Chapter Eight

Urbanization, 1880 to 1930

Industrial Expansion and the Gilded Age 1880 to 1900

Progressive Era 1900 to 1920

The Roaring Twenties 1920 to 1929

1880's	1888	1900	1900-1910	1914-1918	1920	1929
Skipjack sailboats first produced	America's first electrified trolley line, Richmond	Region population reaches 3 million	Internal combustion engines	World War I	Region population exceeds 4.5 million	Stock Market Crash

AN ECOLOGY OF PEOPLE AND PLACE

☐ PEOPLE

Extraordinary changes swept across the United States and the world between 1880 and 1930 (see Map 10). These changes continued to alter Chesapeake Bay life, from the countryside to the city. The region's population doubled, from 2.5 million in 1880 to 5 million by 1930. Many of these people settled in established rapidly expanding urban centers such as Baltimore, Washington, Richmond, and Norfolk. Washington's numbers grew at an incredible pace, rising from about 75,000 in 1880 to 1.4 million by 1920. Many people also moved to newer urban centers such as Newport News, a sleepy port town that grew quickly after the president of the Chesapeake and Ohio Railroad, Collis P. Huntington, chose it as a key terminal and shipyard in the 1890s. In sharp contrast, the rural population either stayed steady or began to drop.

Most people living in the region were native born Americans. Although white Americans outnumbered African Americans by four or five to one, black people were the majority in many rural communities. While 25 million European

SIGNIFICANT EVENTS

- **1880's–wooden skipjack sailing vessels specially adapted to Chesapeake waters first produced**
- **1882–Virginia Assembly approves funding to establish Normal and Collegiate Institute for Negroes and Central Hospital for mentally ill African-Americans in Petersburg**
- **1886–adoption of standard gauge links all railroads in region and nation**
- **1888–America's first electrified trolley line opens in Richmond**
- **1889–nation's first state historic preservation organization, Association for the Preservation of Virginia Antiquities, organized in Richmond**
- **1893–Economic Panic of 1893 plunges nation into five-year depression**
- **1894–protestors, known as Coxey's Army, march on Washington demanding economic reform**
- **1898 to 1899–Spanish-American War fought with Spain**
- **1900–region population reaches 3 million**
- **1900 to 1910–internal combustion engines power first commercially successful wheeled vehicles and airplanes**
- **1904–Great Baltimore Fire destroys city center**
- **1914–passenger pigeons become extinct in wild**
- **1914 to 1918–World War I embroils European powers**
- **1917–America enters World War I on Allied side**
- **1918–Allies defeat Central powers**
- **1918–worldwide Spanish influenza epidemic strikes region**
- **1918–Migratory Bird Treaty Act outlaws killing of whistling swans, establishes hunting seasons, and sets bag limits on international migratory waterfowl**
- **1920–regional population exceeds 4.5 million**
- **1921–captured German battleship *Ostfriesland* (renamed the San Marco) sunk off Cape Henry in test demonstrating ability of aircraft to sink capital surface ships**
- **1926–Robert H. Goddard launches first successful liquid fuel rocket in Maryland**
- **1929–New York stock market crash begins Great Depression**

Map 10: Urbanization, 1880 to 1930

KEY LOCALES

NATIONAL HISTORIC LANDMARKS

District of Columbia

Administration Building, Carnegie Institution of Washington [1910]

American Federation of Labor Building [1916]

American National Red Cross Building [1915-1917]

Arts and Sciences Building, Smithsonian Institution [1881]

William E. Borah Apartment, Windsor Lodge [ca. 1913]

Mary Ann Shadd Cary House [1881-1885]

Constitution Hall [1924-1930]

Corcoran Gallery and School of Art [1893]

Elliott Coues House [1880s]

General Federation of Women's Club Headquarters [1922]

Georgetown Historic District [18th-19th centuries]

Samuel Gompers House [1902-1917]

Charlotte Forten Grimke House [ca. 1880]

Charles Evans Hughes House [1907]

Lafayette Square Historic District [18th-20th centuries]

Library of Congress [1886-1897]

Andrew Mellon Building [1916]

Memorial Continental Hall [1902]

Meridian Hill Park [1900-1925]

National Training School for Women and Girls [1909]

National War College [1907]

Pension Building (National Building Museum) [1885]

Zalmon Richards House [1882]

Saint John's Church [1883]

Sewall-Belmont House [1820, 1929]

State, War, and Navy Building (Old Executive Office Building) [1871-1888]

Mary Church Terrell House [1907]

Twelfth Street YMCA Building [1908-1912]

Oscar W. Underwood House [19th century]

United States Marine Corps Barracks [1906]

Volta Bureau [1893]

Washington Navy Yard [1800-1910]

David White House [1890s]

Woodrow Wilson House [1915]

Carter G. Woodson House [ca. 1890]

Robert Simpson Woodward House [ca. 1880s-1890s]

Maryland

Clara Barton House [ca. 1890], Montgomery County

Chestertown Historic District [18th-19th centuries], Kent County

Gaithersburg Latitude Observatory [1899], Montgomery County

Nellie Crockett (Deadrise buy-boat) [1926], Kent County

Sion Hill [19th-20th centuries], Harford County

United States Naval Academy Guard House [1881], Annapolis

William B. Tennison (Bug-eye buy-boat) [1899], Calvert County

Baltimore City Landmarks

Baltimore (Tug) [1906]

Baltimore and Ohio Railroad Roundhouse and Annex, [1884, 1891]

Chesapeake (Lightship No. 116) [1930]

College of Medicine of Maryland [19th-20th centuries]

Elmer V. McCollum House [ca. 1920]

H. L. Mencken House [early 1880s]

Mount Royal Station and Trainshed [1896]

Mount Vernon Place Historic District [19th century]

Ira Remsen House [1880s]

Henry August Rowland House [1880s]

Sheppard and Enoch Pratt Hospital and Gate House [1862-1891]

U.S.C.G.C. Taney (Coast Guard Cutter WHEC-37) [1925]

William Henry Welch House [1880s]

