

## **Chronology of PUBLIC and ENVIRONMENTAL HEALTH Events Post WWII (Monmouth County and New Jersey are highlighted)**

Rev. 08/09/13 Monmouth County Health Department, NJ.

### **1940**

- 1945** Penicillin introduced on commercial basis; first used to treat humans in 1941 (sulfonamide use began in 1937).  
Grand Rapids, MI becomes first city to fluoridate municipal water supply.  
Alexander Fleming was awarded a Nobel Prize in medicine for discovering penicillin.  
The American Cancer Society was established, originally formed as the American Society for the Control of Cancer in 1913.  
California passed first bill for the regulation of sanitarians.  
**NJSA 26:3B-2 was promulgated in 1945 (sewage on ground prohibited)**
- 1946** **The Arthur Brisbane Child Treatment Center was established in Howell for the treatment of children with mental illness between the ages of 5 and 12 (the Marlboro Psychiatric Hospital, the third mental hospital built in the state, had opened in 1931).**  
CDC established in Atlanta, Georgia; formerly the Center for the Control of Malaria in War Areas.  
USPHS administers the National Hospital Survey for the Hill-Burton Act.  
National Mental Health Act.  
World Health Organization.  
National School Lunch act passed by Congress.  
Infectious diseases no longer leading causes of death; leading causes were HD, CA, and accidents: social medicine vs. environmental improvement.  
Houseflies in Sweden resistant to DDT.  
July 1 - US atomic weapons testing begins on this day in 1946 with the first of the Bikini island atomic tests in the Pacific.
- 1947** National Institute of Arthritis, Metabolism, and Digestive Diseases.  
**NJ – Right of Inspection including food establishments and sanitary surveys in Title 26.**  
**NJ State and local health department duties enumerated; Health Officer and Sanitarian licenses required.**  
**The State Health Department was reorganized and a Commissioner of Health was provided for.**  
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).  
Federal Hill Burton Act.  
The National Security Act creates the National Security Resources Board, the forerunner of FEMA (preceeded by the Office of Civilian Defense created in 1941).  
More than 6 million residents in Manhattan were vaccinated for smallpox within one month at hundreds of sites after an infected Mexican businessman spread the disease to 12 people, 2 of which died including himself.

The Hooker Chemicals and Plastics Corporation takes over the 15-acre canal site for use as a dump. By 1952, 21,800 tons of toxic chemicals in metal drums are buried.

**1948** **Over this year and the next, the State Health Department was reorganized into 6 major divisions: Constructive Health, Environmental Sanitation, Laboratories, Local Health Services, Preventable Diseases, and Vital Statistics.**

National Heart, Lung and Blood Institute.

Publication of Kinsey's Sexual Behavior in the Human Male.

First World Health Assembly met in Geneva.

Noxious smog in Donora, Pennsylvania kills 120 people and sickens 6000.

Water Pollution Control Act (also 1948, 1956, 1961, 1965).

**1949** The last case of variola minor, the milder form of smallpox, was reported in the US (outbreaks of variola major had ended in 1929 in the US).

Dr. Alexander Langmuir, known as the father of infectious disease epidemiology, launched the first disease surveillance program at the CDC.

## **1950**

**1950** Society for Public Health Education is formed (the NY City DOH had established the first Bureau of Health Education in the US in 1914).

National Institute of Neurological and Communicative Disorders and Stroke.

Federal Civil Defense Act creates the Federal Civil Defense Administration and the Office of Emergency Management.

The Epidemic Intelligence Service is created at the CDC during the Korean War.

A chemist at the California Institute of Technology proposes a theory of smog (or ozone) formation in which auto exhaust and sunlight play major roles.

**1951** President Truman appointed commission to study US health needs and recommendations.

CDC establishes its Epidemic Intelligence Service; national disease surveillance systems begin.

Development of oral contraceptive urged by Margaret Sanger.

US Public Health Service recommends community water fluoridation.

'Killer fog' in London, England is linked to over 4000 deaths.

Atomic bomb testing began at Frenchmans Flats in Nevada.

**NJ Local Board of Health rules updated; originated in 1882.**

**NJ Civil service status for employees of local health departments.**

**1952** **The Medical Society of NJ and the NJDOH sponsored the Governors Conference on Prevention of Chronic Illness.**

Contraceptive pill produced.

Salk vaccine against polio tested with good results.

The National Sanitation Foundation, which had been founded in 1944, establishes its NSF Testing Laboratory for food equipment.

**1953** US Department of Health, Education and Welfare (originally under USPHS in Treasury; then in Federal Security Agency 1939); it housed all the federal public health agencies that had evolved since the Civil War.

DNA chemical structure discovered by Drs. James Watson and Francis Crick in Cambridge, England.

"Cancer by the Carton" published by Reader's Digest.

Kinsey published Sexual Behavior in the Human Female.

Hooker Chemicals and Plastics deeds landfill to the Niagara Board of Education.

Much of US and England switches from coal to natural gas; noticeable reduction in particulate levels occurs.

**NJ State Sanitary Code.**

**Public Health Nuisance Code of NJ updated; original in 1882.**

**JCP&L proposes a coal-fired plant on Gull Island in the Manasquan River; later in the 1960's this became a proposal for a 900-megawatt nuclear station on Raritan Bay in Union Beach, and in the 1970's on Reedy Creek in Brick ( Save Barnegat Bay got its start in the 1980's by saving Reedy Creek from development). Eventually this project was moved to Pennsylvania where JCP&L's parent company built Three Mile Island.**

**The Seafood Co-op in Belford was established; it is now oldest operating fishing port on the U.S. East Coast. It was the location of the J. Howard Smith fish factory, later owned by Seacoast Products and Hanson Industries, which operated between 1911 and 1982.**

**1954** School Health Education Evaluative Study.

The Miller Pesticides Amendment empowers the FDA to establish tolerances for pesticides.

First mass polio immunization shots administered, Pittsburgh, PA.

Dr. George Papanicolaou publishes his Atlas of Exfoliative Cytology, which describes the validity of the technique now known as Pap smears, which is widely accepted by the scientific community, 30 years after he first lectured on it.

An early public protest against air pollution takes place in East Greenville, Pennsylvania when homemakers march on the town council to demand that a localasket manufacturer be required to stop polluting. Their complaint is that clean laundry hung out to dry became dirtier than before it was washed because of high levels of soot (or particulates) in the air.

**The Public Health Council replaced the State Board of Health in NJ.**

**NJ Chapter 199 first promulgated (septic systems)**

**NJ reporting of communicable disease by doctors amended; original in 1895**

**1955** Conferences on abortion held by Planned Parenthood.

First automobile seat belt legislation enacted, IL.

Itai-Itai and Minimata Disease (mercury in fish in Japan).

Air Pollution Control Act - pollution research by the U.S. Public Health Service and technical assistance to local areas. The federal government's role is solely advisory and treated air pollution as a local problem, which states had the right to regulate or not.

US Public Health Service bans feeding raw garbage to pigs after a nationwide outbreak of virulent swine disease.

CDC's Polio Surveillance Unit is established.

Salk polio vaccine is distributed through nationwide immunization campaign.

World Health Organization launches global malaria eradication program, relying on DDT spraying.

The California Vehicle Code was amended to require state approval of seat belts before their sale or use.

**1956** La Leche League International, Inc.

General Adaptation Syndrome, Hans Selye.

Interstate Highway Act passed, leads to increased highway construction and traffic.

In Sweden, Volvo installs the first automotive seat belts.

Cure of metastatic cancer using systematic chemotherapy is demonstrated when National Institute of Health scientist Dr. Min Chiu Li discovers a cure for choriocarcinoma.

The first clinical trials of the contraceptive pill began in a clinic in Rio Piedras, Puerto Rico, with the pills manufactured by G.D. Searle.

Fuchs and Riis report in Nature that they can determine fetal sex from cells found in amniotic fluid; John Edwards in England discusses prenatal detection of hereditary disorders.

First fluoride toothpaste introduced in Crest by Proctor and Gamble.

**1957** CDC establishes Division of Radiation Health.

Asian influenza (H2N2) pandemic, new sub-type emerges.

The first commercial nuclear power plant began operation.

The American Cancer Society urges women to demand Pap tests in their annual physicals.

Poultry Products Inspection Act.

**1958** Office of Civil and Defense Mobilization.

The Delaney Clause in the Food Additive Amendments to the 1939 Federal Food, Drug and Cosmetic Act requires that food additives known to be carcinogens can not be approved for use in food.

**1959** National Conference on Fitness for Elementary School Age Children.

Thalidomide birth defects; FDA bans DES.

First full-scale nuclear power plant goes into service at Shippingport, Pa.

## **1960**

**1960** Federal Hazardous Substances Labeling Act.

Basic four food groups replaced earlier nutrition categories.

Prenatal management of patients with Haemophilia A.

Federal Motor Vehicle Act of 1960 requires federal research to address pollution from motor vehicles.

**1961** Lippes Loop IUD for contraception.

CDC acquires and reformats Morbidity and Mortality Weekly Report.

CDC's EIS investigates a cancer cluster in Niles Illinois that marks the agency's expansion into chronic disease; a connection is found between leukemia and birth defects.

All authority for water pollution control transferred from the Surgeon General to HEW – eventually to become the responsibility of the EPA in 1970.

Office of Emergency Planning.

First automotive emissions control technology in the US (Positive Crankcase Ventilation) is mandated in California.

