



Oppose HB 2598 – Modifying the inspection requirements and the definition of an above ground storage tank

The Aboveground Storage Tank Act protects public drinking water sources, but the oil and gas industry wants special exemptions.

In recent years, the oil and gas industry has successfully lobbied to exempt all of their tanks from the AST Act except those located within zones of critical concern (ZCCs)—the areas along rivers and streams immediately upstream from drinking water intakes. It is important to maintain a higher standard of oversight for tanks located in ZCCs to prevent contamination of drinking water.

HB 2598 relaxes inspection requirements for oil and gas waste tanks located closest to drinking water intakes.

HB 2598 removes the requirement for certified inspectors to inspect oil and gas waste tanks every three years. It also allows for longer periods of time between inspections of secondary containment structures for these tanks. Public drinking water sources downstream from approximately 766 oil and gas waste tanks, across 30 West Virginia counties, are at risk.

Oil and gas waste tanks contain a mixture of harmful chemicals.

Only 13% of these oil and gas waste tanks store just brine. Most tanks contain a mixture of produced water and crude oil; this mixture is composed of a variety of pollutants—some water-soluble—that can contaminate drinking water and endanger human health even in very low concentrations.

Who wins?

Diversified Production, LLC is the big winner. Diversified owns more than a quarter of the 766 oil and gas waste tanks that are subject to weaker inspection requirements in HB 2598. Diversified, an out-of-state company and one of the largest oil and gas producers listed on the London Stock Exchange, generated an estimated \$1.6 million in 2020 from its WV operations.¹ It has the resources to pay to inspect its own waste tanks to keep our drinking water safe.

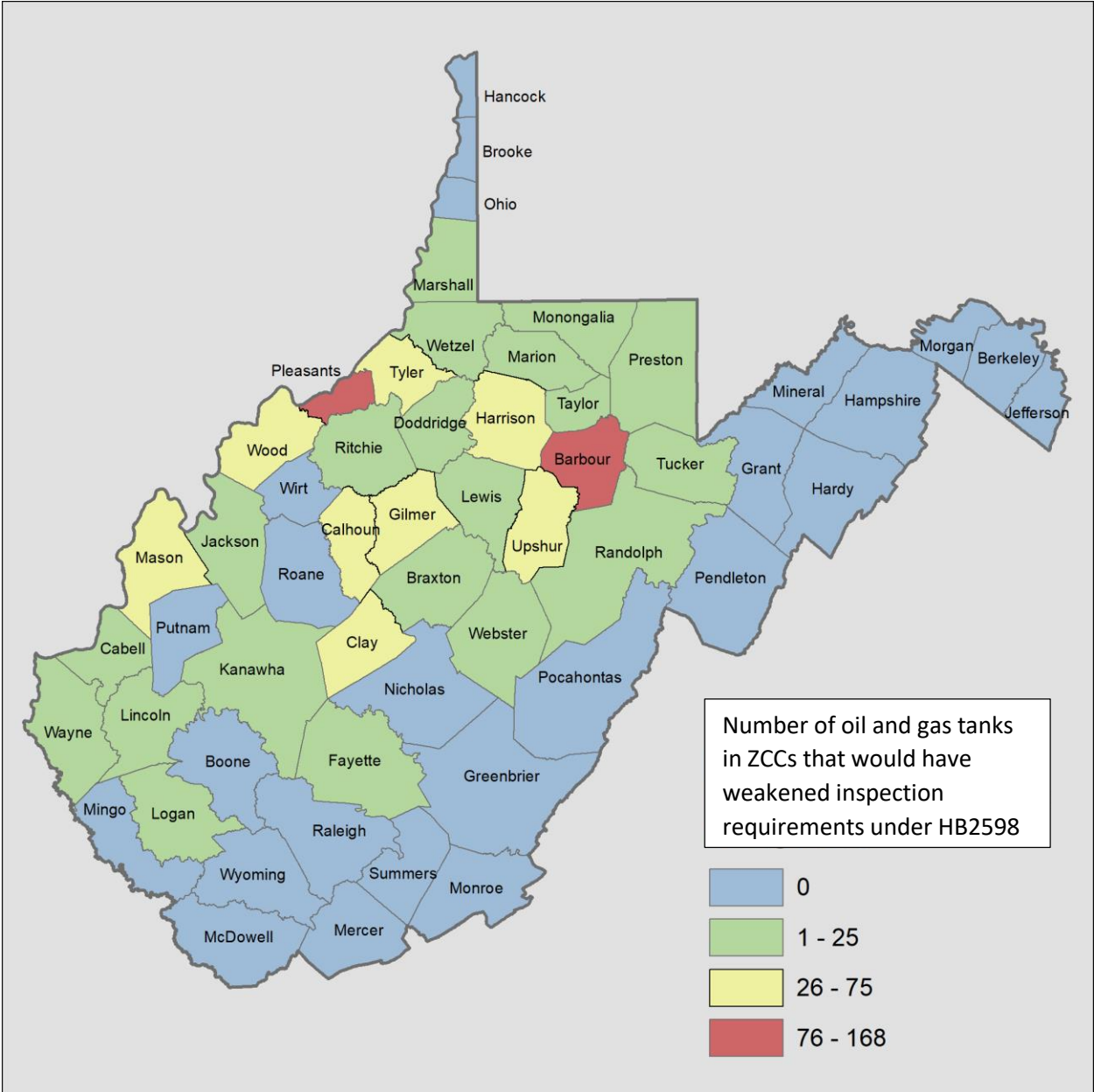
Who loses?

