

PA Environment Timeline:

By Lindsay Phillips, Ed Charles, and RJ Phiambolis

10,000 BC – Around a dozen different Native American peoples call Pennsylvania home (e.g., Erie, Honniasont, Huron, Iroquois, Leni Lenape (Delaware), Shawnee, Woodland Periods). <http://www.ushistory.org/pennsylvania/pennsylvania.html>

1524 – Italian Captain Giovanni da Verrazano is the first recorded European to enter the Chesapeake Bay.

1606 – Captain John Smith and a first wave of colonists set sail from England on December 20 to colonize Virginia.

1607 – On May 13, Captain John Smith and his settlers land at Jamestown ready to begin life in the new environment.

1609 – The Delaware River is first visited by a Dutch East India Company expedition led by Henry Hudson, an English navigator.

1643 – Swedes establish the first permanent European settlement in Pennsylvania with their capitol in Tinicum Island.

1644 – William Penn is born in London on October 14.

1681 – William Penn requires purchasers of land made available through his royal land grant to preserve one acre of trees for every five acres of land cleared, making it Pennsylvania's first conservation law.

1683 – Hunting permitted on all lands under William Penn's Charter.

1687 – Nicholas Scull II is born in Philadelphia. Scull serves as the Surveyor General of Pennsylvania from 1748 until his death in 1761 and is responsible for the creation of many maps throughout the Philadelphia region.

1690 – William Rittenhouse establishes the first paper mill in the United States on Monoshone Creek near Germantown (outside Philadelphia).

1699 – John Bartram is born in Darby (Delaware County) on May 23. Bartram, while never formally educated in the science, becomes known as the "Father of American Botany."

1700 – Fur trade begins.

1716 – Thomas Rutter establishes the first forge in Pennsylvania, a bloomery forge, along the Manatawny Creek, a Schuylkill River tributary. A bloomery forge is a water-powered mill where workers heat the iron ore and hammer it into small iron "blooms," separating the iron in the ore from other elements. The bloomery is replaced four years later with a more efficient refinery forge that produces better quality iron.

1718 – William Penn dies on June 30. At the time of his death, Pennsylvania's population is 30,000.

1721 – Pennsylvania's first game law is enacted on August 26 establishing deer season from July 1 to January 1. The fine for shooting a deer out of season is 20 shillings; Native Americans, however, are exempt from this law.

1724 – Colonial Assembly enacts a statute requiring the removal of impediments to fish moving upstream on the Schuylkill River.

1728 – John Bartram builds the first botanical garden in America located near Philadelphia. The garden becomes the foundation of the first serious study of plants and their agricultural, ornamental, and scientific purposes.

1739 – William Bartram, son of John, is born on April 20. Bartram travels throughout the American Southeast from 1773 to 1777 recording plants, animals, and indigenous people of the region.

1741–1827 – Charles Willson Peale establishes the first natural history museum in the western hemisphere in the Old State House in Philadelphia.

1743 – Benjamin Franklin, John Bartram and others form the American Philosophical Society in Philadelphia for the pursuit of scientific research. After this, Philadelphia becomes the leading center for scientific exploration in the Colonies and early years of the United States.

1750 – European settlers discover the first anthracite coal in America near Richmond, VA, although Native Americans already know of and widely use this “black rock that burns.”

1751 – Christopher Gist is hired by the Ohio Company to explore the southwest corner of what would become Pennsylvania. Gist set out on November 4, 1751, from Wills Creek (Maryland). The route he took is known as “Nemacolin’s Path” and develops eventually into the National Road.

- John Bartram's *Observations on the inhabitants, climate, soil, rivers, productions, animals, and other matters worthy of notice made by Mr. John Bartram, in his travels from Pensilvania [sic] to Onondago, Oswego and the Lake Ontario, in Canada* is published.

1752 – Bituminous coal deposits are identified on a map of Pittsburgh along the Kiskiminetas River.

<http://www.alleghenyconfehttp://www.rrmuseumpa.org/education/historytimeline1.shtmlrence.org/PennsylvaniaEconomyLeague/PDFs/EconomicImpactAnalyses/EconomicImpactOfCoalIndustryInPa0410.pdf>

- Benjamin Franklin conducts his famous kite experience to prove lightning is electricity.

1755 – General Braddock leads an army to capture Fort Duquesne from the French and create a proper roadway in anticipation of western expansion. This road, Braddock’s Road, is the first road to be opened to the public in the Western Country.

1760 – It is made unlawful to hunt or trap on Native American lands.

1761 – Pennsylvania’s bituminous coal industry is born at “Coal Hill” (now Mount Washington) across the Monongahela River from Pittsburgh.

1762 – Settlers from Connecticut (who owned the Wyoming Valley under a grant from King Charles II) discover the region’s anthracite coal seams.

1763-1767 – Charles Mason and Jeremiah Dixon complete their survey of the southern Pennsylvania border, a length of 233 miles. http://www.udel.edu/johnmack/mason_dixon/

1766 – Alexander Wilson is born in Scotland on July 6. Wilson relocated to Philadelphia in May 1794 and, with encouragement of William Bartram, set about researching and illustrating all the birds of North America.

1769 – Ben Franklin attempts to start the silk industry – which required the introduction of mulberry trees to feed the silk worms---with little success.

1775 – The state’s first anthracite mine near Pittston is opened.

1785 – John James Audubon, ornithologist, naturalist, and painter, is born in Haiti on April 26.

1786 – On July 20, the first steam powered vessel journeys across the Delaware River at Philadelphia.

1791 – The Schuylkill and Susquehanna Canal Company, the first public canal company in this country, is chartered in Philadelphia. Financial difficulties bring the project to an end after only a few miles between Myerstown and Lebanon are built.

1792 – The Philadelphia and Lancaster Turnpike Company is incorporated, establishing the first turnpike road to be built in Pennsylvania.

1796 – By this year, timber and grain are being transported by raft down both the North and West branches of the Susquehanna as far as Norfolk, VA.

1797 – John Chapman (aka Johnny Appleseed) plants his first nursery along Broken Straw Creek in Warren County.

http://pabook2.libraries.psu.edu/palitmap/bios/Chapman_John.html

- Conewago Canal, the first canal to be constructed in Pennsylvania, is completed.

1797 – Albert Gallatin builds Gallatin and Company (later known as New Geneva Glass Works) what is believed to be the first glass factory west of the Alleghenies in New Geneva, Fayette County. At nearly the same time, General James O’Hara and his partners establish Pittsburgh Glass Works on the City’s South Side. By the time of the Civil War, western Pennsylvania was the center of the nation’s glass industry.

<http://www.carnegielibrary.org/research/pittsburgh/patentees/pghglassindustry.html>

- Margaretta Hare Morris is born in Philadelphia on December 3. Morris is a self-taught entomologist whose study, in her own home and garden, yields important research on the life cycles of several agricultural pests, including the Hessian fly, 17-year cicada, and curculio.

1798 – Twin brothers Joshua and Samuel Peirce plant the first specimens of an arboretum at their home near Kennett’s Square. By 1850, Peirce's Park becomes a popular outdoor gathering place. The property is purchased by Pierre S. duPont in 1906 to save the trees from being cut for lumber, and has been open to the public continuously as Longwood Gardens since.

1801 – One of the first municipal water systems in the United States provides public water to Philadelphia residents.

- Lucy Way Sistare Say (nee Lucy Way Sistare), naturalist and artist, is born on October 14 in New London, CT.

1803 – John James Audubon emigrates from France to Mill Grove, near present-day Audubon, PA. <http://johnjames.audubon.org/mill-grove-property-history>

1809 – Thomas Leiper's horse-drawn wooden tramway connects quarries in Delaware County to a boat landing. It is the first time rails are utilized for freight transportation. <http://www.rrmuseumpa.org/education/historytimeline1.shtml>

1810 – The first recorded flood on the Susquehanna, though local Native Americans have witnessed frequent flooding decades before.

1806 – Enabling legislation for a national highway from Cumberland, MD to Wheeling, WV is signed by President Jefferson. The road's surface is to measure 32 feet in width and have a maximum grade of 8.75%.

