

Top 15 Virginia Localities with the Highest Toxic Air Emissions



From the 2012 Toxic Release Inventory
Virginia Chapter Sierra Club

July 2014



Top 15 Localities with the Highest Toxic Air Emissions in Virginia

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Introduction:

The issue of toxic pollution in Virginia has been too long ignored in a state that prides itself as business friendly and pursues environmental policies that rely on voluntary compliance and self-enforcement. There has also been an erroneous belief among too many public officials in Virginia that pollution is one of the costs of a strong economy and jobs. In a market-driven economy, those industries with the lowest cost per unit of production prosper even if that lower cost is achieved at the expense of the public's health and the environment. Regulations and pollution standards are needed to establish a level playing field that insures the public is protected, businesses know the rules of the game, and those businesses that violate environmental standards are not allowed to benefit from lower costs of production by exceeding pollution limits.

On a nationwide basis, Virginia is not the worst state in terms of public exposure to toxic pollution, but it could do better. Virginia ranks 22nd among states in total toxic emissions, and 37th in per capita emissions. However, these statewide numbers are meaningless to individuals living in certain communities in Virginia, both urban and rural, who bear a disproportionate burden of toxic pollution exposure. *This report identifies the Top 15 communities most impacted by toxic air pollution and provides the names of the companies emitting the pollution along with the names of the pollutants they are releasing into our air.*

It should come as no surprise that the most persistent sources of toxic pollution are too often found in poorer communities and in communities of color. These communities that are frequently ignored and are the most vulnerable to the argument that environmental protections will only come at the expense of jobs. As is evident from the top fifteen polluted zip codes in Virginia identified in this report, these communities may be found in urban settings like Richmond or in rural "company towns" dominated by one industry that serves as the major employer.

Community Right to Know

Although we need tighter limits on toxic pollution in Virginia and stronger enforcement efforts¹, Virginians and all Americans have benefited from federal legislation, specifically the Toxics Release Inventory (TRI) established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), later expanded in the Pollution Prevention Act of 1990. The requirement of mandatory disclosure has resulted in significant reductions in toxic emissions as a result of greater awareness and scrutiny from an informed public demanding cleaner air and water. When informed and empowered neighborhood residents learn of chemical pollution hazards in their community they can organize to pressure for reductions and enforcement. While TRI has reduced pollution over all, by providing the name of the company, its address and the name and volume of pollutants emitted, it also shines a light on those communities where toxic pollution emissions persist.

The U.S. Environmental Protection Agency (EPA) TRI data-base is maintained as a web-based publicly accessible tool that permits one to enter a zip code and determine which companies in that

¹ "A Strategy to Protect Virginians from Toxic Chemicals," Noah Sachs and Ryan Murphy, UofR School of Law (Jan 2014)

zip code are required to report and how much and which pollutants they are emitting. The federal TRI program provides data on the release of 650 toxic chemicals into the environment. Each year industries that produce more than 25,000 pounds or handle more than 10,000 pounds of a listed toxic chemical must report to the Toxic Release Inventory maintained by the EPA.

With the assistance of Environment Stewardship Concepts, LLC, Sierra Club was able to take the entire EPA TRI data set for 2012 (the most recent data available) and sort it by zip code to draw attention to those Virginia communities experiencing the greatest exposure to toxic air pollution. See Appendix: **2012 Virginia Toxic Release Inventory (TRI) Analyses, Virginia Chapter Sierra Club**. As noted before, it is no surprise that those zip codes with the most exposure to toxic air pollution are frequently among the more disadvantaged communities in Virginia. However, even if your zip code is free of polluting sources, we all live down wind of one pollution source or another. Additionally, most air pollutants eventually settle to the earth to be deposited on our land and our water where they remain for decades or longer depending on the pollutant.

While the reporting of individual chemical emissions is helpful, it does not tell the whole story. The health impacts of exposure to these combinations of toxic chemicals in most cases has not been studied and is not well understood. Additionally, these stationary source, smoke stack emissions do not include the tons of toxic chemicals emitted from our gasoline and diesel power cars, trucks and heavy equipment.

The President's 2008-2009 Cancer Panel report, entitled **Reducing Environmental Cancer Risk**, found there was a "growing body of evidence linking environmental exposures to cancer." The report noted that "the public is becoming increasingly aware of the unacceptable burden of cancer resulting from environmental and occupational exposures that could have been prevented through appropriate national action."² While some of the biggest polluters may still be found in poorer communities, the toxics emitted into our air and water do not respect city or county jurisdictional boundaries. The concentrations of pollution may be lower in communities some distance from pollution sources, but as the 2008-2009 Cancel Panel report illustrates, even lower levels of toxics exposure should be of concern to all Virginians.