People who rely on public drinking water are the losers, because HB 2598 risks contaminating the rivers and streams that are the sources for these systems. If pollution leaking from a failing tank flows downstream to a surface water intake, or through the sediment into a well, the public water system can immediately become contaminated. Other industries with tanks in ZCCs must comply with the AST Act and its inspection requirements. The oil and gas industry should not get special treatment.

¹ Based on production of 78,735,901 mcf at \$2 per mcf

Inspection requirements would be relaxed for approximately 766 oil and gas waste tanks across 30 counties.

These tanks are within ZCCs, the areas immediately upstream from, and close to, public drinking water intakes. This maps shows a distribution of oil and gas tanks per county that would have inspection requirements weakened by HB 2598.



The AST rule already provides flexibility for qualifying persons to conduct inspections every three years.

The rule states the following persons are determined qualified to conduct inspections of regulated ASTs and containment structures every three years:

1. A qualified professional engineer certified by the State Board of Registration for Professional Engineers
2. A person working under the direct supervision of a professional engineer
3. A person certified by the American Petroleum Institute or the Steel Tank Institute to complete tank inspections
4. A person holding certification under another program approved by the Secretary

Inspections play a critical role in preventing drinking water contamination.

Unfortunately, releases and violations are common at oil and gas waste tanks. In 2019, 24 of the 34 confirmed releases from ASTs were from tanks that would have their inspection requirements relaxed by HB 2598.

From 2015 to 2020, inspections conducted under the AST Act found 1,938 violations at tanks that are the subject of HB 2598. Identifying these violations through self-inspections by qualified persons provides the opportunity to fix problems before they become worse and impact drinking water supplies.

Operators with tanks in ZCCs should be held to a higher standard to protect public drinking water supplies.

The list of owners of the oil and gas tanks that would have weaker inspection requirements than other tanks within ZCCs is appended. If these owners cannot commit resources to a professional inspection every three years, then they shouldn't be operating tanks within ZCCs.

Oil and gas tanks within ZCCs only represent 2.5% of all oil and gas waste tanks across the state. It's reasonable to this small number of tanks to be held to higher inspection standards, because they are located in ZCCs.

AST Act inspections are needed to document violations

From 2015 to 2020, inspections conducted under the Aboveground Storage Tank Act found 1,938 violations at tanks that would become unregulated, should either bill pass. The table below shows the most common violations.