Talbot County Landmarks

Edna E. Lockwood (Log bug-eye) [1889]

Hilda M. Willing (Skipjack) [1905]

Kathryn (Skipjack) [1901]

Virginia

Alexandria Historic District [18th-19th centuries], Alexandria City

Camp Hoover [1929-1932], Madison County

Green Springs Historic District [18th-19th centuries], Louisa County

General George C. Marshall House [1925-1949], Loudon County

Gari Melchers Home [1916-1932], Stafford County

General William "Billy" Mitchell House [1826, 1925], Loudon and Fauquier counties

Portsmouth (Lightship No. 101) [1900-1949], Portsmouth

Variable Density Tunnel [1921-1940], Hampton

Waterford Historic District [18th-19th centuries], Loudon County

Arlington County Landmarks

Charles Richard Drew House [1920-1939]

Fort Myer Historic District [1900s]

Quarters 1 [1899]

Charlottesville Landmarks

Shack Mountain [1916-1955]

University of Virginia Rotunda [1822-1826, 1898]

University of Virginia Historic District [19th-20th centuries]

Richmond City Landmarks

Jackson Ward Historic District [19th-20th centuries]

Main Street Station and Trainshed [1901]

Monument Avenue Historic District [1887]

Old City Hall [1887-1894]

Maggie Lena Walker House [ca. 1909]

Figure 84: Two-Sail Bateau Skipjack, the E. C. Collier, and the Hooper Strait screwpile-style Light Station in the background. (Photograph courtesy of the National Park Service and the Library of Congress)

The Chesapeake and Ohio Canal, Maryland

immigrants came to the United States between 1880 and 1930, only a few tens of thousands settled in the Chesapeake area; the rest stayed farther north. Most of the region's new immigrants moved to big cities, where many African Americans were also moving. Once the United States had entered World War I in 1917, even greater numbers of African Americans and immigrants were drawn to these cities by the prospect of work in the many war industries there.

Important technological innovations fueled this massive rise in population. First, innovators increased the efficiency of earlier technologies based on wind, water, wood, and coal. Invention of an ingenious lubricating system eliminating the need to climb high towers fueled a brief boom in metal windmills during the first quarter of the twentieth century. Gas engines and electric motors replaced wind and other traditional power sources by the 1930s. Powered by steam boilers at the beginning of the period, ships, tractors, and a host of other contraptions and conveyances were propelled by internal combustion engines running on gasoline and diesel fuel at its end.

Steel produced in mills using the new Bessemer process gave shipwrights, bridge builders, and manufacturers a lighter, stronger, and cheaper material. New gas and oil fueled limelight beacons shone from the many lighthouses built to mark headlands, shallows, rock outcrops, and other navigational hazards along the Bay's busy shipping lanes. Skipjacks–swift, stable, and low draft boats able to navigate the shallow waters of the Bay–were first produced in the early 1880s (see Figure 84); they represented the technological peak for wooden sailing ships in the region. Evidently named both for the vessel's ability to skip above the waves and for its skipper-like command of the water, the word skipjack combines the Dutch word for ship, *schip*, with jack, an old English word for sailor (as in jack tar). Larger, propeller driven warships, powered by steam and made of riveted steel plates, slid down the ways in shipyards in Washington, Baltimore, Norfolk, and Newport News (see Figures 85-86).

Slow, limited in their carrying capacity, and (in the north) forced to close when water froze during the colder months, most canals lost importance during this period. The *Chesapeake and Ohio* and other canals that required gated locks to carry boats across their routes were closed. Finding the relatively level grades

Figure 85: Newport News Shipyard, Virginia, ca. 1905. (Photograph from the Detroit Publishing Company courtesy of the Library of Congress)

Figure 86: The Great Dry Dock, Newport News, Virginia, ca. 1905. (Photograph from the Detroit Publishing Company courtesy of the Library of Congress)

of canal routes ideal for their trains, railroad owners purchased the assets of failing or bankrupt canal companies and laid track along what had been their tow paths and berm banks.

Not all canals closed during this era, however. Slack water routes like the Chesapeake and Delaware crossing flat low lying stretches of land separating major waterways significantly shortened travel distances, cut travel times, and allowed ships to avoid often dangerous open ocean waters. Work began during the early 1900s to integrate suitable canals into the network of rivers, bays, coves, and other sheltered coastal waters extending from Maine to Texas today known as the Intracoastal Waterway. *The Chesapeake and Delaware Canal* required particularly extensive reconstruction to deepen and widen it sufficiently to allow clear passage for modern ships (see Figure 87). Unable or unwilling to bear the huge costs of renovation, the canal company sold their holdings to the Federal government in 1919. Expending over $10 million dollars, government engineers lowered and widened it into an open water crossing linking the Chesapeake and Delaware Bays by 1927.

Steam railroads also reached the peak of their development as newly invented automobiles, trucks, and airplanes began to challenge their predominance during the 1910s and 1920s. Turnpikes, roads, and highways began to be paved with concrete and asphalt. Soon paved roads crisscrossed the region, making driving cars much more comfortable. Grass covered landing fields for airplanes appeared on military bases, city lots, filled marshlands, and farm meadows. And in 1926, Robert H. Goddard launched the first successful liquid fuel rocket on a Maryland beach. Unlike solid fuel gunpowder propelled rockets, which had been in use since medieval times, liquid fuel rockets represented a quantum leap in power, possessing the potential to carry payloads over vast distances with supersonic swiftness.

