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Winfield Q. Cannon
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Dear Winfield:

Enclosed is a preliminary copy of the paper on your father that I plan to deliver at the annual meeting of the Mormon History Association in Kingston, Ontario, Canada next month. Naturally, I would appreciate any comments that you might have on the paper. If I have made mistakes I would certainly like to correct them before I submit the paper for publication. Since your brother has an interest in this topic, you may want to share it with him. I would appreciate any comments that he might have as well.

Again, thanks for your help.

Sincerely,

Thomas G. Alexander

Sylvester Q. Cannon and the Revival of Environmental Consciousness in the Mormon Community

by Thomas G. Alexander[1]

Although Mormondom's founding Prophet, Joseph Smith, and his successor, Brigham Young, had taught an environmentally conscious theology based on the proposition that human beings bore an unshirkable responsibility to care for God's creations, by the late nineteenth century Latter-day Saints in Utah had largely forgotten these teachings. Smith's environmental theology began with the doctrine that humans, animals, plants, and the earth itself were all living beings with redeemable eternal souls.[1] Compromises with Euro-American culture and a rush for economic development during the late nineteenth century had largely submerged environmentally salutary doctrines. By relegating such matters to the temporal or secular realm apart from priesthood direction, Church leaders left members free

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[1]Thomas G. Alexander is Lemuel Hardison Redd, Jr. Professor of Western American History at Brigham Young University. I appreciate the work of Sharon S. Carver, David R. Hall, and Harvard S. Heath in research on this paper. I also appreciate the help of Winfield Q. Cannon, a son of Sylvester Q. Cannon, and the generous contribution of his time and information on his father. Funding for this study has come from the Brigham Young University College of Family, Home, and Social Sciences; from the Charles Redd Center for Western Studies; and from support funds for the Redd Chair.

to pursue their own economic interests. Many interpreted such freedom as a license to savage the physical environment in the quest for riches.[2]

Shortly after the turn of the twentieth century, however, a number of Latter-day Saints in cooperation with Protestants, Catholics, Jews, and others in Utah and elsewhere began to recognize the damage that unregulated abuse of the physical environment had caused. Motivated in part by Mormon theology and practice and in part by the progressive conservation movement, these people tried to change practices that had degraded the physical environment and to repair such damage as lay within their conceptual and technological capability.[3] Among the Latter-day Saints who troubled themselves with environmental problems were LDS Church President Joseph F. Smith and Utah Senator Reed Smoot, who was also a member of the Quorum of the Twelve Apostles.[4]

Among those who played a central role in the revival of this environmental consciousness was Salt Lake City native and prominent Latter-day Saint leader, Sylvester Q. Cannon. Born in 1877 to Elizabeth Hoagland and George Q. Cannon, Sylvester earned a bachelor's degree in mining engineering from Massachusetts Institute of Technology in 1899. After serving as an LDS missionary in Belgium the same year, he filled two terms as president of the Netherlands-Belgium Mission (1900-1902 and 1907-1909). Between 1902 and 1905 he worked as a mining engineer, principally on Cannon family properties. Between 1905 and 1907 Cannon supervised hydrographic and irrigation surveys of the Weber River system for the Utah state engineer's office. After returning from Holland in 1909 he resumed the practice of hydraulic and irrigation engineering. Following service in 1912 and early 1913 as Salt Lake City's water supply engineer, he was hired as city engineer in April

1913. He continued to work as city engineer until August 1925 when he accepted a call as Presiding Bishop of the LDS Church. In the meantime, following service as a member of the Pioneer Stake Presidency, in 1917 the Church called him as president of the stake which vested him with ecclesiastical responsibility for a several thousand Mormons in the western portion of Salt Lake City's downtown area. In April 1938, President Heber J. Grant called him as an assistant to the Quorum of the Twelve Apostles. He served in that capacity until his call to the Quorum of the Twelve in October 1939. He continued to function as an apostle until his death in May 1943.[5]

Even after his call as Presiding Bishop, Cannon continued to work for solutions to environmental problems. He continued to serve on the Salt Lake City Planning Commission until January 1926. Between 1927 and 1929 he functioned as chair of the Salt Lake Chamber of Commerce's Smokeless City Committee. In that capacity he labored with representatives of women's, professional, and service organizations, with other concerned citizens, with the city commission, and with the city engineer to try to reduce air pollution. After the creation of the Salt Lake City Board of Adjustments on May 26, 1927, he served on the board until April 23, 1929, when he resigned perhaps because of the press of his duties as Presiding Bishop.[6] From September 1930 to February 1931 while serving as Presiding Bishop he chaired the Special State Flood Commission appointed by Governor George H. Dern to determine the causes and recommend solutions for the serious summer flooding along the Wasatch Front and in Sanpete County.[7]