Metropolitan Richmond, the Virginia Capital for Toxic Air Pollution

Metropolitan Richmond has four of the top fifteen zip codes with the most toxic air pollution. The four zip codes identified are: in Hopewell (23860-ranked #2), Chesterfield County (23236-ranked #3), Richmond-Chesterfield (23234-ranked #8) and Colonial Heights-Chesterfield (23834-ranked #9). Together, these four zip codes accounted for over 6 million pounds of toxic air pollution in 2012.

In Hopewell (23860), the largest polluters include Honeywell, Hercules and RockTenn. Phillip Morris and Dominion's Chesterfield Power Station, the biggest coal plant in Virginia are located in Chesterfield County (23836). In the City of Richmond and adjoining Chesterfield County (23234),

² Reducing Environmental Cancer Risk-What we can do now. President's Cancer Panel Annual Report; April 2010; http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf

DuPont's Spruance plant and Phillip Morris' plant on Commerce Road place this zip code at #8 for toxic air emissions in the state. Last among these four zip codes in metro Richmond is Colonial Heights-Chesterfield (23834) with Honeywell's plant on Woods Edge Road and Church & Dwight Co.

The majority of the pollutants emitted into Richmond's air are potent lung irritants such as ammonia, hydrochloric acid and sulfuric acid which explains, in part, why the Asthma and Allergy Foundation of America ranks Richmond #1 as the asthma capital of the United States. The largest sources of these pollutants are Honeywell, RockTenn, Phillip Morris, the Chesterfield Power Station, and Church & Dwight.

The health effects of these more common pollutants should not be minimized, especially when the long term effects of exposure are not well-understood and permanent harm to the human respiratory system is suspected. Long-term occupational exposure to hydrochloric acid has been reported to cause gastritis, chronic bronchitis, dermatitis, and photosensitization. Long-term exposure to sulfuric acid may cause emphysema.

Other chemicals traced to cancer, birth defects, and liver, kidney, neurological damage are released daily in metro Richmond as well. Those chemicals include:

- Acetaldehyde emitted by RockTenn has been linked to cancer, birth defects and neurological damage.
- Methanol emitted by Hercules and RockTenn may contribute to birth defects and neurological damage.
- Phenol emitted by Honeywell and RockTenn may cause genetic mutations, and liver, kidney and neurological damage.
- Toluene emitted by Honeywell and DuPont have been linked to birth defects, liver, kidney and neurological damage.

Beyond the Top 15

The fact that your community does not show up in the Top 15 zip codes does not mean that your health is not affected by toxic air pollution. Coming in at #20, southeastern **Newport News** is the subject of an EPA funded Community Action for a Renewed Environment (CARE) grant to assist community residents in understanding local pollution exposures, the health impacts of those exposures and in advocating for pollution reductions. Background on these efforts in Newport News are found in our Community Spotlight on page 18. Data for every zip code in Virginia with reported TRI releases is listed in the appendix to this report.

Some Good News

For years the electric utility industry was able to use its lobbying clout to exempt itself from TRI reporting. That finally changed in 1998, more than a decade after the first TRI data was released. Today, the prominence of electric utility power plant toxic emissions in TRI totals reflects the toxic

nature of coal burning that the utilities were able to hide for years. Among the Top 15 Most Toxic Zip Codes in Virginia, four make the list, in part or wholly, because of emissions from coal fired power plants. The good news is that Chesapeake (# 5), York County (#12) and Cleveland (#6) will no longer be among the Top 15 now that Dominion and AEP are retiring the coal fired power plants in these three communities. One of the most toxic of pollutants, the neurotoxin mercury which has resulted in widespread fish consumption advisories throughout Virginia and our country, is primarily due to mercury emissions from coal fired power plants. As these coal plants, many of them more than 50 years old, are retired, we will all benefit greatly from improved air quality.

Where Do We Go from Here?

The frequent refrain from industry and regulators is that typical levels of exposure to these toxic chemicals are within applicable health standards, but the truth is that we don't know. Worse yet, the cumulative and synergistic health effects of these combinations of chemicals in the air we breathe have in most cases never been studied.