1811 – Construction begins on the first phase of the National Road at Cumberland, MD.

1812 – The Academy of Natural Sciences formed in Philadelphia “for the encouragement and cultivation of the sciences, and the advancement of useful learning.” The Academy opened to the public as a museum in 1828 and is now part of Drexel University.

1814 – The last volume of Alexander Wilson's nine-volume *American Ornithology* is published (1808-1814), preceding John James Audubon's more famous effort by 16 years. For this work, he becomes known as the “Father of American Ornithology.”

1817 – The Pennsylvania legislature authorizes the Monongahela Navigation Company to build 16 dams with bypass locks to create a river transportation system between Pittsburgh and West Virginia.

- First iron works to fire its forge with coke, Plumsock Iron Works opens in Fayette County.

1818 – The Philadelphia and Lancaster Turnpike is completed. This assists rural areas of Pennsylvania with development and connects towns allowing goods and people to travel easily from place to place.

1820 – The first recorded anthracite coal company, the Lehigh Coal Mining Company, sends the first significant shipment of the substance out of the coal field region. The company's merger with the Lehigh Navigation Company two years later would create the first such merger of interlocking companies in the U.S.

1823 – Spencer Fullerton Baird is born in Reading (Berks County) on February 3. Baird's lifelong interest in the natural world led him from a teaching position at Dickinson College to a career at the new U.S. National Museum/Smithsonian Institution, where he serves as a tireless researcher and collector, its first curator and eventual second Secretary, and the first Commissioner of Fish & Fisheries for the U.S. Much of his experience of the natural world is gained on foot; he is said to have hiked 2,100 miles in 1842 alone.

1826 Construction of the Main Line Canal begins. <http://mainlinecanalgreenway.org/>

1827–1838 – John Audubon’s *Birds of America*, 435 life-sized watercolors of North American birds, is considered one of the most remarkable ornithological works ever created.

1829 – The Lehigh River dam at the Forks of the Delaware is finished, blocking shad from their traditional migration for over 150 years.

1834 – With the completed West Branch Canal on the Susquehanna effectively linking Williamsport to the rest of the state, a group of Philadelphia investors opens the first sawmill in the city, setting off a “great timber boom” in 1838.

1836 – The Pennsylvania Geological Survey is established. Its mission is “to serve the citizens of Pennsylvania by collecting, preserving, and disseminating impartial information on the Commonwealth’s geology, geologic resources, and topography in order to contribute to the understanding, wise use, and conservation of its land and included resources.” Henry D. Rogers is appointed State Geologist.

1837 – Mary Harris is born in Ireland. Her family moved to Tennessee and in 1862 she met and married George Jones, a union As “Mother Jones,” Mary works tirelessly to organize workers across the midwest and east, joining the wives and children of striking miners throughout the anthracite region. Her 1903 “Children’s Crusade” was instrumental in bringing the issue of child labor to national attention.

1839 – The “Father of Pennsylvania Forestry,” Dr. Joseph Rothrock, is born in McVeytown on April 9.

1840 – Susquehanna River is damned at Columbia, ending the American shad runs (http://www.bayjournal.com/article/shad_to_get_free_run_of_susquehanna)

- Iron furnaces and forges now number over 200 since the first bloomery in 1716.

1841 – Lucy Way Sistare Say, natural illustrator of shells and insects, is the first woman to be elected to Academy of Natural Sciences in Philadelphia.

- First reliably documented coke ovens are constructed by Provance McCormick and James Campbell, two local carpenters, and John Taylor, a stonemason, on Taylor’s land in Fayette County. The venture is not commercially successful but the die has been cast as coke from the “Connellsville District” soon fuels furnaces, mills, and industry.

1842 – Charles Dickens travels from Harrisburg by canal. He crosses the Old Camelback Bridge (and mentions it in his *American Notes*) then continue by canal to Pittsburgh.

http://www.portal.state.pa.us/portal/server.pt/community/places/4278/harrisburg_pennsylvania's_capital_city/472249

1843 – The Coal and Coke Era begins with the successful sale of a boatload of Connellsville coke to Miles Greenwood, a Cincinnati iron foundryman, by brothers James and Sample Cochran, and their uncle Mordecai Cochran.

1847 – May French Sheldon (nee Mary French), sociologist and world traveler, is born on May 10 near Bridgewater (Beaver County). She traveled alone in Africa in 1891, and

writing about her experiences there.

1850 – Spencer Fullerton Baird appointed the first curator of the National Museum at the Smithsonian.

1851 – The timber boom along the Susquehanna River receives a boost with the construction of an actual “log boom” to catch and hold floating logs until they could be processed. The lumber mills can now obtain a steady stream of lumber all year long instead of just at high water times.

1853 – The Pennsylvania and Lehigh Zinc Company is formed on the banks of the Lehigh River in Bethlehem.

(<http://www.ei.lehigh.edu/envirosoci/watershed/history/industry/zinc.html>)

- Mira Lloyd Dock, forestry pioneer and civic activist, is born on December 25 in Harrisburg. After studying botany at the University of Michigan, Mira returns home and joins reformer J. Horace McFarland in the beautification of her home town.

1854 – Fairmount Park in Philadelphia officially dedicated as a public park.

(<http://www.phila.gov/ParksandRecreation/history/departmenthistory/parksystemhistory/Pages/FairmountParkOrigins.aspx>)

1855 – The Farmers’ High School of Pennsylvania is founded by act of the General Assembly. In 1862, its name changes to the Agricultural College of Pennsylvania and in 1874 it becomes the Pennsylvania State University.

1857 – William G. Waring, professor of horticulture, starts a demonstration plot of peach trees setting the stage for the development of teaching and research at Penn State.

1859 – In Titusville, Venango County, the first commercial oil well in the United States is drilled by “Colonel” Edwin Drake and well-driller William Smith. As luck would have it, the spot they chose was the *only* area where oil could be found at the extremely shallow depth of 69.5 feet where they struck “black gold.”

http://www.acs.org/content/acs/en/education/whatischemistry/landmarks/pennsylvaniaoilindustry.html?_ga=1.23812979.853721314.1449518468#colonel-edwin-drake

1860 – Pennsylvania leads the nation in lumber production (2.3 billion board feet at its peak)

- Margaretta Hare Morris is elected to the Philadelphia Academy, only the second woman to be so honored.

1862 – President Abraham Lincoln signs the Morrill Land-Grant Act granting public lands to the states to be sold and the proceeds to be used to fund the establishment of agricultural and engineering state colleges

- Lehigh River rises 27 feet above its normal level. The dams on the Lehigh Canal cannot maintain that amount of water and the water and logs swept from the burst dams lead to the destruction of the entire Lehigh Canal.

1864 – John Wilkes Booth and two friends form the Dramatic Oil Company and begin to

drill for oil at the Fuller farm along the Allegheny River at Franklin, PA.

<http://aoghs.org/editors-picks/the-dramatic-oil-company/>

1865 – Gifford Pinchot is born on August 11 at Simsbury, CT. Pinchot serves as the first Chief of the United States Forest Service (1905–1910) and as the 28th Governor of Pennsylvania (1923–1927) and again from 1931-35..

- Pennsylvania's first oil field is created with an oil strike on a farm near Pithole (Venango County) in January 1865. By Christmas of that year, the population has grown to nearly 20,000 with the oil boom. Fires and a financial panic reverse Pithole's fortunes and by the end of 1866 the population drops to 2,000. The 1870 census records a population of 237.
- Construction of Pennsylvania's first oil pipeline, a five mile pipeline from the west side of Oil Creek to Pithole, is completed by Samuel Van Syckel in October.

1866 – James Worrall is named the first Commissioner of Fisheries following a Harrisburg convention investigating pollution, poor condition of Pennsylvania's mountain rivers and streams, and the end of spring shad runs caused by dams.

1867 – Caroline Earle White, S. Morris Wain, and Colonel M. Richards Mucklé co-found the Pennsylvania Society for the Prevention of Cruelty to Animals (PSPCA). White goes on to found its women's branch (WPSPCA) in 1869.