A corroding oil and gas waste tank. Cited by DEP for lack of inspection of secondary containment and lack of corrosion prevention measures.

In contrast, oil and gas waste tank inspections conducted under other rules have identified far fewer problems.

AST Act inspections are thorough and protective

Inspections conducted under the Aboveground Storage Tank Act are more comprehensive and protective of public health than other inspections.

For example, a single inspection in October 2020 uncovered 106 violations at 12 oil and gas waste tanks at a single facility in Wood County.

# Violations	Description
670	Lack of proper inspection
238	Inadequate leak detection
214	Inadequate corrosion protection
208	Inadequate secondary containment structures
159	Lack of notification to emergency service/public water intakes
131	Missing/inadequate spill response prevention plan
72	Tank not appropriately labeled
48	Lack of proper registration

In 2019, most leaks and spills were from tanks that would be unregulated

In 2019, 24 of the 34 confirmed releases from aboveground storage tanks were from tanks that would be exempted from regulation, should HB 2598 or HB 4083 pass.



An oil and gas waste tank with corrosion and leakage. Cited by DEP for lack of registration, inspection, and maintenance as well as failure to notify downstream public water system of its contents and quantity.

The Office of Oil and Gas only has nine inspectors statewide to monitor approximately 75,000 wells and almost 28,000 aboveground storage tanks.



Oil and gas waste tanks contain a mixture of harmful chemicals.

PROTECTING DRINKING WATER FROM OIL AND GAS WASTE TANKS

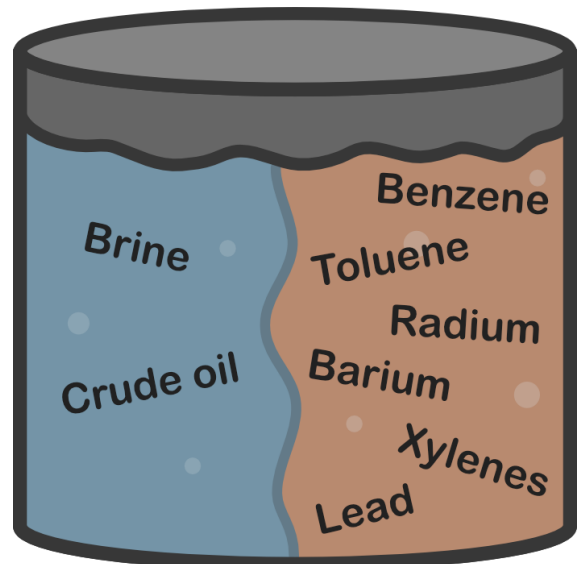
Oil and gas waste tanks contain a mixture of produced water and crude oil, each of which contain pollutants that can contaminate drinking water and harm human health. It's not just table salt.

Under the Aboveground Storage Tank Act, owners and operators must report the substances stored in each tank to DEP. Because oil and gas waste tanks store a mixture of produced water and crude oil, owners and operators report these substances in many different ways, including brine, crude oil, sodium chloride, or natural gas condensates.

Oil and gas waste tanks contain a mixture of produced water and crude oil

Produced water is the fluid trapped in underground formations that is brought to the surface along with the natural gas. It is sometimes misleadingly referred to as "brine." But you wouldn't want to brine your turkey with it, because produced water contains a mixture of many substances, some of which are harmful to human health even in very small amounts.

In addition to produced water, these tanks also store crude oil. The proportion of produced water to crude oil varies by tank. Crude oil also contains many different pollutants that are harmful to human health.