The more prudent course would be to follow the precautionary principle and not allow the release of chemicals not proven safe. But since we are living with these toxic chemicals every day, the very least we should do is pursue epidemiological studies to assess correlations between long term exposure and incidents of cancer and other serious illnesses.

It is our intention that this report will help inform the public and public officials of where toxic air pollution is a problem across the state. TRI data presented in this manner may be more effective in fostering a healthy public debate that can contribute to greater and swifter reductions of toxic pollution emissions.

In **A Strategy to Protect Virginians from Toxic Chemicals**³, authors Noah Sachs and Ryan Murphy, recommend numerous measures to reduce Virginians' exposure to the toxic pollutants prevalent in our environment. Among those recommendations that could accelerate a reduction in toxics emissions discussed in this report are:

"DEQ and the three citizen boards governing air, water, and waste should enact strict limits on toxic chemical releases in environmental permits, especially in environmentally sensitive areas."

"DEQ and the three citizen boards should focus stricter permitting and enforcement efforts on chemical manufacturing and electric utilities, which are responsible for more than two-thirds of all reported toxic chemical releases to Virginia's environment."

Hopefully, with the growing awareness of our exposure to these toxics and the risks they represent, citizens will demand stronger pollution limits, and industry and public officials will listen.

³ "A Strategy to Protect Virginians from Toxic Chemicals," Noah Sachs and Ryan Murphy, UofR School of Law (Jan 2014)

Virginia TOP 15 ZIP Codes with the Highest Amount of Toxic Air Emissions

Rank	ZIP Code	City/County	2010 Population	Toxic Emissions (lbs)**
1	24426	Covington	14,329	2,927,781
2	23860	Hopewell	31,970	2,658,930
3	23836	Chesterfield	11,444	1,981,043
4	24631	Buchanan	2,843	1,311,554
5	23323	Chesapeake	35,906	904,920
6	24225	Cleveland	1,697	844,231
7	23181	West Point	5,426	842,822
8	23234	Richmond City	42,989	809,058
9	23834	Colonial Heights/Chesterfield	25,612	753,449
10	24124	Narrows	4,352	494,503
11	23185	James City	46,370	464,481
12	23692	York	18,846	429,000
13	23851	Isle of Wight	13,715	389,574
14	24141	Montgomery	20,668	360,375
15	24501	Lynchburg	26,757	357,551

***Toxic emissions are the sum of Fugitive Air and Stack Air as reported by the TRI. This value is expressed in pounds (TRI.NET, 2013).*

EPA's website may be accessed to view TRI data for any zip code directly:

[Click here to enter your Zip Code](#)

The Top 15 Virginia Localities by Zip Code with the Highest Toxic Air Emissions

1. **Covington, VA (24426)** is a small Appalachian town about 40 miles north of Roanoke, VA and is completely surrounded by the George Washington National Park.

2010 Population: 14,329

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 2,927,781

Primary Source(s) of Toxic Air Emissions:

MeadWestvaco of Virginia, Inc Covington Operations

104 East Riverside Street Covington VA 24426

- Began operations in 1934
- 2010 Direct GHG Emissions 2,209,062 / 2010 Indirect GHG Emissions 668,229¹
- North American Industry Classification System (NAICS) CODE
 - 322130 - Paperboard Mills
 - 325998 - All Other Miscellaneous Chemical Product Manufacturing

2012 Toxic Air Emissions by Chemical Type ⁴:

Chemical Name	Media	Toxic Emissions (lbs)
<u>ACETALDEHYDE</u> (TRI Chemical ID: 000075070)	<u>AIR STACK</u>	50600
<u>AMMONIA</u> (TRI Chemical ID: 007664417)	<u>AIR STACK</u>	240000
<u>HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)</u> (TRI Chemical ID: 007647010)	<u>AIR STACK</u>	341300
<u>HYDROGEN SULFIDE</u> (TRI Chemical ID: 007783064)	<u>AIR STACK</u>	54000
<u>METHANOL</u> (TRI Chemical ID: 000067561)	<u>AIR STACK</u>	1958000
<u>SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)</u> (TRI Chemical ID: 007664939)	<u>AIR STACK</u>	200000

⁴ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24426WSTVCRIVER

2. **Hopewell, VA (23860)** is in the Tri-Cities area of the Richmond Metropolitan Statistical Area (MSA) and is combined with Prince George County for statistical purposes.