In the cities, electrified trolley lines replaced horse drawn street cars and

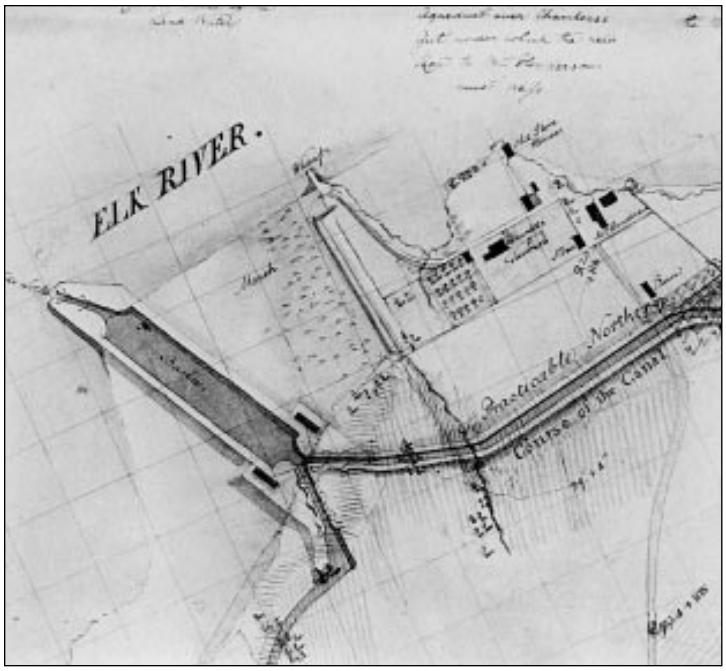

Figure 87: Detail of Chesapeake and Delaware Canal survey map.
(Sketch by Benjamin H. Latrobe courtesy of the Library of Congress)

carriages. The nation's first electrified trolley line began operating on Richmond's streets in 1888. City road ways in the Washington, Baltimore, Richmond, and Norfolk metropolitan areas–formerly shell-covered, filled with bricks, or stone-cobbles–began to be paved to aid riders of the just invented and very popular bicycle. By the turn of the century, these and other routes were graded and widened to accommodate automobiles, buses, and trucks (see Figure 88). Soon after, electrified light rail lines started providing high speed links between Chesapeake Bay cities and towns.

Chesapeake and Delaware Canal, Maryland

Figure 88: Downtown Easton, Maryland, ca. 1920.
(Photograph by H. Robbin Hollyday courtesy of the Talbot County Historical Society)

Advances in medical knowledge and vigorous public health policies also had major effects between 1880 and 1930. Researchers were able to subdue ancient plagues such as cholera, smallpox, and yellow fever. Health standards improved, and people lived longer. Many public health facilities were built. Sanitariums and rest homes sheltered those suffering from persistent ailments such as tuberculosis and mental illness. Preventoriums were rural institutions built to house city people at high risk of contracting infectious diseases. Public agencies and private organizations established community hospitals and opened clinics in all but the region's most rural parts. Municipalities took on more responsibilities, working to improve sewage systems, build and maintain roads, erect water treatment plants, and dam rivers to create new reservoirs. Advances in naval, aeronautical, and civil engineering were pioneered and put into use in military bases. The *Variable Density Tunnel,* built in 1921 in Virginia's Langley Field, was an experimental facility used to test and develop new aircraft designs. Other advances in ordinance and logistical development occurred in the many installations around Washington, D.C. that were built or expanded to support American involvement in the Spanish-American War (1898-1899) and World War I (1917-1918).

Variable Density Tunnel, Virginia

The arts and sciences flourished in the region's many colleges, museums, and conservatories. Chesapeake Bay artists, musicians, journalists, and writers, such as Baltimore's wittily acerbic H. L. Mencken, whose row house today is a National Historic Landmark (see Figure 89), contributed greatly to the nation's cultural life. But no amount of skill, sophistication, or scholarship could end social problems such as race prejudice or halt epidemics such as the deadly worldwide Spanish influenza outbreak that struck the region in 1918, killing thousands in the Chesapeake region.

Electric current came into widespread use as a power source during this era as well. First treated as a curiosity, it soon lit up homes, workplaces, and streets, not to mention power for phonographs, radios, and movie projectors. It also carried messages through and from the region to the rest of the United States and the world on telephones developed during the 1880s and wireless radios that were first introduced during the following decade. Radio waves, broadcast from high steel towers, brought Chesapeake Bay people into closer contact with the world than ever before. And steel began to change the face of towns and cities as well. As wooden downtown buildings fell to the wrecker's ball or burned in catastrophic fires (like the blaze that devastated Baltimore's business district in 1904), new steel towers rose in their place. The newly invented elevator allowed builders to erect skyscrapers for powerful corporations on pricey downtown real estate. Washington remained the only city in the region to limit the height of its buildings. It did so to uphold a tradition requiring that no building should stand taller than the capitol, a tradition that Thomas Jefferson had started; this was formalized into a law in 1899.

The period between 1880 and 1930 is remembered today as a more self assured, serene, and hopeful time. We call its earlier decades the Gilded Age, and its later years the Progressive Era and the Roaring Twenties. Yet this period was

Figure 89: H. L. Mencken Row House located at 1524 Hollins Street, Baltimore, Maryland. (Photograph by Ronald L. Andrews courtesy of the Maryland Historical Trust)

Figure 90: Impoverished workers led by Jacob Coxey are escorted from the Capitol.
(*Harper's Weekly* sketch courtesy of the Library of Congress)

marked by social turmoil, political struggle, and wild economic swings. The boom-bust business cycle that had characterized the American economy from its beginnings continued. The prosperous years of the 1880s railroad boom, for example, were followed by the financial Panic of 1893 and a five-year depression that made many unemployed workers doubt the national ethic that hard work leads to success. In 1894, several hundred impoverished workers known as Coxey's Army (named after Jacob Coxey, a self-taught economist from Massillion, Ohio) came to Washington to protest conditions and press for a federal public works program to create jobs. Instead of being heard, they were forcibly removed (see Figure 90). But attempts to improve conditions continued. Unions organized, workers struck for better pay and working conditions, and the federal government struggled to limit the power of big business trusts and monopolies. Labor unions vied with the powerful political machines that swapped votes for jobs in the region's cities and towns.

Prosperity came to many working in regional shipyards, military installations, and factories that produced arms and munitions for American troops (which fought in the Spanish-American War and World War I during these years). But serious social problems persisted. Among these were city slums, widespread poverty, child labor and worker exploitation, race and gender bias, immigrant assimilation, political corruption, and corporate greed. These issues spurred organizations aimed at reform, including municipal leagues, the American Federation of Labor, the more radical Industrial Workers of the World, the National American Women's Suffrage Association, the National Association for the Advancement of Colored People, and the agrarian grangers and populists. Although they had different goals, most of these organizations looked to the federal government to pass legislation favoring their causes.

