The Northeast/Mid-Atlantic Profile of Environmental Public Health Practice

State Profiles
CONNECTICUT

Geography:
CT has 4,845 mi² of land; 699 mi² of water
CT has 618 miles of coast with a coastal population of 2,120,734

CT Land Use:
- 53% forest land (57% in New England/Mid-Atlantic region*)
- 29% developed land (14% in the region)
- 7.2% water and other rural land (10% in region)
- 5.4% crop land (10% in the region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

CT Population
Growth:
1980 population: 3,107,576
1990 population: 3,287,116 (↑ 5.8% from 1980) (↑ 9.8% USA)
2000 population: 3,405,565 (↑ 3.6% from 1990) (↑ 13.2% USA)
Estimated growth from 2000 to 2006 was + 2.9% (+ 6.4% USA)

2006 Population:
- 3,504,809 (299,398,484 USA)
- 5.8% population < 5 years of age (6.8% USA)
- 13.4% population > 65 years of age (12.4% USA)

2000 Median Age: 37.4 (35.3 USA)
http://quickfacts.census.gov/qfd/states/00000.html

Multilingual Population:
In 2000, 18.3% CT population > 5 years spoke a language other than English at home (17.9% USA).

Income:
- In 2004, CT median household income: $56,617 ($44,334 USA).
- In 2004, 9.1% CT population (12.7% USA) were below the poverty line.
Housing: From 2000 – 2005, Over 55,000 housing units were built in CT, a 4% increase (↑ 9% in USA).  

2005 American Community Survey

Composition of the 1, 385,975 total housing units in Connecticut based on year built

2000 US Census Data

Air Quality: The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy.

http://www.epa.gov/air/trends/aqi_info.html
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:
- 25% of CT’s rivers/streams are considered impaired for recreational use
- 21% of CT’s rivers/streams don’t provide sufficient habitat for certain aquatic organisms
- 40% of CT’s bays/estuaries don’t provide sufficient habitat for certain aquatic organisms
- 55% of CT’s bays/estuaries can’t support shellfish harvesting for human consumption

**Well and Septic Use:** In 1990, there were 1,320,850 total housing units in CT (102,263,678 in USA), with:
- 78% (84.1% USA) drinking water from a public system/private company
- 71% (74.8% USA) public sewer service
- 29% (24.1% USA) a septic tank or cesspool
- 22% (14.8% in USA) individually drilled or dug drinking water well

**Fish Advisories:** In 2003, CT had 19 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers/lakes) and PCBs (for the entire coast).

**Beaches:** CT has 67 regulated coastal bathing areas, all of which are regularly monitored by municipal and/or state agencies.

**Governance**

Connecticut constitutional, executive branch offices are comprised of Governor, Lieutenant Governor, Treasurer, Attorney General, Comptroller, and Secretary of State.

The Connecticut state legislature (the General Assembly) is a bicameral body consisting of an upper body, the Senate (36 senators); and a lower body, the House of Representatives (151 representatives).

CT has no county government system; rather, government exists at the state and municipal (town, city or borough) level. There are 169 town municipalities, 21 cities, and 10 incorporated boroughs.
**Environmental Public Health Service**

At the state level, as depicted below, several agencies are responsible for environmental public health issues. Most of these duties are carried out by the Department of Public Health (DPH) and the Department of Environmental Protection (DEP); however, the Departments of Emergency Management and Homeland Security, Public Safety, Consumer Protection, Education, and Agriculture, as well as the Office of Policy and Management, all have some connection to environmental health in Connecticut.

There are 20 regional health districts, 62 town (municipal) health departments, and two tribal (Mashantucket Pequot, Mohegan) health departments. All of these departments must provide sanitarian services, although over half of the departments share a full-time sanitarian with a neighboring district or employ a part-time sanitarian.

**An Overview of CT Environmental Public Health Structure**

CT has a mandatory “registered sanitarian” program and an active state environmental health association; for more information, go to [http://www.cteha.org](http://www.cteha.org).
Delaware

Geography:
DE has 1954 mi² of land; 535 mi² of water
DE has 381 miles of coast with a coastal population of 666,168

DE Land Use:
- 22% forest land (57% New England/Mid-Atlantic region *)
- 17% developed land (14% in the region)
- 27% water and other rural land (10% in region)
- 30% crop land (10% in the region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

DE Population
Growth:
1980 population: 594,338
1990 population: 666,168 (↑12% from 1980) (↑9.8% in USA)
2000 population: 783,600 (↑ 18% from 1990) (↑13.2% in USA)
Estimated Growth from 2000 to 2006 was + 8.9% (6.4% in USA)

2006 Population: 853,476 (299,398,484 USA)
- 6.6% population < 5 years of age (6.8% USA)
- 13.4% population > 65 years of age (12.4% USA)

2000 Median Age: 37.9 (35.3 USA)
http://quickfacts.census.gov/qfd/states/00000.html

DE Racial Composition
(Based on 2005 Census estimates)

Multilingual Population: In 2000, 9.5% of DE population > 5 years spoke a language other than English at home (17.9% USA).

Income:
- In 2004, DE median household income: 49,545 ($44,334 USA).
- In 2004, 9.6% DE population (12.7% USA) were below the poverty line.

Density: In 2000, there were 401 persons per square mile in DE (79.6 USA).

Education: In 2000, 25% of DE population older than 25 years had a bachelor’s degree or higher (24.4% USA)

Housing: From 2000-2005, nearly 40,000 housing units were built in DE, an 11.6% increase (↑ 9% in USA) (2005 American Community Survey)

Composition of the 343,072 total housing units in Delaware based on year built.

Air Quality: The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. 
http://www.epa.gov/air/airtrends/aqi_info.html
Water Quality: According to the EPA National Water Quality Inventory (2000) – see graphic:
- 96% of DE's rivers/streams are considered impaired for recreational use
- 70% of DE's rivers/streams don't provide sufficient habitat for certain aquatic organisms
- 100% of DE's bays/estuaries don't provide sufficient habitat for certain aquatic organisms
- 96% of DE's bays/estuaries can't support shellfish harvesting for human consumption

Well and Septic Use: In 1990, there were 289,919 total housing units in DE (102,263,678 in USA) with:
- 76.2% (84.1% USA) drinking water from a public system/private company
- 73.4% (74.8% USA) public sewer service
- 25.7% (24.1% USA) septic tank or cesspool
- 23.6% (14.8% USA) an individually drilled or dug drinking water well.
(1990 Census Data (Note: Most recent data available)

Fish Advisories: In 2003, DE had 21 fish consumption advisories for specific inland water bodies only.
(EPA National Listing of Fish Advisories 2004)

Beaches: DE has approximately 25 miles of sandy beaches, about half of which are located on state park land.

Governance

The constitutional, executive branch offices in Delaware are comprised of Governor, Lieutenant Governor, Treasurer, Attorney General, Auditor, and Commissioner of Insurance.

The Delaware State Legislature (the General Assembly) is a bicameral body consisting of an upper body, the Senate (21 senators); and a lower body, the House of Representatives (41 representatives).

At the local level, there are three counties and several cities. Each has an appointed executive officer responsible for the day to day functioning of
All jurisdictions have elected county boards/city councils of varying sizes depending upon the jurisdiction.