2010 Population - 31,970

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 2,658,930

Primary Source(s) of Toxic Air Emissions:

HONEYWELL INTERNATIONAL INC HOPEWELL PLANT

905 E Randolph Rd, Hopewell, VA 23860

- North American Industry Classification System (NAICS) CODE - 325 Chemical
- Total Air Releases (In Pounds): 1,752,121 (65% of total)

2012 Toxic Air Emissions by Chemical Type⁵:

Chemical Name	Media	Toxic Emissions (lbs)
AMMONIA (TRI Chemical ID: 007664417)	AIR STACK	1600000
PHENOL (TRI Chemical ID: 000108952)	AIR STACK	24000
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	33000
TOLUENE (TRI Chemical ID: 000108883)	AIR STACK	9800

Hercules, Inc.

1111 Hercules Rd, Hopewell, VA 23860

- North American Industry Classification System (NAICS) CODE – 325 Chemicals
- **Total Air Releases (In Pounds) : 501,551 (19% of total)**

Chemical Name	Media	Toxic Emissions (lbs)
CERTAIN GLYCOL ETHERS (325 – Chemicals)	Air stack and Fug Air	250
CHLOROACETIC ACID (325 – Chemicals)	Air stack and Fug Air	255
CHLOROETHANE (325 – Chemicals)	Air stack and Fug Air	67,186
ETHYLENE (325 – Chemicals)	Air stack and Fug Air	57,659
ETHYLENE GLYCOL (325 – Chemicals)	Air stack and Fug Air	250
ETHYLENE OXIDE (325 – Chemicals)	Air stack and Fug Air	1,242
METHANOL (325 – Chemicals)	Air stack and Fug Air	242,045
NITRIC ACID (325 – Chemicals)	Air stack and Fug Air	2,634
PROPYLENE OXIDE (325 – Chemicals)	Air stack and Fug Air	2,287
TERT-BUTYL ALCOHOL (325 – Chemicals)	Air stack and Fug Air	127,743

⁵ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23860LLDSGPOBOX

ROCKTENN CP LLC

910 Industrial St, Hopewell, VA 23860

- North American Industry Classification System (NAICS) CODE - 322 Paper
- Total Air Releases (In Pounds) : 401321 (15% of total)

2012 Toxic Air Emissions by Chemical Type⁶

Chemical Name	Media	Toxic Emissions (lbs)
ACETALDEHYDE (TRI Chemical ID: 000075070)	AIR STACK	11030
AMMONIA (TRI Chemical ID: 007664417)	AIR STACK	70757
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	83474
HYDROGEN SULFIDE (TRI Chemical ID: 007783064)	AIR STACK	29828
METHANOL (TRI Chemical ID: 000067561)	AIR STACK	164967
PHENOL (TRI Chemical ID: 000108952)	AIR STACK	11483
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	21064

3. Chesterfield County, VA (23836) is located between Richmond and Petersburg.

Chesterfield County is the third largest county by population in the state.

2010 Population -

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 1,981,043

Primary Source(s) of Toxic Air Emissions:

PHILIP MORRIS USA PARK 500 SITE

4100 BERMUDA HUNDRED RD CHESTER VA 23836

- North American Industry Classification System (NAICS) CODE – 312229 - Other Tobacco Product Manufacturing
- Total Air Releases (In Pounds) : 1,423,984 (71% of total)

2012 Toxic Air Emissions by Chemical

Chemical Name	Media	Toxic Emissions (lbs)
AMMONIA (TRI Chemical ID: 007664417)	AIR STACK	334656
BARIUM COMPOUNDS (TRI Chemical ID: N040)	AIR STACK	31998
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	239413
ZINC COMPOUNDS (TRI Chemical ID: N982)	AIR STACK	793092

⁶ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23860STNHP910IN

CHESTERFIELD POWER STATION

500 XENDALE RD CHESTER VA 23836

- North American Industry Classification System (NAICS) CODE - 221112 - Fossil Fuel Electric Power Generation
- Total Air Releases (In Pounds) : 463,318 (23% of total)

2012 Toxic Air Emissions by Chemical Type ⁷

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	340000 **
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	62000

** ↓ from year 2007 output of 3.9 million lbs.

Other chemicals: Hydrogen Fluoride (43,000 lbs), Ammonia (17,000 lbs), Mercury (39 lbs), Lead (78 lbs)