People also formed civic organizations to instill and inspire patriotic sentiments. These groups began preserving sites linked to colonial forebears, and they built the first monuments honoring Civil War soldiers. The nation's first state organization dedicated to historic preservation, the Association for the Preservation of Virginia Antiquities, was organized by a group of socially prominent women and men in Richmond in 1889. Association members helped preserve and interpret historic sites in places such as Williamsburg, Jamestown, and the greater Richmond area. Women in the association also made efforts to honor the Confederacy by linking colonial sites with Civil War events and personalities. They preserved several battlefields, restored war cemeteries, and prevented the demolition of threatened sites such as the *White House of the Confederacy* in Richmond.

White House of the Confederacy, Virginia

The era also saw the founding of many social, cultural, professional, fraternal, and youth organizations. Groups such as the American Medical Association, the American Anthropological Association, the Boy and Girl Scouts, and the American Bar Association sought and received national charters. Each encouraged technical skill and excellence, moral integrity, citizenship, and other values identified with the middle class. The growing ranks of urban, white collar workers in Baltimore, Washington, and other American cities embraced these values. And blue collar industrial laborers saw to it that their sons and daughters received the educations most would need to move up in society.

Figure 91: The Ku Klux Klan Marches Down Pennsylvania Avenue, September 13, 1926.
(Photograph courtesy of the Library of Congress)

More reactionary movements also grew stronger in the early decades of the twentieth century. Anti-immigrant and white supremacist organizations such as the Ku Klux Klan grew increasingly influential. Reinventing itself in 1915 as an organization that was committed to 100 percent Americanism and opposed to blacks, Jews, Catholics, and immigrants, the Ku Klux Klan quickly grew into the nation's largest fraternal organization of the period. Claiming some 4 million members, the Klan displayed its power in September 13, 1926 in one of the largest marches yet seen in Washington, D.C. (see Figure 91). The organization declined as rapidly as it rose. Rocked by scandals exposing the corruption and hypocrisy of several of its key leaders, its' numbers dropped to less than a few hundred thousand members by 1929. Although it again rose to national attention as a reactionary group opposing civil rights during the 1960s, it did not play a significant role in Chesapeake region life during the remainder of the century.

Groups pursuing specific social, political, and economic agendas sometimes made strange alliances that highlight the era's complexities. For example, new immigrants–who competed with African Americans for jobs as unskilled laborers–sometimes found themselves agreeing with racists who were otherwise far from friendly to their interests.

The years between 1880 and 1930 were particularly difficult for African Americans. Although clever marketeers, such as Margaret L. "Maggie" Walker of Richmond's Jackson Ward, made sizable fortunes, nearly all African Americans suffered from poverty and intense discrimination. Gains were made in the decades just after the war–as when the Virginia assembly established the *Normal and Collegiate Institute for*

Normal and Collegiate Institute for Negroes, Virginia

JACKSON WARD HISTORIC DISTRICT. *One of several Richmond city districts named for presidents, Jackson Ward was a center of African American life and culture in Virginia from 1871 to 1905. Today, the district covers a thirty-eight block area of free-standing and attached two and three story town houses. Significant figures in African American arts, commerce, and community life, such as John Mitchell, W.W. Browne, Giles B. Jackson, and Margaret L. "Maggie" Walker (see Figure 92), lived in Greek Revival, Italianate, or vernacular homes along the ward's tree-lined streets. The more elaborate of these homes featured spacious yards bordered by ornamental cast iron fences. Today, well-preserved Doric columns, Italianate ironwork, and Eastlake-style Victorian wooden fretwork continue to adorn many town house porches in the district.*

Figure 92: Maggie L. Walker Streetscape, Jackson Ward, Richmond, Virginia.
(Photograph courtesy of the National Park Service)

Negroes and the *Central Hospital* for mentally ill African Americans–but these were lost when Virginia joined other southern states by passing voting laws that took the vote from African Americans in the final years of the nineteenth century. Other Jim Crow laws formally defined people of mixed ancestry as colored or negroes, strictly segregated the races, and otherwise treated African Americans as second-class citizens.

Hopes for African American equality were suppressed by terror as well as law. The Black Codes required absolute subordination and subservience, and men believed to have violated them were kidnaped, tortured, and hanged by racist vigilantes. Lynchings became distressingly common during the depression years of the mid-1890s, when racist whites vented their frustrations on black neighbors. Hundreds of thousands of African Americans moved north to cities such as Washington, D.C., and Baltimore to escape lynch law and find work and security. Denied all but the most unskilled labor, most were forced to move into neglected tenements in the most rundown parts of town. Municipal agencies and local assistance organizations would not serve them adequately, so they formed banks, churches, and self help associations of their own.

When the nation mobilized for World War I, government authority grew in ways not seen since the Civil War. The federal government nationalized railroads, rationed food and fuel, and worked with states to establish war industry boards requiring industries to give first priority to military production. Old installations were reactivated and new camps and stations constructed throughout the region. Hundreds of warships and merchant vessels were built in shipyards in Washington, Baltimore, and Newport News. Uniforms and other equipment were manufactured in Richmond, Baltimore, and mill towns throughout the region. Thousands of Chesapeake Bay men, both black and white, were drafted. Many of them served in France. Because they were serving in a segregated army, most

Figure 93: Suffragettes March for the Vote on Pennsylvania Avenue, March 3, 1913. (Photograph courtesy of the Library of Congress)

African American troops were relegated to digging trenches, carrying supplies, and other manual labor performed by work battalions. Women, who previously had largely been barred from most factory work, took jobs in industries needing replacements for departing servicemen. Other women sold war bonds, collected scrap metal for the war effort, and served as nurses in camps at home and abroad.