**The American Littoral Society formed, headquartered today in Sandy Hook, NJ.**

- 1962** First successful measles vaccine produced, John Enders.  
Kefauver-Harris amendment to the 1938 Food, Drug and Cosmetic Act.  
Rachel Carson's "Silent Spring".  
Virginia Trailways became the first US bus company to install passenger safety belts.
- 1963** Weight Watchers founded.  
The Clean Air Act (also 1965, 1970, 1977, 1990) was the first federal legislation to acknowledge that air pollution was not a local problem, but a problem that crossed the boundaries of local and state jurisdictions. Through this act the federal government began to publish national air quality standards, although these were only recommendations. The federal government had very little enforcement power, and air quality issues remained primarily a local concern.  
Health Professionals Educational Assistance Act.  
**NJ Chapter 199 first revision (septic systems).**  
Rifampin developed for treatment of tuberculosis (Other anti-TB drugs were introduced: Streptomycin (1944), p-aminosalicylic acid (1949), isoniazid (1952), pyrazinamide (1954), cycloserine (1955), ethambutol (1962)).
- 1964** Surgeon General's (first) Report on Smoking and Health (SG was Luther L. Terry).  
Prenatal management of patients with Duchenne muscular dystrophy.  
Sex Information and Education Council of the US (SEICUS).  
Economic Opportunity Act – "War on Poverty".  
Nurse Training Act.  
Chrysler exhaust control system is approved for cars.  
Cancer linked to asbestos in report by Dr. Irving J. Selikoff at the NY Academy of Medicine.  
Ocean Township Sewer Authority formed.
- 1965** White House Conference on Health.  
Medicare and Medicaid programs enacted, expanding social insurance for the needy that had its origins in the Social Security Act of 1933.  
Federal Cigarette Labeling and Advertising Act.  
National Clearinghouse for Smoking and Health.  
Neighborhood Health Centers established.  
Home Health program begins to provide services under Medicaid and Medicare.  
Federal Water Pollution Control Administration transferred from HEW to the Department of Interior.  
the term 'solid waste' replaces 'refuse' in the lexicon after President Johnson calls for 'better solutions to the disposal of solid waste'.  
Federal Solid Waste Disposal Act is passed as Title II of the 1965 amendments to the Clean Air Act.

- The Motor Vehicle Air Pollution Control Act acknowledged that autos were a significant source of air pollution and recognized that it was economically and technologically feasible and appropriate to set vehicle emission standards on a national level rather than at the local level.
- 1966** National Institute of Environmental Health Sciences.  
Fair Packaging and Labeling Act.  
Comprehensive Health Planning Act (CHPs – Hospital Planning).  
CDC starts the Smallpox Eradication Program.  
Highway Safety Act and National Traffic and Motor Vehicle Safety Act passed to improve changes in vehicle and highway design.  
The federal Medicare insurance program takes effect.  
In New York City, a three-day temperature inversion over Thanksgiving weekend is blamed for the deaths of 168 people.
- 1967** World's first heart transplant.  
The Foreign Quarantine Service and NIOSH join the CDC.  
Action on Smoking and Health.  
Health Consequences of Smoking, USPHS.  
The first of several viral hemorrhagic fevers was isolated in Germany that would later be known as Lassa, Marburg and Ebola fevers.  
The term Integrated Pest Management is introduced by RF Smith and R van der Bosch.  
Wholesome Meat Act.  
The Metropolitan Atlanta Congenital Defects Program begins monitoring all major birth defects in five metro counties around Atlanta, Georgia.  
Agent Orange is used during the height of the Vietnam war (the herbicide 2,4-D became available in 1944).  
Madison Wisconsin initiates curbside pickup of newspapers, the first since the efforts to support the war during WWII.  
Worldwide smallpox eradication campaign headed by D.A. Henderson began.
- 1968** Mumps vaccine is developed.  
Office of Emergency Preparedness established.  
The nation's first 911 emergency telephone system was inaugurated in Haleyville, Ala.  
Hong Kong Flu, H3N2.  
Cardiovascular disease rates peaked this year, and thereafter declined, about 2.6% per year from 1968 to 1990.
- 1969** White House Conference on Food, Nutrition and Health.  
National Center for Family Planning.  
Public Health Cigarette Smoking Act mandates “Warning” label.  
National Environmental Policy Act.  
Hong Kong (H3N2) influenza pandemic, new sub-type emerges.  
WHO's Global Eradication of Malaria program is ended. Malaria was eradicated from most of North America, Europe and some areas of Asia and South America.  
Santa Barbara Oil spill – offshore wells in California foul beaches.

First state Ambient Air Quality Standards are promulgated by California for total suspended particulates, photochemical oxidants, sulfur dioxide, nitrogen dioxide, and carbon monoxide.

The Stratton Commission is appointed by Congress to prepare the first report on the health of the coastal zone.

June 22 - The Cuyahoga River in Ohio catches fire, and becomes the “seminal” event in the history of water pollution control in America, helping to spur the growth of the environmental movement and the passage of national environmental legislation including the Clean Water Act.

**Following a State and Federal investigation of respiratory complaints from bathers during a 1968 bloom of *Prorocentrum micans*, the Interagency Committee on Marine Plankton was formed to coordinate responses to “red tides” and other serious phytoplankton blooms.**

## 1970

- 1970** Birth control pill warnings issued to physicians by FDA.
- Nadler and Gerbie publish the “Role of amniocentesis in the intrauterine diagnosis of genetic defects” in New England Journal of Medicine; which leads to prevalence of genetic laboratories for analysis of amniotic fluid to detect birth defects.
- Egg Products Inspection Act is enacted in response to Salmonella outbreaks.
- Environmental Protection Agency created
- The first Earth Day, April 22, is established during President Richard Nixon’s term (he died on Earth Day in 1994).
- National Environmental Policy Act (NEPA) – encouraged the President to create two environmental agencies: (1) the Council on Environmental Quality, based out of the White House, to advise the President: and (2) the Environmental Protection Agency.
- Environmental Protection Agency established.
- Council on Environmental Quality established.
- Federal Clean Air Act – set emission standards for new cars and banned lead in gasoline. It required (not just recommended, as in 1963) National Ambient Air Quality Standards (NAAQS) for six criteria pollutants and initiated regulation of both stationary and mobile sources of air pollutants. States were required to develop plans as to how they would meet clean air standards in polluted areas, and permitted citizens to bring lawsuits against violators of the NAAQS.
- NJ Wetlands Act (covers coastal wetlands)**
- Resource Conservation and Recovery Act (RCRA).
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA).
- Resources Recovery Act (recycling).
- NIOSH established in the Public Health Service
- Occupational Health and Safety Administration established in the Dept. of Labor.
- Hospital care costs: \$81 per patient per day average.
- The Communicable Disease Center is renamed the Center for Disease Control.

- The Family Planning Services and Population Research Act established federal funding for family planning services, which created Title X of the Public Health Service Act.
- Middletown Environmental Commission is formed.
- Creation of US National Oceanic and Atmospheric Administration.
- 1971** National Cancer Act signed by President Nixon, referred to as the “War on Cancer”, which empowered the National Cancer Institute, which had been originally established in 1937.
- President's Committee on Health Education created.
- Cigarette adverting banned on TV and radio.
- OSHA established.
- CDC’s EIS investigates lead exposure from a smelter in El Paso, Texas, increasing the understanding of lead poisoning in children.
- Victoria, Australia passes the first law requiring the use of seat belts by drivers and passengers.
- Federal EPA promulgates National Ambient Air Quality Standards for particulates, photochemcial oxidants (including ozone), hydrocarbons, carbon monoxide, nitrogen dioxide and sulfur dioxide.
- 1972** Sidestream cigarette smoking hazards revealed.
- Medicaid funding for family planning authorized.
- Coppertone introduced SPF factor for sunscreen in the US (“Coppertone Suntan Cream” was invented in 1944; French scientist Eugene Schuller, the founder of L’Oreal, invented the first sunscreen in 1936).
- Water Pollution Act passed over President Nixon’s veto.
- The TMDL program has achieved mixed results since its inception in 1972. The nonpoint source aspects of the program were largely ignored by both the EPA and the states until lawsuits were filed in the 1990s.
- Federal Insecticide, Fungicide and Rodenticide Act.
- Federal Coastal Zone Management Act enacted.
- Marine Protection, Research, and Sanctuaries Act.
- DDT banned in U.S.
- Federal Ocean Dumping Act passed.
- Federal Emergency Management Agency (FEMA).
- Seventy nations including the US and the Soviet Union signed an agreement banning biological warfare.
- Flood Plains Act, NJAC 58:16a(55-66).**
- Flood Hazard Area Regulations, NJAC 7:13-1.1.**
- Marine Protection, Research and Sanctuaries Act**
- 1973** Abortion legalized at request of mother during first three months of pregnancy.
- Supplemental Food Program for Women, Infants and Children (WIC) begins.
- Health Maintenance Organization Act.
- Endangered Species Act.
- NJ Coastal Area Facility Review Act enacted.**
- The NJDEP and the National Marine Fisheries Service, Sandy Hook Laboratory, coordinated an intensive phytoplankton study in the bay and ocean areas most affected by red tides.**

EPA issues first wastewater permits.  
EPA sets auto maintenance regulations.  
EPA starts leaded gas phaseout.  
NIOSH becomes part of the CDC.  
First recombinant DNA molecules are produced by Paul Berg and Herb Boyer.  
FIREScope (Firefighting RESources of California Organized for Potential Emergencies) develops the Incident Command System (ICS) and the Multi-Agency Coordination System (MACS) after a devastation wildfire in California in 1970).

First oil embargo imposed by Arab states.

**1974** Energy Supply and Environmental Coordination Act - A result of the Arab Oil Embargo, this law granted EPA the authority to delay or waive auto and other emission standards.

Bureau of Health Education, Dept. of HEW.

National Institute on Aging.

Child Abuse Prevention and Treatment Act.

National Health Planning and Resources Development Act.

Breast cancer awareness is promoted by 3 prominent women who have the disease, Betty Ford, Susan G. Komen, and Rose Kushner.