Cannon brought to the position of city engineer a background as the scion of one of Utah's first families, as a life-long resident of Salt Lake City, and as an engineer with a

degree from one of the premier technical institutions in the nation. One of George Q. Cannon's youngest children, Sylvester lost his mother in 1882 when he was only five years old. After Elizabeth's death, the young boy lived with his father's other families and with his oldest sister, probably at the Cannon farm in southwestern Salt Lake City.[8] He possessed a calm and virtually unflappable disposition, a strong sense of the importance of regulating private interests to promote an orderly and pleasant urban environment, and feeling for the need to develop of urban services and utilities to meet the residents' needs.[9]

It is important, however, to locate Cannon's views in his own time. He was a utilitarian conservationist, and modern environmentalists would probably not consider him a kindred spirit. Cannon helped to plan and design improvements to supply urban residents with water, to protect their watershed, to carry away their sewage, to provide efficient urban transportation, to rid the city of smoke pollution, and to regulate the siting of business, industrial, and residential districts to minimize conflicts between various urban uses. In the words of his son Winfield: "his responsibilities to plan for water storage to serve the development of Salt Lake City put him at odds with those who object[ed] to dams, aqueducts and pipelines."[10] Nevertheless, "his shift from the mining industry to water conservation, air quality improvement and proper urban development could have been influenced by his basic interest in protecting the environment while still using its natural resources for public benefit."[11]

While he sought to construct a pleasant and functional urban environment, he also cherished wilderness and other out-of-door experiences for himself and his family. Sylvester and his wife Winnifred Saville Cannon took the family on "frequent short family outings into

nearby Canyons," longer trips into the "Heber Valley or to the upper reaches of the Weber and Ogden Rivers," and extended excursions to Yellowstone, Grand Canyon, Zions Canyon, and Bryce Canyon National Parks and to wilderness and rural areas of southern Utah. During these outings the family camped out with tent and bed roll. Cannon taught his children to ride horses and to hunt game birds and to fish. He especially excelled in the fine art of fly fishing. In the words of one son, "He seemed to feel it was important this the family get out and see untouched areas."[12]

Although Cannon grew up on his father's farm, he came into Salt Lake City's official scene after the urban area had lost most of its agricultural character. Still, Salt Lake City retained the large lots and wide streets that stamped it as a garden plot city. Moreover, most of Salt Lake County's heavy industry, especially the mills and smelters had located south of Salt Lake City in cities such as Sandy, Midvale, and Murray and in western Salt Lake Valley at the foot of the Oquirrh Mountains.

In 1916 during Cannon's tenure as city engineer a survey of United States and Canadian cities with more than 100,000 residents revealed some of Salt Lake's unique features and some it shared with other large cities.[13] Of all the large cities in the United States and Canada, Salt Lake City had the smallest industrial and business districts. Only 1 percent of the city was devoted to each. At the same time, Salt Lake City had slightly smaller than average residential and farming districts at 49 percent and 18 percent (compared with an average of 60 percent and 20 percent for other large cities). Salt Lake City also had a much larger area of undeveloped land at 31 percent than the 20 percent average of other large cities. All of Salt Lake City's undeveloped land lay in a protected watershed east of the

city.

The survey also revealed that Salt Lake City had undergone a remarkable transformation since 1890. In 1890, although the city had an extensive streetcar system, it had few paved streets, virtually no protected water system, and no sewer system. In the next two and a half decades and particularly after 1906, owing largely to the prodding of voluntary organizations of women and men, the city experienced a remarkable transformation as workers constructed such utilities for the citizens.[14]

The transformation seems astounding. By 1916 with 2.7 miles of water pipes per 1,000 residents, Salt Lake City stood in fourth place among large American and Canadian cities and far above the average of 1.72 miles per 1,000. With 2.56 miles of sewer pipes per 1,000 people, Salt Lake ranked in third place among large cities as compared with an average of 1.4 miles per 1,000. Salt Lake City had the second longest mileage of street car tracks at 1.1 miles per thousand, compared with an average of .67 miles in large cities. Salt Lake ranked fourth in street mileage per 1,000 at 4.5, compared with a national average of 2.17.