**Environmental Public Health Service**

At the state level, the Delaware Health and Social Services Agency has 12 divisions, one of which is the Public Health Division. This Division provides public health services to the state through a number of branch offices located in the three Delaware counties. This state agency provides public health services state-wide and locally. The Delaware Department of Natural Resources and Environmental Control have responsibility for air and water resources.

DE does not have a mandatory “registered sanitarian” program.
**District of Columbia**

**GEOGRAPHY**
- DC has 61 mi² of land
- DC has about 40 miles of coast along the Potomac River
- and 6.7 miles of shoreline along the Anacostia River

**DC Population**

**Growth:**
- 1980 population: 638,333
- 1990 population: 606,900 (↓ 4.9% from 1980) (↑ 9.8% in USA)
- 2000 population: 572,059 (↓ 5.7% from 1990) (↑ 13.2% in USA)
- Estimated growth from 2000 to 2006 was +1.7% (6.4% in USA)

**2006 Population:** 581,530 (299,398,484 USA)
- 6.0% population < 5 years of age (6.8% USA)
- 12.3% population > 65 years of age (12.4% USA)

**2000 Median Age:** 34.6 (35.3 USA)

**Density:** In 2000, there were 9,378 persons per square mile in DC (79.6 USA)

**Education:** In 2000, 39.1% DC population older than 25 years had a bachelor’s degree or higher (24.4% USA)

**Multilingual Population:** In 2000, 16.8% of DC population > 5 years spoke a language other than English at home (17.9% USA).

**Income:**
- In 2004, DC Median Household Income: $46,211 ($44,334 USA).
- In 2004, 18.3% DC population (12.7% USA) were below the poverty line.

**DC RACIAL COMPOSITION**

(Based on 2005 Census estimates)

- Hispanic: 9%
- Asian: 3%
- Native: 0.3%
- White: 36%
- Black: 53%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.
**Housing:** From 2000 – 2005, 2,930 housing units were built in DC, a 1% increase (↑ 9% in USA) (2005 American Community Survey)

**Composition of the 274,845 total housing units in the District based on year built.**

2000 US Census data

**Air Quality:** The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. [http://www.epa.gov/air/airtrends/aqi_info.html](http://www.epa.gov/air/airtrends/aqi_info.html)
Water Quality: According to the EPA National Water Quality Inventory (2000) – see graphic:

- 100% of DC’s rivers, streams and lakes are considered impaired for recreational use
- 100% of DC’s rivers/stream and 89% of DC’s lakes don’t provide sufficient habitat for certain aquatic organisms
- 100% of DC’s bays/estuaries can’t support shellfish harvesting for human consumption

Well and Septic Use: In 1990, there were 278,489 total housing units in DC (102,263,678 USA) with:

- 99.9% (84.1% USA) drinking water from a public system/private company
- 99.3% (74.8% USA) public sewer service
- 0.2% (24.1% USA) septic tank or cesspool
- 0.01% (14.8% USA) individually drilled or dug drinking water well

Fish Advisories: In 2003, DC had 1 district-wide fish consumption advisory in 2003 (for PCBs).

Beaches: DC has no regulated bathing/coastal areas.

Governance

The executive branch offices for the District of Columbia are comprised of Mayor, Attorney General, Inspector General, and Chief Financial Officer.

The District of Columbia City Council includes a total of 13 members a Chairperson, Ward representatives (8) and at-large members (4).

Environmental Public Health Service

Environmental public health services are provided by the Department of Health and the Department of the Environment.

DC has a voluntary registered sanitarian program.
An Overview of DC Environmental Public Health Infrastructure

Department of the Environment

Department of Health
Maine

Geography:
ME has 28,903 mi² of land; 4,511 mi² of water
ME has 3,478 miles of coast with a coastal population of 944,847


ME Land Use:
- 84% forest land (57% New England/Mid-Atlantic region *)
- 3.9% developed land (14% in region)
- 8.5% water and other rural land (10% in region)
- 2.0% crop land (10% in region)

US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

ME Population

Growth:
1980 population: 1,124,660
1990 population: 1,227,928 (↑ 9.2% from 1980) (↑ 9.8% in USA)
2000 population: 1,274,505 (↑ 3.8% from 1990) (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 3.7% (+ 6.4% in USA)

2006 Population: 1,321,574 (299,398,484 USA)
- 5.3% population < 5 years of age (6.8% USA)
- 14.6% population > 65 years of age (12.4% USA)

2000 Median Age: 38.6 (35.3 USA)
http://quickfacts.census.gov/qfd/states/00000.html

Density: In 2000, there were 41.3 persons per square mile in ME (79.6 USA).

Education: In 2000, 22.9% ME population older than 25 had a bachelor’s degree or higher (24.4% USA)

Multilingual Population: In 2000, 7.8% of ME population > 5 years spoke a language other than English at home (17.9% USA)

Income:
- In 2004, ME median household income: $41,287 ($44,334 USA)
- In 2004, 11.5 % ME population (12.7% USA) were below the poverty line.

**Housing:** From 2000 to 2005, Over 33,000 housing units were built in ME, a 5% increase (↑ 9% in USA) \( (2005 \text{ American Community Survey}) \)

**Composition of the 651,901 total housing units in Maine based on year built:**

- 30% up to 1959
- 45% 1960 to 1979
- 25% 1980 to 2000

\(2000 \text{ US Census Data}\)

**Air Quality:** The National Ambient Air Quality Standards for ground-level ozone are 0.12 parts per million (ppm) for 1-hr exposures and 0.08 ppm for 8-hr exposures.

According to EPA data, particulate matter in Maine’s air has stayed roughly the same in recent years.

\[http://www.epa.gov/air/airtrends/agi_info.html\]
### Water Quality:

According to the EPA National Water Quality Inventory (2000) – see graphic:  
- 10% of ME’s lakes don’t provide sufficient habitat for certain aquatic organisms  
- 11% of ME’s bays/estuaries can’t support shellfish harvesting for human consumption

### Well and Septic Use:

In 1990, there were 587,045 total housing units in ME (102,263,678 USA) with:  
- 53.2% (84.1% USA) drinking water from a public system/private company  
- 45.4% (74.8% USA) public sewer service  
- 51.3% (24.1% USA) a septic tank or cesspool  
- 41.9% (14.8% USA) an individually drilled or dug drinking water well  

**1990 Census Data (Note: Most recent data available)**

### Fish Advisories:

In 2003, ME had 17 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers/lakes and the entire coast), dioxins (for the entire coast) and PCBs for the entire coast).  

**EPA National Listing of Fish Advisories (2004)**

### Beaches:

ME has 46 “critical” beaches, 37 of which are monitored weekly from Memorial Day to Labor Day.

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**Governance**

The Maine constitutional, executive branch offices are comprised of Governor, State Treasurer, State Attorney General, State Auditor, and Secretary of State.

The Maine State Legislature is a bicameral body consisting of an upper body, the Senate (35 senators); and a lower body, the House of Representatives (151 representatives).

ME has 16 county governments; however, there are no county-level public health agencies. There are 432 town municipalities with elected part-time “Board of Selectmen” or “Select Board,” consisting of three, five or seven members serving as the executive agency. Maine also has 22 cities, 34 plantations, and 4 Indian townships.