Central Hospital, Virginia

The war effort fueled a prosperity that carried into the 1920s. Products from America's farms and factories found ready markets at home and abroad, and stock speculation heated an already hot market. Some items on the progressive agenda, such as women's suffrage (see Figure 93) and prohibition, were enacted into law. Congress also passed reactionary legislation, such as the 1924 Immigration Act, which drastically slashed immigration quotas and barred further immigration from Asia. Other causes, such as the struggle against racial discrimination, had to wait for later times and legislatures.

During this decade, the people of the United States looked inward and sought entertainment in amusement parks, resorts such as Maryland's *Chesapeake Beach* and *Piney Point,* movie houses, and, for many, speakeasies that catered to those with tastes for alcohol, gambling, and other outlawed vices.

Chesapeake Beach and Piney Point, Maryland

Baseball, football, and other sports became increasingly popular. Nearly every social and business group or institution organized ball clubs. Ball fields sprang up nearly everywhere. Wood and steel stands with commanding views of carefully tended clay base paths and mown grass playing fields became fixtures in community landscapes. Players everywhere competed on sand lots, city streets, school yards, and park lawns. Well funded and highly organized professional and college teams played to crowds of thousands in vast stadiums. Celebrated sports figures, such as Baltimore's favorite son, George Herman "Babe" Ruth, became popular culture icons. Ruth's flamboyant personality and lavish life style came to symbolize the liveliness, prosperity, and excesses of the Roaring Twenties. But the era ended suddenly on October 29, 1929. On a day known as Black Tuesday, an enormous drop in stock prices plunged the Chesapeake region and the rest of the United States and the world into a devastatingly sudden economic decline. This grim time is now remembered as the Great Depression.

☐ PLACE

Between 1880 and 1930, unprecedented changes in technology and society allowed people to transform Chesapeake Bay lands, waters, and skies. They altered the region in ways no one had thought possible or even desired. Valuable innovations often affected the environment, sometimes in unexpected ways. For example, after 1886, all railroad companies began using a 4 foot, 8.5 inch-wide standard track gauge, making their lines compatible. This meant that trains could run freely throughout the region. Thus steam engines of the Baltimore and Ohio, Chesapeake and Ohio, and Norfolk Southern lines could more efficiently bring in western livestock, mid-western grain, Pittsburgh steel, Northern manufactures, and Southern mill products. These imports enriched life in Chesapeake Bay cities, towns, and farms.

As desirable as these imports were, the trains carrying them hauled and burned highly polluting coal. The coal came from mines farther inland along the upper reaches of the Potomac and Susquehanna river valleys. Tailings and other wastes from the mines were flushed into nearby rivers, where they mixed with sediments washed from deforested uplands. Farther down river, these waters were further sullied by soils eroded from farm fields, factory wastes, and, finally municipal sewage. Noxious microbes flourished as fish, shellfish, plants, and other aquatic life sickened and died in the increasingly toxic murky waters of the Bay estuary.

Each new form of energy took its toll. When natural energy sources such as wood and wind were replaced with coal, oil, and gas, non-biodegradable waste products polluted the region. The burning of coal to fuel furnaces, heat boilers, or turn steam turbines may have gotten rid of the problems caused by earlier sources of power– the smoke from wood fires and manure runoff wastes from horses, mules, and other draft animals– but coal also created serious problems. Coal burned in engines, plants, and buildings poured smoke into the region's skies. Highly acidic coal mining wastes were released into Chesapeake drainage rivers. Coal miners and stokers breathed ever growing quantities of lethal coal dust into their lungs, paying their own steep price for progress. Other costs were harder to measure. While we do know that average temperatures worldwide generally have been rising since the 1880s, no direct evidence has yet proved that burning coal and other fossil fuels helped create this trend.

In the late nineteenth century, sport fishermen and government scientists published reports speculating that increased water pollution was threatening the eelgrass in Chesapeake Bay waters. Other reports showed that water chestnut and Eurasian watermilfoil–invasive water plants accidentally introduced into Bay waters by passing ships–began taking space, light, and nutrients away from eelgrasses and other native water plants sometime between 1880 and 1900. More and more aware of how important

Figure 94: Carting Shingles. (From *The Transformation of Virginia, 1740-1790* by Rhys Isaac; used by permission of the University of North Carolina Press ©1982)

submerged aquatic plants are to Bay ecology, the region's scientists and conservationists began to study the life cycles and habitat needs of these and other invasive species at this time.

Forests also suffered from population and industrial expansion. By 1900, less than 30 percent of the Chesapeake Bay watershed's original forests remained. Woodsmen could no longer find standing trees large enough to supply the shingles and shakes widely used for roofs and siding (see Figure 94). Looking for new sources of supply, they began to mine the ancient bald cypress and Atlantic white cedar trunks buried in bogs on the Pocomoke River and elsewhere. Most of the cleared lands in the Coastal Plain and Piedmont valleys were turned to agricultural or livestock uses. People also drained wetlands to create more farmlands and to destroy the breeding grounds of mosquitoes and other insect pests. Such activities also changed the composition of tidewater forests. Farther inland, clear cutting increased erosion and altered the chemical composition of soils by exposing them to sun, wind, and rain. These changes made it harder for young trees to reclaim logged tracts, especially in steep, hilly areas. And foreign tree diseases–chestnut blight and Dutch elm disease–all but exterminated chestnut and elm trees in the region.

Pollution and intensified use also had serious impacts on Chesapeake Bay fish and shellfish populations in this period. We find evidence of this in Virginia's and Maryland's state game records, first kept in the 1880s. These show that American shad, Atlantic menhaden, alewife herring, American croaker, and other fin-fish supported a large commercial fishery. By 1920, more than 60 million pounds of fish were reported to have been taken from Bay waters. Of this amount, 12 million pounds, then valued at $850,000, were caught in Maryland. The remaining 48 million pounds, worth $2.4 million at the time, came from Virginia waters. About 90 percent of the entire catch consisted of alewives, croakers, shad, and American menhaden.