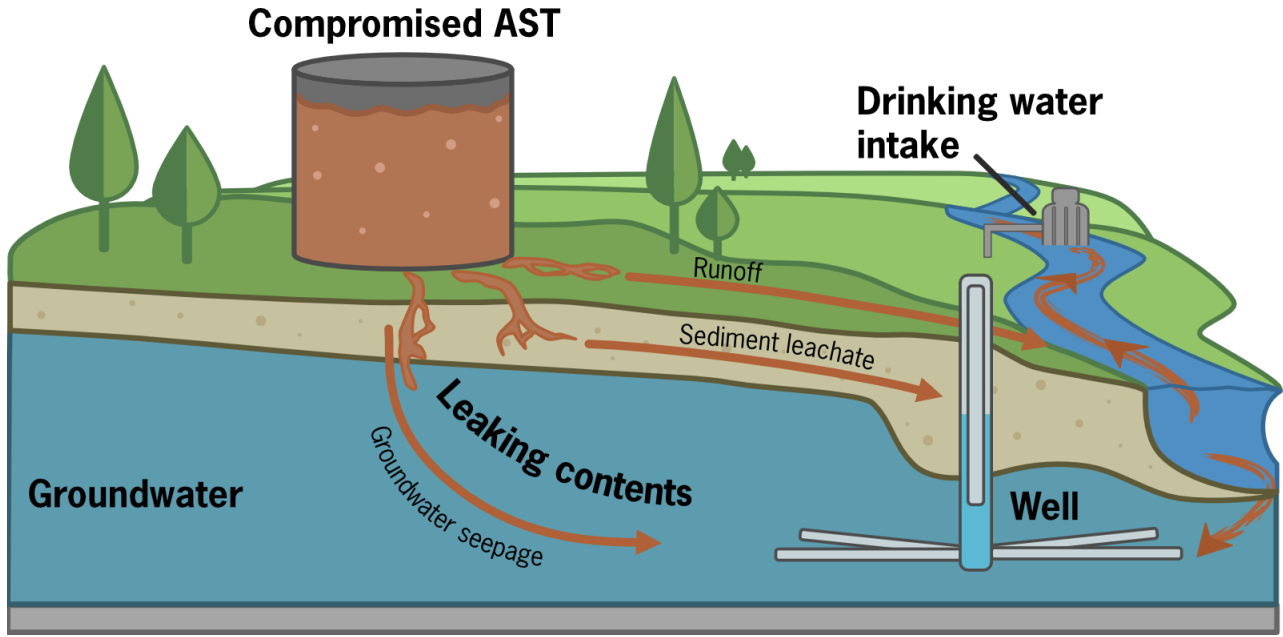
Pollutants of concern

- Hydrocarbons, including
 - ◊ benzene, toluene, ethylbenzene, and xylenes
 - ◊ polycyclic aromatic hydrocarbons
 - ◊ phenols
- Naturally occurring radioactive material (NORM), including radium-226 and radium-228
- Metals, including barium, iron, lead, manganese, and zinc

87% of the 766 tanks self-report holding something other than just brine.

Pollutants in oil and gas waste tanks can contaminate public drinking water

Whether drawing water from a stream or a surface water-influenced groundwater well, public drinking water systems are vulnerable to pollution from oil and gas waste tanks. This is because a portion of the pollution from these tanks is soluble and will dissolve in water. Even the surface water-influenced groundwater wells along the Ohio River will draw this pollution into the public water systems.



These pollutants harm human health at low concentrations

Only very small amounts of several of these pollutants are safe for human consumption. The maximum contaminant levels, or MCLs, listed in this table are the highest levels of contaminants allowed in drinking water.

Pollutant	Maximum contaminant level (MCL)	Health effects
Benzene	0.005 mg/L	Anemia; decrease in blood platelets; increased risk of cancer
Toluene	1 mg/L	Nervous system, kidney, or liver problems
Ethylbenzene	0.7 mg/L	Liver or kidney problems
Xylenes	10 mg/L	Nervous system damage
Radium 226, Radium 228	5 pCi/L	Increased risk of cancer
Barium	2 mg/L	Increase in blood pressure
Lead	0.015 mg/L	Delays in physical or mental development of infants and children; children could show slight deficits in attention span and learning abilities. Kidney problems or high blood pressure in adults



Owners of oil and gas tanks within ZCCs that would have inspection requirements relaxed by HB 2598.