4. Buchanan County, VA (24631) is north of Abingdon, VA

2010 Population – Buchanan County: 24,000; Zip Code 24631: 2,843

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 1,311,554

Primary Source(s) of Toxic Air Emissions:

JEWELL COKE CO LP

1034 DISMAL RIVER RD OAKWOOD VA 24631

- North American Industry Classification System (NAICS) CODE - 331111 – Iron and Steel Manufacturing
- Total Air Releases (In Pounds): 1,311,533

2012 Toxic Air Emissions by Chemical Type ⁸

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	1307869

- Lead compounds 3,578 lbs, Mercury Compounds 106 lbs

⁷ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23836CHSTR500CO

⁸ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24656JWLLCHWY46

5. Chesapeake, VA (23323) is located in the Hampton Roads MSA. Chesapeake is the second-largest independent city by land area and the third most populous city in Virginia.

2010 Population – 35,906

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 904,920

Primary Source(s) of Toxic Air Emissions:

CHESAPEAKE ENERGY CENTER

2701CO ST CHESAPEAKE VA 23323

- North American Industry Classification System (NAICS) CODE - 221112 – Fossil Fuel Electric Power Generation
- Total Air Releases (In Pounds): 898,795

2012 Toxic Air Emissions by Chemical Type⁹

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	750000
HYDROGEN FLUORIDE (TRI Chemical ID: 007664393)	AIR STACK	93000
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	52000

6. Cleveland, VA (24225) is located in Russell County in southwest Virginia.

2010 Population – 1,697

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 844,231

Primary Source(s) of Toxic Air Emissions:

AMERICAN ELECTRIC POWER CLINCH RIVER PLANT

JUNCTION OF ST RTS 664 & 665 CLEVELAND VA 24225

- North American Industry Classification System (NAICS) CODE - 221112 – Fossil Fuel Electric Power Generation
- Total Air Releases (In Pounds): 844,231

2012 Toxic Air Emissions by Chemical Type¹⁰

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	747000**
HYDROGEN FLUORIDE (TRI Chemical ID: 007664393)	AIR STACK	53800
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	42700

**↓ from year 2008 output of 2.2 million lbs.

Additional emissions included: Lead – 5,368 lbs and Mercury – 72 lbs.

⁹ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23323CHSPK2701V

¹⁰ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24225MRCNLJUNCT

7. **West Point, VA (23181)** is an incorporated town in King William County, Virginia

2010 Population – 5,426

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 842,822

Primary Source(s) of Toxic Air Emissions:

ROCKTENN CP LLC

1901 MAIN ST WEST POINT VA 23181

- North American Industry Classification System (NAICS) CODE - 322110 – Pulp Mills
- Total Air Releases (In Pounds): 842822

2012 Toxic Air Emissions by Chemical Type ¹¹

Chemical Name	Media	Toxic Emissions (lbs)
ACETALDEHYDE (TRI Chemical ID: 000075070)	AIR STACK	31458
AMMONIA (TRI Chemical ID: 007664417)	AIR STACK	115000
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	74966
HYDROGEN SULFIDE (TRI Chemical ID: 007783064)	AIR STACK	39884
METHANOL (TRI Chemical ID: 000067561)	AIR STACK	426456
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	105638

Additional emissions included: Lead – 597 lbs. and Mercury – 17 lbs.

¹¹ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23181CHSPK19THM

8. Richmond City, VA (23234)

2010 Population – Zip Code 23234: 42,989

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 809,058

Primary Source(s) of Toxic Air Emissions:

DUPONT SPRUANCE PLANT

U.S. HWY 1 AT COGBILL RD RICHMOND VA 23234

- North American Industry Classification System (NAICS) CODE – 325222 - Noncellulosic Organic Fiber Manufacturing
- Total Air Releases (In Pounds) : 223,860 (28% of total)

2012 Toxic Air Emissions by Chemical Type¹²

Chemical Name	Media	Toxic Emissions (lbs)
DIMETHYLAMINE (TRI Chemical ID: 000124403)	AIR FUG	47081
N-METHYL-2-PYRROLIDONE (TRI Chemical ID: 000872504)	AIR STACK	46820
TOLUENE (TRI Chemical ID: 000108883)	AIR STACK AIR FUG	20929 19320
TRICHLOROFLUOROMETHANE (TRI Chemical ID: 000075694)	AIR FUG	78585

PHILIP MORRIS USA COMMERCE ROAD SITE

3601 COMMERCE RD RICHMOND VA 23234

- North American Industry Classification System (NAICS) CODE – 312221 - Cigarette Manufacturing
- Total Air Releases (In Pounds) : 533,889 (65% of total)

2012 Toxic Air Emissions by Chemical Type¹³

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	110625
ZINC COMPOUNDS (TRI Chemical ID: N982)	AIR STACK	390706

¹² http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23234DPNTSUSHIG

¹³ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23234PHLLP3601C

9. Colonial Heights/Chesterfield, VA (23834) is located in the Tri-Cities area of the Richmond Metropolitan Statistical Area.