Nevertheless, in 1916 Salt Lake City ranked near the bottom in certain amenities, especially in park land. At 1.27 acres per 1,000 the city ranked below the average of 4.84, though it was not among the lowest five. With only .47 percent of its area in parks, the city ranked fourth lowest, and much lower than 4.87 percent which the average large city boasted. Salt Lake had only 15 acres in playgrounds, but the basis for the reports from the cities varied so radically much that the compiler could make no comparative statement on such facilities.

Moreover, by the early twentieth century, Salt Lake City's polluted air had

transformed it into a dirty sink hole. This resulted in part from smoke drifting in from the smelters; in part from local transportation, industry, and commerce; and in part from residential heating with coal and wood. Each year the air pollution necessitated a ritual of spring cleaning. Families washed soot-encrusted walls and windows, and they took down all the curtains and drapes and gave them a thorough laundering.[15]

Cannon's life in Salt Lake City spanned the years in which American cities first began to formulate general plans to make the cities into beautiful and functional places for their citizens. In the nineteenth century, in Salt Lake City as elsewhere in the United States--and in contrast to European cities--public officials planned city development piecemeal largely in response to the private concerns of developers and of citizens with powerful connections. In major metropolitan areas, landscape architects, architects, and planners like Pierre L'Enfant, Alexander Jackson Davis, Andrew Jackson Downing, Frederick Law Olmsted, Calvert Vaux, Horace W. S. Cleveland, Charles Eliot, and Daniel Burnham planned parks and boulevards, they paid little attention to the siting of buildings. Planners like Olmsted and Vaux promoted pleasant residential surroundings to improve the lives of business and professional people.[16]

There were some exceptions. Burnham proposed a metropolitan design for Chicago and designed the White City for the 1893 Columbian Exposition.

Americans harbored a love-hate relationship with the city. From the 1890s to the 1920s Americans became increasingly apprehensive about their fate in what seemed clearly an urban future. Whatever else Frederick Jackson Turner's 1893 essay on the significance of the frontier meant, it represented a sense of nostalgia about a past that observers thought had disappeared and a sense of foreboding about an uncertain future in a nation without a

frontier, with declining farming population, and with burgeoning cities.

In what M. Christine Boyer has called "The Rupture of a Rural Order," Americans hung suspended between, on the one hand, the fear that the passing of the frontier-rural past had robbed them of the source of their virtue, and, on the other, an urban-industrial future in which they descried the uncertain prospects of unrivaled prosperity, moral degradation, or both.[17] Observers recognized that no one could recapture the frontier and rural world America had lost in the cosmos of urbanization. Nevertheless, some believed that through careful planning citizens could make their cities into beautiful places in which Americans could live comfortably, carry on their businesses, and raise their families.

Such a future, most believed, depended upon a degree of regulation and planning that Americans had seemed unwilling to tolerate until the twentieth century. Some cities led the way into that future. Hartford, Connecticut established the first city planning commission in 1907.[18] Still, until New York City and Berkeley, California adopted zoning plans in 1916, city administrations seemed unwilling to impose comprehensive regulation of property owners and landlords.[19] Nevertheless, in little more than a decade after New York City and Berkeley broke the ice, most large American cities--Salt Lake City included-- adopted comprehensive zoning designed to regulate urban land uses and building sizes and heights and to segregate various functions into districts to prevent the mutual encroachment of residential, commercial, and industrial activities.

From the late nineteenth century through the first two decades of the twentieth, urban planning passed through two phases. The first of these--the City Beautiful Movement--captivated people in certain cities with the idea that by planning and building parks,

boulevards, and playgrounds city administrations could remake urban space into something like the countryside and at the same time enhance the value of residential property especially for the upper middle and upper classes.