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a A plantation is an organized municipality in Maine falling in-between a township and town that has some limited self-government.
Environmental Public Health Service

At the state level in Maine, several agencies are responsible for environmental health issues. Most of these duties are carried out by the Maine Centers for Disease Control and Prevention (CDC) housed within the Maine Department of Health and Human Services and the Department of Environmental Protection (DEP). However, the Departments of Conservation, and Agriculture, as well as the State Planning Office, all have some environmental public health functions in Maine.

There are 492 mandated municipal health officers, two city health departments in Portland and Bangor, and five tribal health departments. In addition, DEP is supported by four regional offices.

ME is part of the Northern New England Environmental Health Association; for more information, go to http://www.freewebs.com/nneeha/index.htm.

An overview of Maine Environmental Public Health Infrastructure

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b Indian townships are equivalent to towns and operate under a “town hall”-style government.
Maryland

Geography:
MD has 9,773 mi² of land; 2,633 mi² of water MD has 3,190 miles of coast with a coastal population of 3,592,430

MD Land Use:
- 30% forest land (57% in New England/Mid-Atlantic region*)
- 17% developed land (14% in the region)
- 25% water and other rural land (10% in region)
- 19% crop land (10% in the region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

Maryland State Profile 18

Density: In 2000, there were 541.9 persons per square mile (79.6 USA).

Education: In 2000, 31.4 % MD population older than 25 had a bachelor’s degree or higher (24.4% USA)


MD Population
Growth:
1980 population: 4,216,933
1990 population: 4,781,468 (↑ 13.3% from 1980) (↑ 9.8% in USA)
2000 population: 5,296,486 (↑ 10.7% from 1990) (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 6% (6.4% in USA)

2006 Population: 5,615,727 (299,398,484 USA)
- 6.6% population < 5 years of age (6.8% USA)
- 11.6% population > 65 years of age (12.4% USA)

2000 Median Age: 36.0 (35.3 USA)

http://quickfacts.census.gov/qfd/states/00000.html

MD Racial Composition
(Based on 2005 Census estimates)

Multilingual Population: In 2000, 12.6% MD population > 5 years spoke a language other than English at home (17.9% USA)

Income:
- In 2004, MD median household income $57,019 ($44,334 in USA)
- In 2004, 9.2% MD population (12.7% USA) were below the poverty line.

Housing: From 2000-2005, over 164,000 housing units were built in Maryland, a 7.6% increase (↑ 9% in USA) (2005 American Community Survey)

Composition of the 2,145,283 total housing units in Maryland based on year built

Air Quality: The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. http://www.epa.gov/air/airtrends/aqi_info.html
Water Quality: According to the EPA National Water Quality Inventory (2000) – see graphic:

- 46% of MD’s rivers/streams don’t provide sufficient habitat for certain aquatic organisms
- 58% of MD’s lakes don’t provide sufficient habitat for certain aquatic organisms
- 63% of MD’s bays/estuaries don’t provide sufficient habitat for certain aquatic organisms

Well and Septic Use: In 1990, there were 1,891,917 total housing units in MD (102,263,678 USA) with:

- 82.7% (84.1% USA) drinking water from a public system/private company
- 81.0% (74.8% USA) public sewer service
- 18.0% (24.1% USA) a septic tank or cesspool
- 16.7% (14.8% USA) an individually drilled or dug drinking water well.

Fish Advisories: In 2003, MD had 20 fish consumption advisories. Included in this count are state-wide advisories for mercury, PCBs, and organochlorine pesticides (for all rivers/lakes).

Beaches: Sixteen of 23 Maryland counties have beach/coastal areas (the remainder of Maryland’s counties have no reportable beaches), all of which are regularly monitored by local and/or state agencies.

Governance

The Maryland constitutional, executive branch offices are comprised of Governor, Lieutenant Governor, Treasurer, Attorney General, Comptroller, and Secretary of State.

The Maryland State Legislature (the General Assembly) is a bicameral body consisting of a Senate (47 senators); and a House of Representatives (141 Delegates elected from 47 districts).
Maryland has a county government system. There are 23 counties and the City of Baltimore for a total of 24 local jurisdictions.

**Environmental Public Health Service**

At the state level, several agencies are responsible for environmental public health issues. Most of these duties are carried out by the Department of Health and Mental Hygiene (DHMH) and the Maryland Department of the Environment (MDE); however, the Departments of Agriculture, Natural Resources, Emergency Management, and Labor, Licensing and Regulation all have some environmental public health functions in Maryland.

There are 24 local health departments. All of these departments provide environmental public health services.

MD has a mandatory registered sanitarian program and an active local environmental health directors association.

**An Overview of MD Environmental Public Health Infrastructure**

[Diagram showing the hierarchy of state agencies]
**MASSACHUSETTS**

**Geography:**
MA has 7,840 mi² of land; 1,400 mi² of water
MA has 1,519 miles of coast with a coastal population of 4,783,167 people

**MA Land Use:**
- 50% forest land (57% New England/Mid-Atlantic region *)
- 29% developed land (14% in region)
- 12% water and other rural land (10% in region)
- 4.7% crop land (10% in region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

**MA Population**

**Growth:**
1980 population: 5,737,037
1990 population: 6,010,425 (↑ 4.8% from 1980) (↑ 9.8% in USA)
2000 population: 6,349,097 (↑ 5.6% from 1990) (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 1.4% (+ 6.4% in USA)

**2006 Population:** 6,398,743 (299,398,484 USA)
- 6.0% population < 5 years of age (6.8% USA)
- 13.3% population >65 years of age (12.4% USA)

**2000 Median Age:** 36.5 (35.3 USA)

http://quickfacts.census.gov/qfd/states/00000.html

**MA Racial Composition**
(Based on 2005 Census estimates)

- Hispanic: 11%
- Asian: 4.2%
- Native: 0.3%
- Black: 6.3%
- White: 86%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.

**Density:** In 2000, there were 809.8 persons per square mile in MA (79.6 USA)

**Education:** In 2000, 33.2% of persons in MA older than 25 had a bachelor’s degree or higher (24.4% USA)

**Multilingual Population:** In 2000, 18.7% of MA population > 5 years spoke a language other than English at home (17.9% USA)

**Income:**
- In 2004, MA median household income: $53,657 ($44,334 USA)
- In 2004, 9.9% MA population (12.7% USA) were below the poverty line

Housing: From 2000 – 2005, over 100,000 housing units were built in MA, a 4% increase (↑ 9% USA) (2005 American Community Survey)

Composition of the 2,621,989 total housing units in Massachusetts based on year built

Air Quality: The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. [http://www.epa.gov/air/airtrends/aqi_info.html]
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:

- 50% of MA’s rivers/streams and 31% of lakes, estuaries/bays are considered impaired for recreational use.
- Approximately half of MA’s rivers, streams, lakes, estuaries/bays don’t provide sufficient habitat for certain aquatic organisms.
- 63% of MA’s rivers/streams and 100% of lakes, estuaries/bays can’t support shellfish harvesting for human consumption.

**Well and Septic Use:** In 1990, there were 2,472,711 total housing units in MA (102,263,678 USA) with:

- 91.6% (84.1% USA) drinking water from a public system/private company.
- 72.9% (74.8% USA) public sewer service.
- 26.7% (24.1% USA) a septic tank or cesspool.
- 8.1% (14.8% USA) an individually drilled or dug drinking water well.

**Fish Advisories:** In 2003, MA had 147 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers/lakes and coastal areas) and PCBs (for the entire coast).