- The first fishway is constructed at the Columbia Dam on the Susquehanna River.
- The last recorded elk in Pennsylvania is killed on September 1.

1868 – Legislature passes a law prohibiting the use of seines for taking fish within 200 yards of any device erected for the passage of fish.

1869 – A total of 110 men and boys are asphyxiated in Luzerne County's Avondale Colliery when a September fire in the shaft leading into an underground mine ignited the coal breaker located directly above. A mine ventilation law had been passed in April but only applied to mines in neighboring Schuylkill County. The disaster prompts increased membership in the Workingmen's Benevolent Association, a labor organization.

- Jane Bowne Haines, educator and horticulturalist, is born on July 18 in Cheltenham (Montgomery County).

1870 – In response to the Avondale Mine Disaster, the state legislature expands the Anthracite Mine Ventilation Law that regulated air currents and movement in mines to cover the entire anthracite region.

<http://explorepahistory.com/hmarker.php?markerId=1-A-ED>

1873 – Pennsylvania passes its first comprehensive Wildlife Act.

- Ground is broken for Andrew Carnegie's Edgar Thomson Steel Works near Braddock (Allegheny County).

1875 – The first state fish hatchery, called the Western Hatchery, opens near Corry (Erie County).

1877 – With funding through a bequest from French botanist Andre Michaux, Joseph

Rothrock is named "Michaux Lecturer" and begins a 20-year campaign to promote the science-based or "silvicultural" management of Pennsylvania forests. These lectures are designed to establish an understanding of forestry, especially in Pennsylvania.

(<http://www.apps.dcnr.state.pa.us/forestry/sfrmp/communications.htm>)

1879 – Williamsport boasts of being the "Lumber Capital of the World," with more millionaires per capita than any city in the United States. The white pine forests have been decimated and the lumber barons have the hemlocks in their sights.

1880 – Henry W. Shoemaker is born on February 24 in New York, NY. Shoemaker's early summers are spent in Pennsylvania and as a result the conservation of Pennsylvania's natural resources and folklore become the center of his life. He serves as "State Folklorist" and later chairman of the Pennsylvania Historical Commission where he popularizes the historic marker program. The Alpine Club of Pennsylvania is founded by Shoemaker in 1917 to promote hiking and mountain climbing.

- George Wirt, the first director of the Pennsylvania State Forestry Academy at Mont Alto, is born in McVeytown (Mifflin County) on November 28.

1883 – Thomas Edison installs the first successful three-wire electric lighting system in Sunbury.

- James Henry, upon whose family property Jacobsburg Environmental Education Center is located, drafts a bill to "encourage the planting of trees over the springs and along the watercourses of this Commonwealth of Pennsylvania." Introduced by a Northampton County senator, the bill becomes Pennsylvania's first public law dealing with the reforestation of stream corridors and establishes a state nursery system.
- Eleanora Frances Bliss is born in Rosemont (Montgomery County) on July 15. This early Ph.D. (from Bryn Mawr) and U.S. Geological Survey scientist acts as researcher and teacher at both Yale University and Stanford University at the side of her husband Adolph Knopf who is retained in both institutions as a paid professor.

1884 – Bird Day (the first holiday dedicated to a celebration of birds) is established by Charles Almanzo Babcock, Superintendent of the Oil City (Venango County) Schools.

1886 – Largely through the efforts of Joseph Rothrock, the Pennsylvania Forestry Association is founded.

1887 – James A. Beaver becomes governor of Pennsylvania. Among other accomplishments, his administration promotes conservation measures for forests and waterways and the regulated disposal of coal mine waste.

1888 – The first recorded "planting" of rainbow trout in the Susquehanna River occurs.

- The city of Jeannette (Westmoreland County) is founded upon farms purchased for construction of the Chambers & McKee Glass Works and housing for the workers employed there.

1889 – The catastrophic failure of the South Fork Dam near Johnstown unleashes 20

million tons of water onto Johnstown, killing 2,200 people in the process and making it the worst dam failure in American history. (<http://www.wdl.org/en/item/9571/>)

1890 – John M. Phillips and other sportsmen (hunters) form the Pennsylvania Sportsmen's Association in order to press the government for protection of the Commonwealth's disappearing wildlife.

(<http://explorepahistory.com/hmarker.php?markerID=1-A-140>)

1892 – On June 28, Carnegie Steel Company, under the management of Henry Clay Frick and with tacit acknowledgment of company president Andrew Carnegie, locks out the worker members of the increasingly powerful Amalgamated Association of Iron & Steel Workers from Carnegie's Homestead Works in Homestead (Allegheny County). Frick has vowed to break the union and, after months of violence and bloodshed, the use of armed Pinkerton detectives, and the help of the Pennsylvania state militia, he succeeds.

- The Fish Commission's railcar *Susquehanna* is delivered to Harrisburg. This 64'-long car is specially equipped with 84 10-gallon fish cans and, operating out of its home base at the Corry fish hatchery, is able to deliver live fish to any applicant approved by the Commission.

1893 – Valley Forge is established as the first state park in Pennsylvania.

- Pennsylvanians leave their mark on the World's Fair: Columbian Exposition (also known as the Chicago World's Fair):
 - The controversy over Nikola Tesla's alternating or Thomas Edison's direct electrical current is decided in favor of AC when 100,000 incandescent lights installed by the Westinghouse Corporation illuminate the Fair's neoclassical buildings.
 - Tucked away on the second floor of the Agricultural Hall is a booth for the H.J. Heinz Company where the newly-created "pickle pin" is given away to visitors. Nearly one million pins are given away before the Fair's end.
 - The Mines & Mining Exhibit Hall is dominated by a replica of the H.C. Frick Coke Company Standard Shaft No. 2, considered the largest and most modern in the world.
 - In a competition to build a structure for the Fair to rival the Eiffel Tower, Pittsburgh bridge-builder George Ferris introduces the Ferris Wheel. By the end of the Fair, 1.5 million passengers take the Wheel's 20-minute ride high above the Exposition.
 - The Fish Commission's *Susquehanna* and live fish exhibit make a splash.
- The legislature provides an appropriation enabling establishing of a shad propagation station at Bristol (Bucks County).

1895 – Pennsylvania Department of Agriculture is created.

- Pennsylvania Board of Game Commissioners (now PA Game Commission) is created with help from sportsman John Phillips.

1896 – Pennsylvania chapter of the Audubon Society is formed.

- Carnegie Museum of Natural History is founded by industrialist Andrew Carnegie in Pittsburgh.
- Joseph Rothrock becomes the first Commissioner of Forestry within the Department of Agriculture.

<http://www.dcnr.state.pa.us/stateparks/thingstoknow/history/lifeofrothrock/index.htm>

1897 – The purchase of "unseated lands for forest reservations" is authorized by the Pennsylvania legislature.

- After a summer of strikes and inconclusive labor negotiations, 400 unarmed Eastern European immigrant workers in Luzerne County are confronted by Sheriff James Martin and 150 armed deputies guarding a newly unionized coal mine near Lattimer, resulting in the death of 19 miners. Unlike the outcome of the Homestead Strike in 1892, the United Mine Workers sees membership soar in the months that followed.

1898 – First state forest lands are purchased along Young Women's Creek in what is now Sprout State Forest in western Clinton County to protect watersheds.

1899 – Scientists from the Carnegie Museum of Natural History unearth its first dinosaur fossil. Today the Museum houses the world's largest collection of Jurassic dinosaurs including the world's first specimen of Tyrannosaurus rex and the only fossils of a juvenile Apatosaurus.

1900 – Gifford Pinchot founds the Society of American Foresters in Washington, DC.

1901 – The Department of Forestry established as its own agency; Joseph Rothrock is named the first Commissioner.

- Mira Lloyd Dock becomes the first woman ever appointed to a governmental position in Pennsylvania, taking her place on the State Forest Reservation Commission at the behest of Joseph Rothrock.