The clearly elite vision of the City Beautiful drove a wedge between its advocates and democratic partisans who expected the city to become a pleasant place for the lower middle and lower classes as well. These people came to champion the City Practical Movement. The organization of the National Conference on City Planning in 1909 opened a fault line between the City Beautiful and the City Practical. Housing reform advocates like New York's Benjamin C. Marsh and architects like Cass Gilbert used the planning conferences and the conventions of the American Institute of Architects to flay the City Beautiful Movement as elitist and incomplete and to promote the City Practical as a vehicle to offer function and beauty to all residents of the city. City Practical converts believed in the words of New York City landscape architect Robert A. Pope, that "City planning for social and economic ends will logically result in a genuinely and completely beautiful city."[20]

A number of advocates of the City Beautiful Movement like Charles Mulford Robinson of the University of Illinois; landscape architect George E. Kessler of St. Louis; J. Horace McFarland, who designed boulevards and parks in Harrisburg, Pennsylvania; and especially Daniel Burnham who proposed a comprehensive regional plan for Chicago, tried to bridge the chasm between the two movements. Like Pope, they believed that cities could achieve both aesthetic and practical objectives. These people argued that through comprehensive planning and zoning and by constructing playgrounds, parks, and boulevards as while providing water supplies, sewers, functional public transportation, efficient street

systems, and pleasantly located housing, cities could become both beautiful and functional.[21]

Under the prodding of a number of local improvement organizations, Salt Lake City embraced the City Beautiful Movement during the first decade and a half of the twentieth century. Proponents of the City Beautiful included the Civic Improvement League, organized in March 1906; a number of similar associations in various quarters of the city; and special interest groups like the Parks and Playgrounds Association which a group of men and women organized in December 1909. In each of these organizations, women and men representing clubs, service organizations, and the Chamber of Commerce prodded the city to construct the parks, playgrounds, and boulevards to create the City Beautiful as well as practical utilities such as water systems, sewers, and residential streets.[22]

Following the lead of Hartford and other cities, in November 1913, the Salt Lake City Commission organized the Civic Planning and Art Commission. The city's mayor served as chair of the commission which consisted of prominent citizens, representatives of womens organizations, members of the Chamber of Commerce, business people, artists, and architects. Until the reorganization of the commission in 1918 when it began to draft a zoning ordinance, J. Leo Fairbanks, who served as executive secretary, exerted the decisive influence on the commission's agenda.

Fairbanks's vision coincided with that of the City Beautiful Movement. A distinguished artist, Fairbanks conceived the commission as an advisory body which could use planning to create "a healthful, efficient and beautiful city; to work out a general plan; to seek to have all material changes conform to that plan; to minimize ugliness, and give just cause for city pride."[23] In line with the City Beautiful emphasis Fairbanks seems to have

favored the policy which confined coercive planning to city property, and he expected to use moral suasion and publicity to induce private property owners to conform to the general plan.[24]

Ultimately the failure of the expectation of creating the City Beautiful through voluntarism led in Salt Lake City as elsewhere to an amalgamation with the City Practical. Given enough interested citizens willing to pay taxes, the city could easily build beautiful places on its own property, but if private owners did not cooperate in civic beautification and building siting, without the coercive power of law, urban neighborhoods could quickly become blighted through the proliferation of factories and commercial establishments and through the hasty erection of multifamily housing, or worse, their deterioration.[25] Beginning in 1912, the Salt Lake City government in cooperation with women's and men's service organizations and the public schools probed the limits of the City Beautiful Movement by promoting voluntary cleanup programs as a means of securing the cooperation of private landowners with the city's efforts to create a pleasant and beautiful urban place.[26] These programs worked to some degree, but such cleanup campaigns could not prevent the construction of offensive and inferior structures or the onslaught of urban disorder and blight.

In order to solve such problems the people of Salt Lake City followed in the pattern set by other urban areas. To impose order and create beauty, American cities turned to a program of zoning which originated in its modern form in Germany. A concept promoted by the City Practical rather than the City Beautiful, zoning sought to reconcile the private ownership of property with the social need to promote efficient and economical land use and to protect both the monetary and aesthetic value of residential, commercial, and industrial

property.[27] By establishing zones and defining the size, types, and functions of structures allowed in various parts of the city, urban planners expected to fill the gaps left open by the civic beauty-voluntary cooperation emphasis of the City Beautiful Movement.

The effort to begin zoning in Salt Lake City started in 1917, and it consisted of four phases. First, since Salt Lake City did not have the technical capability to plan a zoning system for the entire city at once, it began to zone districts considered particularly vulnerable to the encroachment of incompatible uses. Second, in order to provide informed expertise on zoning and planning, the city hired an outside consultant. Third, the city broadened the functions of the planning commission. Fourth, the city administration and the planning commission turned to the city engineer to provide the technical expertise and experience to draft plans for comprehensive zones and to suggest solutions for immediately serious problems.

