

US EPA ARCHIVE DOCUMENT

1996 Modeled Ambient Concentration for Washington DC

EPA strongly cautions that these modeling results should not be used to draw conclusions about local concentrations or risk. The results are most meaningful when viewed at the state or national level; for smaller areas, the modeling becomes less certain. In addition, these results represent conditions in 1996 rather than current conditions.

- The modeled estimates presented here are not a direct indicator of risk because they do not factor in the extent to which people are exposed to these pollutants or the widely varying toxic potential of different substances. EPA uses these ambient concentration estimates in combination with exposure modeling and health effects information to estimate risk.
- The emissions used in this assessment do not reflect potentially significant emission reductions that have taken effect since 1996, including those from: 1) mobile source regulations which are being phased in over time; 2) many of the air toxics regulations EPA has issued for major industrial sources; 3) State or industry initiatives; and 4) any facility closures.
- Methods of estimating emissions, as well as simplified modeling assumptions, may introduce significant uncertainties into each component of the assessment.
[For a discussion of limitations, please see http://www.epa.gov/ttn/atw/nata/natsalim2.html](http://www.epa.gov/ttn/atw/nata/natsalim2.html)
- Because of these uncertainties, EPA will not use the results of this assessment to determine source-specific contributions or to set regulatory requirements. However, EPA expects to use these results to inform decisions about the priorities of the air toxics program as well as to guide the collection of additional data that could lead to regulatory decisions.
- Note that based on the persistence and bioaccumulation potential of lead, mercury, PCBs (polychlorinated biphenyls), hexachlorobenzene, 7-PAH (polycyclic aromatic hydrocarbons), POM (polycyclic organic matter) and cadmium, ingestion rather than inhalation may contribute substantially to exposures of concern, and this assessment does not address pollutant levels that may be ingested from food, water, or soil.

KEY-- *** onroad and nonroad concentrations include a model-estimated background concentration

