,000 gallons or less in the secondary containment are deferred from the financial responsibility requirements, but must still comply with all other requirements of 2 CSR 90-30.</p> <p>Department of Agriculture, Weights and Measures Division  <a href="http://www.moga.mo.gov/mostatutes/chapters/chapText414.html">http://www.moga.mo.gov/mostatutes/chapters/chapText414.html</a></p>
Montana	<p>ASTs are covered under the Fire Code (Administrative Rules of Montana 17.58.326), which follows the Uniform Fire Code.</p>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

<b>State</b>	<b>AST Regulation and Applicable Requirements</b>
	<p>Additionally, ASTs may also be covered by the Petroleum Tank Release Cleanup Fund provided that they meet minimum design, construction, and installation standards specified in 17.57.102. To be eligible for the Fund, ASTs must be double-walled and have maximum storage capacities of less than 30,000 gallons. Tank owners or operators wanting to avail themselves of the Fund coverage may voluntarily register their tanks with the Montana Petroleum Tank Release Compensation Board.</p> <p>Montana Petroleum Tank Release Compensation Board (<a href="http://deq.mt.gov/pet/default.mcp">http://deq.mt.gov/pet/default.mcp</a>)</p>
Nebraska	<p>ASTs are regulated under Title 153, Chapter 17. Installation and replacement of ASTs require a permit from the State Fire Marshal. Installations must be in accordance with NFPA codes.</p> <p>State Fire Marshal's Office</p>
Nevada	<p>Storage tanks are subject to State Fire Marshal regulations. Nevada Administrative Code 477.323 states "A person shall not store a hazardous material in excess of the amount set forth in the International Fire Code, 2006 Edition as adopted pursuant to NAC 477.281, unless he has been issued an operational permit by the State Fire Marshal to store that material." A hazardous materials permit must be renewed annually through the Department of Public Safety, State Fire Marshal's Division (SFM). Higher thresholds are set for retail gas stations that store fuels (gasoline and diesel) in USTs in compliance with UST regulations.</p> <p>State Fire Marshal (<a href="http://fire.nv.gov/bureaus/FPL/Hazmat_Reporting/">http://fire.nv.gov/bureaus/FPL/Hazmat_Reporting/</a>)</p> <p>The Nevada Division of Environmental Protection does not regulate most AST systems, with the exception of AST systems located at or near a body of water and used to provide fuel to water vessels (i.e., marina storage tanks). For these tanks, the DEP registration program applies to tanks greater than 110 gallons but no more than 12,000 gallons capacity.</p> <p>Division of Environmental Protection (<a href="http://www.leg.state.nv.us/nac/NAC-459.html#NAC459Sec9921">http://www.leg.state.nv.us/nac/NAC-459.html#NAC459Sec9921</a>)</p>
North Dakota	<p>Approval of State Fire Marshal for fuel dispensing storage tanks only, according to UL 142 and NFPA guidelines.</p> <p>To be eligible for the North Dakota Petroleum Tank Release Compensation Fund, farm and ranch underground tanks greater than 1,100 gallons must be registered. Underground tanks less than 1,100 gallons and all aboveground tanks are excluded if they are used for non-commercial purposes. However, farmers and ranchers can voluntarily join the Fund upon application and payment of fees for excluded tanks.</p> <p>State Fire Marshal's Office</p>
Ohio	<p>Permits for ASTs holding flammable liquids, including diagram and accordance with Ohio Fire Code and NFPA 30/30A. Tank owners must submit application to the State Fire Marshal at installation, removal, alteration, temporary closure and abandonment.</p> <p>State Fire Marshal's Office</p>
Oregon	<p>DEQ only regulates the operation of facilities with ASTs of 10,000 gallon or greater capacity if petroleum is received from pipelines or vessels.</p> <p>Other tanks are subject to requirements of the Office of State Fire Marshall. Permits are required for tanks greater than 1,000 gallons holding flammable and combustible liquids.</p> <p>Office of State Fire Marshall</p>
South Carolina	<p>The State Fire Marshal administers the AST program, in accordance with NFPA 30 and 30A. Owners must register the tanks with the Fire Marshal Office for review.</p> <p>Office of State Fire Marshall</p>
Washington	<p>All ASTs in Washington used to store flammable or combustible materials are subject to the International Fire Code (IFC), which is a part of the Washington State Uniform Building Code. AST inspection required by fire district, tank must be in accordance with API Standard 653 and with the NFPA Uniform Fire Code. If the facility transfers oil to or from a tank vessel, such as a barge or oil tanker, or to or from a pipeline, then it is subject to Washington State's Contingency Planning and Facility Oil Handling Standards regulations (Chapters 173-182 and 173-180 WAC).</p> <p>State Fire Marshal's Office</p>
<b>States without State-Specific Program</b>	
Connecticut	<p>ASTs and their piping systems are subject to the State Fire Code, which follows NFPA 30 and 30A. The</p>

**Table A-1: Summary of State Regulations and Programs for Oil Storage on Farms**

<b>State</b>	<b>AST Regulation and Applicable Requirements</b>
	requirements are administered locally.
Hawaii	No state program was identified, but local and county ordinances cover ASTs.
Idaho	Idaho Department of Environmental Quality does not regulate ASTs and refers to the SPCC rule. Note that local fire districts, cities and counties may have AST ordinances. <a href="https://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx">https://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx</a>
Mississippi	Mississippi Department of Environmental Quality does not regulate ASTs and refers to the SPCC rule. Notes that fire marshal, cities and counties may have separate regulations. In 2013 a measure was introduced that would have created a program similar to the UST program, but for ASTs. The measure was ultimately withdrawn but it would have exempted ASTs used at farms (and other sectors). <a href="http://www.deq.state.ms.us/mdeq.nsf/page/UST_FAQs?OpenDocument">http://www.deq.state.ms.us/mdeq.nsf/page/UST_FAQs?OpenDocument</a>
Tennessee	The State Fire Marshal sets requirements for ASTs, following NFPA 30 and 30A, but does not inspect, register, or review site plan. Note that local fire districts, cities and counties may have AST ordinances. <a href="http://www.tn.gov/fire/documents/storagetanks5.8.12.pdf">http://www.tn.gov/fire/documents/storagetanks5.8.12.pdf</a>
Utah	ASTs are exempt from the Department of Environmental Quality requirements under the Petroleum Storage Tanks Act. The State Fire Marshal enforces state-adopted IFC, but no state program for registration for tanks that store flammable liquid or liquid petroleum. Local requirements may differ. For example, Utah County requires permit for tanks used for storage, handling or dispensing of flammable and combustible liquids on farms and construction sites and which have a storage capacity >10 gallons of Class I liquids or >60 gallons for Class II or III-A liquids. State Fire Marshal

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