1902 – Methane gas explosion in the Rolling Mill Mine in Johnstown (Cambria County) kills 112 mostly Central and Eastern European immigrant workers.

- Mont Alto State Park is established and is the oldest state park still in the system.

1903 – The State Forest Academy at Mont Alto (now a part of Pennsylvania State University) opens its doors. It is the first forestry school in the state and only the second in the country. Mira Lloyd Dock acts as a lecturer in botany.

- A fish hatchery is opened at Bellefonte (Centre County). Money for construction of the hatchery and a railroad siding was raised by the citizens of Bellefonte.
- Caledonia State Park is established.

1904 – Shamokin Dam of the Susquehanna is destroyed by the breakup of 22 inches of ice in the spring thaw. It is replaced in the 1960s by the Adam T. Bower Memorial Dam which is the world's longest inflatable dam.

- More than 10.2 million chain pickerel are propagated; chain pickerel have never before been propagated in any fish cultural establishment in the United States.

- Chestnut tree blight, introduced into the United States on chestnut trees imported from Japan, is noticed by a forester at the Bronx Zoo in New York City, and proceeds to eradicate the chestnut trees in Pennsylvania.

1905 – The Purity of Waters Act established to "preserve the purity of the waters of the State for the protection of the public health." The term "waters of the State" is defined by the Act to include "all streams and springs, and all bodies of surface and of ground water, whether natural or artificial within the boundaries of the State."

- A methane gas explosion in the Harwick Mine in Cheswick (Allegheny County) kills 181.
- Gifford Pinchot is named the first Chief of United States Forest Service.
- Game Refuge Law is enacted; the first State Game Refuge is established in the Sproul State Forest about 12 miles south of Renovo (Clinton County).
- First forest fire observation tower is established in the Michaux State Forest.
- Department of Health is created.

http://www.portal.state.pa.us/portal/server.pt/community/department_of_health_information/10_674)

- The Pennsylvania State Museum is created to preserve Pennsylvania's natural history collections.

1906 – Howard Zahniser, writer and "Father of the Wilderness Act," is born on February 25 in Franklin (Venango) County. His teenage years are spent in Tionesta, on the edge of the Allegheny National Forest where developed a life-long love of both literature and nature.

1907 – Rachel Carson is born in Springdale (Allegheny County) on May 27. Her writings, especially *Silent Spring* in 1962, are credited with sparking a grassroots environmental movement in the United States.

- December becomes the deadliest month in U.S. coal mining history when explosions and fires at the Naomi Mine in Fayette City (Fayette County), the Monongah Mine in Monongah, WV and the Darr Mine in Van Meter (Westmoreland County) kill 35, 362 (officially), and 239 respectively.

1908 – Chestnut tree blight is discovered in Lower Merion Township (Montgomery County).

1909 – A law is passed forbidding the emptying of any waste into the waters of the Commonwealth that could jeopardize fish populations.

1909 – Linn Run State Park formed

1910 – The McCalls Ferry Dam on the Susquehanna River is completed by Pennsylvania Water and Power Co., forming Lake Aldred. The name of the dam is changed to Holtwood Dam to honor two company executives, Herbert Holt and Edward Wood.

1911 – Second only to the 1889 Johnstown Flood in loss of life, September's break of the Bayless Pulp & Paper Company dam of Freeman Run near Austin (Potter County) kills 78 (confirmed) residents of the small town. Like the Johnstown Flood before it, heavy

rains cause the collapse of a poorly-constructed dam.

- White pine blister rust is discovered in imported white pine nursery stock
- Congress passes the Weeks Act, allowing the federal government to buy land in eastern states for the establishment of National Forests.
<http://www.fs.usda.gov/main/alleggheny/about-forest>
- On the strength of its location in the coal and coke boom region, Connellsville becomes the first city in Fayette County, boasting more millionaires per capita than any city in the United States.
- Jane Bowne Haines founds the Pennsylvania School of Horticulture for Women in Ambler (Montgomery County) as a way to give women instruction about managing gardens, greenhouses, and orchards. The school is was among the first training schools for women in the field.

1912 – Maurice Goddard is born on May 12 in Lowell, MA. Known as the "Father of Pennsylvania's State Parks," Goddard serves as the Secretary of the Pennsylvania Department of Forests and Waters (and its successor agencies) for 24 years under six governors.

- The George W. Childs Recreation Site in Dingman's Ferry (Pike County) is donated to the Commonwealth by Child's widow. This former state park becomes a part of the Delaware Water Gap National Recreation Area in 1983.

1913 – Fifty Rocky Mountain elk, purchased from Yellowstone National Park, arrive in Benezette (Elk County) by train. The herd is reborn.

- The first water resource inventory was taken
- The first effort to control motor boating by law is signed by Governor John K. Tenner. The act requires motorboats (except steam boats) to have an efficient muffler.
- The Pennsylvania Forest Fire Protection Act is signed on June 3, establishing the state's Forest Fire Warden system.

1914 – Once numbering in the millions, the last passenger pigeon dies in the Cincinnati Zoo on September 1.

1915 – The Pennsylvania Forest Protection Law creates the Bureau of Forest Protection and the position of Chief Forest Fire Warden. George Wirt is named the first Chief.

1916 – The Convention for the Protection of Migratory Birds, a treaty between the United States and Great Britain (for Canada) is signed. This is the first agreement recognizing the need for conservation of species that migrate across international borders.

- S.B Elliott State Park is established; dedicated to Simon B. Elliott who was a member of the Pennsylvania Legislature and of the old State Forestry Reservation Commission, a precursor to the Department of Forestry.

1917 – The Pennsylvania Alpine Club, one of the first conservation groups, was formed to study the flora and fauna and promote the love of beauty and to conserve its natural

resources of the state

1918 – U.S. Migratory Bird Treaty Act passed by Congress.

1919 – On June 5, a train carrying miners and a cargo of the black powder used to blast away loose coal explodes on its way to the Baltimore No. 2 tunnel of the Delaware & Hudson Coal Company near Wilkes-Barre (Luzerne County). With the death of 92 miners, the U.S. Bureau of Mines finally prohibits the transportation of miners and explosives in the same rail car.

- Pennsylvania Legislature authorizes the Game Commission to purchase "State Game Lands" for game refuges and public hunting grounds.
- Pennsylvania Legislature requires nonresidents to purchase a \$5 fishing license. Only 50 are sold.

1920 – The state's first 6,288 acres of State Game Lands are purchased in Elk County.

- The Department of Forestry is reorganized and Pennsylvania is divided into 24 forest districts.

1921 – By this time, nine Forest Monuments established and were the forerunners of today's Natural Areas (Bear Meadows, Martins Hill, Joyce Kilmer, Ole Bull, Mount Riansares, Alan Seeger, Mount Logan, McConnell Narrows, Detweiler Run)

- Ralph W. Abele is born on August 13 on a farm near Pittsburgh. His lifelong passion for conservation leads him to serve western Pennsylvania as a volunteer throughout the 1950s and 1960s, to the Joint Legislative Air & Water Pollution Control & Conservation Committee of the PA House and Senate in 1969, and culminating in his appointment as the Pennsylvania Fish Commission Executive Director in 1972.
- The Appalachian National Scenic Trail has its beginnings in a proposal by forester Benton McKaye in the October issue of the *Journal of the American Institute of Architects*. The call is answered and the trail is completed in 1937. It spans 2,158 miles running through 15 states, and is one of the first two trails (along with the Pacific Crest Trail) recognized by the National Trails System Act of 1968.
- Pymatuning State Park is established, spanning two states, and creating the largest lake in Pennsylvania

1922 – Leonard Harrison State Park is established; dedicated to Leonard Harrison a businessman and banker who contributed his time, energy and finances to making his community a better place. Leonard Harrison State Park originally consisted of 121 acres and was called "The Lookout."

- First resident fishing license is established at a cost of \$1.

1923 – Gifford Pinchot begins his first term as Governor of Pennsylvania.

- The Department of Forests and Waters consolidates the Department of Forestry, the Water Supply Commission, and the Bureau of Topographic and Geologic Survey.