Owner Name	No. Tanks
DIVERSIFIED PRODUCTION LLC	193
PILLAR ENERGY, LLC	58
SWN PRODUCTION (OHIO), LLC	36
RITCHIE PETROLEUM CORPORATION, INC.	32
APCO ENERGY, INC.	30
ROUZER OIL COMPANY	25
MOUNTAINEER STATE ENERGY, INC.	22
LUCAS WELL SERVICE, INC.	20
TAPO ENERGY, LLC	19
MOUNTAIN V, LLC	18
K. PETROLEUM, INC.	15
EM & WE SMITH	14
JAY-BEE OIL & GAS, INC.	14
DILS, SHERMAN III	12
MIKE ROSS, INC.	12
BOBCAT OIL & GAS INC.	11
COMMONWEALTH ENERGY, INC.	11
CRESTON OIL CORPORATION	11
CUNNINGHAM ENERGY LLC	11
PERKINS OIL AND GAS, INC.	11
R.L. & W.F. ZICKEFOOSE LLC	11
STALNAKER ENERGY CORPORATION	11
MOUNTAIN V OIL & GAS, INC.	10
BERRY ENERGY, INC.	8
BRAXTON OIL AND GAS CORP.	8
OIL HAULERS, LLC	7
S & R GAS VENTURES LTD.	7
WESTMORELAND GAS, LLC	7
DRILCO OIL & GAS CORPORATION	6
EQT PRODUCTION COMPANY	6
ALEXANDER PRODUCTION COMPANY	5
ARSENAL RESOURCES LLC	5
ENERVEST OPERATING, L.L.C., A LIMITED LIABILITY COMPANY	5
CLOWSER WELL SERVICE, INC.	4
PATCHWORK OIL & GAS LLC	4
PHOENIX OIL, LLC	4
SANCHO OIL & GAS CORPORATION	4
STANDARD OIL COMPANY, INC.	4
SYNDEX RESOURCES, INC.	4
ADKINS, TEDDY D.	3
BOWYER, DAVID E	3
CLEM ENERGY LLC	3
GARNET GAS CORPORATION	3
GREENWOOD, JAMES C DBA C G & G	3
R & R OIL AND GAS, LLC	3
SCHULTZ RUN GAS CO.	3
TRIBUNE RESOURCES, LLC	3
BILL AND JESSE, INC.	2
BRIGHTWELL, RICHARD	2
CHISLER BROTHERS CONTRACTING LIMITED LIABILITY COMPANY	2
CLARK WELLS LLC	2
ELAHS GAS COMPANY	2

Owner Name	No. Tanks
HARPER CROSBY HOLDINGS, LLC	2
KESTERSON, FRANK LIN	2
KOCHER AND WESTFALL	2
LAMAR OIL & GAS COMPANY, INC.	2
MITCHELL, BOBBY JOE	2
PENNECO OIL COMPANY, INC.	2
PETRO-MARK, INC.	2
ADAMS OIL & GAS LLC	1
APPLIED MECHANICS CORP.	1
BIALEK OIL & GAS CORPORATION	1
C. I. MCKOWN & SON, INC.	1
CHARITY GAS, INC.	1
CHRISTIAN, ROBERT M	1
DOMINION HOPE GAS INC	1
FRESHWATER, HAROLD	1
GLE MANAGEMENT SERVICES, LLC	1
HILLS RUN LLC	1
INTERSTATE PRODUCTION COMPANY, INC.	1
JACKSON FUEL CORPORATION	1
MCCULLOUGH, EVERETT M	1
MOUNTAINEER TRADING COMPANY, LLC	1
PARDEE MINERALS LLC	1
PAULEY, PETE	1
PETRO HOLDINGS INC.	1
PETROLEUM SERVICE PARTNERS, INC.	1
RITCO, INC	1
ROSS AND WHARTON GAS COMPANY, INC.	1
STRATEGIC WELL HOLDINGS, INC.	1
TENMILE LAND LIMITED LIABILITY COMPANY	1
UPSHUR GAS GATHERING, LLC	1
Total	766