We do not have statistics showing exactly how far fish populations had declined. But the situation concerned fish and wildlife officials enough to cause them to begin opening fish hatcheries by the late 1870s. They were concerned not only by over-fishing, but also by the construction of dams that blocked spawning streams, keeping fish from swimming upriver to lay their eggs and depriving their young of a safe habitat. Hatcheries, artificial oyster beds, cages, and artificial ponds holding large numbers of diamondback terrapins sold to markets became increasingly common by the turn of the century. Bag limits were enacted to limit over-harvesting of economically important species, but poaching grew into a major problem as fishermen ignored these limits. Oystermen could not make a living by working clam banks in the open water, because these banks had been depleted. Guarding their own grounds from small watch houses standing on tall support timbers pounded into tidal mud, many continued to raid each other's beds and nurseries.

Birds were affected by environmental changes as well. In the early 1900s, concerned bird enthusiasts–members of the newly founded Audubon Society–began conducting bird counts on the Bay every Christmas. Their activities, along with those of state fish and game agents, became important tools for estimating bird population sizes, varieties, and distributions. Observations made by

ornithologists helped show how other changes in the environment affected birds. They noted that drought and decreases in eelgrass and other underwater plants threatened populations of canvasback ducks and other waterfowl.

Unrestricted market and sport shooting, too, had devastating effects on some bird populations. Finally, Congress passed the Migratory Bird Treaty Act in 1918. The act outlawed the killing of rare whistling swans, established limited hunting seasons, and set bag limits for waterfowl migrating across international boundaries. But no legislation could protect devastated populations of Carolina parakeets and the once-common passenger pigeon. The last representatives of these species died in zoos during the 1920s, marking their final extinction and alarming concerned people everywhere.

THE CULTURAL LANDSCAPE OF URBANIZATION

☐ PEOPLING PLACES

As noted, revolutionary industrial developments and population changes helped people make indelible marks on the region's cultural landscape between 1880 and 1930. Many of these marks are still visible today. Chesapeake Bay cities began to assume their modern appearances as skyscrapers, government buildings, commercial establishments, apartment houses, tenements, row houses, and many other structures rose over streets paved with Belgian block cobbles, concrete slabs, and poured asphalt. Initially, self-propelled bicycles competed for space on these streets with horse and mule drawn carts, wagons, and streetcars. Trolleys, trucks, buses, and automobiles dominated the region's roads and byways by the end of the period.

Figure 95: Baltimore's Mount Vernon District.
(Photograph courtesy of the Dennis Montagna Collection)

In the region's cities, new immigrants settled into urban ethnic neighborhoods with signs in both English and their native languages. They added onion domes and other familiar architectural touches from their home countries to the many churches, shops, and halls erected in popular styles–first in the ornate Victorian, classical, romantic modes, then in the traditional colonial revival style, and finally in the streamlined art moderne and art deco styles.

Wealthier citizens usually lived on fashionable avenues in or near city centers (see Figure 95). Yet many of the more affluent classes began moving out of city centers to new suburbs constructed in the nearby countryside along trolley and rail lines. Often they moved to escape the clutter and noise of crowded urban life. In the suburbs, they engaged the services of shopkeepers and skilled, white collar workers. Often, these workers returned to rented apartments or rooms in the city after work. Wealthier residents of cities and suburbs hired live-in servants who slept in separate quarters in the main house or in small buildings on house grounds.

Rural county seats became smaller replicas of major cities. Market, mill, and cannery towns also grew larger and more complex. But most smaller towns and villages in more remote areas–places such as the Maryland Coastal Plain fishing village of Crisfield and other locales in the extreme southern, western, and eastern parts of the region–did not change much between 1880 and 1930. Although mechanization made farming more efficient, and improvements such as refrigerator cars hurried perishable foods to market more quickly, rural farms mostly remained

as they were, maintaining earlier dimensions and staying in the same locations.

People continued to live in greater numbers north of the Potomac River. The Eastern Shore and southeastern Virginia continued to be sparsely populated. Mass migrations of rural African Americans and poor whites occurred during and after World War I. Mostly, these people moved to Washington or Baltimore, but many also took up residence in Richmond and Newport News. Their migration sent overall rural populations into a decline that has yet to end.

☐ CREATION OF SOCIAL INSTITUTIONS

The focus of the region's social life shifted even further away from the family domestic sphere to more community centered organizations. This shift was reflected in the many new meeting halls, churches, campgrounds, resorts, and other facilities built between 1880 and 1930. Communities also arranged for the construction of many new courthouses, office buildings, primary and secondary schools, university campuses, and teacher's colleges both in cities and in rural locales. Most of these structures were built using locally available wood, stone, brick, and glass construction materials. Railroads and ships brought in metal structural elements and fixtures. Architectural flourishes were crafted in Chesapeake Bay workshops or imported from elsewhere. Terra cotta tiles, stained glass, cut crystal windows, and intricately sawn timber fretwork were among the many embellishments popular during the period.

Domestic and community buildings, decor, and ground plans were generally tidy and ornate. Their well ordered style celebrated middle class values of comfort and respectability, which were the social ideal at the time for most people in the region. Wealthy women belonging to the Garden Club of Virginia, for example, began sponsoring the restoration of gardens and grounds of historic plantations, homes, churches, and mills during the 1920s. They and like-minded people thought that such projects both beautified the landscape and provided examples that helped instill immigrants and the poor with so-called American values. By adopting these values, the theory went, impoverished people would rise from poverty and immigrants would completely assimilate into American society. Not surprisingly, then, this middle class design sense also showed up in the hostels, soup kitchens, and settlement houses of relief organizations such as the Salvation Army; in facilities run by the Young Men's and Women's Christian and Hebrew Associations and similar community support groups; in social clubs catering to particular classes, professions, or ethnic groups; and in public institutions such as sanitariums, poor houses, hospitals, and penitentiaries.

☐ EXPRESSING CULTURAL VALUES

The middle class ethos also showed up in the architectural designs of the many buildings erected to house cultural institutions between 1880 and 1930. Stately monuments and imposing stone and brick museums and libraries, often endowed by wealthy philanthropists, shot up in the region's cities and in many of its larger county seats and towns. Big cities such as Baltimore, Washington, and Richmond supported conservatories, opera houses, art institutes, science organizations, zoological parks, and botanical gardens. Schools, colleges, and universities also mushroomed. The more successful of these soon moved from center city office buildings to suburban campuses on the edges of towns. The most elaborate campuses boasted suites of buildings in the same architectural style. These were often located on tastefully winding tree lined roads in park-like settings. As these suburban campuses drew businesses to their areas, many soon got swallowed up in just the sort of urban expansion they had tried to escape.