Estimated Annual Average Ambient Concentrations (µg/m³) for Washington DC

State	County	FIPS	Urban or Rural	Pollutant	Percentile Distribution of Ambient Concentrations Across Census Tracts								Contribution to Average from ...				
					5th	10th	25th	Median	Average	75th	90th	95th	Major	Area and Other	Onroad Mobile	Nonroad Mobile	Estimated Background
Washington DC	Statewide	N/A	N/A	Acetaldehyde	8.19E-01	8.64E-01	9.68E-01	1.10E+00	1.36E+00	1.35E+00	2.00E+00	3.56E+00	8.40E-05	7.36E-02	6.07E-01	6.77E-01	0.00E+00
Washington DC	Statewide	N/A	N/A	Acrolein	1.22E-01	1.27E-01	1.42E-01	1.60E-01	2.02E-01	1.98E-01	2.96E-01	5.40E-01	4.26E-05	2.36E-02	8.08E-02	9.77E-02	0.00E+00
Washington DC	Statewide	N/A	N/A	Acrylonitrile	8.71E-04	9.01E-04	9.85E-04	1.17E-03	1.29E-03	1.40E-03	1.57E-03	1.71E-03	8.42E-04	4.45E-04	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Arsenic Compounds	9.08E-05	1.03E-04	1.23E-04	1.50E-04	1.55E-04	1.75E-04	2.09E-04	2.44E-04	5.76E-05	9.52E-05	1.28E-06	6.35E-07	0.00E+00
Washington DC	Statewide	N/A	N/A	Benzene	1.48E+00	1.57E+00	1.69E+00	1.82E+00	1.91E+00	2.07E+00	2.40E+00	2.54E+00	2.38E-03	6.52E-02	1.04E+00	3.24E-01	4.80E-01
Washington DC	Statewide	N/A	N/A	Beryllium Compounds	1.90E-05	2.03E-05	2.55E-05	3.11E-05	3.26E-05	3.78E-05	4.74E-05	5.40E-05	2.94E-06	2.96E-05	0.00E+00	3.84E-09	0.00E+00
Washington DC	Statewide	N/A	N/A	1,3-Butadiene	5.90E-02	6.90E-02	7.95E-02	9.85E-02	1.06E-01	1.27E-01	1.50E-01	1.68E-01	0.00E+00	6.56E-04	8.47E-02	2.08E-02	0.00E+00
Washington DC	Statewide	N/A	N/A	Cadmium Compounds	8.45E-05	9.34E-05	1.08E-04	1.36E-04	1.83E-04	1.74E-04	2.52E-04	3.21E-04	1.15E-05	1.71E-04	0.00E+00	5.31E-08	0.00E+00
Washington DC	Statewide	N/A	N/A	Carbon Tetrachloride	8.80E-01	8.80E-01	8.81E-01	8.81E-01	8.81E-01	8.81E-01	8.81E-01	8.82E-01	2.88E-06	1.06E-03	0.00E+00	0.00E+00	8.80E-01
Washington DC	Statewide	N/A	N/A	Chloroform	8.64E-02	8.66E-02	8.71E-02	8.83E-02	9.02E-02	8.95E-02	9.19E-02	9.69E-02	8.98E-06	7.16E-03	0.00E+00	0.00E+00	8.30E-02
Washington DC	Statewide	N/A	N/A	Chromium Compounds	3.41E-04	3.53E-04	3.91E-04	4.42E-04	6.16E-04	5.75E-04	9.41E-04	1.96E-03	3.83E-05	1.84E-04	8.16E-05	3.12E-04	0.00E+00
Washington DC	Statewide	N/A	N/A	Coke Oven Emissions	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	1,3-Dichloropropene	9.71E-02	1.13E-01	1.38E-01	1.70E-01	1.87E-01	2.24E-01	2.93E-01	3.35E-01	0.00E+00	1.87E-01	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Diesel Particulate Matter	2.21E+00	2.30E+00	2.58E+00	2.85E+00	3.92E+00	3.67E+00	5.91E+00	1.24E+01	0.00E+00	0.00E+00	1.07E+00	2.84E+00	***
Washington DC	Statewide	N/A	N/A	Ethylene Dibromide	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	4.71E-07	1.29E-07	0.00E+00	0.00E+00	7.70E-03
Washington DC	Statewide	N/A	N/A	Ethylene Dichloride	6.11E-02	6.11E-02	6.11E-02	6.11E-02	6.11E-02	6.11E-02	6.12E-02	6.12E-02	1.08E-04	3.03E-05	0.00E+00	0.00E+00	6.10E-02
Washington DC	Statewide	N/A	N/A	Ethylene Oxide	3.09E-03	4.41E-03	6.18E-03	8.46E-03	1.01E-02	1.22E-02	1.70E-02	2.41E-02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Formaldehyde	1.31E+00	1.39E+00	1.54E+00	1.72E+00	2.27E+00	2.18E+00	3.38E+00	6.72E+00	1.37E-04	1.12E-01	6.97E-01	1.21E+00	2.50E-01
Washington DC	Statewide	N/A	N/A	Hexachlorobenzene	9.30E-05	9.30E-05	9.30E-05	9.30E-05	9.30E-05	9.30E-05	9.30E-05	9.30E-05	0.00E+00	8.88E-09	0.00E+00	0.00E+00	9.30E-05