**NJ County and Municipal Government Study Commission (Musto Report) – the Basis of Title 26 and the Local Health Services Act.**

**The USEPA Cooperative Coastal Monitoring Program begins in NJ, but is not incorporated into the NJ State Sanitary Code until 1986.**

Safe Drinking Water Act.

EPA identifies noise levels affecting health.

CDC's EIS investigates liver cancer deaths at B.F. Goodrich in Louisville, Kentucky and links them to vinyl chloride.

New Source Performance Standards (EPA Method 9 are published that require opacity, not Ringlemann numbers, for evaluating air emissions.

**Water Quality Management planning was initiated in NJ in 1974 by 3 designated county or regional agencies; in 1976, 3 more counties were designated by the governor and the DEP became the responsible planning agent for the remaining areas, and 3 state was divided into 5 planning areas: the Northeast, Upper Raritan, Upper Delaware, Lower Delaware, and Monmouth County (a total of 12 areas; TMDLs became part of this process).**

**1975** Energy Policy and Conservation Act set fuel economy standards and hastened the appearance of more fuel-efficient U.S. auto engines.

National Center for Health Education

Special Supplemental Food Program for Women, Infants and Children

Professional Standards Review Organizations (PSROs).

EPA bans manufacture of Heptachlor and Chlordane.

CDC produces The Study for Efficacy of Nosocomial Infection Control to evaluate hospitals' procedures, demonstrating the effectiveness of infection control activities for the first time.

The FDA bans all interstate shipment of pet turtles; in 1974 the CDC found that they accounted for 14% of all human salmonella cases.

First of 49 bombings between 1974 and 1977 attributed to the Puerto Rican National Liberation Army.

Soil Erosion and Sediment Control Act (the Soil Conservation Act of 1937 established the NJ State Soil Conservation Committee-NJ Department of Agriculture and the state's 15 soil conservation districts).

Juvenile arthritis cluster in Lyme Connecticut later identified as Lyme Disease.

**Recognized Public Health Activities and Minimum Standards of Performance for Local Boards of Health in New Jersey**

**NJ Full time Health Officer license required for health departments**

1976 July 27 - Legionnaires disease outbreak in Philadelphia, PA

**Swine flu outbreak at Fort Dix; 50 million Americans are vaccinated in 10 weeks, setting an immunization world record; Guillian-Barre Syndrome prompts President Ford to discontinue.**

CDC's EIS studies the cause of the outbreak of Lassa fever in Lassa, Nigeria that occurred in 1969.

CDC's EIS go to Zaire and Sudan to investigate an outbreak of Ebola, named after a nearby river.

Toxic Substances Control Act (TSCA).

Studies show that CFCs (1975) and also methane and ozone (1976) can make a serious contribution to the greenhouse effect.

Resource Conservation and Recovery Act.

Dioxin released in Seveso, Italy after an industrial explosion; chloracne and other disease subsequently observed.

Phaseout of lead in gasoline begins when the first catalytic converters in cars were introduced.

Lovastatin isolated from Penicillium citrinum at Merck and becomes the first statin to marketed to treat cholesterol.

The Argo Merchant broke apart near Nantucket and spilled 7.5 million gallons of oil into the Atlantic.

**Over \$550 million in losses to shellfishing and related industries occurs after dissolved oxygen levels plummet off the NJ coast, impacting nearly the entire NJ continental shelf; related to the discharge of the nutrient rich Hudson-Raritan plume and coastal upwelling causing a massive algae bloom.**

The EPA recommends a fecal coliform bacterial guideline for primary recreational contact.

**Monmouth County Reclamation Center opens in Tinton Falls (the first 'sanitary landfill' in the US was built in 1937 by Jean Vincesz, DPW commissioner of Fresno, Ca.)**

**Water Quality Management planning was initiated in NJ in 1974 by 3 designated county or regional agencies; in 1976, 3 more counties were designated by the governor and the DEP became the responsible planning agent for the remaining areas, and 3 state was divided into 5 planning areas: the Northeast, Upper Raritan, Upper Delaware, Lower Delaware, and Monmouth County (a total of 12 areas; TMDLs became part of this process).**

1977 Successful treatment of herpes encephalitis.

First of several laws precluding FDA from banning saccharin.

US Department of Energy.

1400 anti nuclear demonstrators at the Seabrook nuclear power plant in Concord, NH on April 30<sup>th</sup> ; a watershed moment for the anti nuclear movement.

Clean Air Act Amendments - de-emphasized federal responsibility in air quality issues, limited EPA authority. It extended the time frames for states with polluted areas to develop and implement a plan to improve their air quality and relaxed the standards for emission from new cars. However, this law allowed EPA to bring limited civil and criminal penalties against polluters.

**Public Health Priority Funding Act of 1977 (formula for state funding to local health agencies)**

**NJ Transfer of full time employees ensured when local health department is absorbed by a county health department (County Environmental Health Act).**

**NJ Public Health Nuisance Code is amended to remove enforcement of disposal of waste to streams and oceans.**

**The EPA begins its helicopter flyovers of the NY-NJ coastlines.**

World Health Organization's smallpox eradication campaign succeeds: last case of endemic smallpox is reported in Somalia.

CDC begins the Cancer and Steroid Hormone study of the association between birth control use and estrogen replacement therapy with breast, endometrial, and ovarian cancers.

Russian Flu, H1N1.

**1978** First test tube baby born.

National Task Force on Preparation and Practice of Health Educators.

War on smoking declared by Secy of HEW J. Califano.

President Carter declares emergency at Love Canal.

EPA sets new air standard for lead.

Lead based paints used in housing banned by Congress.

EPA bans aerosol fluorocarbons.

Research first links sun exposure to skin cancer.

CDC opens a maximum-containment laboratory to handle dangerous viruses.

Rainfall in Wheeling, West Virginia is measured at a pH of 2, the most acidic yet recorded and 5000 times more acidic than normal rainfall.

Love Canal controversy begins, 8/11/78. The first rally of Love Canal residents was on 8/2/78.

**NJ Chapter 199 2<sup>nd</sup> revision (septic systems).**

**Monmouth County Health Department established.**

**NJ County Environmental Health Act (CEHA).**

**1979** Three Mile Island.

Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention.

EPA bans PCB manufacture.

EPA starts Hazardous Waste Enforcement/Emergency Response system.

EPA issues Bubble Policy (air pollution).

Second oil "energy crisis." Strengthened environmental movement encourages renewable energy sources.

Last case of wild polio virus in the U.S. is reported.

**117 Local Health Departments in NJ**

**NJ Pinelands Protection Act becomes law.**

Hepatitis B vaccine is developed.

WHO declares world smallpox-free.

Federal Emergency Management Agency (FEMA) created by Executive Order.

Second oil embargo imposed by Arab states.

**Current version of the Flood Hazard Control Act (NJSA 58:16A); a significant revision since the stream encroachment law, NJSA 58:1-26, was enacted in 1929.**

**Inception of the Navesink River Pollution Control Program by the NJDEP and various agencies including local and county to identify and control sources of non point pollution.**

## 1980

1980 Dept. of HEW became Department of Health and Human Services.

White House Conference on Families.

Mothers Against Drunk Driving (MADD) founded in Sacramento California.

**Superfund (CERCLA) enacted.**

**NJDEP Office of Planning and Standards, supported by an EPA grant, produces a working paper on the Navesink River that 2 years later will link elevated coliform levels with agricultural runoff from the upper watershed and storm drain runoff from Red Bank.**

Solid Waste Management Act.

EPA and New York relocate Love Canal residents.

CDC's EIS starts study that finds association between Toxic Shock Syndrome and tampon use in menstruating women.

California and the National Fire Academy formally adopts the Incident Command System (ICS).

FIRESCOPE ICS documentation was revised and adopted as the National Interagency Incident Management System (NIIMS).

1981 White House Conference on Aging

Morbidity and Mortality Weekly Report: "Pneumocystis Pneumonia – Los Angeles" later identified as AIDS. CDC begins to formally track cases identified as Acquired Immunodeficiency Syndrome in 1982.

The Quebec Ministry of the Environment notifies the U.S. that 60 percent of the acid rain (sulfur dioxide pollution) damaging air and waters in Quebec, Canada comes from the U.S. industrial sources in the Midwestern and Northeastern U.S. Hansen and others show that sulfate aerosols can significantly cool the climate, raising confidence in models showing future greenhouse warming.

**NJ smoking in public places prohibited.**

**Lyme Disease first made reportable in NJ.**

CDC identifies lead in gasoline as an important route of human exposure.