**Beaches:** Massachusetts has 525 coastal beach areas: 419 public beaches and 106 semi-public beaches.

**Governance**

The Massachusetts constitutional, executive branch offices are comprised of Governor, Lieutenant Governor, Treasurer, Attorney General, Auditor, and Secretary of State.

The Massachusetts State Legislature (the General Court) is a bicameral body consisting of an upper body, the Senate (40 senators); and a lower body, the House of Representatives (160 representatives).
There are 51 city and 300 town governments in MA (grouped into 14 counties) which follow the “New England Town Hall” municipal system used throughout the northeast. Of these 14 original (pre-Revolutionary War) counties, only Bristol, Dukes, Nantucket, Norfolk, Plymouth and Suffolk counties maintain full-time active governance at the county level.

**Environmental Public Health Service**

At the state level, the Massachusetts Dept of Public Health responds to environmental health concerns and provides communities with epidemiologic and toxicological health assessments. The Departments of Environmental Protection (DEP), Conservation and Recreation (DCR), and Agricultural Resources (DAR) have regulatory authority to control environmental hazards in the ambient environment. Furthermore, the Departments of Fish and Game, and Education, as well as the Offices of Public Safety, and Consumer Affairs and Business Regulation all have some environmental public health functions in Massachusetts.

The 51 city and 300 town boards of health appoint a health officer (some city governments have elected to have their own health departments, run by an appointed Commissioner of Health). These officers and Commissioners sit on the 5 regional health districts as well. Finally, Barnstable County is the only county-level health department.

MA has a mandatory “registered sanitarian” program and an active state environmental health association; for more information, go to [http://www.mehaonline.net](http://www.mehaonline.net)

**An Overview of MA Environmental Public Health Infrastructure**
New Hampshire

Geography:
NH has 8,968 mi² of land; 314 mi² of water
NH has 131 miles of coast with a coastal population of 389,592 people


NH Land Use:
- 66% forest land (57% in New England/Mid-Atlantic region* )
- 11% developed land (14% in the region)
- 7% water and other rural land (10% in region)
- 2% crop land (10% in the region)

US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

NH Population

Growth:
1980 population: 920,610
1990 population: 1,109,252 (↑ 20.5% from 1980) (↑ 9.8% in USA)
2000 population: 1,235,786 (↑ 11.4% from 1990) (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 6.4% (+ 6.4% in USA)
Note: Growth from ’04 to ’05: 0.8% (#1 in NE USA)

2006 Population: 1,314,895 (299,398,484 USA)
- 5.6% population < 5 years of age (6.8% in US)
- 12.4% population > 65 years of age (12.4% in US)

2000 Median Age: NH 37.1 (35.3 USA)

http://quickfacts.census.gov/qfd/states/00000.html

Density: In 2000, there were 137.8 persons per square mile in NH (79.6 USA)

Education: In 2000, 28.7% of NH population older than 25 had a bachelor’s degree or higher (24.4% USA)

NH Racial Composition
(Based on 2005 Census estimates)

- White: 96%
- Asian: 2%
- Hispanic: 2%
- Black: 1%
- Native: 0.2%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.

Multilingual Population: In 2000, 8.3% of NH population > 5 years spoke a language other than English at home (17.9% USA)

Income:
- In 2004, NH median household income: $53,377 ($44,334 USA).
- In 2004, 6.6% NH population (12.7% USA) were below the poverty line.

**Housing:** From 2000-2005, over 34,000 housing units were built in NH, a 6% increase (↑ 9% USA) (2005 American Community Survey)

Composition of the 547,024 total housing units in New Hampshire based on year built

2000 US Census Data

**Air Quality:** The National Ambient Air Quality Standards for ground-level ozone are 0.12 parts per million (ppm) for 1-hr exposures and 0.08 ppm for 8-hr exposures. According to EPA data, the ground-level ozone in New Hampshire has been stable and below air quality standards in recent years. [http://www.epa.gov/air/airtrends/aq_info.html](http://www.epa.gov/air/airtrends/aq_info.html)
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:

- 100% of NH’s rivers/streams and estuaries/bays are impaired for human fish consumption
- 100% of NH estuaries/bays can’t support shellfish harvesting for human consumption

**Well and Septic Use:** In 1990, there were a total of 503,904 housing units in NH (102,263,678 USA) with:

- 60.3% (84.1% USA) drinking water from a public system/private company
- 49.6% (74.8% USA) public sewer service
- 49.0% (24.1% USA) a septic tank or cesspool
- 37.5% (14.8% USA) an individually drilled or dug drinking water well

1990 Census Data (Note: Most recent data available)

**Fish Advisories:** In 2003, NH had 9 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers, lakes and the entire coast), dioxins (for the entire coast), and PCBs (for the entire coast).

EPA National Listing of Fish Advisories (2004)

**Beaches:** NH has 16 coastal public beach areas, all of which are monitored (11 weekly, 5 bimonthly).

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**Governance**

New Hampshire has a bifurcated executive branch, consisting of the governor and a five-member Executive Council, which "advises and consents" to the governor. New Hampshire does not have a Lieutenant Governor; rather, the president of the State Senate serves as "Acting Governor" whenever the governor is unable to perform the duties.

The New Hampshire State Legislature (the General Court) is a bicameral body consisting of an upper body, the Senate (24 senators); and a lower body, the House of Representatives (400 representatives). The New Hampshire House of Representatives was established in January 1776 and is the “third-largest parliamentary body in the English-speaking world.”
New Hampshire has a limited county government system. There are 10 counties that offer some services, as well as two fully-functioning independent city governments (Nashua and Manchester).

**Environmental Public Health Service**

At the state level, many agencies are responsible for environmental public health issues. Most are carried out by the Department of Health and Human Services (DHHS) and the Department of Environmental Services (DES). Other agencies with roles include the Department of Safety and the Department of Agriculture, Markets & Food. Provision of financial and social services by DHSS are mainly done through a network of 12 District Offices; however, DES is also supported by a network of regional offices, providing wastewater treatment, septic, coastal and wetland management, and waste management needs.

On the local level, there are two fully-functioning, independent city health departments (Manchester and Nashua) and 234 Municipal Health Officers. The city health departments each maintain an environmental health division.

NH is part of the Northern New England Environmental Health Association; for more information, go to [http://www.freewebs.com/nneeha/index.htm](http://www.freewebs.com/nneeha/index.htm).

