emissions by all new vehicles sold in the state beginning with the model-year 2009. The new law—the first of its kind in the nation—mandated a lowering of global-warming pollutants from passenger cars by nearly 30 percent by 2016. Environmentalists were further encouraged by Governor Arnold Schwarzenegger's commitment to the issue. Unlike many in the Bush administration who questioned whether human-generated pollution contributed to global warming, the governor made his position clear: "I say the debate is over. We know the science, we see the threat, and we know the time for action is now." Schwarzenegger signed an executive order calling for further emissions reductions and supported the accelerated development of *fuel-cell vehicles,* non-polluting vehicles powered by hydrogen-fueled electric motors. He also appointed a leading fuel-cell advocate to head the state's Environmental Protection Agency (EPA) and advocated the creation of the nation's first "hydrogen highways" by placing hydro-fueling stations along the state's major freeways.

California's leadership in combating global warming was recognition that the state was particularly vulnerable to its effects. Climatologists predicted that by 2070 the state could experience a significant increase in heat-related deaths, disrupted ecosystems, water supply chaos, and the inundation of coastal areas. "Many of the places we know and love in California are vulnerable to a changing climate," warned a biologist at Stanford University. "A variety of changes are coming, and many will have profound ecological and economic consequences."

Water Resources

The long-standing controversy over the use and distribution of the state's water resources was renewed in the late 1970s as the legislature considered authorization of the Peripheral Canal, a 43-mile-long channel around the periphery of San Francisco Bay that would connect the Sacramento River directly with the existing California Aqueduct. By being drawn from the Sacramento, rather than from the southern end of the Sacramento–San Joaquin River Delta, the annual supply of water delivered by the aqueduct to southern California could be increased by at least 700,000 acre-feet.

Support for the Peripheral Canal was virtually unanimous throughout southern California. Opposition to the canal was led by environmental groups and others in northern California who believed that the massive diversion of freshwater supplies from the delta would harm San Francisco Bay and delta water quality. The issue was a matter of grave concern because the delta supplied two-thirds of the state's drinking water. One Bay Area assembly member warned: "Please, southerners, don't think you can rob our water and destroy our ecosystem, because there will be a civil war in this state if you do. The aqueduct will be blown up. National Guardsmen will be shot." In 1980 the legislature passed a bill authorizing construction of the canal, but a coalition of environmentalists and northern California public officials drafted a referendum to block its construction. When the referendum appeared on the ballot, in June 1982, the canal was rejected statewide by a vote of 62 percent.

An important step toward resolving the decades-long controversy between northern and southern California water interests was taken in 1992 when Congress approved a new policy of cooperation between federal and state water agencies. The

federal government promised to use the huge resources of its Central Valley Project (CVP) to protect the water quality of the delta and San Francisco Bay. Under terms of the Central Valley Project Improvement Act, the first basic reshaping of the CVP since its creation in 1935, about a tenth of the CVP's water was reallocated to protect fisheries and endangered habitats. The act also permitted transfers of project water anywhere in the state, allowing rural water districts to sell a portion of their allocations to the cities.

By the early 2000s, the water quality of the Sacramento–San Joaquin River Delta—in spite of important legislative reforms—had deteriorated to the lowest level in more than two decades. The delta was suffocating from the continued drainage of agricultural wastewater, saltwater intrusion, and freshwater diversions. "The overarching impression," said the head of the state's Resources Agency, "is of an ecosystem in decline." State and federal agencies, water users, and environmentalists formed a coalition known as CalFed to address (once again) the issue of delta water quality. In 2000 the coalition announced a bold new plan to meet the state's growing water needs while restoring the delta after decades of degradation. The plan called for the largest habitat and ecosystem restoration in the nation's history. Unfortunately, the plan was jeopardized by the Bush administration's approval of increased water diversions to agribusiness interests and the consequent accelerated deterioration of fisheries and wildlife habitats. "What we've seen is a change in the administration at the federal level," commented the executive director of a commercial fishing group. "It goes counter to what CalFed was constituted to do."

Meanwhile, other battles over the state's water resources continued. A campaign to save Mono Lake pitted the National Audubon Society and a host of environmental groups against the city of Los Angeles. Described by Mark Twain as "one of the strangest freaks of nature to be found in any land," Mono Lake was the primary breeding ground for 90 percent of the California gull population and an important stopover for millions of migratory birds. Since the early 1940s, Los Angeles had been tapping the streams flowing into Mono Lake, causing its water level to drop by more than 40 vertical feet and its surface area to diminish by one-third. As the lake shrank, its chemical content changed drastically, thus reducing the supply of brine shrimp necessary for the survival of the nesting gulls and their chicks. A University of California biologist reported in 1982 that only 5000 California gulls were hatched at Mono Lake that year, compared with more than 35,000 just 4 years earlier. In 1983 environmentalists scored a major victory when the state supreme court ruled that water could not be taken from a lake or other natural source without consideration of the possible harm to the source itself. Eleven years later the state's Water Resources Control Board ordered the Los Angeles Department of Water and Power (LADWP) to restore waterfowl habitats lost due to the decline of the lake's water level. It also restricted further water exports from the basin until the lake had stabilized at about 25 feet below its pre-diversion level.

Water experts in the early 2000s warned that California faced a new era of "permanent drought" because its demand for water was rapidly outstripping the supply. By 2010, unless the state reduced its overall demand or reallocated its available supply, water shortages would occur 9 years out of 10. The state Department of Water Resources estimated that by 2020 California could experience a water shortfall equivalent to the combined needs of all the residents of Los Angeles and San Diego.