

Natural Resource Protection—1904

By: Loring Bullard

In 2004, Missourians celebrated the bicentennial of an amazing feat of exploration launched from their doorsteps. Loaded with scientific equipment and trinkets for trading, Lewis and Clark headed west from St. Louis in 1804, following President Jefferson's directive to traverse and explore what had just become the country's largest ever real estate acquisition. Upon their return, these men described a wealth of natural resources just waiting for an eager new nation to claim—land, furs, forests and minerals that would fuel the economy, house the expanding population and, most importantly, fulfill the prophesy of manifest destiny.

The attitude that resources were there to find and exploit prevailed a hundred years later, when, in 1904, Missouri celebrated the Louisiana Purchase at the World's Fair in St. Louis. The intervening century had been marked by unabashed resource extraction and utilization, with little or no thought given to sustainability. Though the fair purported to highlight the inventive genius of man, it inadvertently emphasized his hunger to consume the planet's natural resources.

At the time of the fair, industrial, mechanical and electrical sciences were flourishing. Many of these cutting edge technologies were displayed in St. Louis for the world to admire. Myriad displays featured products, inventions and innovations of the entire world—food, livestock, minerals, machinery—even people from far away lands. Trains pulled over 20,000 carloads of domestic exhibits to St. Louis in the months preceding the Fair, while 30,000 workers put the finishing touches on the buildings and grounds. More than 20 million people attended the event, an average of over 100,000 per day.

St. Louis worked hard to improve its image for the arrival of the Fair. The city had just upgraded its public water supply, then, as now, drawn from the nearby Mississippi River. Fearful that murky water might spoil the visual effects of the fair's giant waterfall fountain (the "Cascades"), city workers installed a newly patented coagulation process to ensure water clarity. However, the city still did not filter its water supply and, like many communities at the time, suffered from recurring episodes of waterborne disease. In 1900, St. Louis health officials reported an average of 29 typhoid deaths per 100,000 people.

The Exposition Company, which ran the fair, chose to provide alternative drinking water for the event, hauling water in by the train car load from the artesian wells in De Soto, Missouri. Visitors were dispensed a cup of water by dropping a penny into a machine. Perhaps the provision of outside water reflected some concern with the safety of the public water supply and its surface source, the Mississippi River.

St. Louis and other cities fretted about healthy drinking water, but lacked the motivation to clean up local industrial and sewage pollution. A scientist with the United States Geological Survey complained about the agonizingly slow rise of an "effective public sentiment" against the pollution of rivers, lakes and harbors. St. Louis (like Kansas City) discharged its sewers directly into a large river, (albeit downstream of its drinking water intake), and (like Kansas City) had no significant wastewater treatment facilities until the second half of the twentieth century.

It seems that city dwellers worried more about the thick smoke hanging over their coal-burning neighborhoods than about water pollution. In St. Louis, word that the Fair was coming stimulated a major smoke abatement movement. However, this initiative had more to do with polishing the city's image than with concerns over public health. A New York Commissioner commented on efforts by that metropolis to stay out of the "notorious circle" of cities with smoky reputations.

Epitomizing the resource-consumptive nature of the era, the energy hungry World's Fair gobbled 500 tons of coal per day. Extracting this coal for energy and to fuel industrial expansion created its own set of problems. In January 1904, an explosion in a Pennsylvania coal mine entombed 150 miners, an all-too-common event in the days before safety regulations. Companies used only rudimentary methods to protect land, water and air from the detrimental effects of mining and ore processing. In April 1904, a reporter visiting a lead smelter noticed large cloth bags hanging from the ceiling. Particles in fumes diverted through this simple filtration system fell to the ground as a blue, sooty powder. However, the company reclaimed this material—80% lead—for its economic value, not as a means of preventing air pollution.

Exhibitors at the World's Fair displayed minerals, ores and mining equipment from around the country. A half-century after the famous California strikes, the nation had still not recovered from its gold fever. By 1904, interest centered in northern Idaho, where 37% of the nation's gold was being extracted. Mining of these placer deposits required dredging and washing huge volumes of river sediments and gravel, extensively scarring mountain valleys. Missouri also suffered mining damage, as spoils and tailings from open-pit coal mining and ore processing piled up at sites around the state. Yet, in spite of these obvious eyesores, few people grumbled about the resulting wastelands or demanded reclamation.