**An Overview of New Hampshire Environmental Public Health Infrastructure**
NEW JERSEY

Geography:
NJ has 7,417 mi² of land; 797 mi² of water
NJ has 1,792 miles of coast with a coastal population of 7,575,546 people

NJ Land Use:
- 31% forest land (57% New England/Mid-Atlantic region*)
- 37% developed land (14% in region)
- 17% water and other rural land (10% in region)
- 10% crop land (10% in region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

NJ Population Growth:
1980 population: 7,364,823
1990 population: 7,730,188 (↑ 5.0% from 1980) (↑ 9.8% in USA)
2000 population: 8,414,350 (↑ 8.8% from 1990) (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 3.7% (+ 6.4% in USA)

2006 Population: 8,724,560 (299,398,484 USA)
- 6.4% population < 5 years of age (6.8% USA)
- 12.9% population > 65 years of age (12.4% USA)

2000 Median Age: NJ 36.7 (35.3 USA)
http://quickfacts.census.gov/qfd/states/00000.html

NJ Racial Composition
(Based on 2005 Census estimates)

Multilingual Population: In 2000, 25.5% NJ Population > 5 years spoke a language other than English at home (17.9% USA)

Income:
- In 2004, NJ median household income: $57,338 ($44,334 USA)
- In 2004, 8.4% NJ population (12.7% USA) were below the poverty line

Density: In 2000, there were 1,134.5 persons per square mile in NJ (79.6 USA)

Education: In 2000, 29.8% NJ Population older than 25 had a bachelor’s degree or higher (24.4% USA)

NJ Geographic Regions:

**Housing:** From 2000 – 2005, over 197,000 housing units were built in NJ, a 6% increase (↑ 9% USA) (2005 American Community Survey)

**Composition of the 3,310,275 total housing units in New Jersey based on year built**

- **up to 1959:** 23%
- **1960 to 1979:** 47%
- **1980 to 2000:** 30%

2000 US Census Data

**Air Quality:** The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. [http://www.epa.gov/air/airtrends/aqi_info.html](http://www.epa.gov/air/airtrends/aqi_info.html)
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:

- 83% of NJ’s rivers/streams and 33% of lakes are considered impaired for recreational use
- 63% of NJ’s rivers/streams and 23% of estuaries/bays don’t provide sufficient habitat for certain aquatic organisms
- 76% of NJ’s rivers/streams and 99% of lakes are considered impaired for human fish consumption
- 26% of NJ’s estuaries/bays can’t support shellfish harvesting for human consumption

**Well and Septic Use:** In 1990, there were 3,075,310 total housing units in NJ (102,263,678 USA) with:

- 89.6% (84.1% USA) drinking water from a public system/private company
- 87.9% (74.8% USA) public sewer service
- 11.6% (24.1% USA) septic tank or cesspool
- 10.2% (14.8% in USA) an individually drilled or dug drinking water well

**Fish Advisories:** In 2003, NJ had 110 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers/lakes), dioxins (for the entire coast), and PCBs (for the entire coast).

**Beaches:** New Jersey has 325 ocean and bay bathing beach areas that are monitored by a cooperative network of state and local agencies.

**Governance**

The New Jersey constitutional, executive branch offices are comprised of Governor, State Treasurer, Attorney General, and Secretary of State, as well as the various department heads and board/commission members, etc.

The New Jersey State Legislature is a bicameral body consisting of an upper body, the Senate (40 senators), and a lower body, the General Assembly (80 members) which are composed of elected representatives from each of the 40 districts in the state.
New Jersey has 21 counties and 566 municipalities. New Jersey is the only state in the nation where elected county officials are called “Freeholders,” governing each county as part of its own Board of Chosen Freeholders. Additionally, unique to New Jersey is that all of its municipalities are incorporated entities with fixed boundaries. New Jersey has five variants of municipal government, all modeled after the “New England Town Meeting” system.

**Environmental Public Health Service**

As depicted below, at the state level, several agencies are responsible for environmental health issues. Most of these duties are carried out or overseen by the Department of Health and Senior Services (DHSS) and the Department of Environmental Protection (DEP); however, the Departments of Community Affairs, Law and Public Safety, Education, and Agriculture all contribute to state-level environmental health in New Jersey. Capacity to deliver essential services at the local level is coordinated through the DHSS Office of Public Health Infrastructure.

There is a “board of health” system at both the municipal and county level in NJ, such that county departments may cover multiple municipalities except those that have elected to create their own board of health. In addition, NJ passed the County Environmental Health Act (CEHA) in 1978, which authorized county health agencies to enforce many state environmental laws for DEP and receive grant funding to conduct EH activities, including routine inspections of facilities, complaint investigations, environmental media monitoring, hazardous material investigation and response, and enforcement. In 2003, DHSS adopted new rules (Public Health Practices Standards of Performance for Local Boards of Health in New Jersey) governing local boards of health, which replaced standards that had not been substantially changed since 1986. All 21 NJ counties work with DEP under the CEHA program to provide local environmental health services. Fourteen of these counties provide public health services in addition to environmental public health services, along with eight regional health commissions and 88 municipal health departments.

NJ has a mandatory “registered environmental health specialist” program and an active state environmental health association; for more information, go to [http://www.njeha.org](http://www.njeha.org).

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[http://www.state.nj.us/health/lh/documents/chapter_52.pdf](http://www.state.nj.us/health/lh/documents/chapter_52.pdf)
An Overview of NJ Environmental Public Health Infrastructure

GOVERNOR

Environmental Protection
Health and Senior Services
Community Affairs
Agriculture
Law & Public Safety
Education

8 Regional Health Commissions

21 County Health Departments

88 Municipal Health Departments
New York

**Geography:**
NY has 47,214 mi² of land; 7,342 mi² of water
NY has 2,625 miles of coast with a coastal population in 2000 of 15,026,340

**NY Land Use:**
- 56% forest land (57% in New England/Mid-Atlantic region*)
- 11% developed land (14% in the region)
- 6.7% water and other rural land (10% in region)
- 17% crop land (10% in the region)

US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

**NY Population**

**Growth:**
1980 population: 17,558,072
1990 population: 17,990,455 (↑ 2.5% from 1980)(↑ 9.8% in USA)
2000 population: 18,976,457 (↑ 5.5% from 1990)(↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 1.7% (6.4% USA)

**2006 Population:** 19,306,183 (299,398,484 USA)
- 6.3% population < 5 years of age (6.8% USA)
- 13.1% population > 65 years of age (12.4% USA)

**2000 Median Age:** 35.9 (35.3 USA)

http://quickfacts.census.gov/qfd/states/00000.html

**Density:** In 2000, there were 402 persons per square mile in NY (79.6 USA)

**Education:** In 2000, 27.4% of persons in NY older than 25 had a bachelor’s degree or higher (24.4% USA)

**NY Racial Composition**
*(Based on 2005 Census estimates)*

- White: 74%
- Black: 18%
- Hispanic: 16%
- Asian: 6%
- Native: 0.5%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.

**Multilingual Population:** In 2000, 28% of people in NY older than 5 spoke a language other than English at home (17.9% in the USA)

**Income:**
- In 2004, NY median household income was $45,343 ($44,334 USA)
- In 2004, 14.5% NY population (12.7% USA) were below the income poverty line

Housing: From 2000 – 2005, nearly 245,000 housing units were built in New York, a 3.2% increase (9% in USA) (2005 American Community Survey)

Composition of the 7,679,307 total housing units in New York based on year built

Air Quality: The Air Quality Index (AQI) provides daily indication of air quality. The AQI compares pollutant levels to the national health standards for the following five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy.

http://www.epa.gov/air/airtrends/airaqi.html
**Water Quality**: According to the EPA National Water Quality Inventory (2000) – see graphic:

- 48% of NY’s rivers/streams, 74% of NY’s lakes, and 100% of NY’s bays/estuaries are considered impaired for recreational use.
- 80% of NY’s rivers/streams, 100% of NY’s lakes, and 100% of NY’s bays/estuaries can’t be used for human consumption of fish.
- 28% of NY’s rivers/streams, 84% of NY’s lakes, and 100% of NY’s bays/estuaries don’t provide sufficient habitat for certain aquatic organisms.
- 100% of NY’s bays/estuaries and ocean shoreline can’t support shellfish harvesting for human consumption.