**EPA identifies first 114 Superfund sites, including Lone Pine Landfill in Freehold, and Imperial Oil and Burnt Fly Bog in Marlboro in Monmouth County.**

- 1982** Institute of Medicine and National Academy of Science reported one-half of mortality traced to life-style.  
Times Beach Missouri evacuated due to dioxin contamination by dioxin.  
The National Center for Health Statistics releases a study indicating that four percent of all U.S. schoolchildren, about 675,000 children including about 12 percent of all African-American preschoolers, have high levels of lead in their blood. It is recognized that children absorb this lead by breathing air contaminated primarily from leaded gasoline.  
E.coli 157:H7 is first recognized as a pathogen, during an epidemic in Oregon and Michigan caused by undercooked McDonald's hamburgers. E. Coli O157:H7 is apparently the result of the gut transfer of the shigella toxin gene to salmonella.  
Seven people in the Chicago area died after unwittingly taking Extra-Strength Tylenol capsules laced with cyanide.
- Moratorium on offshore drilling for gas and oil off the NJ coast.**
- 1983** HIV-I retrovirus is identified as the causal agent of AIDS.  
EPA relocates residents of Times Beach, Missouri (dioxin).  
The California Birth Defects Monitoring Program began active surveillance system in the 5 counties around San Francisco.
- 1984** Stanley Watras sets off detectors at the Limerick Nuclear Power Generating Station in Pottstown, Pa.; later discovered it was caused by natural radiation levels in his home (including radon).  
Hazardous and Solid Waste Amendments to RCRA.  
New York became the first state to require seat belt use in vehicles.  
Disaster at Bhopal India.  
CDC's EIS investigates an outbreak of salmonella food poisoning in Oregon caused by intentional contamination of salad bars in 10 restaurants by a religious commune (Baghwan Shree Rajneesh followers) trying to control a local election outcome. The first known bioterrorism event in the US.  
**Cloisonné jewelry imported from Taiwan was found to emit unhealthy levels of radiation due to the presence of uranium salts in their paint, and was subsequently tested with Geiger Counters by health departments.**  
**The southern side of the Global Landfill in Old Bridge collapsed and waste slid into the Cheesequake wetlands.**  
**Clean Ocean Action was formed in Monmouth County.**
- 1985** Civil rights disputes triggered by closing of gay bars to help control AIDS.  
Rock Hudson appeared gaunt looking on the Doris Day show and it was later revealed he had AIDS, which promoted major media discussion of the disease.  
**NJ CEHA programs initiated in Monmouth County Health Department**  
**First beach cleanup sponsored by Clean Ocean Action.**  
**The NJDEP initiated the Cooperative Coastal Monitoring Program, adopting the standard of 200 fecal coliform colonies per 100 mls.; mandatory closures did not begin until 1986.**

**NJ First ocean beach closures in Monmouth and Cape May Counties due to fecal coliform exceedences.**

**New Jersey Statewide Water Quality Management Plan adopted by the New Jersey Department of Environmental Protection.**

**Brownish water conditions, first in Barnegat Bay, later in Great Egg Harbor were initially attributed to the minute coccoid chlorophyte *Nannochloris atomis*. This coincided with the first identification in these bays of the previously unidentified “brown tide” algae, *Aureococcus anophagefferens*, which had ruined eelgrass beds and shellfisheries in Rhode Island and eastern NY.**

EPA sets new limits on lead in gasoline.

The U.S. EPA estimates 50,000 streams in the U.S. and Canada are dead or dying because of acid rain pollution.

Broecker speculates that a reorganization of North Atlantic Ocean circulation can bring swift and radical climate change.

EPA approves first use of gene-altered bacteria.

Mad Cow Disease first appears in Great Britain.

Hib (haemophilus influenza type b) vaccine first made available.

**1986** Chernobyl nuclear disaster in USSR

Chlamydia most prevalent STD (4.6 M)

OSHA 1910.120 – OSHA Emergency Response regulations

Emergency Planning and Community Right-to-Know Act

Local Emergency Planning Councils required (OEM)

CDC re-establishes the Vessel Sanitation Program for cruise ships.

Safe Drinking Water Act Amendments.

September 24 - The EPA announced new limits on the use of lead in piping systems for public drinking water supplies, banning the use of solder containing more than two-tenths of 1 % of lead and the use of pipes and fittings with more than 8% lead content.

Superfund Amendments and Reauthorization Act (SARA).

Asbestos Hazard Emergency Response Act.

The Office of Smoking and Health becomes part of the CDC.

EPA approves the release of the first genetically engineered crop, gene altered tobacco plants.

Bovine Spongiform Encephalopathy (BSE) officially diagnosed (Mad Cow Disease).

Johnson & Johnson announces it will no longer sell over the counter medicines in capsule form, following death of a woman who had taken Tylenol with cyanide in the capsule.

SPF 15 sunscreen regularly used during the first 18 years of life shown to potentially reduce the lifetime risk of melanoma by 78%.

Lead completely phased out of gasoline; all gasoline is unleaded.

**June 19 - Amendments to the Safe Drinking Water Act requiring more contaminants to be regulated, well head protection, filtration for certain surface water systems, disinfection for certain groundwater systems, and restrictions on lead in solder and plumbing.**

**The EPA recommends enterococcus and Escherichia coli guideline for primary recreational contact in marine and fresh water.**

**The NJ Office of State Planning is established to create a growth management plan that would control suburban sprawl by encouraging the development of urban centers.**

**The Coastal Cooperative Monitoring Program is incorporated into the NJ Sanitary Code and beach closings are mandated after 2 consecutive elevated samples.**

**A Memorandum of Understanding implemented the nonpoint pollution control recommendations of the Navesink River Pollution Control Program, which had identified horse farms and urban storm drains as the major source of elevated bacteria levels in the shellfishing beds.**

**In December, a 65 foot fin whale strands on the beach in Deal; it takes 2 days to make arrangements for it to be hauled to the Monmouth County Reclamation Center.**

**IFF fined \$1.5 million after its prosecution by the MC Prosecutors Office for water pollution from its site in Union Beach.**

**1987 NJ Freshwater Wetlands Protection Act becomes law.**

**NJ Statewide Mandatory Source Separation and Recycling Act.**

**NJ regulates Underground Storage Tanks – NJAC 7:14B-1 et seq.**

Montreal Protocol of the Vienna Convention imposes international restrictions on emission of ozone-destroying gases.

CDC establishes the Medical Examiner/Coroner Information Sharing Program to improve the quality of data on death certificates.

CDC publishes preliminary results of veterans who sprayed Agent Orange in Vietnam (Ranch Hands); study continues until 2002.

CDC reports strong association between Reye Syndrome and aspirin.

Radioactive cesium dust is spread by children through Goiania, Brazil after a canister is scavenged from an abandoned hospital; four people die and others are sickened.

Congress designates Yucca Mountains in Nevada as the only site for nuclear waste disposal.

AZT licensed for use in treating AIDS.

September 29 - A Federal grand jury today indicted W. R. Grace & Company on charges that it lied to the United States Environmental Protection Agency about the use of chemicals and waste disposal techniques at its industrial plant in Woburn, Mass.

**The NY-NJ Harbor Estuary Program authorized by Congress.**

**12 Mile Sewage Dump Site closes off New Jersey.**

**Thirty two miles of ocean beaches in Ocean County are closed due to floatables just before Memorial Day; a 50 mile trash slick washes up on beaches in Monmouth and Ocean counties from August 13th through the 15<sup>th</sup> (about 200-300 tons of debris are removed).**

**August 23 – the New York Times publishes “Troubled Times Along the Shore”, about bird droppings under piers raising coliform bacteria counts and closing swimming areas, dead dolphins washing ashore around July 1,**

sewage system breakdowns fouling beaches, and a mysterious 50-mile-long tide of hospital waste forcing additional beach closings.

From March to October, the Mobro 4000 'garbage barge' travels 6,000 miles roundtrip from NY, as far as the Yucatan peninsula in southeastern Mexico, looking for a port that would take its 3,200 tons of trash, which was rumored to contain medical waste. The trash was finally returned to Brooklyn for incineration in October.

Storm drains around Deal Lake in Monmouth County are mapped; sewer interconnections are found and abated.

Long Branch Pier destroyed by fire in June.

NJDOH begins an epidemiological study examining the link between swimming and the risk of infectious diseases, that was concluded in 1988 and a final report issued in 1990. This was prompted by anecdotal reports from a group of medical practitioners, Save our Shores.

Bottlenose dolphins (Tursiops truncatus) washed ashore from NJ to Virginia; it was later associated with a phytoplankton-derived neurotoxin in fish which the dolphins had been eating.

Imperial Oil fined \$30,000 after its prosecution by the MC Prosecutors Office for its Superfund site in Marlboro.

Keansburg fishing pier built; 2400 feet long, built on older pier destroyed by fires and hurricanes.

September 13 - New York Times headline—"Pollution of Summer '87 Seen as Oceanic Warning" as along the East Coast, algae blooms, garbage slicks and high bacterial levels have made some waters unsafe for swimming.

1988 Three miles of ocean beach closed for 3 weeks in Monmouth County.

New Jersey Sewage Infrastructure Improvement Act of 1988.

An extensive multi-species fishkill occurred when a large algal bloom arriving from western Raritan Bay depleted the dissolved oxygen in the flats at Leonardo Beach just to the east of the Naval Weapons Station Earle Pier.

Toxic Waste Incineration Sites close off New Jersey (they were never used).

Storm drain stenciling project initiated by Clean Ocean Action.

Water column and sediment is sampled in nine coastal lakes in Monmouth County.

Federal Ocean Dumping Ban Act.

More than 450 boats participate in a Tri-State Flotilla to Stop Ocean Dumping.

A federal law requires all sludge dumping at the 100-mile offshore site to end by 6/30/1992; a NJ law requires this termination by 3/17/1991.

NJDEP institutes chlorophyll a analysis into routine phytoplankton sampling.

Medical waste and debris began washing up and closing beaches in the NYC area (7/6)

The NJDEP lab at Leeds Point first began work with the University of North Carolina in developing and determining the application of RNA coliphage as a pathogen Indicator (coliphage).

Municipal Waste Planning, Recycling, and Waste Reduction Act

Hazardous Sites Cleanup Act  
CDC studies human exposure to dioxin in Seveso, Italy.  
EPA sets standards for Underground Storage Tanks.  
Indoor Radon Abatement Act passed.  
CDC establishes the Center for Chronic Disease Prevention and Health Promotion.  
“Syndrome X” first used by Dr. Gerald M. Reavan to describe a cluster of risk factors for heart disease.  
All states in US establish 21 as the legal drinking age.  
Supreme Court decides that the Constitution does not protect the privacy rights of individuals’ garbage (5/16).  
Global warming became a national debate on June 23, when Robert Hansen of NASA testified before Congress that there was a strong "cause and effect relationship" between observed global warming and anthropomorphic emissions into the atmosphere.  
Intergovernmental Panel on Climate Change (IPCC) is established.  
A terrorist bomb exploded aboard a Pan Am Boeing 747 over Lockerbie, Scotland, killing 270 people.