Washington DC	Statewide	N/A	N/A	Hydrazine	4.45E-09	4.75E-09	5.45E-09	7.34E-09	1.08E-08	1.25E-08	1.96E-08	3.08E-08	0.00E+00	1.08E-08	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Lead Compounds	3.56E-03	3.77E-03	4.60E-03	6.34E-03	7.36E-03	9.14E-03	1.17E-02	1.39E-02	2.13E-04	3.36E-03	1.14E-04	3.67E-03	0.00E+00
Washington DC	Statewide	N/A	N/A	Manganese Compounds	1.38E-03	1.51E-03	1.77E-03	2.17E-03	2.33E-03	2.74E-03	3.22E-03	3.94E-03	6.96E-05	1.90E-03	3.35E-05	3.31E-04	0.00E+00
Washington DC	Statewide	N/A	N/A	Mercury Compounds	2.02E-03	2.08E-03	2.18E-03	2.49E-03	3.08E-03	3.00E-03	3.55E-03	4.91E-03	7.06E-05	1.42E-03	1.08E-06	8.79E-05	1.50E-03
Washington DC	Statewide	N/A	N/A	Methylene Chloride	4.01E-01	4.20E-01	4.72E-01	5.41E-01	6.04E-01	6.61E-01	8.49E-01	1.11E+00	3.02E-03	4.51E-01	0.00E+00	0.00E+00	1.50E-01
Washington DC	Statewide	N/A	N/A	Nickel Compounds	8.76E-04	9.84E-04	1.18E-03	1.49E-03	1.74E-03	2.06E-03	2.84E-03	3.55E-03	1.71E-04	1.34E-03	6.37E-05	1.59E-04	0.00E+00
Washington DC	Statewide	N/A	N/A	Perchloroethylene	3.25E-01	3.46E-01	3.87E-01	4.24E-01	4.62E-01	5.27E-01	6.27E-01	7.10E-01	2.90E-02	2.93E-01	0.00E+00	0.00E+00	1.40E-01
Washington DC	Statewide	N/A	N/A	Polychlorinated Biphenyls	3.80E-04	3.80E-04	3.80E-04	3.80E-04	3.80E-04	3.80E-04	3.80E-04	3.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-04
Washington DC	Statewide	N/A	N/A	Polycyclic Organic Matter	7.40E-02	8.23E-02	9.48E-02	1.14E-01	1.24E-01	1.44E-01	1.85E-01	2.08E-01	8.54E-06	1.23E-01	5.79E-04	1.14E-04	0.00E+00
Washington DC	Statewide	N/A	N/A	7-PAH	4.01E-03	4.45E-03	5.08E-03	6.00E-03	6.48E-03	7.49E-03	9.41E-03	1.05E-02	1.34E-06	6.20E-03	2.57E-04	2.88E-05	0.00E+00
Washington DC	Statewide	N/A	N/A	Propylene Dichloride	4.94E-05	5.12E-05	5.60E-05	6.42E-05	6.94E-05	7.80E-05	8.61E-05	9.52E-05	5.10E-05	1.83E-05	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Quinoline	5.16E-08	5.35E-08	6.04E-08	6.67E-08	7.84E-08	9.01E-08	1.20E-07	1.41E-07	0.00E+00	7.84E-08	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	1,1,2,2-Tetrachloroethane	4.03E-04	4.19E-04	4.49E-04	5.04E-04	5.31E-04	5.96E-04	6.63E-04	7.54E-04	4.67E-04	6.32E-05	0.00E+00	0.00E+00	0.00E+00
Washington DC	Statewide	N/A	N/A	Trichloroethylene	1.36E-01	1.43E-01	1.61E-01	1.86E-01	2.16E-01	2.35E-01	3.32E-01	4.50E-01	9.08E-04	1.34E-01	0.00E+00	0.00E+00	8.10E-02
Washington DC	Statewide	N/A	N/A	Vinyl Chloride	1.01E-03	1.04E-03	1.11E-03	1.25E-03	1.32E-03	1.49E-03	1.64E-03	1.86E-03	1.15E-03	1.67E-04	0.00E+00	0.00E+00	0.00E+00
Washington DC	All Urban Counties	N/A	U	Acetaldehyde	8.19E-01	8.64E-01	9.68E-01	1.10E+00	1.36E+00	1.35E+00	2.00E+00	3.56E+00	8.40E-05	7.36E-02	6.07E-01	6.77E-01	0.00E+00
Washington DC	All Urban Counties	N/A	U	Acrolein	1.22E-01	1.27E-01	1.42E-01	1.60E-01	2.02E-01	1.98E-01	2.96E-01	5.40E-01	4.26E-05	2.36E-02	8.08E-02	9.77E-02	0.00E+00
Washington DC	All Urban Counties	N/A	U	Acrylonitrile	8.71E-04	9.01E-04	9.85E-04	1.17E-03	1.29E-03	1.40E-03	1.57E-03	1.71E-03	8.42E-04	4.45E-04	0.00E+00	0.00E+00	0.00E+00
Washington DC	All Urban Counties	N/A	U	Arsenic Compounds	9.08E-05	1.03E-04	1.23E-04	1.50E-04	1.55E-04	1.75E-04	2.09E-04	2.44E-04	5.76E-05	9.52E-05	1.28E-06	6.35E-07	0.00E+00
Washington DC	All Urban Counties	N/A	U	Benzene	1.48E+00	1.57E+00	1.69E+00	1.82E+00	1.91E+00	2.07E+00	2.40E+00	2.54E+00	2.38E-03	6.52E-02	1.04E+00	3.24E-01	4.80E-01