**Well and Septic Use**: In 1990, there were 7,226,891 total housing units in NY (102,263,678 USA) with:

- 88% (84.1% USA) drinking water from a public system/private company.
- 79% (74.8% USA) public sewer service.
- 20% (24.1% USA) a septic tank or cesspool.
- 11% (14.8% USA) an individually drilled or dug drinking water well.

**Fish Advisories**: In 2007, NY had a general advisory (for all fresh and some marine waters), regional advisories and specific sport fish advisories for 136 waters. The NYSDOH advisories are due to concerns regarding contamination of fish with mercury, PCBs, dioxin, chlordane, DDT, mirex, dieldrin and cadmium. New York State Department of Health at [http://www.health.state.ny.us/environmental/outdoors/fish/fish.htm](http://www.health.state.ny.us/environmental/outdoors/fish/fish.htm).

**Beaches**: NY has a total of 1622 regulated/permited beaches throughout the state, including 347 coastal beaches along Lake Erie, Lake Ontario, the Atlantic Ocean, and Long Island Sound. All of New York’s beaches are regulated by a network of state and local agencies.

**Governance**

The state government for New York consists of three independent branches — the Legislative Branch, the Judicial Branch, and the Executive Branch. The Executive branch consists of 20 departments — the maximum number allowed
by the State Constitution. The Governor, who heads the Executive Department, and Lieutenant Governor are elected by the people of New York State, along with the State Comptroller and the State Attorney General.

The New York Legislative Branch consists of a bicameral (or two chamber) Legislature — a 62 member Senate and 150 member Assembly that, together, represent the 18 million citizens of the State. All members are elected for two-year terms.

At the local level, New York State is divided into 62 counties (five of which are boroughs of New York City). Within these counties are 62 cities (including New York City), 932 towns, 553 villages and 704 school districts.

Local governments have the power to adopt local laws, so long as they are consistent with the State Constitution or other general law. Further, the Legislature “may not pass laws that affect only one locality, unless the governing body of that locality has first approved the bill — referred to as a home rule request — or unless a State interest exists.”

Public Health Service

There are 57 county health departments in New York State. Along with the New York City Department of Health and Mental Hygiene (NYC DHMH), these counties have the major responsibility for provision of public health services at the local level.

Health Commissioners head 12 of the local health departments in New York, while public health directors lead the remaining 46 local health departments. Public health directors are required to have a master's degree in public health or a related field and three years of public health experience or an appropriate combination of education and experience.

Environmental Health Service

The New York State Center for Environmental Health is housed within the State Health Department and provides guidance and support to all counties in the state. Thirty-six counties and the NYC DHMH have their own environmental health divisions while the other 21 counties rely on the NYS Department of

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d Ibid

e Ibid

Health, through nine State District Offices, to provide environmental health services in their counties.\(^g\)

Although, NY does not have a mandatory “registered sanitarian” program, environmental health staff are required to meet education and experience qualifications, established in Part 11 of the State Sanitary Code (10 NYCRR)\(^h\), as well as requirements contained in local or state civil service regulations.

**An Overview of New York Environmental Public Health Infrastructure**

** 36 of these 57 county health departments have an environmental health division and provide environmental health services. The remaining 21 departments do not have environmental health divisions and environmental health services are provided by the nine Department of Health Center for Environmental Health State District offices

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\(^h\) New York State Laws and Regulations - 10NYCRR accessed on May 5, 2008 at the NYS DOH web site at: [http://www.nyhealth.gov/nysdoh/phforum/nycrr10.htm](http://www.nyhealth.gov/nysdoh/phforum/nycrr10.htm)
Pennsylvania

Geography:
PA has 44,817 mi² of land; 1,239 mi² of water
PA has 140 miles of coast with a coastal population of 2,946,892 people


PA Land Use:
• 54% forest land (57% in New England/Mid-Atlantic region *)
• 15% developed land (14% in the region)
• 4.1% water and other rural land (10% in region)
• 18% crop land (10% in the region)

US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

Density: In 2000, there were 274 persons per square mile in PA (79.6 in USA).

Education: In 2000, 22.4% of persons in PA older than 25 had a bachelor's degree or higher (24.4% in the USA)

PA Racial Composition (Based on 2005 Census estimates)

Multilingual Population: In 2000, 8.4% of persons in PA > 5 years spoke a language other than English at home (17.9% in the USA)

Income:
• In 2004, PA median household income: $43,714 ($44,334 USA)
• In 2004, 11.2% PA population (12.7% USA) were below the poverty line.

Housing: From 2000-2005, nearly 245,000 housing units were built in Pennsylvania, a 4.6% increase (2% in USA) (2005 American Community Survey)

Composition of the 5,249,750 total housing units in Pennsylvania based on year built

Air Quality: The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. http://www.epa.gov/air/trends/aqi_info.html
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:

- 62% of PA’s lakes and 20% of PA’s rivers/streams can’t fully support aquatic life

**Well and Septic Use:** In 1990, there were 4,938,140 total housing units in PA (102,263,678 in USA) with:

- 78% (84.1% USA) drinking water from a public system/private company
- 74% (74.8% USA) public sewer service
- 24% (24.1% USA) a septic tank or cesspool
- 20% (14.8% USA) an individually drilled or dug drinking water well

*1990 Census Data (Note: Most recent data available)*

**Fish Advisories:** In 2003, PA had 116 fish Consumption advisories. Included in this count is a state-wide advisory for mercury (for all rivers/lakes).

**EPA National Listing of Fish Advisories (2004)**

**Beaches:** PA has only one county (Erie) along Lake Erie with 12 regulated coastal areas. These are the only beaches in the state and are monitored by the county.

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**Governance**

The Pennsylvania constitutional, executive branch offices are comprised of Governor, Lieutenant Governor, Treasurer, Attorney General, Comptroller, and Secretary of State.

The Pennsylvania State Legislature (the General Assembly) is a bicameral body consisting of an upper body, the Senate (50 senators); and a lower body, the House of Representatives (203 representatives).

Pennsylvania government exists at the state, county and municipal (town, city or borough) levels. There are 10 Independent City or County Health Bureaus. Of the 2,564 Pennsylvania municipalities approximately 220 have a health officer.¹
Environmental Public Health Service

At the state level, several agencies are responsible for environmental public health issues. Most of these duties are carried out by the Department of Health (DOH), Department of Environmental Protection (DEP), and the Department of Agriculture. However, the Departments of Natural Resources, Emergency Management and Homeland Security, Public Safety, and Consumer Protection, all have some environmental public health in Pennsylvania.

PA does not have a mandatory “registered sanitarian” program.