**1989** Exxon Valdez oil spill  
Environmental Technology Research and Development Fund  
CDC establishes national surveillance for Eosinophilia Myalgia Syndrome, which was linked to ingestion of L-tryptophan.  
EPA publishes first Toxic Release Inventory.  
British stop feeding cows from feed made from sheep bone and meat remnants.  
Ozone depleting chemicals like chlorofluorocarbons banned or phased out for use as refrigerants under the Montreal Protocol.  
Emergency Management Act of 1989 (originally known as the Civil Defense Act of 1942).  
**March 6 - the NJ Comprehensive Regulated Medical Waste Management Act, N.J.S.A. 13:1E-48 et seq. was signed into law.**  
**NY/NJ Baykeeper formed.**  
**106 Mile Industrial Waste Site closes off New Jersey.**  
**June 29 - Surface Water Treatment Rule and Total Coliform Rule promulgated.**

## 1990

**1990** **NJ Chapter 199 - 3<sup>rd</sup> revision (septic systems).**  
**NJ First full year of resurgence of rabies.**  
**MCHD’s Geographic Information System is established in December.**  
**In January, a pipeline beneath the Arthur Kill ruptured, spilling more than a million gallons of home heating oil over 100 acres of salt marsh.**  
Oil Pollution Act.  
Clean Air Act Reauthorization - intensified the national effort to reduce air pollution by 2005, and remains one of the biggest undertakings in the history of environmental regulation. These new guidelines will take as much as 20 years to

fully implement: stricter guidelines and timelines for controls that must be implemented in areas that do not meet air quality standards, like NJ; tough new emission standards for motor vehicles, requiring a reduction in emissions of about 50%; requirements for the petroleum and auto industries to produce alternative (clean-burning) fuels and vehicles able to use them; development of new control standards for sources of 189 toxic pollutants, beyond the six criteria pollutants; to reduce acid rain, a required 50% reduction in emissions from coal-burning power plants; to reduce depletion of stratospheric ozone, restrictions on the use of chloroflourocarbons (CFC's); and stronger enforcement authority for EPA, including greater criminal sanctions.

Mt. Pinatubo explodes; Hansen predicts cooling pattern, verifying (by 1995) computer models of aerosol effects.

Nutrition Labeling and Education Act passes; congress requiring all packaged foods to have nutritional labeling.

Federal Pollution Prevention Act passed.

Human Genome Project founded by US Dept. of Energy and the NIH.

GenPharm International Inc. creates the first transgenic dairy cow used to produce human milk proteins for infant formula.

Federal Organic Foods Protection Act.

**1991 Epidemiologists (CSTE) designated Lyme disease as a nationally notifiable disease.**

Polio eliminated from the Western Hemisphere through vaccination.

CDC studies VOC exposure to fire fighters putting out oil fires in Kuwait.

Brownfields Initiative

**NJ Pollution Prevention Act.**

CDC develops the Strategic Plan for the Elimination of Childhood Lead Poisoning.

Federal Recycling order signed.

Conference in Rio de Janeiro produces UN Framework Convention on Climate Change, but US blocks calls for serious action.

**Global Positioning System is initiated at MCHD.**

**The Manasquan River Treatment Plant on Hospital Road in Wall is dedicated.**

**NJ stops dumping its sewage sludge in the ocean.**

**Cellar Dirt Site closes off New Jersey.**

**June 7, 1991: EPA published the Lead and Copper Rule**

**1992 EPA and New York mark end of offshore sludge dumping when the 106 Mile Sewage Sludge Sites closes off New Jersey.**

**Clean Ocean Action's Beach Sweeps becomes state wide event.**

**New Jersey's Clean Vessel Act (CVA), passed by the Congress in 1992, helps reduce pollution from vessel sewage discharges with federal grants for the construction and/or renovation, operation and maintenance of pumpout and portable toilet dump stations.**

EPA commits to reducing environmental risks to minorities.

Hurricane Andrew decimates much of southern Florida; CDC's EIS finds extensive need for mental health services.

CDC established the National Center for Injury Prevention and Control to target alcohol impaired drivers, and young drivers; advocates use of child safety seats. The American Cancer Society recommends that men over 50 be tested annually by DRE and PSA to detect prostate cancer.

The Public Health Service and the CDC recommend that women planning on becoming pregnant take folic acid supplements.

The Earth Summit takes place in Rio de Janeiro, Brazil, where 2 treaties are signed by all but a few nations present. The U.S. does not sign the treaty on global warming, which recommended curbing emissions of greenhouse gases. The second treaty requires inventories of plants and wildlife and strategies to protect endangered species.

**The Coastal Ocean Observation Lab at Rutgers University is part of the Institute of Marine and Coastal Sciences. The lab was established in October 1992 by Dr. Scott Glenn.**

**NYC stops dumping its sewage sludge in the ocean.**

**1993** CDC publishes study of human exposure to MTBE.

CDC identifies hantavirus pulmonary syndrome at the 'Four Corners' western states in the U.S.

EPA designates passive smoke a human carcinogen.

EPA requires phaseout of CFCs and other ozone depleters.

The FDA declares that genetically engineered foods are not inherently dangerous and do not need special regulation.

FDA states the sunscreens with high SPF are effective in stopping UVB-caused skin cancer.

First World Trade Center attack by bomb on February 25th.

CDC's EIS traces an outbreak of bloody diarrhea to E. Coli-contaminated "Monster Burgers" at Jack-In-The-Boxes in four western states; four children killed.

Cryptosporidium outbreak in the drinking water in Milwaukee.

One cow in Alta., Alberta, Canada is diagnosed with BSE (Mad Cow Disease).

**Rutgers begins continuous sampling on the NJ shelf.**

**17 Mile Woodburning Site closes off New Jersey.**

**The ACE give the PANY/NJ a permit with EPA approval to dump 450,000 tons of dioxin contaminated sediments at the Mud Dump site 6 miles off Sea Bright; in 1995 a federal judge rules the permit illegal; in 1996 an agreement is made to close the Mud Dump site in 1997.**

**1994** CDC establishes a DNA specimen bank.

CDC shows 78% decrease in blood lead levels from efforts to reduce lead in gasoline and lead-soldered cans.

EPA funds Brownfields development.

First genetically engineered food product, the Flav'r Savr tomato, is approved by FDA.

Congress passes a transportation bill that would have DOT regulate the sanitary transportation of food and address proper temperatures in refrigerated trucks; these regulations have yet to be enacted as they are still going through an approval process.

- Rutgers establishes their Marine Remote Sensing webpage.**
- 1995** US commits to monitoring the environment using Remote Sensing.  
CDC begins publishing Emerging Infectious Disease journal.  
CDC investigates Ebola virus outbreak in Zaire.  
CDC recommends AZT therapy for HIV-infected pregnant women to reduce fetal transmission.  
CDC, the USDA and the FDA initiate FoodNet to collect precise information on foodborne illness.  
HACCP increases the food industries' responsibility for controlling the temperatures and safety during food preparation, storage and serving.  
Aum Shinrikyo releases sarin in a Tokyo Subway.  
Murrah Federal Building in Oklahoma City bombed by Timothy McVeigh.
- DEP delegated all noise enforcement to county health departments and municipalities with approved ordinances.**
- Monmouth Park Racetrack in Monmouth County diverts most of its manure runoff out of the Shrewsbury River to the Two Rivers Water Reclamation Authority, the first and only racetrack in the state to divert its manure runoff to sanitary sewer.**
- Due to a drop in bacteria counts due to sewage infrastructure repairs, the L St. beach on the Shark River in Belmar in Monmouth County is reopened as the County's first rain provisional swimming beach.**
- Significant revision to the Flood Hazard Rules , NJAC 7:13.**
- 1996** U.S. Tobacco Liggett to Repay More than \$10 million for treatment of smokers.  
EPA finalizes leaded gas ban.  
Federal New Source Performance Standards (NSPS)  
Federal National Emission Standards for Hazardous Air Pollutants (NESHAP).  
Bombings at the Atlanta Olympics.  
Unabomber Ted Kaczynski indicted by federal grand jury for the 1994 mail bomb slaying of advertising executive Thomas Mosser (sentenced to 4 life terms plus 30 years).  
Bovine somatotropin, designed to increase milk efficiency in dairy cattle, is approved for US.  
Meat Inspection Act modernizes the nation's meat and poultry inspection system for the first time in 90 years and help prevent E. coli bacteria contamination in meat.  
The USDA passes the Pathogen Reduction and Hazard Analysis and Critical Control Points (HACCP) rule.  
Congress directs CDC to establish the Centers for Birth Defects Research and Prevention.  
Highly Active Antiretroviral Therapy (HAART) for treating AIDS came into common use and the US death rate began to level off.  
The Food Quality Protection Act overhauls the regulation of pesticides in food, with an emphasis on child and infant protection.  
8/6 – The Safe Drinking Water Act of 1996 requires drinking water systems to protect against dangerous contaminants like cryptosporidium, and gives people the right to know about contaminants in their tap water. Included: Consumer

Confidence Reports; Microbial Contaminants and Disinfection Byproducts; Cost-Benefit Analysis; Drinking Water State Revolving Fund; Operator Certification; Public Information and Consultation; Small Water Systems assistance.