Popular culture also flourished in these decades. Saloons; dance, music, and vaudeville halls; gyms; ballfields; and

amusement parks went up everywhere. These were mostly housed in brick or wooden-framed structures, with styles ranging from utilitarian sturdiness to gaudily colorful flashiness. Burlesque halls, bordellos, and–during prohibition–speakeasies, catered to tastes that could not be openly acknowledged elsewhere.

Modernist movements emerged in artistic communities in Washington and other cities during the turn of the century. Their creators strove to break with past cultural traditions. They shared a rebellious spirit, wishing to undermine the high culture they associated with elitist class distinctions and Old World snobbery. Modernists tried to create a new, native born cultural vocabulary that all Americans could understand and appreciate. Their sense of design replaced ostentation, literalness, and Victorian clutter with simplicity, abstraction, and streamlined sleekness. Modernist cultural values found expression in art moderne and art deco skyscraper and commercial design; in streamlined locomotives, airplanes, and automobiles; in literature; and in the decorative arts.

Rural areas, by contrast, largely maintained more traditional cultural values. This was especially the case in southeastern Virginia and the Eastern Shore, where many homes continued to be built in traditional local styles, including the central-hall dogtrot layout and the modest bungalow format. Some of the more well-to-do rural families chose to live in standardized, prefabricated homes sold through mail order catalogs by new companies such as Sears and Roebuck. Manufacturing plants shipped these in pieces by rail, delivering them to construction sites. Commercial and public buildings in rural areas also tended to reflect more conventional cultural viewpoints and tastes.

☐ SHAPING THE POLITICAL LANDSCAPE

Political struggles between rich and poor, labor and management, white and black, progressives and reactionaries, and native and foreign born Americans shaped political aspects of the region's cultural landscape. People gathered in halls, town squares, fields, stadiums, and other public spaces to debate the issues of the day. Lawmakers voted for more and more funds for larger and more ornate halls of government. Courthouses, records halls, and prisons grew in size and grandeur as more and more police officers, lawyers, jurists, and clerks enforced laws enacted by federal, state, and local legislators. Today considered quaint and charming, the fortress-like appearance of many of these structures actually reflects the need at the time to protect law enforcement personnel from lynch mobs and possible attacks of anarchists and other political radicals.

Federal office buildings, courthouses, and other facilities rose in all cities and most county seats as people looked to the central government for solutions to political problems. Imposing castle-like armories surrounded by brick or stone walls were built to store munitions and train troops. They were also intended to serve as fortresses in the event of civil revolt. Wilderness lands and historically significant sites were set aside for national forests, wildlife refuges, parks, and monuments. Created in 1915, the United States Coast Guard maintained Chesapeake Bay lighthouses and policed the region's shipping lanes and fishing grounds. Also, for the first time in the nation's history, the government continued to maintain and build military bases, testing grounds, and munitions depots at a time when no war was in progress. Many of these facilities had been built during World War I, and most were considered necessary to maintain national security in an increasingly dangerous world.

☐ DEVELOPING THE CHESAPEAKE ECONOMY

Industrial mass production came to dominate most of the region's economy during this period. Manufacturing processes were usually centralized in large factory complexes near rail lines, waterways, or sources of raw materials

Figure 96: Aerial View of Ellicott Mills Looking North Toward Ellicott City, Maryland.
(Photograph courtesy of the National Park Service and the Library of Congress)

(see Figure 96). Workers and machinery were often housed in stout brick plant complexes. These were frequently surrounded by fences or walls of brick or stone. Massive smokestacks belched smoke into the air, and raw factory wastes flowed into the nearest rivers and streams.

Working long hours at low wages, factory workers tended to live in row houses, tenements, or small one or two family houses near work (see Figure 97). Supervisors and managers lived in larger middle class homes, usually on lands affording commanding views of factory complexes. Most factory owners favored high-style mansions on large, landscaped lots, for both their main dwellings and their country homes. Many of their main dwellings were built in more fashionable parts of town or in suburbs–far from the grime and filth pouring from their plants. Others had their great houses built close to their factories. In northern parts of the region, many officers of corporations owning factories and other companies competed with one another to build ever-taller and more ornate skyscrapers in city business districts.

Figure 97: Baltimore Row Houses, 1981: The 500 block of South Chapel Street in the Fells Point neighborhood.
(Photograph by Elaine Eff courtesy of the Painted Screen Society of Baltimore, inc.)

Banks, brokerages, insurance companies, specialty shops, professional office complexes, and department stores lined downtown boulevards. Vast rail and stockyards occupied expanses of open ground behind city terminals, while forests of ship's masts filled the skies along long lines of piers, shed-covered wharves, and warehouses stretched across urban waterfronts (see Figure 98). Ships and trains brought unprocessed bulk products such as wheat, sugar cane, corn, cattle, and petroleum to concrete and steel mills, refineries, and storage tanks on the outskirts of Chesapeake Bay cities. Short haul rail lines and trucks carried fresh farm produce to nearby cities and towns. Commercial fishermen and oystermen brought their catches to Bay canneries or local marketplaces.

Tourism and the entertainment industries boomed as large numbers of more affluent people looked for enjoyable ways to fill their leisure time. Communities and businesses throughout the region began using outdoor billboards, newspaper ads, and other new advertising techniques to draw cash carrying visitors

Figure 98: Oyster Fleet in Baltimore Harbor, ca. 1885.
(Photograph courtesy of the National Archives)

to local attractions. These included beaches, hotels, health resorts, spas, campgrounds, amusement parks, and recreation grounds.