An Overview of Pennsylvania Environmental Public Health Infrastructure

RHODE ISLAND

Geography:
RI has 1,045 mi² of land; 187 mi² of water
RI has 384 miles of coast with a coastal population of 1,048,319

RI Land Use:
- 46% forest land (57% New England/Mid-Atlantic region*)
- 27% developed land (14% in region)
- 21% water and other rural land (10% in region)
- 2.5% crop land (10% in region)
US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)

RI Population

Growth:
1980 population: 947,154
1990 population: 1,003,464 (↑ 5.9% from 1980) (↑ 9.8% USA)
2000 population: 1,048,319 (↑ 4.5% from 1990) (↑ 13.2% USA)
Estimated growth from 2000 to 2006 was + 1.8% (+6.4% USA)

2006 Population: 1,067,610 (299,398,484 USA)
- 5.8% population < 5 years of age (6.8% US)
- 13.9% population > 65 years of age (12.4% US)

2000 Median Age: 36.7 (35.3 in USA)
http://quickfacts.census.gov/qfd/states/00000.html

RI Racial Composition:
(Based on 2005 US Census Bureau estimates)

Multilingual persons: In 2000, 20.0% of RI population > 5 years spoke a language other than English at home (17.9% USA)

Income:
- In 2004, RI median household income: $47,037 ($44,334 USA)
- In 2004, 11.6% RI population (12.7% USA) of persons were below the poverty line.

Density: In 2000, there were 1,003.2 persons per square mile in RI (79.6 USA)

Education: In 2000, 25.6% of persons older than 25 had a bachelor’s degree or higher (24.4% USA)

Native: 0.6%
Black: 6%
Hispanic: 11%
Asian: 3%
White: 89%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.

**Housing:** From 2000-2005, over 13,000 housing units were built in RI, a 3% increase (↑ 9% USA) *(2005 American Community Survey)*

**Composition of the 439,837 total housing units in Rhode Island based on year built**

- 20% up to 1959
- 26% 1960 to 1979
- 54% 1980 to 2000

*2000 US Census Data*

**Air Quality:** The Air Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy.

[http://www.epa.gov/air/airtrends/aqi_info.html](http://www.epa.gov/air/airtrends/aqi_info.html)
Water Quality: According to the EPA National Water Quality Inventory (2000) – see graphic:

- 100% of RI’s rivers, streams, and lakes are impaired for human fish consumption
- 24% of RI’s rivers/streams are impaired for human recreational use
- 27% of RI’s rivers/streams and bays/estuaries don’t provide sufficient habitat for certain aquatic organisms
- 25% of RI’s bays/estuaries can’t support shellfish harvesting for human consumption

Well and Septic Use: In 1990, there were 414,572 total housing units in RI (102,263,678 USA) with:

- 88.8% (84.1% USA) drinking water from a public system/private company
- 70.9% (74.8% USA) public sewer service
- 28.6% (24.1% USA) a septic tank or cesspool
- 11.0% (14.8% USA) an individually drilled or dug drinking water well

1990 Census Data (Note: Most recent data available)

Fish Advisories: In 2003, RI had 23 fish consumption advisories. Included in this count are state-wide advisories for mercury (for all rivers/lakes and for the entire coast), and PCBs (for the entire coast).

EPA National Listing of Fish Advisories (2004)

Beaches: RI has 70 important coastal beach areas, about one-third of which are monitored by a state agency.

Goveance

The elected officers from the executive branch of Rhode Island include not only the Governor and Lieutenant Governor, but the General Treasurer, Attorney General, and Secretary of State.

The state legislature (the General Assembly) is a bicameral body consisting of an upper body, the Senate (38 senators); and a lower body, the House of Representatives (75 representatives).

RI has five counties but no county government system; rather, government exists at the state and municipal (39 towns and cities) level. Each of these 39 municipalities maintains their own home rule and legislative charter.
Environmental Public Health Service

At the state level, several agencies are responsible for environmental health issues. (See Figure 2) Most of these duties are carried out by the Department of Environmental Management (DEM) and the Department of Health (DOH); however, the Departments of Elementary and Secondary Education, Department of Administrative Affairs, and Office of the Secretary of State all have some connection to environmental health in Rhode Island.

The town and city governments do not have their own public health or environmental health departments; however, all of the 39 municipalities have a health officer and typically have town offices, such as public works, planning/zoning, and civil defense/emergency preparedness that can provide some local EPH services.

RI has a voluntary “registered sanitarian” program.

An Overview of Rhode Island Environmental Public Health Infrastructure
**Vermont**

**Geography:**
VT has 9,250 mi² of land; 365 mi² of water
VT has no coastline, but does have hundreds of miles of lake shore

**VT Land Use:**
- 67% forest land (57% New England/Mid-Atlantic region *)
- 5.6% developed land (14% in region)
- 5.8% water and other rural land (10% in region)
- 9.5% crop land (10% in region)

**US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)**

**VT Population**

**Growth:**
- 1980 population: 511,456
- 1990 population: 562,758 (↑ 10.0%) from 1980) (↑ 9.8% in USA)
- 2000 population: 608,827 (↑ 8.2%) from 1990) (↑ 13.2% in USA)
- Estimated growth from 2000 to 2006 was + 2.5% (6.4% in USA)

**2006 Population:** 623,908 (299,398,484 USA)
- 5.3% population < 5 years of age (6.8% USA)
- 13.3% population > 65 years of age (12.4% USA)

**2000 Median Age:** 37.7 (35.3 USA)

http://quickfacts.census.gov/qfd/states/00000.html

**VT Racial Composition**

(Based on 2005 Census estimates)

- White: 97%
- Hispanic: 1%
- Black: 0.6%
- Asian: 1%
- Native: 0.4%

May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.

**Density:** In 2000, there were 66 persons per square mile in VT (79.6 USA).

**Education:** In 2000, 29.4% of persons in VT older than 25 had a bachelor’s degree or higher (24.4% in the USA)

**Income:**
- In 2004, VT median household income: $44,548 ($43,334 USA)
- In 2004, 8.7% VT population (12.7% USA) were below the poverty line

**Multilingual Population:** In 2000, 5.9% of persons in VT > 5 years spoke a language other than English at home (17.9% in the USA)

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The Leading Causes of Death
United States and Vermont, 1995 and 2001

Composition of the 294,382 total housing units in Vermont based on year built

Air Quality: The National Ambient Air Quality Standards for PM$_{2.5}$ are 15 $\mu$g/m$^3$ (24-hr exposures) and 35 $\mu$g/m$^3$ (24-hr exposures). According to EPA data, levels of small particulate matter (PM$_{2.5}$) in VT have increased slightly in recent years but are still generally low.

http://www.epa.gov/air/airtrends/qaq_info.html
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:
- 10% of VT’s rivers/streams are considered impaired for recreational use
- 19% of VT’s rivers/streams don’t provide sufficient habitat for certain aquatic organisms
- 34% of VT’s lakes don’t provide sufficient habitat for certain aquatic organisms
- 41% of VT’s lakes can’t be used for human consumption of fish

**Well and Septic Use:** In 1990, there were 271,214 total housing units in VT (102,263,678 USA) with:
- 51% (84.1% USA) drinking water from a public system/private company
- 42% (74.8% USA) public sewer service
- 55% (24.1% USA) a septic tank or cesspool
- 37% (14.8% USA) an individually drilled or dug drinking water well

1990 Census Data (Note: Most recent data available)

**Fish Advisories:** In 2003, VT had 12 fish consumption advisories. Included in this count is a state-wide advisory for mercury (for all rivers/lakes).

EPA National Listing of Fish Advisories (2004)

**Governance**

The state government for Vermont consists of three independent branches — the Legislative Branch, the Judicial Branch, and the Executive Branch. All members of the executive and legislative branch serve two-year terms including the governor and senators. There are no term limits for any office. The Governor and Lieutenant Governor are elected separately by the people of Vermont, along with the State Comptroller, the State Attorney General, and Auditor of Accounts.