**Radiation levels above standards are detected in wells in Toms River owned by United Water Resources.**

**The Barnegat Bay Estuary Program is formed in Toms River. Originally, the Ocean County Chapter of the Izaak Walton League of America, which is today known as Save Barnegat Bay, was founded in 1971.**

**Monmouth Park Racetrack becomes first racetrack in NJ to obtain a Concentrated Animal Feeding Operation Permit mandating discharge of the “first flush” of its stormwater into a sewer plant.**

**Clean Ocean Action’s Beach Sweeps expands to freshwater and the first underwater cleanup is undertaken.**

1997 **NJ LINCS established**

**Household Hazardous Waste Facility opens in Monmouth County.**

**The Rapid Bioassessment Program is initiated at the MCHD.**

Presidential Apology on the Tuskegee Study.

CDC investigates 18 cases and six deaths from a new strain of flu in Hong Kong, H5N1 (Avian Flu).

CDC publishes “Assisted Reproductive Technology Success Rates” regarding fertility clinics.

CDC creates the Office of Genomics and Disease Prevention.

Early-Warning System is established to gather critical data to identify food borne disease outbreaks.

Kyoto Protocol rejected by U.S.

Dolly the sheep cloned from the cell of an adult ewe by Scotland’s Roslin Institute.

Chemical Weapons Convention was ratified by more than 160 nations to eliminate the state production, storage and use of chemical weapons.

In August EPA issued interpretive guidance which for the first time called on states to develop long-term schedules for implementing TMDLs, because of lawsuits and existing requirements of the law.

Toyota introduces Prius in Japan, first mass-market electric hybrid car; swift progress in large wind turbines and other energy alternatives.

International conference produces Kyoto Protocol, setting targets for industrialized nations to reduce greenhouse gas emissions if enough nations sign onto a treaty (rejected by US Senate in advance).

**Rutgers’ Coastal Ocean Observatory Laboratory room (aka COOLroom) is established to develop a three-dimensional understanding of the ocean over time.**

**Szabo, Zoltan, Rice, D.E., MacLeod, C.L., and Barringer, T.H. Relation of distribution of radium, nitrate, and pesticides to agricultural land use and depth, Kirkwood-Cohansey aquifer system, New Jersey Coastal Plain, 1990-91: U.S. Geological Survey.**

1998 D.H. Henderson warns about smallpox as a bioweapon.

Surgeon General’s “Tobacco Use Among U.S. Racial/Ethnic Minority Groups”.

CDC's EIS studies physician-assisted suicide during first year of the Oregon law.  
FDA mandates that all enriched grain products must be fortified with 140 micrograms of folic acid per 100 grams of grain.

California sets off-road engine regulations for emissions from lawn mowers, weed trimmers and other small engine power tools; for marine outboard motors; and for portable gas cans.

September 15 - The National Academy of Sciences released their Report on Radon in Drinking Water "Risk Assessment of Radon in Drinking Water".

"Super El Niño" causes weather disasters and warmest year on record (approximately matched by 2005, 2007 and 2010).

Controversial paper linking the MMR vaccine and autism published by The Lancet.

EPA promulgated the Stage 1 Disinfectants and Disinfection Byproducts Rule and the Interim Enhanced Surface Water Treatment Rule.

**No Discharge Zones are established for the Manasquan and Shark Rivers in Monmouth County, the first in NJ, after efforts by the Monmouth-Ocean Alliance to Enhance the Manasquan River that began in 1993 (the Alliance was a partnership of agencies initiated by MCHD similar to the Watershed Management Area model established in 2000).**

**Szabo, Zoltan, DePaul, V.T., and Parsa, Bahman. "Decrease in gross-alpha particle activity in water samples with time after collection from the Kirkwood-Cohansey aquifer system in southern New Jersey."**

**Ocean County launches first pumpout boat in the area, the "Circle of Life", which is owned and operated by Seaside Park.**

## **1999 Hurricane Floyd.**

Driver and passenger air bags for frontal impact federally required of all car manufacturers.

Ramanathan detects massive "brown cloud" of aerosols from South Asia.

The Master Settlement Agreement negotiated between the attorneys general of 46 states and 5 territories and the major tobacco companies, \$206 billion to settle Medicaid lawsuits.

Genes from daffodil are placed into 'golden rice' to add beta-carotene.

A veterinarian at a New York zoo initiates study of what is later identified as the West Nile virus.

Origin of AIDS discovered when HIV-1 discovered in chimpanzees in west equatorial Africa.

The Health Alert Network (HAN) partnership between CDC and local and state health agencies was developed.

**A fish kill in the Tuckahoe River at Corbin City, NJ in September resembled a Pfiesteria –related fish kill; no toxic Pfiesteria complex organisms were observed in samples, but other evidence indicated its presence, and a DNA sample taken 3 weeks after the kill from the Tuckahoe River was analyzed in October 1999 showed the presence of Pfiesteria piscicida.**

**Giardia is found in geese feces in NJ for the first time as part of partnership with MCHD and Johns Hopkins.**

**ICS training mandated for fire service in New Jersey as per NJAC 5:73-6.1.**

H9N2 flu in Hong Kong.

## 2000

- 2000** EPA bans most uses of Dursban.  
Human genes mapped by Human Genome Project; in 2003 a high quality sequence was made available to the public.  
First successful gene therapy in humans performed at the NIH, treating a 4 year old for adenosine deaminase (ADA) deficiency.  
The National Electronic Disease Surveillance System launched by CDC.  
The Beaches Environmental Assessment, and Coastal Health Act requires coastal states to adopt the 1986 criteria (must use enterococcus or E. coli to assess water quality for primary recreational contact) by April 2004.  
**Suez Lyonnaise des Eaux purchases United Water Resources; locally, the Toms River and Matchaponix Water Companies.**  
**Watershed Areas are formed in NJ; the Area 12 Watershed Management Partnership, comprising the majority of the watersheds in Monmouth County, adopts its vision statement on September 28, 2000.**  
**The first Total Maximum Daily Load in NJ is established for phosphorous in Strawbridge Lake, Burlington County.**
- 2001** **9/11: MCHD decontaminates almost 800 ferry passengers escaping Manhattan.**  
**MCHD performs 244 white powder investigations from September through December (28 for all of 2002). The first set of anthrax letters were mailed on September 18, 2001, one week after the September 11, 2001 attack, with a Trenton, New Jersey postmark.**  
**The Royal Flush is purchased and pumps out sewage from boats in the Navesink River; stationed at Red Bank.**  
**The first 'Rosgen' study of the Manasquan River is conducted to classify states of erosion.**  
Robert Stevens of Florida becomes first anthrax fatality in US since 1976.  
The Public Health Action Plan to Combat Antimicrobial Resistance is released by a USDHHS task force.  
**Private Well Testing Act passes (3/23).**  
**NY/NJ Baykeeper establishes the Keyport Harbor Oyster Reef when 10,000 bushels of crushed shells were deposited by barge to build half and acre of oyster habitat.**  
**Fresh Kills landfill in Long Island closes.**  
**Two and a half miles of beaches in Spring Lake are closed for two days by discharges from Wreck Pond.**  
**Menhaden (bunker) commercial fishing for reduction (fishmeal and oil production) is banned closer than 1.2 nautical miles from the shoreline.**  
July 6 — Environmental Working Group reports that sources of drinking water for more than 7 million Californians and millions of others are contaminated with Perchlorate, a chemical that disrupts child development and may cause thyroid cancer.
- 2002** NYC bans smoking in bars and taverns.

- Department of Homeland Security formed (it was established in 2001).  
H7N2 flu occurs in Virginia in one infected person following a poultry outbreak.  
A Federal Appeals Court rules that the USDA was not empowered to shut down a meat grinding company in 2001 in Texas even though it failed 3 bacterial contamination tests in succession; one test found that almost 50% of the meat was contaminated by Salmonella.  
The Public Health Security and Bioterrorism Preparedness and Response Act.  
A color-coded system for terror warnings was initiated (March 12).  
**Rutger's Lagrangian Transport and Transformation Experiment (LaTTE) is established.**  
**Private Well Testing Act – first wells tested in NJ.**  
**A provisional beach closure policy is established for the ocean beaches in Spring Lake near Wreck Pond.**  
**According to Biocycle Magazine: The top 3 states that import solid waste are Pennsylvania (10 million tons per year), Illinois, and Virginia; the top exporting states are NY and NJ.**
- 2003** SARS outbreak.  
H5N1 flu kills one of two people in China.  
World Tobacco Treaty.  
EPA announces Clean School Bus USA program (bus idling).  
First case of Mad Cow Disease reported in the US (Washington).  
Notorious “blob” of algae forms in canal in Ocean County.  
**The North American power grid failed when trees fell and short circuited transmission lines in Ohio; this resulted in a power failure in NYC and raw sewage being discharged into Raritan Bay.**  
**NY/NJ Baykeeper establishes the John English Memorial Oyster Reef on the Navesink River near Oyster Point in Red Bank.**  
**NJ voters approved \$2M per year for 17 years to expand the UST inspection program.**
- 2004** **NJ Stormwater Rules.**  
**Enterococcus and E. Coli replace fecal coliform for surface water sampling in New Jersey.**  
**NJ Bioterrorism drill (TED).**  
EPA issues Clean Air Rules.  
First major books, movie and art work featuring global warming appear.  
USDA announces it would begin more extensive testing of cows in US and Canada for Mad Cow Disease.  
National Incident Management System (NIMS) issued by Dept. of Homeland Security.  
H5N1 flu causes illness in 47 people in Thailand and Vietnam; 34 die.  
191 people killed in train bombings in Madrid (March 11).
- 2005** **Topoff3 – international plague drill.**  
Avian Flu (H5N1): WHO reports 122 lab confirmed cases, with 62 deaths, since 1/04. Human detections in Thailand, Vietnam, Cambodia, and Indonesia.  
Hurricane Katrina.  
Kyoto Protocol comes into effect.

Second case of BSE (Mad Cow Disease) in US cow.

50 mile-long benzene spill on the Songhua River in China from a chemical plant explosion in Jilin, about 120 miles southeast of Harbin.