- Management of the Allegheny National Forest begins
- 1924 – The Fish Commission begins a stream survey to classify waters with regard to area, depth, fish species, aquatic life, and general conditions.
- 1926 – Construction of the Conowingo Dam, the largest dam on the Susquehanna River, begins.
- 1927 – Goehring Bill to seal all abandoned mines in Pennsylvania passed.
- 1928 – The Commonwealth authorized \$450,000 to purchase property from the heirs of lumber baron Andrew Cook. To meet the purchase price, the Cook Forest Association raised an additional \$200,000. The purchase marked the first time the Department of Forests and Waters purchased land to preserve an outstanding natural resource. Cook Forest State Park is established and is the first state park acquired to preserve a natural landmark
- 1929 – Presque Isle State Park is opened to the public, often referred to as Pennsylvania's only 'seashore,'
- 1930 – Construction of the Safe Harbor Dam on the Susquehanna River begins.
 - Deer densities have recovered and then some with 40 deer per acre, twice the number recommended by forest managers.
 - The most severe drought ever experienced during the summer with many tributary streams drying entirely.
- 1931 – The Eastern Hemlock tree is named the state tree.
 - Ruffed Grouse designated as the state game bird.
 - Gifford Pinchot is re-elected to a second, non-consecutive term as Pennsylvania's governor.
- 1932 – Gypsy moth caterpillars appear in the state for the first time, appearing in Luzerne and Lackawanna Counties. (<http://ento.psu.edu/extension/factsheets/gypsy-moth>)
 - Greater Pittsburgh Parks Association is created to alleviate unemployment and improve resource conservation through public works programs. Later known as the Western Pennsylvania Conservancy, the organization is responsible for the acquisition of land that eventually becomes some of the state's most beautiful and visited state parks.
 - Severe drought, made worse by years of the replacement of natural grazing lands throughout the Midwest with wheat, cause massive erosion and dust storms, ravaging the ecology and agriculture of the United States. This event, commonly known as the Dust Bowl, is considered the most devastating environmental disaster to occur in United States history.
- 1933 – Civilian Conservation Corps (CCC) is formed as one of the first programs of the New Deal. CCC camps operated across the nation until 1942, with Pennsylvania having the second highest number of camps (151).
 - Mountain Laurel is adopted as state flower.

1934 – After seeing photographs of hunters lining the raptor migration route of Pennsylvania's eastern mountains and the wanton destruction of the birds for sport, Rosalie Edge leases 1,400 acres of Hawk Mountain and closes it to hunting. The next year the Sanctuary is opened to the public for viewing of the passing birds.

- The U.S. Migratory Bird Hunting Stamp Act (aka Duck Stamp law) is adopted, directing funds from the hunting of waterfowl into a program for conservation of the wetlands and habitat that support the birds.

1935 – Congress establishes the Soil Conservation Service (now the Natural Resources Conservation Service) as an agency in the U.S. Department of Agriculture. In the midst of the devastating Dust Bowl conditions, the SCS is charged with promoting farming and ranching rehabilitation practices including the planting of trees and grasses to anchor the soil in place.

- The state's first waterfowl refuge is established at Pymatuning Reservoir in Crawford County.
- Cherry Springs and Ralph Stover state parks established. Today, Cherry Springs State Park holds the designation as the “darkest skies east of the Mississippi,” and is recognized as a Gold Level Dark Sky Park.

1936 – First student class enrolls at the Ross Leffler School of Conservation in Brockway (Jefferson County). Named for the President of the Game Commission, the school is the first training academy in the world devoted to training game protectors.

- Two successive rainstorms and rapid snowmelt along the eastern seaboard result in the Great St. Patrick's Day Flood. In Harrisburg, the Susquehanna crests at 29.23 feet, while in Pittsburgh, the Allegheny and Monongahela rivers combined for a crest of 46 feet. A bill already being debated in Congress for flood control dams to protect Pittsburgh is finally passed in 1937.
- Franklin Kury, legislator and visionary, is born on October 15 in Sunbury (Northumberland County).

1937 – The Clean Streams Law is passed expanding protection for Pennsylvania's waterways against sewage and industrial discharges and regulating the impact of mining operations on waterways.

- The 1918 Migratory Bird Treaty is expanded to include Mexico.
- Pennsylvania is among the first states to pass the model soil conservation law proposed by the federal Soil Conservation Service.

1938 – The Game Commission introduces the first statewide season for only antlerless deer.

- A tragic wildfire on the morning of October 19 at Pepper Hill (near Sinnemahoning, Cameron County) takes the lives of seven CCC boys and their supervisor dispatched from the Hunts Run CCC Camp. Untrained in the fighting of fires, the men tried to outrun the flames and were overtaken.

1939 – The Honey Hollow Watershed Conservation Area near New Hope is created by

the five farm landowners in the watershed. Through their cooperation and with the assistance of their local Soil Conservation Service office, this first agricultural area in a small watershed demonstrates that soil, water and wildlife conservation, and flood prevention could be achieved through cooperative local action.

<http://explorepahistory.com/odocument.php?docId=1-4-7E>

- The Associated Clubs for Roadside Development (an outgrowth of the Garden Club Federation) is founded by Hilda Vogel Fox and others to fight roadside litter and control billboards to protect the state's scenic beauty. The name is changed the next year to the Pennsylvania Roadside Council (and later to Pennsylvania Resources Council).

1940 – U.S. Bald and Golden Eagle Protection Act is enacted to protect these birds from human interference.

- The Interstate Commission on the Delaware River labels the tidal river at Philadelphia "one of the most grossly polluted areas in the United States."

1942 – The Pennsylvania Timber Reduction War Project (in conjunction with a similar federal initiative) provides for the selective cutting of timber from the state forests in support of the war effort. More than 100 million board feet of timber are selectively cut over the next two years.

1944 – Ricketts Glen State Park was established, and includes the Glen Natural Area. The Glens became a registered National Natural Landmark in 1969, and in 1993 became a State Park Natural Area and will be protected and maintained in a natural state.

1945 – The Surface Mining Conservation and Reclamation Act is considered to be the first comprehensive attempt to prevent pollution from surface coal mining.

1947 – The Anthracite Strip Mining and Conservation Act acts in the same manner for strip mining as the surface mining law passed two years earlier.

1948 – For five days in October, an air inversion traps industrial pollution from the American Steel & Wire and Donora Zinc Works over the small western Pennsylvania town of Donora (Washington County). In three days, 20 people die and half the town's population is sick. Fifty more are dead after the inversion lifts, making it the worst air pollution disaster in U.S. history. The disaster does bring air pollution to the attention of the legislature (both state and federal) and ground-breaking anti-pollution laws can be traced to the Donora Smog Disaster.

- U.S. Radium Corporation relocates its operations from Brooklyn, NY to Bloomsburg (Columbia County). U.S. Radium manufactures luminous watch dials and gauges, deck markers, and paint. Unfortunately, it also dumps radioactive liquid wastes into a canal draining into the Susquehanna River. It is declared a "Superfund" site by the U.S. Environmental Protection Agency in 2005.
- The Federal Water Pollution Control Act is enacted, the first major law enacted by the U.S. Congress to address the problem of water pollution. It is limited in

scope and largely ineffective.

1949 – U.S. War Department deeds 14,000 acres of the former Tobyhanna Military Reservation to the PA Game Commission

- The Fish Commission appoints its first Executive Director, Charles A. French.
- The first "Trout Opening Day" is established by the Fish Law of 1949.

1950 – The Department of Forests and Waters makes a commitment to encourage private forest landowners to sustainably manage their forest resources through the Cooperative Forest Management Program. This program is managed by 42 service foresters.

- The Greater Pittsburgh Parks Association is renamed Western Pennsylvania Conservancy and begins acquiring properties in Lawrence, Butler, and Fayette counties.

1950 – Federal Dingell-Johnson Bill becomes law, ending a ten-year struggle by conservationists from across the nation. Also called the Federal Aid in Sport Fish Restoration Act, the statute grants federal financial assistance to states for fish restoration, management and acquisition plans and projects

1951 – Fish are placed in the Schuylkill River for the first time in a decade after a cleanup campaign by the Department of Forest and Waters.