2010 Population – Zip Code 23834: 25,612

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds

2012 (Measured in Pounds): 753,449

Primary Source(s) of Toxic Air Emissions:

HONEYWELL INTERNATIONAL COLONIAL HEIGHTS PLANT

15801 WOODS EDGE RD CHESTERFIELD VA 23834

- North American Industry Classification System (NAICS) CODE – 325222 - Noncellulosic Organic Fiber Manufacturing
- Total Air Releases (In Pounds) : 274,832 (36% of total)

2012 Toxic Air Emissions by Chemical Type¹⁴

Chemical Name	Media	Toxic Emissions (lbs)
FREON 113 (TRI Chemical ID: 000076131)	AIR FUG	200051
FREON 113 (TRI Chemical ID: 000076131)	AIR STACK	74781

Freon 113 EPA Fact Sheet: http://www.epa.gov/chemfact/f_freon.txt

CHURCH & DWIGHT CO INC

1851 TOUCHSTONE RD COLONIAL HEIGHTS VA 23834

- North American Industry Classification System (NAICS) CODE – 326299 - All Other Rubber Product Manufacturing
- Total Air Releases (In Pounds) : 478,592 (63% of total)

2012 Toxic Air Emissions by Chemical Type¹⁵

Chemical Name	Media	Toxic Emissions (lbs)
AMMONIA (TRI Chemical ID: 007664417)	AIR FUG	24433
AMMONIA (TRI Chemical ID: 007664417)	AIR STACK	453981

¹⁴ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23832LLDSGEXIT5

¹⁵ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23834LDNCR16101

10. Narrows, VA (24124) is located in Giles County, Virginia. It was named for the narrowing of the New River that flows past it.

2010 Population – 4,352

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 494,503

Primary Source(s) of Toxic Air Emissions:

[CELANESE ACETATE LLC - CELCO PLANT](#)

3520 VIRGINIA AVE NARROWS VA 2412

- North American Industry Classification System (NAICS) CODE – 325222 -Noncellulosic Organic Fiber Manufacturing
- Total Air Releases (In Pounds): 494,503 (100% of total)

2012 Toxic Air Emissions by Chemical Type¹⁶

Chemical Name	Media	Toxic Emissions (lbs)
CYCLOHEXANE (TRI Chemical ID: 000110827)	AIR FUG	150680
DICHLOROMETHANE (TRI Chemical ID: 000075092)	AIR STACK	30799
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	149657
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	149800

11. James City County, VA (23185) is a county in which Williamsburg serves as the county seat. James City County is a part of the Hampton Roads Metropolitan Area.

2010 Population – 46,370

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 464,481

Primary Source(s) of Toxic Air Emissions:

[BALL METAL BEVERAGE CONTAINER CORP](#)

8935 POCAHONTAS TRAIL JAMES RIVER COMMERCE CENTER WILLIAMSBURG VA 231856249

- North American Industry Classification System (NAICS) CODE – 332431 –Metal Can Manufacturing
- Total Air Releases (In Pounds): 458,000 (98% of total)

2012 Toxic Air Emissions by Chemical Type¹⁷

Chemical Name	Media	Toxic Emissions (lbs)
CERTAIN GLYCOL ETHERS (TRI Chemical ID: N230)	AIR FUG AIR STACK	55000 280000
N-BUTYL ALCOHOL (TRI Chemical ID: 000071363)	AIR FUG AIR STACK	23000 100000

¹⁶ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24124HCHSTRT460#p2report

¹⁷ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23185BLLPC8935P#p2report

12. York County, VA (23692) is a county in the Hampton Roads Metropolitan Area and Yorktown is the county seat.

2010 Population – 18,846

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 429,000

Primary Source(s) of Toxic Air Emissions:

[DOMINION RESOURCES INC YORKTOWN POWER STATION](#)

1600 WATERVIEW RD YORKTOWN VA 23692

- North American Industry Classification System (NAICS) CODE - 221112 – Fossil Fuel Electric Power Generation
- Total Air Releases (In Pounds): 395,894 (92% of total)

2012 Toxic Air Emissions by Chemical Type¹⁸

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	309000
HYDROGEN FLUORIDE (TRI Chemical ID: 007664393)	AIR STACK	38800
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	47800

13. Isle of Wight, VA (23851) is located in the Hampton Roads metropolitan area and features two incorporated towns Smithfield and Windsor.