Eric Rudolph pleaded guilty to the 1996 Atlanta Olympics bombings, and three other attacks.

The Monday before Thanksgiving is designated annually to be 'Public Health Thank You Day'.

Terrorist bombings in 3 subway stations and a bus killed 52 victims and four suicide bombers in London on 7/7.

**Base closure announced for Ft. Monmouth in Eatontown.**

**Deadline for NIMS standard training mandated by Gov. Codey.**

**A provisional beach closure policy is established for The Terrace beach in Sea Girt by Wreck Pond.**

**An amendment was made to the CEHA statute on January 19, 2005 by Acting Governor Richard J. Codey requiring comprehensive statewide planning, supervision of all Hazmat emergency response activities; and provides for the statewide standardization of planning, training, exercising and equipment for each county to respond to CBRNE incidents.**

**New Jersey Smoke-Free Air Act" (S-1926) P.L. 2005, c.383. Signed into Law- January 15, 2005; Effective- April 15, 2005.**

Feb. 16 — Kyoto – With a majority of the world's nations ratifying, the Kyoto Protocol officially goes into force without the U.S.

2006 **In December 2006, Gov. Jon Corzine signed legislation creating four needle exchange pilot operations, in Newark, Camden, Paterson and Atlantic City, making NJ the last state in the nation to offer addicts access to clean needles.**  
**First Responder (Operation Pathfinder) drills in Monmouth and other NJ counties.**

**In March, the NJDEP extends the Wreck Pond outfall in Spring Lake and Sea Girt 300 feet off shore as part of a 3-part plan to reduce beach closures due to stormwater.**

**On 6/29, flooding in NY and Pennsylvania in the Delaware watershed resulted in a federal disaster and flooded Trenton, causing evacuations, flooded water and sewer plants, and the closure of government offices (which was then closed by the Governor in an historic shutdown from July 1 to July 8 over a standoff with the Assembly over budget issues).**

**The Arthur Brisbane Child Treatment Center in Howell was closed.**

A post-exposure vaccine for Marburg virus that gave complete protection to experimental Rhesus macaques has been developed by U.S. and Canadian researchers (April 27).

The population of the US hit 300 million in October.

E coli outbreak originating in California results in a nationwide spinach recall.

Scientists announce an investigation into developing a "patch" to treat the flu instead of a needle-administered vaccine.

**Outbreak of E.coli starts 11/20/06 at Taco Bell in South Plainfield and spreads through parts of NJ and NY, resulting in 89 cases of GI illness and the closure of all 86 stores in NJ.**

**The DEP completes a 300-foot extension of the Wreck Pond outfall.**

NYC enacts ban on trans fat on 12/5/06.

The Pandemic and All-Hazards Preparedness Act (S.3678) was signed into law on 12/19/06.

June — Former U.S. Vice President Al Gore releases An Inconvenient Truth, a documentary that describes global warming. The next year, Gore is awarded the Nobel Peace Prize (jointly with the Intergovernmental Panel for Climate Change).

August 3 — The US EPA recommends new limits on the use of thousands of pesticides due to their ill effects on human health following a congressionally mandated 10-year review of more than 230 chemicals. The first to be banned is lindane, a toxic insecticide used for agricultural purposes.

September 26 — Earth's overall temperature has reached its highest level in 12,000 years according to research by James Hansen of the U.S.'s National Aeronautics and Space Administration (NASA) and others.

September 27 – California imposes a cap on greenhouse gas emissions, the first state in the US to do so.

**2007** The April 15<sup>th</sup> nor'easter floods the NJ Delaware valley.

NJ Global Warming Response Act signed on 7/6 by Gov. Corzine.

**The EPA ends its helicopter flyovers of the NY-NJ coastlines for bacteria and algae sampling, but continues the flyovers for floatables.**

**q-PCR sampling in Monmouth and Ocean County begins, with analysis conducted by the EPA in Edison.**

**First Memorial Day weekend diatom bloom since 1998 occurs in Raritan Bay and along the MC ocean shoreline.**

**Major Labor Day weekend trash washup in Ocean County from Point Pleasant to Normandy Beach.**

**First summer since CCMP began in 1986 that there was only 1 bay beach closure and no ocean beach closures due to bacteria at Monmouth County Beaches.**

**Numerous bunker kills during the summer, the biggest on 9/11 at Keyport Harbor, estimated in the millions.**

February 9 – US EPA cuts level of carcinogenic benzene allowed in gasoline to 1.3% This will result in an 80% cut from 1999 toxic emissions levels by 2030, EPA said.

19 June - China overtakes US as world's biggest CO2 emitter, according to the Netherlands Environmental Assessment Agency, due to soaring demand for coal to generate electricity and a surge in cement production. The report says that China produced 6,200m tonnes of CO2 last year, compared with 5,800m tons from the US.

Aug. 15 — US — John William Gofman, 88, nuclear chemist and medical researcher (1918 – 2007), died. In the late 1960s, Gofman and a colleague at Lawrence Livermore National Laboratory called for federal safety guidelines for low-level exposure to be reduced by 90%. Their findings were disputed by the Atomic Energy Commission, and he was pushed out of government service.

Gofman became an activist, helping found the Committee for Nuclear Responsibility, in 1971.

January 2, - New Jersey's retail food rules, known as Chapter 24, "Sanitation in Retail Food Establishments and Food and Beverage Vending Machines" (N.J.A.C. 8:24) went into effect, replacing Chapter 12, at double its length.

**2008** **On 7/25 Army scientist Bruce Ivins committed suicide as prosecutors prepared to charge him with carrying out the deadly anthrax attacks of 2001.**

**On 10/3/08, local boards of health were instructed by the NJDHSS not to follow sections 2.1(a) and 2.1(b) of their model ordinances based on the Public Health Nuisance Code of 1953. It had been found unconstitutional as a result of efforts by the New Jersey Libertarian Party (their Preempted Ordinance Repeal Project), which had filed a petition for rulemaking in the 7/7/08 edition of the NJ Register. The PHNC was the first public health code enacted for adoption by local health departments in NJ, dating from 1880 when municipal governments in New Jersey were first required to provide for local boards of health (102 years before the CEHA). An amendment is in progress. <http://www.lpcnj.org/OGTF/NuisancePetition.pdf>**

**In June 2008, 16 bottlenose dolphins took up residence in the Shrewsbury River apparently afraid to pass back under the ongoing re-construction of the Highlands bridge. Six dolphins appeared in the same river on 6/7/09, almost a year to the day later. According to NOAA, of the original 16, 6 stranded dead between September 24, 2008 and April 20, 2009: 3 confirmed to be from that group, 3 not possible to confirm whether they were or not. Dolphins were stranded in 1993 and 2000 in the Shrewsbury River. In December, 5 Muslim immigrants were convicted of plotting to massacre U.S. soldiers at Fort Dix.**

**On 12/30, the Southeast Monmouth Municipal Utility Authority, representing Brielle, Sea Girt, Spring Lake, Spring Lake Heights and Wall, took control of the NJWSA drinking water-filtration facility on Hospital Road in Wall that was formerly owned by the Monmouth County Improvement Authority (MCIA).**

**On 12/30, the Freeholders appointed a panel that had been authorized on Aug. 14 to work on reducing the County's greenhouse-gas emissions.**

Feb 28 — British Antarctic Survey and U.S. National Snow and Ice Data Center (NSIDC) report the collapse of a 160-square-mile (405-sq-km) section of the Wilkins Ice Shelf in western Antarctica around the end of the Antarctic summer.  
July 9 — Group of Eight (G-8) industrialized nations will cut greenhouse gas emissions in half by 2050, they agree. This is the first time that all eight countries made the climate commitment.

**2009** **The 2009 swine flu outbreak is an epidemic of a new strain of Influenza A virus subtype H1N1 identified in April 2009. The outbreak was first detected in Mexico City on March 18, killing at least 81 people by April 26. The first symptoms in USA was in California on 3/30/09, the CDC identified the novel H1N1 on 4/15/09, and the first high school reported the disease in NYC on 4/24/09. NJ announced 5 cases on 4/29/09. The World Health Organization chief Margaret Chan announced that she had raised the pandemic alert scale to 6, the highest level on 6/11/09.**

**6/22/09 - FDA regulates tobacco**

**MCHD Water Pollution Laboratory is outsourced.**

January 27 — Climate researchers from NOAA report that levels of CO<sub>2</sub> expected by 2050 would lead to a sea-level rise and droughts that would last for a millennia. The findings were reported by Susan Solomon, a senior scientist at the NOAA in the Proceedings of the National Academy of Sciences.

April 17 — US EPA rules that emissions of six greenhouse gases, including carbon dioxide, are a danger to public and should be regulated.

**August – MCHD posts first beach advisory.**

October — Memos between scientists working on climate issues are leaked to bloggers, creating a furious controversy over the legitimacy of the science of climate modeling.

December 18 — Copenhagen — The first decade of the 21st century ends with the collapse of climate negotiations in Copenhagen. US President Barack Obama announces a non-binding agreement between the U.S., China, Brazil, South Africa and India. But representatives from 193 countries failed to reach a consensus on replacement for the 1997 Kyoto Protocol emissions treaty, set to expire in 2012.

## 2010

**2010** March 25 — The previous decade 2000 – 2009 was the warmest on record, according to the World Meteorological Organization. The finding corresponds with US NASA agency's finding that the decade was the warmest since the 1850s when the first systematic records of temperatures were begun.

April 20 — Deepwater Horizon disaster, Gulf of Mexico.

April 22 — US EPA issues rules on automotive fuel efficiency and, for the first time, regulates greenhouse gas emissions.