- Hilda Vogel Fox becomes chair of the National Council of State Garden Clubs and launches the famous "litterbug" campaign.

1952 – The Department of Forestry reorganizes from 24 forest districts to 20.

1954 – Maurice K. Goddard is named Secretary of the Department of Forests and Waters by Governor George M. Leader.

- The Soil Conservation Service leases 89.8 acres of land near Howard (Centre County) for construction of a tree nursery. The Howard Nursery produces and distributes two to eight million bare-root seedlings for wildlife food and cover on State Game Lands annually since then.
- Virgin Run Lake in Fayette County is the first project to use federal aid from Dingell-Johnson. The 35-acre lake is built from start to finish by the Pennsylvania Fish Commission and is dedicated on July 11, 1953.

1955 – Act 256 establishes the Oil and Gas Lease Fund with all revenues from leases on state forest lands directed to be used for conservation, recreation, and flood control.

- M.K. ("Doc") Goddard sets a goal of a state park within 25 miles of every person in Pennsylvania.
- The Delaware River faces record flooding due to both Hurricane Connie and Hurricane Diane hitting the area in less than a week. Construction of a dam at Tocks Island, long under consideration, seemed fated to be finalized in the face of the property damage and loss of life the flooding caused.
- Curtiss-Wright Corporation purchases 80 square miles of state forest land in Clearfield County to build nuclear powered jet engines and conduct other atomic

research, the first of several atomic research and manufacturing concerns to occupy and contaminate the area. They name their facility "Quehanna" for the nearby West Branch of the Susquehanna.

1956 – Congress passes the Fish and Wildlife Act, establishing the U.S. Fish and Wildlife Service in the Department of the Interior.

- Congress also passes the Federal Water Pollution Control Act including provisions for grants to the states for construction of water treatment works.
- Carnegie Museum of Natural History establishes the Powdermill Nature Reserve as a field station for long-term study natural populations.
- Governor George M. Leader signs the nation's first anti-littering law. We are not litterbugs!

1957 – The world's first full-scale atomic power plant, Shippingport Atomic Power Station, is built on the Ohio River in Beaver County.

- *Pennsylvania's New State Parks: A Report to the General Assembly on Act 256* studied 175 potential parks, assessing them on the basis of water, location, topography, subsurface conditions, availability, and scenic and historic significance. Acquisition of land for some of these parks began almost immediately.

1958 – At age 71, Emma "Grandma" Gatewood becomes the first woman to walk the entirety of the Appalachian Trail.

- The Fish Commission establishes the first recreational fishing area on the Left Branch of Young Woman's Creek in Clinton County.

1959 – In spite of mine safety laws prohibiting mine construction where adequate roof thickness was impossible and within 35 feet of a riverbed, The Knox Coal Company constructed its River Slope Mine within 19 inches of the Susquehanna River near Pittston (Luzerne County). On January 22, the mine's roof gave way, trapping 74 men. While 62 of them would escape, 12 were never found. The Susquehanna River smashed into the mine and flooded miles of mines throughout the Wyoming Valley, spreading underground acid mine discharges. The extent of the damage and the level of corruption uncovered in the investigation that followed is responsible for the collapse of the anthracite mining industry.

(<http://explorepahistory.com/hmarker.php?markerId=1-A-C7>)

- The White-tailed Deer is named the official state mammal.
- The Fish Law of 1959 establishes Trout Opening Day as 5:00 AM on April 12 or the first Saturday thereafter if April 12 is not a Saturday. Under current regulations, Opening Day is 8:00 AM on the first Saturday after April 11 except in southeastern Pennsylvania where it is the first Saturday after March 28.

1961 – The Oil and Gas Conservation Law permits and spacing of wells.

- The Delaware River Basin Commission is formed, the first time that the federal government and a group of states joined as equal partners in a river basin planning, development, and regulatory agency. The Tocks Island Dam project

was a priority of the new Commission, but was eventually defeated by the public.

- Annual state park visitation reaches 24 million (up from eight million in 1955).
- The Pennsylvania legislature designates the last Friday in April as Arbor Day and the week that includes it "The Dr. J.T. Rothrock Memorial Conservation Week" during which week the citizens shall be encouraged to consider through suitable activities the broader subject of the conservation of all of the natural resources from which the wealth of the Commonwealth is derived."
- More than 116,280 fish are killed in the Susquehanna River during October resulting from illegal acid mine discharges from anthracite coal mines in the Wyoming Valley that were owned by the Glen Alden Mining Corporation. The Fish Commission accepts a \$45,000 voluntary contribution from the Glen Alden Mining Corporation - the largest settlement to date ever to be made in the United States for fish killed by pollution.
- Largest shad migration of modern times is recorded in the Delaware River.

1962 - An anthracite coal vein underneath the town of Centralia in Columbia County catches fire after a garbage dump is set on fire by municipal workers. Unbeknownst to the workers, the makeshift landfill was atop a coal vein. By 1984, 95% of the town's residents accept federal and state buy-outs of their homes. Many relocate to a nearby town called New Centralia. Others leave the area permanently. The fire continues to burn today and will likely continue to do so for decades.

1963 - Ernesta Drinker Ballard becomes the first woman to be named director of the Pennsylvania Horticultural Society. Largely through her efforts, the Philadelphia Flower Show becomes a spectacular international event.

- Congress passes the Clean Air Act with funding for study and clean-up of air pollution.

1964 - After years of relentless lobbying and the laying of groundwork, Howard Zahniser writes and finds support for the Wilderness Act creating a legal definition of wilderness and protecting 91 million acres of federal land. Zahniser dies in May, two days after testifying before Congress on behalf of the bill. President Johnson signs the Act into law in September with Zahniser's widow by his side.

- The Project 70 Land Acquisition and Borrowing Act permits the state to issue bonds for the purchase of public lands "for recreation, conservation and historical purposes before such lands are lost forever to urban development."
- President Lyndon Johnson signs the National Historic Preservation Act, creating the National Register of Historic Places.

1965 - The Kinzua Dam of the Allegheny River is completed, flooding land retained by the Seneca Indians in a 1794 treaty with George Washington. The federal government spends \$15 million to relocate them.

- Congress creates the Land and Water Conservation Fund, using revenues from

the depletion of one natural resource - offshore oil and gas - to support the conservation of another precious resource - our land and water.

- Construction of the Tocks Island Dam in the Delaware River is authorized and land acquisition and vocal opposition commences.

1967 – The Pennsylvania legislature authorizes a \$500 million bond for the Land and Water Conservation and Reclamation Fund to be used for elimination of acid mine drainage, sewage, and other pollution Pennsylvania's waterways, financial assistance to local authorities for sewage treatment plants, restoration of abandoned strip mines and control of mine fires, alleviation and prevention of mine subsidence, and the acquisition and development of park and recreational lands.

- Chesapeake Bay Foundation is established to educate the public about deteriorating conditions in the Chesapeake Bay.
- The Delaware River Basin Commission (DRBC) adopts the most comprehensive water quality standards of any interstate river basin in the nation.

1968 – The Wild and Scenic River Act establishes National Wild and Scenic Rivers System and prescribes the methods and standards through which additional rivers may be identified and added to the system.

- A State Constitutional Convention concludes with the adoption of a new Constitution that contains specific environmental provisions in Article 1, Section 27, written by Franklin Kury, that:

“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”

The Environmental Rights Amendment is sent to the legislature where it must pass two successive legislative sessions before appearing on the ballot for approval by the people.

1969 – Ralph Abele becomes the executive secretary of the Joint Legislative Air and Water Pollution Control and Conservation Committee of the House and Senate.

(<http://fishandboat.com/images/people/abele/bio.htm>)

- In June, the Environmental Rights Amendment passes the House for the first time on a vote of 190-0.
- Pennsylvania Environmental Council (PEC) is formed as a "coordinating organization to which individuals, other organizations, government and business could turn for information on environmental issues."