At the dawn of the 20th century, a host of degradations beset Missouri's streams. The World's Fair Committee paid workers to straighten and bury about a mile of the River des Peres, which meandered across the 1,300-acre fairgrounds. Some historians suggest that the stream was diverted underground at least partly to hide its embarrassingly polluted state and stench from fairgoers. Massive efforts to drain the swamps (wetlands, in today's terminology) of the Bootheel moved forward and a majority of politicians, with their limited understanding of hydrology, espoused the straightening of rivers for flood prevention. In March 1904, for example, Missouri and Kansas legislatures petitioned Congress for \$1.4 million to "improve" the Kansas River.

At the time of the World's Fair, water pollution had just begun to impinge upon the public consciousness. The passage of the Rivers and Harbors Act in 1899 made it illegal, for the first time, to dump garbage and refuse into U.S. waters without a permit from the Army Corps of Engineers (although this was intended primarily to prevent impediments to navigation). In 1900, high-profile water pollution concerns flowed into Missouri when Chicago, in an attempt to protect its Lake Michigan water supply, diverted its sewage into the Des Plaines River. This river fed into the Mississippi, from which St. Louis drew its drinking water, albeit hundreds of miles downstream. St. Louis sued the state of Illinois, but a judge eventually dismissed the case, ruling that the sewage had been adequately diluted and diminished by the time it reached Missouri.

Trash and garbage plagued urban areas throughout the nineteenth century. The World's Fair experimented with an alternative method of handling refuse. A newspaper reporter noted that the high tech garbage crematory at the fair would serve educational purposes, in that it could be "studied with profit by those municipalities who have wrestled with the vexed problem of how to dispose of a city's garbage." Some cities attempted to produce usable energy by burning wastes, but most of these facilities did not prove successful. Of 180 refuse furnaces installed between 1885 and 1908, 102 had been abandoned by 1909 due to excessive operational costs and complaints of noxious smoke.

In its building at the fair, Missouri proudly displayed some of its forest and aquatic resources, although some of them had reached a depleted, sorry state. Missouri's Grandin Mill, in its heyday the largest in the United States, devoured some 70 acres of Ozark pines each day. A Missouri Fish Commissioner lamented the depletion of the state's fishes, especially by "trammel netters and dynamiters," methods that were still legal at the time. In spite of its declining fisheries, Missouri exhibited some of the state's most unique species at the fair, including an "aquarium of blind fish taken from cave streams in the Ha Ha Tonka region" and "a monster Mississippi River catfish, as large as an average-sized man."

In the early 1900s, when exploitive industries began eyeing some of the nation's most pristine and beautiful lands, particularly in the west, a few prominent citizens took issue. One of them, Theodore Roosevelt, delivered the keynote address at the dedication of the World's Fair in St. Louis. A few years earlier, in his first message to Congress, he argued strenuously for water and forest conservation. Subsequently, inspired by a camping trip to Yosemite with John Muir, Roosevelt expanded the national forest system. He actually built upon the tentative conservation efforts of his assassinated predecessor, William McKinley (shot and killed at the World's Fair in Buffalo, New York). McKinley supported an early environmental measure by signing the Lacey Act in 1900, prohibiting the interstate shipment of animals protected by state law. This law applied primarily to commercial plume harvesters, who killed thousands of coastal birds like egrets and spoonbills for feathers to decorate fashionable women's hats.

Momentum for conservation began to increase. In 1905, Congress established the nation's first wildlife refuge near Wichita, Kansas and in Missouri, the Walmsley Fish and Game Law set up the state's first hunting licenses and banned the dynamiting of fish. These measures represented the first significant steps on a long journey leading to the sweeping environmental initiatives of the late 20th century. In the first decades of that century, more and more citizens would add their voices to the chorus calling for longer and wider views in the management of natural resources.

Missouri enjoyed a banner year in 1904, basking in the international spotlight. The Louisiana Purchase Exposition and World's Fair showcased the progressive and creative talents of man; but it also portrayed, if inadvertently, his relentless exploitation of natural resources. Nonetheless, a gentle but persistent undercurrent of conservation, not readily evident during the Fair, had already taken hold. From our vantage point in the twenty-first century, we can clearly see the environmental gains we have made since 1904. But while we celebrate our successes, we must not allow ourselves to become complacent. Rather, remembering how far we have come should inspire us to sustain our vigilance, and increase our resolve to protect our remaining, and therefore even more precious, natural resources.

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