Vermont’s State Legislature is the part-time Vermont General Assembly, a bicameral body composed of the Vermont House of Representatives (the lower house) and the Vermont Senate (the upper house). The Senate is composed of 30 state senators, while the House of Representatives has 150 members.
There are three types of incorporated municipalities in Vermont, towns, cities and villages; these municipalities serve as the basic unit of government. This includes 237 towns, nine cities, five unincorporated areas, and four gores.

**Environmental Public Health Service**

Environmental public health is jointly protected at the state level primarily by the Department of Health, housed in the Agency of Human Services, and the Department of Environmental Conservation, housed in the Agency of Natural Resources. The Department of Health administers programs addressing food safety, indoor air environments, environmental toxins, and radiological health. The Department of Environmental Conservation administers most of the state’s regulatory programs, as well as several voluntary pollution and waste reduction programs.

The Department of Health operates 12 District Offices, each in a specific part of the state. Environmental health services are provided at the state level primarily by the State Health Department’s Health Protection Operations Division, which operates the Food and Lodging Program. This program employs public health sanitarians who conduct food inspections, among other services such as animal bite investigations and rental housing inspections. There are eight regional Public Health Sanitarian Offices in the state. In addition to the state environmental public health infrastructure, each town in the state has a Health Officer. Town (municipal) health officers’ duties are set by state statute and include the following:

- Investigating possible public health hazards and risks within the municipality.
- Taking action to prevent, remove or destroy any such hazards and to mitigate significant public health risks.
- Enforcing health laws, rules and permit conditions, and taking the steps necessary to enforce orders.

The local health officer, along with municipal leadership (town selectboard or city council), constitutes the municipality’s board of health.

VT does not have a mandatory “registered sanitarian” program.

**An Overview of Vermont Environmental Public Health Infrastructure**

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1 A gore is an unincorporated area within a county (but not part of a town) in Vermont with some limited self-government.
Virginia

**Geography:**
VA has 39,594 mi² of land; 3,180 mi² of water
VA has 3,315 miles of coast with a coastal population of 4,440,709

*National Ocean and Atmospheric Administration (NOAA) Office of Ocean and Coastal Resource Management*

**VA Land Use:**
- 49% forest land (57% New England/Mid-Atlantic region)
- 11% developed land (14% in region)
- 9% water and other rural land (10% in region)
- 11% crop land (10% in region)

*US Department of Agriculture/Natural Resources Conservation Service Natural Resources Inventory (2003)*

**VA Population**

**Growth:**
1980 population: 5,346,818
1990 population: 6,187,358 (↑ 15.7%) from 1980 (↑ 9.8% in USA)
2000 population: 7,078,515 (↑ 14.4%) from 1990 (↑ 13.2% in USA)
Estimated growth from 2000 to 2006 was + 8% (6.4% in USA)

**2006 Population:** 7,642,884 (299,398,484 USA)
- 6.7% population < 5 years of age (6.8% USA)
- 11.6% population > 65 years of age (12.4% USA)

**2000 Median Age:** 35.7 (35.3 USA)

*http://quickfacts.census.gov/qfd/states/00000.html*

**Density:** In 2000, there were 178.8 persons per square mile in VA (79.6 USA)

**Education:** In 2000, 29.5% of persons in VA older than 25 had a bachelor’s degree or higher (24.4% USA)

**VA Racial Composition**
*(Based on 2005 Census estimates)*

- Hispanic: 6%
- Asian: 5%
- Native: 0.3%
- Black: 20%
- White: 74%

*May add up to more than 100% as “Hispanic” includes people of Hispanic or Latino origin and is an overestimate.*

**Multilingual Population:** In 2000, 11.1% VA population > 5 years spoke a language other than English at home (17.9% USA)

**Income:**
- In 2004, VA median household income: $51,103 ($44,334 in USA)
- In 2004, 9.5% VA population (12.7% USA) were below the poverty line

Housing: From 2000 – 2005, nearly 269,000 housing units were built in Virginia, a 9.3% increase (9% in USA) (2005 American Community Survey)

Composition of the 2,904,192 total housing units in Virginia based on year built

Air quality index: The Quality Index (AQI) provides a daily indication of air quality. The AQI compares pollutant levels to the national health standards of five pollutants: carbon monoxide, nitrogen dioxide, ground-level ozone, particulates and sulfur dioxide. An AQI over 100 is considered unhealthy. http://www.epa.gov/air/airtrends/aqi_info.html
**Water Quality:** According to the EPA National Water Quality Inventory (2000) – see graphic:
- 47% of VA’s rivers/streams are considered impaired for recreational use.
- 23% of VA’s rivers/streams don’t provide sufficient habitat for certain aquatic organisms
- 17% of VA’s bays/estuaries don’t provide sufficient habitat for certain aquatic organisms
- 5% of VA’s bays/estuaries can’t support shellfish harvesting for human consumption.

**Well and Septic Use:** In 1990, there were 2,496,334 total housing units in VA (102,263,678 USA) with:
- 76.1 % (84.1% USA) drinking water from a public system/private company
- 69.7% (74.8% USA) public sewer service
- 69.7% 28.3 % (24.1% USA) a septic tank or cesspool
- 20.1 % (14.8% USA) an individually drilled or dug drinking water well

**Fish Advisories:** In 2003, VA had 21 fish consumption advisories, for specific waterbodies only.

**Beaches:** VA has 47 public beaches on the Chesapeake Bay and Atlantic Ocean that are monitored during the swimming season (May-September).

**Governance**

Virginia’s constitutional, executive branch offices are comprised of Governor, Lieutenant Governor, and Attorney General. The Virginia State Legislature (the General Assembly) is a bicameral body consisting of an upper body, the Senate (40 senators); and a lower body, the House of Delegates (100 Delegates).
The Commonwealth of Virginia is comprised of 95 counties and 39 incorporated cities. Cities are independent, thus they are separate from, and independent of, any county they may be near or within. Therefore, Virginia cities are the equivalent of counties as they have no higher municipal government intervening between them and the state government. There is typically a county manager/executive form of government at the county level and cities have a city manager that reports to the city council.

Local political leadership is comprised of elected county boards of supervisors of varying sizes. Government at the city level is typically a city council/mayor, some mayors are appointed by the council and others are elected.

**Environmental Public Health Service**

At the state level, the Virginia Health and Human Resources Secretary is a cabinet level position having responsibility for 12 state agencies including the Department of Health. The Department of Health is made up of seven divisions. Among these, Public Health administers environmental health services. Local health services are provided through the state via 35 health districts. These districts can be comprised of multiple counties, a single county or a single city. Each district has a director and is administratively supported through the State Health Department’s division of Community Health Services.

The State also has a 13 member Board of Health appointed by the Governor. This Board serves in an advisory capacity.

In addition to the Department of Health, the Virginia Department of Environmental Quality has substantial responsibility for environmental protection. Services are provided through seven regional offices.

VA has an active state environmental health association; for more information, go to [http://www.veha.org](http://www.veha.org).

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**An Overview of Virginia Environmental Public Health Infrastructure**

- **Governor**
  - Department of Health
  - Department of Environmental Quality
  - Department of Agricultural and Consumer
  - Department of Emergency Management
  - 35 DOH Health Districts