1970 – The Department of Environmental Resources is formed, combining the Department of Forests and Waters and other environmental, conservation and some public health programs into a single department with vast regulatory responsibilities.

Maurice K. Goddard is appointed its first Secretary.

- In March, the Environmental Rights Amendment passes the Senate for the first time, on a vote of 39-0.
- Fostered by Wisconsin Senator Gaylord Nelson, the first Earth Day is celebrated on April 22 with 20 million Americans demonstrating on behalf of a healthy, sustainable environment.
- Brook trout named the official state fish.
- The legislature strengthens the 1937 Clean Streams Law to change its focus from pollution abatement to pollution prevention. Governor Shafer forms a Pollution Strike Force with staff from several agencies to support it.
- The federal government passes a new Clean Air Act making air pollution control a national responsibility and signaling that a clean environment and healthy economy are not mutually exclusive goals.
- The Susquehanna River Basin Commission is established, uniting Pennsylvania, Maryland, and New York into a compact to guide the conservation, development, and administration of the water resources of the vast river basin.

1971 – In February, the Environmental Rights Amendment passes in the House for the second time on a vote of 199-0, and the Senate for the second time on a vote of 45-0.

- In May, the people of Pennsylvania approve the Environmental Rights Amendment on a vote of over 1 million in favor and 259,979 against.

1972 – Article 1, Section 27 (the Environmental Rights Amendment) is added to the Constitution.

- In June, 19 inches of rain from Hurricane Agnes come down over the course of two days, causing significant flooding. Agnes leaves behind over \$3 billion in damage across the U.S.
- In the summer, agricultural use of DDT is outlawed in the U.S.
- The Pennsylvania Lumber Museum in Potter County holds its grand opening.
- A forest insect spray program is undertaken by the Department of Environmental Resources to try and control gypsy moth populations.
- Ralph Abele is appointed executive director of the Pennsylvania Fish Commission.
- The Fish Commission names 75 streams to its Wilderness Trout Program, first established in 1969 to protect and promote native brook trout fisheries and wilderness aesthetics.
- Congress enacts the Federal Water Pollution Control Act Amendments of 1972, a rewrite of the 1948 law and the basis of future Clean Water Act. It introduces the concept of point sources of pollution and permitted discharges, among other innovations.

1973 – The U.S. Endangered Species Act becomes law, to protect and recover imperiled species and the ecosystems upon which they depend.

- The Middle Creek Wildlife Management Area is opened.
- 1974 – The Schuylkill River Greenway Association citizens group, dedicated to restoring and preserving the Historic Schuylkill River Corridor in Southeastern Pennsylvania, is formed.
- The Fish Law of 1959 is amended to give the Fish Commission jurisdiction over reptiles, amphibians, and aquatic organisms.
 - The Ferncliff Peninsula in Ohio (Fayette County) is dedicated as a National Natural Landmark.
 - The first bald eagle is spotted at Middle Creek Wildlife Management Area, and appear there every year since.
- 1975 – Flooding throughout the Northeast disables over a dozen water plants and at least 16 sewage treatment plants, prompting a boil-water advisory in Harrisburg as well as forcing 20,000 residents out of their homes.
- Facing cost over-runs and relentless opposition, the Delaware River Basin Commission votes 3-1 against building the Tocks Island Dam with Pennsylvania the only member of the DRBC voting in favor.
- 1976 – Amendments to the Game Law make it illegal to damage a tree while constructing a tree stand or using a portable stand on public and private properties (unless the private owner gives written permission).
- 1977 – The federal government passes further amendments to the Water Pollution Control / Clean Water Act.
- On July 20, a second Great Johnstown Flood kills 85 people and causes \$300 million in damages. A foot of rain in 10 hours causes the breach of dams just as it had 88 years earlier. In the aftermath of the flood, the city's population decreases by 15% as people simply move elsewhere.
- 1978 – The Pennsylvania Appalachian Trail Act authorizes the Department of Environmental Resources to support development and acquisition of Pennsylvania's portion of the trail.
- The bald eagle is listed by the Department of the Interior as endangered or threatened in 43 states.
 - Congress designates that part of the Delaware that is part of the Delaware Water Gap National Recreation Area a "Wild and Scenic River," effectively ending consideration of the Tocks Island Dam project.
- 1979 – On March 28, a series of mishaps and lapses in judgment result in the partial meltdown of Reactor No. 2 of the Three Mile Island Nuclear Generating Station in Dauphin County, leading to the release of radioactive material.
- On July 30, an oil slick from bank to bank of the Susquehanna is traced to the Butler Mine Tunnel near Pittston (Luzerne County). Contaminants are found downstream for 60 miles to Danville and the drinking supply of the town's 11,700 residents. The discharge is traced to the dumping of waste oil into the

mine tunnel by a disposal company hired by the Hi-Way Auto Service Station. A \$2.2 million clean-up ensued along with five years of monitoring by the state.

- A bald eagle hatched at the Patuxent Wildlife Research Center in Laurel, MD is released at the Middle Creek Wildlife Management Area.
- Maurice Goddard retires from DER after 24 years of service.

1980's – Dredging ends for river coal in Susquehanna. Historically, dredging had occurred along the Susquehanna and Schuylkill rivers, removing nearly forty thousand tons of coal, used for industry.

1980 – The Lancaster County Commissioners create the first Agricultural Preserve Board to devise ways to protect the county's agricultural lands.

(<http://web.co.lancaster.pa.us/126/Agricultural-Preservation-Board>)

- The Fish and Wildlife Conservation Act is adopted, authorizing the U.S. Fish & Wildlife Service to spend \$20 million over four years to help states develop non-game management programs.
- Chesapeake Bay Commission is created to regulate policy across state lines.

(<http://www.chesbay.us/>)

1981 – The Fish Commission adopts Operation FUTURE to improve species protection and propagation and improve fishing opportunities for anglers.

- Cheryl Stauffer becomes the first female District Game Protector.
- Defoliation by the invasive gypsy moth visible on 12.9 million acres between Maine and Maryland.

1982 – The Pennsylvania Eagle Protection and Reward Fund is created by the Game Commission, with cooperation of the Pennsylvania and National Wildlife Federations, the Pennsylvania Federation of Sportsmen's Clubs, the National Audubon Society, Hawk Mountain Sanctuary, and Pennsylvania Forestry Association, offering rewards of up to \$1,500 for information leading to the prosecution of anyone harassing, injuring or killing a bald eagle in Pennsylvania.

- *Penngift Crownvetch* is named the official state beautification and conservation plant.

1983 – The first Chesapeake Bay Agreement is signed by Maryland, Virginia and Pennsylvania, the District of Columbia; the U.S. Environmental Protection Agency; and the Chesapeake Bay Commission. The Chesapeake Bay Program is established and the Chesapeake Executive Council is named the chief policy-making authority in the watershed. (<http://www.chesapeakebay.net/history>)

- The Fish Commission adopts Ralph Abele's rallying cry of "Resource First" as its motto and philosophy. The philosophy requires, among other mandates, that protecting, conserving, and enhancing the commonwealth's aquatic resources are the agency's first management priority.

1984 – Stanley Watras, a construction worker at the Limerick Nuclear Power Plant near Pottstown (Montgomery County) sets off the radiation monitors at the plant although

there is as yet no radioactive material at the plant. The source is found to be radon gas in his home.

- The first fish ladder on the Lehigh River opens in June at the Samuel Frank Memorial Dam in Allentown.
- The first female waterways conservation officer is hired by the Fish Commission.
- Barbara Davey, the first female park superintendent in central office was hired in the Bureau of State Parks.

1985 – Pittston's Butler Mine Tunnel is once again the subject of a massive waste oil clean-up when 100,000 gallons is discharged in the wake of Hurricane Gloria. The Tunnel is now a "Superfund" site.

- The Fish Commission begins stocking the Lehigh with shad.

1986 – The Pennsylvania Environmental Defense Foundation is established to both assist and educate the people of Pennsylvania by advocating and enforcing their rights to a clean environment.

1987 – Voters of Pennsylvania pass a referendum allowing a \$100 million bond issue to preserve farmland.