☐ EXPANDING SCIENCE AND TECHNOLOGY

As noted, scientific and technological developments of this period made an imprint that continues to dominate the region's cultural landscape to the present day. In this era, technologies based mostly on muscle power, wood, sail, steam, coal, and iron gave way to a more modern set centered on petrochemicals, steel, and electromagnetic energy. The era also saw a shift from a wide range of locally available natural resources that could be used pretty much as they were to a much narrower range of imported substances that could be modified into a multitude of refined and synthetic products.

Johns Hopkins University and University of Maryland

Scientists working in research centers such as Baltimore's *Johns Hopkins University* and the campuses of the *University of Maryland* made major advances in medicine, chemistry, and engineering. Scientists at the agricultural extension stations of regional land grant colleges developed new ways of farming that improved yields and conserved soil and water. The first steam powered tractors appeared, along with new, more durable, and increasingly efficient types of metal corn cribs, barbed wire and chain link fences, and other agricultural innovations. Samuel Langley and other scientists in the region's many army camps and naval facilities made major contributions to aeronautical, nautical, and military engineering.

Regional artisans and mechanics also continued to refine their crafts and skills. Fishermen and shipwrights used the new materials and manufacturing techniques to improve vessel design and develop new types of tackle and gear. The growing popularity of sport fishing created markets that allowed Chesapeake Bay carvers to bring wooden decoy art to new heights. And because cheap, mass produced furnishings were easy available, more people came to appreciate the value of finely handcrafted items. Those who could afford them sought out handmade decorative merchandise, increasing demand and raising production levels.

☐ TRANSFORMING THE ENVIRONMENT

The new technologies emerging in this era gave people the ability to transform the region's environment in ways not thought possible by their ancestors. New machines and energy sources allowed people to move and manipulate unheard of volumes of goods and materials. Pumps and dredges drained wetlands to destroy habitats of mosquitoes and other disease carrying pests. Swamps and marshes also turned into municipal waste dumps or were filled to create new land for development. Even the earth gave way as men blasted rock with dynamite and moved it with steam shovels, bulldozers, barges, and trucks.

Monumental buildings supported by steel frames and clad in stone and brick masonry were constructed in dense urban cores along avenues whose dimensions had not been changed since city founders had first laid out their original street plans. These included city halls, office buildings, churches, rail terminals, train sheds, and department stores. Powerful Washington politician Mayor Alexander Shepard, motivated voters to approve expenditures aimed at clearing up some of the congestion clogging the city. He wanted to turn Washington into a place that reflected both the nation's power and the high cost of its real estate. Shepard narrowed and paved the city's wide boulevards, planted ornamental shade trees, cleared shanties and makeshift market stalls, and ordered railroads to meet city specified grade levels at street crossings. The city was also beautified by new elegantly landscaped parks, cemeteries, hospital grounds, and college campuses. Many of these were designed by such prominent designers as Calvert Vaux and Frederick Law Olmsted, Jr.

Other efforts to streamline urban development in the region soon followed. Congress passed the Highway Act of 1893, providing funds to begin linking cities and suburbs throughout the region with landscaped parkways. And Washington's central mall, park system, and monuments–along with the Beaux Arts architectural style of many of the edifices built in the early twentieth century–can be traced to the recommendations of the 1902 MacMillan Commission. Made up of a blue ribbon board that included Olmsted, architects Charles McKim and Daniel Burnham, and sculptor Augustus Saint-Gaudens, the commission's findings soon became a model adopted by other American cities, including Richmond and Baltimore.

A vast network of new roads, interurban rail lines, and, later, flying fields linked Chesapeake Bay cities with the countryside. Planned suburban developments, such as *Roland Park,* began to appear along the margins of developed urban areas (see Figure 99). Roland Park is a large-lot wooded residential preserve built by the Olmsted firm on the outskirts of Baltimore between 1891 and 1910. An elegant, upper middle class community of homes built in several popular styles, Roland Park gradually changed from a freestanding suburban community to a residential city neighborhood as Baltimore expanded around it in the 1920s.

In rural areas, farmers using new reapers, tractors, fertilizers, and insecticides changed their products. Many turned from large scale cultivation of tobacco, wheat, or corn to production of the more perishable fruits, vegetables, poultry, and dairy products demanded by urban and suburban consumers. Automobiles and trucks dominated the region's hinterland. Farmers drove produce to markets, fairs, and railheads; suburbanites navigated from home to work or school; and city folk took drives in the country. Continually improved, many of these roads have since become U.S. Routes and State Highways.

Figure 99: Shopping Center in suburban Roland Park, designed by the Olmsted firm between 1891 and 1910.
(Photograph courtesy of the Library of Congress)

☐ CHANGING ROLE OF THE CHESAPEAKE IN THE WORLD COMMUNITY

Roland Park, Maryland

Urban growth, technological change, and national involvement in world affairs created demands for imports and faster communications. In meeting these demands, the Chesapeake Bay region grew more firmly linked with the world community. As in earlier periods, wharves, warehouses, and the many hulks of maritime vessels that sank or settled to the bottom of Chesapeake Bay between 1880 and 1930 testify to its active maritime trade. This trade stimulated the development of deepwater harbors at Baltimore, Norfolk, and Newport News. Surviving skipjacks recall the Prohibition years at the end of this period, when ships smuggled contraband alcohol through those ports. Ever denser concentrations of army camps, naval facilities, and munitions plants in and around Washington, D.C. bear witness to the United States's growing ability to project power beyond its borders in foreign conflicts, such as the Spanish-American War and World War I. These military sites include the *Washington Navy Yard,* the *United States Marine Corps Barracks,* and Alexandria's *Torpedo Factory,* The hulk of the battleship *Ostfriesland,* surrendered by Germany following the

Washington Navy Yard, Washington, D.C.

United States Marine Corps Barracks and Torpedo Factory, Virginia

end of World War I and renamed the *San Marco*, further testifies to the rise of America as a global power. Resting at the bottom off Cape Henry, she was sunk by army bombers on July 21, 1922 under the command of air war pioneer Colonel William "Billy" Mitchell in a demonstration that conclusively showed that capital ships could be sunk by bombs dropped by airplanes.

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