2010 Population – 13,715

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 389,574

Primary Source(s) of Toxic Air Emissions:

[INTERNATIONAL PAPER FRANKLIN MILL](#)

34040 UNION CAMP DR FRANKLIN VA 23851

- North American Industry Classification System (NAICS) CODE - 322110 – Pulp Mills
- Total Air Releases (In Pounds): 389,573

2012 Toxic Air Emissions by Chemical Type¹⁹

Chemical Name	Media	Toxic Emissions (lbs)
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	35640
HYDROGEN SULFIDE (TRI Chemical ID: 007783064)	AIR FUG AIR STACK	74183 20123
METHANOL (TRI Chemical ID: 000067561)	AIR FUG AIR STACK	62000 157244

¹⁸ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23692YRKTW1600W

¹⁹ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23851NNCMPHIGHW

14. Montgomery County, VA (24141) is part of the Blacksburg–Christiansburg–Radford Metropolitan Statistical Area which encompasses all of Montgomery County and the city of Radford.

2012 Population – County Population: 95,192; Population of Zip Code 24141: 20,668

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 360,375

Primary Source(s) of Toxic Air Emissions:

[US ARMY RADFORD ARMY AMMUNITION PLANT](#)

RT 114 RADFORD ARMY AMMUNITION PLANT RADFORD VA 24141

- North American Industry Classification System (NAICS) CODE – 928110 – National Security
- Total Air Releases (In Pounds): 359,379

2012 Toxic Air Emissions by Chemical Type²⁰

Chemical Name	Media	Toxic Emissions (lbs)
AMMONIA (TRI Chemical ID: 007664417)	AIR FUG	23513
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007647010)	AIR STACK	250489
NITROGLYCERIN (TRI Chemical ID: 000055630)	AIR STACK	24722
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (TRI Chemical ID: 007664939)	AIR STACK	55563

15. Lynchburg, VA (24501) is an independent city that is in the geographic center of Virginia.

Other nearby cities include Roanoke, Charlottesville, and Danville.

2012 Population – City: 77,113 Zip Code 24501: 26,757

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 357,551

Primary Source(s) of Toxic Air Emissions:

[R R DONNELLEY PRINTING CO](#)

4201 MURRAY PL LYNCHBURG VA 24501

- North American Industry Classification System (NAICS) CODE – 323111 – Commercial Gravure Printing
- Total Air Releases (In Pounds): 302,450 (85% of total)

2012 Toxic Air Emissions by Chemical Type²¹

Chemical Name	Media	Toxic Emissions (lbs)
TOLUENE (TRI Chemical ID: 000108883)	AIR STACK	302450

²⁰ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24141SDDSRPOBOX

²¹ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=24506MRDTH4201M

Community Spotlight: Newport News, VA (23607) is one of the cities that makes up the Hampton Roads region in the southeastern part of the state.

2010 Population – City of Newport News: 180,726; Zip Code 23607: 24,519

Total Aggregate Releases of TRI Chemicals excluding Dioxin and Dioxin-like Compounds 2012 (Measured in Pounds): 225,132

Primary Source(s) of Toxic Air Emissions:

[HUNTINGTON INGALLS INC](#)

4101 WASHINGTON AVE

- North American Industry Classification System (NAICS) CODE – 336611 – Ship Building and Repairing
- Total Air Releases (In Pounds): 130,534

2012 Toxic Air Emissions by Chemical Type²²

Chemical Name	Media	Toxic Emissions (lbs)
N-BUTYL ALCOHOL (TRI Chemical ID: 000071363)	AIR FUG AIR STACK	54944 252
SULFURIC ACID (TRI Chemical ID: 007664939)	AIR STACK	45687
XYLENE (TRI Chemical ID: 001330207)	AIR FUG	27838

[MICA CO OF CANADA](#)

900 JEFFERSON AVE

- North American Industry Classification System (NAICS) CODE – 327999 – Miscellaneous Nonmetallic Mineral Product Manufacturing
- Total Air Releases (In Pounds): 94,597