- Ralph Abele retires as executive director of the Fish Commission.
- Mary Herrold Hirst, first female field park superintendent, was hired at French Creek State Park as assistant superintendent.

1988 – Zebra mussels, an invasive species, are discovered in Lake Erie for the first time.

- Agricultural Conservation Easement Program created to slow the loss of prime farmland in Pennsylvania using funds from the 1987 bond issue.
- The cleanup of the extremely polluted Delaware Estuary becomes one of the premier water pollution control success stories in the United States.

1989 – The Great Lakes Protection Fund Act provides funding for research and other efforts to protect the Great Lakes from toxic pollutants.

1990 – Ralph Abele dies, three years after retiring from the Fish Commission.

- The Pennsylvania office of the Rails to Trails Conservancy is established, seeking to convert abandoned rail lines to pedestrian and bicycling trails.

1991 – The Pennsylvania Fish Commission renamed the Fish & Boat Commission.

- The Environmental Fund for Pennsylvania is established to support hands-on projects to protect the environment, bringing 19 different environmental groups together.
- The Public Recycling Officials of Pennsylvania (PROP) is established to promote and enhance recycling and recycling programs in Pennsylvania through education, information exchange, technical support, applied research, and coordination of recycling industry development.
- The Pennsylvania Biological Survey is established to increase knowledge and foster the biological diversity native to the Commonwealth.

1992 – An otter release in the Youghiogheny River brings river otters back to the

drainage for the first time in more than 100 years.

1993 – Governor Casey signs state law making April 22 “Earth Day”.

- The US Forest Service introduces its Forest Stewardship Program to encourage long-term stewardship of important forest landscapes.
- Pennsylvania's Environmental Education Act provides for environmental education programs within the Commonwealth, creates an Environmental Education Fund and authorizes the establishment of an Environmental Education Grants Program.

1993 – Act 50 of 1993, the Keystone Recreation, Park and Conservation Fund, wins overwhelming bipartisan support in both the legislature and with the public. Key 93 provides funding through a \$50 million bond for deferred maintenance for state park and historic resources managed by the Commonwealth. Majority of funding goes to DER and Pennsylvania Historical and Museum Commission.

1994 – The coldest temperature ever recorded in Pennsylvania was – 22F in Pittsburgh on January 19.

- PA Wildlife and Waterways Conservation Officers form the Conservation Officers of Pennsylvania to increase understanding, awareness, and support for the role of Pennsylvania's conservation officers in the management of our natural resources.
- Sea Change Urban Horticultural Center, an urban garden where once trash and drug addicts' paraphernalia, is created in Philadelphia by Rosalind Johnson.

1995 – The Department of Environmental Resources is divided into The Department of Conservation and Natural Resources (DCNR) and Department of Environmental Protection (DEP). James Seif is named as Secretary of DEP; John Oliver, former president of the Western Pennsylvania Conservancy, is Secretary of DCNR.

- The Environmental Protection Agency's Brownfields program is created to help states clean up hazardous waste and materials to those areas can be reused.
- Governor Ridge signs Act 18, assigning the Bureau of Forestry to DCNR.

1996 – The Pennsylvania Biological Survey sponsors its first conference to educate attendees about building partnerships, garnering government support, standardizing protocols, essential to protecting and monitoring PA natural resources.

1997 – Passage of the National Wildlife Refuge Improvement Act provides the first “organic” legislation for the management of the federal refuge system.

1998 – The largest earthquake recorded in Pennsylvania occurs near Pymatuning Lake in northwestern Pennsylvania. The quake measures 5.2 magnitude.

1999 – The Growing Greener fund is established with \$650 million committed over five years to fund conservation and environmental protection projects from the creation of trails and greenways to community parks and wildlife habitat protection.

- The Pennsylvania Parks and Forests Foundation is formed to provide a voice for and expansion of Pennsylvania's state parks and forests.

2000 – Pennsylvania's state forests becomes FSC (Forest Stewardship Council) certified sustainably managed, making it the largest publicly owned FSC Certified forest in the country.

- Green Mountain Energy's wind farm near Garrett (Somerset County) is the first wind farm in Pennsylvania.

2002 – With funding for Growing Greener set to expire and the initiative an acknowledged success, the Environmental Stewardship Fund is created through an increase in the tipping fee (the fee for dumping trash in landfills) to be used for environmental restoration and conservation.

- Citing the Environmental Rights Amendment, the PA Department of Education adopts academic standards for environment and ecology in all Pennsylvania schools.
- On July 24, 18 coal miners at the Quecreek Mine in Somerset County accidentally dig into an abandoned and poorly documented adjacent mine, flooding the room in which they were working. Nine escape and, four dramatic days later, all nine remaining men are rescued.

2003 – Peregrine falcons are found breeding on cliff sides in Pennsylvania for the first time since the 1950s.

2004 – Pennsylvania's first Marcellus shale well is drilled using hydraulic fracturing technology in Washington County.

2005 – The Conservation Landscape Initiatives program begins, with seven regions in Pennsylvania participating to drive strategic investment and actions around sustainability, conservation, community revitalization, and recreational projects.

- Voters approve Growing Greener II, a \$625 million bond to supplement existing Growing Greener funds, with 61% support statewide. Support is even higher in southeastern Pennsylvania, with 76% voter approval.

2006 – Pennsylvania completes its first federally-mandated Wildlife Action Plan to receive grant funding and strengthen the state's management of fish and wildlife resources.

2007 – Allegheny Ridge Wind Farm, the largest wind farm in Pennsylvania to date, opens in Cambria and Blair counties.

2008 – Roxane S. Palone becomes the first woman elected president of the Pennsylvania Game Commission.

2009 – Drinking water in Dimock (Susquehanna County) is contaminated with methane from Marcellus shale natural gas drilling and fracturing.

- The Rails to Trails Act authorizes the Department of Environmental Resources to acquire and develop railroad rights-of-way for public recreational trail use, requiring the Department of Transportation to coordinate rights-of-way with the DER and the Public Utilities Commission, and providing a limitation on liability on persons who provide property for public recreational use.

2010 – The South Mountain Partnership launches its Speakers Series, intended as a revival of the 19th century *Michaux Lectures*.

- Some estimates predict that there might be of 400 trillion cubic feet of gas in Marcellus Shale.
- Utica and other Devonian shales are identified as holding natural gas.
- Governor Ed Rendell implements a moratorium on gas drilling in Pennsylvania's state parks and forests.

2011 – Hurricane Irene in addition to the remnants of Tropical Storm Lee produce widespread flooding in eastern Pennsylvania. The Susquehanna River crests at levels similar to Hurricane Agnes in some places and produce record flooding on some waterways.

2012 – Act 13, regulating Marcellus shale gas development, increases setback requirements for unconventional gas development, enhances protection of water supplies, and imposes an impact fee on drilling that may only be used in the communities where the drilling occurs. Lawsuits immediately follow.

- Penn State University restructures its College of Agricultural Science and eliminates the School of Forest Resources. The school's forestry major (Forest Ecosystem Management) is placed in the newly created School of Ecosystem Science and Management.

2013 – Pennsylvania's Supreme Court rules against Act 13, saying that localities can make their own rules about where drilling can and cannot happen.

- A nesting pair of Bald Eagles is seen in Pittsburgh for the first time in 150 years. From the pair's nest, located in the small community of Hays along the Monongahela River and the Great Allegheny Passage bike trail, is hatched a successful chick, although the too-small nest falls apart soon after.

2014 – The Department of Environmental Protection releases the first-ever oil and gas annual report.

- The Hays bald eagles return to Pittsburgh, building a larger nest about 100 yards from the 2013 original. The Game Commission authorizes the first-ever camera in a Pennsylvania bald eagle nest and millions of people enjoy a close-up view of the three successfully fledged chicks.
- Governor Tom Corbett lifts the existing moratorium on leasing state park and forest land for natural gas drilling.

2015 – Governor Tom Wolf reinstates the moratorium on leasing state forest and state park lands for oil and gas development.