**May – Alkaline battery collection is being phased out from HHW collection.**

July 7 — A team of scientists at the East Anglia University report that the university's Climate Research Unit did not alter data in support of the theory that man-made (anthropogenic) greenhouse gasses were major contributors to climate change. The allegations surfaced in Nov. 2009 after about 1,000 emails were leaked online. The report said that the "rigor and honesty" of the researchers was not in doubt, but that they had failed "to display the proper degree of openness."

**July 28 – MC Health Departments were recognized by Clean Ocean Action for being the first in NJ to post advisories based on initial bacteriological sample results at ocean and bay recreational bathing sites.**

Oct 5 — Hungarian toxic dam break kills seven — Hungary declares state of emergency after an industrial dam breaks, killing seven people and spilling about one million cubic meters of toxic waste from an aluminum production plant near Devecser.

**Oct. 7, 2010. DEP issues transformation plan and changes management.**

**2011** Jan. 15 — EPA approves use of 15% ethanol blended fuels in gasoline, sparking renewed debate over environmental benefits and drawbacks of corn ethanol.

March 13 — Nuclear reactor melt-downs, explosions and spent fuel fires at the Fukushima power complex.

**Aug. 27 — Hurricane Irene hits US east coast, causing massive damage.**

**August - A massive algae bloom of Nannochloris sp. was noted 4 – 8 miles off-shore by NJDEP and Rutgers. It extends some 70 miles from Barnegat in Ocean County to the tip of Cape May County. The bloom was weakened but not destroyed by Hurricane Irene.**

**November 16 – the NJ Health Officers Association merged with the the NJ Association of County Health Officers to form the NJ Association of County and City Health Officials (NJACCHO). The ratio of local and regional health departments to county health departments in NJ is about 4:1.**

**2012** January 18 — US President Barack Obama denies an application from a Canadian company for a permit to build and operate the controversial Keystone XL oil pipeline.

**NJ Chapter 199 revised (septic systems).**

**March – Latex paint collection is being phased out from HHW collection.**

March 27– US EPA issues the first limits on greenhouse gas emissions from newly built power plants.

**May 7, 2012 – Licensed Site Remediation Professional. The Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq. (SRRA).**

May — Tsunami debris from the Japanese earthquake / tsunami / nuclear meltdown begins washing up on US Pacific Coast shores as protests mark the re-start of two Japanese reactors.

June - Saudi Arabian man became the first reported case of Middle East Respiratory Syndrome (MERS).

**June 12, 2012 - employees at the Monmouth County Courthouse took ill while working in a common office area located in the West Wing of the building.**

June 25 — The 50th anniversary of the publication of Silent Spring.

June 25 — US Geological Survey notes that sea level rise on the US east coast is accelerating, with sea levels 4.8 inches higher in some locations.

June 25 — US Geological Survey notes that sea level rise on the US east coast is accelerating, with sea levels 4.8 inches higher in some locations.

**June 29 - New Jersey American Water had major water-main break that affected thousands of residents in 22 central New Jersey municipalities when a wooden bridge atop three pipes - which lead to and from the company's plant in Monmouth County – collapsed.**

**Oct. 29 — Hurricane Sandy makes landfall in the US. Sandy is the second most expensive hurricane in history, causing \$65 billion in damages.**

**Oct 28 – MCHD staff begin setting up shelters in Monmouth U and Brisbane.**

**Nov 19 – Last MCHD staff leave shelters – Brisbane turned over to NJSP.**

Dec. 7 – NOAA publishes “Arctic Report Card“ detailing “widespread, sustained change driving Arctic environmental system into new state.”

**December – EPA releases 2012 Recreational Water Quality Criteria, significantly changing the CCMP program if it goes into effect in October of 2015 as written.**

**2013** Spring, 2013 — The city of Beijing struggles through months of life-threatening toxic smog in the winter of 2012-13.

Level of CO<sub>2</sub> in the atmosphere reaches 394 ppm (in 1800-1870 was 290 ppm). Mean global temperature is 14.6°C, the warmest in 100's & probably 1000's of yrs (in 1850-1870 was 13.6C).

April 8 - Exxon loses \$236 million lawsuit by state of New Hampshire over MTBE contamination; the first state-level lawsuit.

April 15 - Boston Marathon Bombing.

**6-11 - Wreck Pond 'canal' bulldozed open in preparation for storms. It was originally opened before SS Sandy landfalled on 10/29/12 to prevent flooding. The temporary inlet discharged on Brown Av., bypassing the 200 foot outfall constructed by the DEP in 2006.**

## **REFERENCES**

Many of the public health references came from the informative Milestones in Public Health by Pfizer; see below for details).

Air Resources Board. 5/28/04. California's Air Quality History Key Events.  
<http://www.arb.ca.gov/html/brochure/history.htm>

Agovino, Vince. Masters Thesis  
[www.avaeci.com](http://www.avaeci.com)

American Institute of Physics. The Discovery of Global Warming.  
<http://www.aip.org/history/climate/timeline.htm>

Asbury Park Press. 4/22/05 "Earth Day and Environmental Laws"

Bates, Todd. 5/27/07. Ocean Pollution Time Line. Asbury Park Press. Page A5.

CBC News. Timeline of BSE in Canada and the U.S.  
<http://www.cbc.ca/news/background/madcow/timeline.html>

CDC Timeline. <http://www.cdc.gov/od/oc/media/timeprnt.htm>  
Ectopia. Environmental Movement Timeline. <http://ecotopia.org/ehof/timeline.html>  
Eastern Technical Associates. History of Opacity.  
<http://www.eta-is-opacity.com/history.htm>

Clean Ocean Action. Accessed 2006. Clean Ocean Action Beach Sweeps History.  
<http://www.cleanoceanaction.org/index.php?id=158>

Cowen, D. 1964. Medicine and Health in New Jersey: A History. D. Van Nostrand and Company, Inc. Princeton, NJ.

Fee, E. 1991. "The origins and development of public health in the United States" in Holland, Detels, and Knox (1991). A Brief History of Public Health in the United States. Oxford Textbook of Public Health (2nd Edition). Volume 1 Influences of Public Health. Oxford Medical Publication. <http://www.dpch.umd.edu/faculty/desmond/History-Outline.htm>

Gastrich, M. 2000. Harmful algal blooms in coastal waters of NJ. NJDEP. DSRT.  
<http://www.state.nj.us/dep/dsr/coastal/hab2.PDF>

Great Lakes Information Network (GLIN) A Brief History of Environmental Regulation <http://www.great-lakes.net/lists/p2tech/2000-02/rtf00000.rtf>

Kovarik, W. The Environmental History Timeline. [www.environmentalhistory.org/](http://www.environmentalhistory.org/)

Louis, G. 2004. A historical context of municipal solid waste management in the US. Waste Management Resources. 22: 306-322. <http://wmr.sagepub.com/cgi/content/abstract/22/4/306>

McGuire, Michael J. Accessed 6/13/13. This Day in Water History.  
<http://thisdayinwaterhistory.wordpress.com/>

Michigan State University. History of Environmental Regulations.  
[http://www.envirotools.org/regulations/env\\_reg\\_history\\_expanded.shtml#nepa](http://www.envirotools.org/regulations/env_reg_history_expanded.shtml#nepa)

Moore, K. 2/20/2006. The Nuclear Future That Didn't Come to Pass. Asbury Park Press.

Mullan, Fitzhugh. 1898. Plagues and Politics. Basic Books. NY

National Center for Environmental Health – History 1980-1995  
<http://www.cdc.gov/nceh/history/history.htm>

National Institute of Allergy and Infectious Diseases. Accessed 12/30/05. Focus on the Flu Timeline.  
<http://www3.niaid.nih.gov/news/focuson/flu/illustrations/timeline/timeline.htm>

New Jersey Statutes Annotated 26. Health and Vital Statistics.

New York Times. On This Day – Today’s Highlights in History.  
<http://www.nytimes.com/learning/general/onthisday/>

Olsen, P. and Kurtz, B. 1989. Annual summary of phytoplankton blooms and related conditions in NJ coastal waters, summer of 1988. NJ Geological Survey Technical Memorandum 89-1. Division of Water Resources. Geological Survey. NJDEP.

Pfizer Global Pharmaceuticals. 2006. Milestones in Public Health. Pfizer Inc., N.Y.  
<http://www.pfizerpublichealth.com/publications.asp>

Royte, E. 2005. Garbage Land. Little Brown and Co. NY.

Rutgers University Coastal Ocean Observation Lab. Accessed 2006. <http://marine.rutgers.edu/cool/>

Shuler, P. Timeline (agricultural). Fort Lewis College.  
[http://faculty.fortlewis.edu/shuler\\_p/classeswebsites/timeline.htm](http://faculty.fortlewis.edu/shuler_p/classeswebsites/timeline.htm)

Stepanovich, Paul. History of Public Health. <http://courses.lib.odu.edu/commhealth/pstepano/1>

SC Dept. of Health and Environmental Control. History of Public Health in South Carolina.  
<http://www.scdhec.net/administration/history/timeline.htm>

Students For Clean Air. Accessed 12/26/09. A History Of Air Pollution Events. Clean Air Program. Pima County Department of Environmental Quality. Tucson, Arizona.  
<http://www.dnrec.state.de.us/DNREC2000/Divisions/AWM/aqm/education/airqualityappx.pdf>

USEPA. History Timeline.. <http://www.epa.gov/history/timeline/index.htm>

University of South Florida. Last Updated August 1999. Significant Developments in Health Education and Related Events. 2000 BC - 1990s.  
[http://hsc.usf.edu/~kmbrown/hed\\_history.htm](http://hsc.usf.edu/~kmbrown/hed_history.htm)

Wikipedia. [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page)

\*\*\*

Those who forget the past are doomed to repeat it. - George Santayana

There is nothing new under heaven, for it has all been discovered and forgotten and discovered again. – Solomon

12/30/05