2012 Toxic Air Emissions by Chemical Type²³

Chemical Name	Media	Toxic Emissions (lbs)
TOLUENE (TRI Chemical ID: 000108883)	AIR STACK AIR FUG	47770 250
METHANOL (TRI Chemical ID: 000067561)	AIR STACK AIR FUG	46327 250

Although Newport News did not make the list of the top 15 toxic localities in Virginia, the release of toxics in the city's Southeast Community is concentrated to such a large extent in the area that it has alarmed residents. The total toxic air release for the city of Newport News in 2012 was 330,480 pounds; 68% of these releases occurred within the Southeast Community. In addition to industrial facilities, Interstate 664 and commercial port operations are also located within the Southeast Community. Huntington Ingalls, Inc. (Newport News Shipyard) continues to be the largest emitter of toxic chemicals not only in the Southeast Community, but also in the city of Newport News. The 23607 zip code currently ranks as the 20th most toxic in terms of total air releases in Virginia.

²² http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23607NWPR4101W

²³ http://oaspub.epa.gov/enviro/tris_control_v2.tris_print?tris_id=23607MCCMP900JE

The Southeast Community is about 4 miles long and 2 miles wide. According to the 2010 Census, the neighborhood population is approximately 17% Caucasian and 77% African American. Past research has found that the African American community in Newport News suffers from heart disease death rates, chronic respiratory disease death rates and septicemia death rates higher than the regional and state averages.²⁴ The Southeast Community has been identified as one of the most vulnerable areas to adverse health outcomes according to the 2012 Virginia Health Equity Report²⁵.

N-butyl alcohol, toluene, methanol, sulfuric acid and xylene are the most common toxic releases. Together they count for 223,318 pounds, around 68% of the chemicals released. N-butyl alcohol is a suspected neurotoxicant, cardiovascular/blood toxicant, gastrointestinal/liver toxicant, respiratory toxicant, and skin/sense toxicant. Toluene has been recognized as a developmental toxicant. Exposure of pregnant women can disrupt fetal development or in some cases cause the death of the fetus. Other impacts can include birth defects, abnormal birth weight, biological impairments, and psychological/behavioral deficits. Additionally, toluene is suspected to be a cardiovascular/blood toxicant, gastrointestinal/liver toxicant, immunotoxicant, kidney toxicant, neurotoxicant, reproductive toxicant, respiratory toxicant and a skin/sense toxicant. Methanol is a suspected developmental toxicant, gastrointestinal/liver toxicant, kidney toxicant, neurotoxicant, respiratory toxicant, and a skin/sense toxicant. Sulfuric acid is a suspected muscoskeletal toxicant, respiratory toxicant and skin/sense toxicant. Sulfuric acid ranks in the 75th percentile on the Environmental Protection Agency's Risk Screening Environmental Indicators for Inhalation Toxicity Weight, a ranking system that measures risk assessment relative to other chemicals in terms of propensity to cause cancer and non-cancer health effects. Xylene is suspected to be a cardiovascular/blood toxicant, developmental toxicant, gastrointestinal/liver toxicant, immunotoxicant, kidney toxicant, neurotoxicant, reproductive toxicant, respiratory toxicant and skin/sense toxicant.²⁶

As a response to these risks, the Southeast Community has pulled together to fight the pollution threatening their neighborhood. In 2011, the Environmental Protection Agency (EPA) designated the Greater Southeast Development Corporation, a Southeast Community-based neighborhood development corporation, as a recipient of the Community Action for a Renewed Environment (CARE) national competitive grant program. The EPA's CARE program focused on providing communities pathways to address risk from multiple sources of toxic pollution. The Greater Southeast Development Corporation established the Southeast CARE Coalition which is working today to tackle environmental concerns in the community. Their main goals are to inform the Southeast Community of the impacts of toxic pollutant exposure and to generate action that advances local environmental quality. Recently, they have held several community symposiums to decide on their top priorities and how to move forward. Additionally, they are currently working towards having an air monitor installed. The Southeast Community provides an example of a community working together to face the risks imposed by exposure to hundreds of thousands of pounds of multiple toxic chemicals.

²⁴ 2008 Virginia Health Equity Report, Virginia Department of Health

²⁵ 2012 Virginia Health Equity Report, Virginia Department of Health

²⁶ <http://scorecard.goodguide.com/>