Given the complexity of the city and the lack of reliable information the city commission passed some stopgap zoning ordinances to deal with what citizens perceived as particularly serious problems. In each case, the ordinances sought to prevent the encroachment of offensive manufacturing and commercial establishments into residential areas. They were drafted under Mayor W. Mont Ferry and his successor C. Clarence Neslen. Passed in June 1917, the first zoning ordinance designated a residential district between 2nd and 17th South and 7th West and the Jordan River. The district excluded manufacturing and such incompatible commerce as butcher shops, though it allowed those businesses already operating to remain.[28] The second law passed in 1923 zoned the area between 2nd and 8th West and 8th and 13th South as a residential district, again to prevent

the encroachment of industry.[29] Significantly, both of these special zones were partly within the boundaries of the LDS stake over which Cannon presided.

The city administration carried out the second and third phases currently. The reorganization of the Planning Commission in 1918 coincided with a visit of George E. Kessler of St Louis who served as a consultant on urban planning. Kessler had studied and worked in Europe before returning to the United States to design parks and boulevards for New York City, Kansas City, Denver, and Dallas. Formerly a City Beautiful advocate who had moved with many of his colleagues to champion an amalgamation of the City Beautiful and City Practical, Kessler visited Salt Lake City during the week of December 15, 1917 and again in May 1918. The city administration had hoped to continue to retain Kessler's services, but a decline in tax revenues caused by the post-war depression which began in 1919 led to a decision not to bring him back.[30]

After 1917, the city revised its planning commission ordinance at least twice. On April 8, 1918, after Neslen became mayor, the city passed a revised ordinance that more fully integrated the planning commission with the city commission by making each member of the city commission ex officio a member of the planning commission when it considered matters under their jurisdiction.[31] In May 1927, the city passed a new ordinance to conform to a 1925 state law by revamping the planning commission ordinance and creating a zoning commission.[32]

After the 1918 reorganization, the planning commission organized a zoning committee which undertook the enormously complex and politically charged responsibility of drafting an ordinance for consideration by the city commission. Since elected officials and

members of the planning commission lacked accurate information on residential and business patterns and they could not afford to hire a consultant like Kessler, they turned to the city engineer for technical information and for advice.[33] As historian David C. Hammack has suggested, although nationally famous architects, landscape architects, and planners have received most of the historical acclaim for both the City Beautiful and City Practical Movements, in most cities anonymous engineers had a greater overall influence.[34]

The experience of Salt Lake City between 1913 and 1925 under city engineer Sylvester Q. Cannon substantiates Hammack's generalization for Utah's capital city. In contrast with many cities, however, in Salt Lake City--indeed in Utah--Cannon was anything but anonymous. As a stake president in Mormondom's capital city, Cannon had enormous visibility especially in a time when most Mormons lived in Utah and when the LDS Church had no First or Second Quorum of Seventies who served as general authorities, no area presidencies, and no regional representatives. Moreover, Cannon was born into one of Utah's most prominent families and he served as a visible and influential member of the Chamber of Commerce.

After the designation of Salt Lake City's first residential zone in 1917, Cannon found himself caught in a hectic race to provide the advice and information that the city needed to designate residential, commercial, and industrial zones. At the same time he had to furnish the other engineering services demanded by the city including those required in the intensive campaign to control air pollution. Although Cannon's degree in engineering, his familiarity with his home city, his experience in hydraulic engineering, and his experience in providing engineering and planning services for Salt Lake City had given him some of the background

necessary to provide help with zoning, he had never actually worked on the formulation of a zoning system. To acquire the information he needed, as early as 1917 he began to contact specialists outside the city. He wrote to the editors of professional journals like American City and to cities that had previously undertaken comprehensive planning and zoning like Chicago.[35] In 1920, he joined the National Conference on City Planning which gained information on current theory and on the practices in other American and European cities.[36] In 1922 he turned to the United States Commerce Department, which under Secretary Herbert Hoover began to draft model zoning regulations.[37] With such information, Cannon began to build a fund of knowledge he adapted to Salt Lake City's needs. By 1925, Cannon had achieved a sufficient national reputation that the secretary-treasurer of city planning division of the American Society of Civil Engineers invited him to participate in their professional conference by commenting on a paper on industrial districts written by a nationally recognized engineer.[38]

By April 1919, the planning commission's zoning committee had begun to call on Cannon for the technical information and maps necessary to develop the stopgap zoning measures with a view to eventually drafting a comprehensive plan. The first request came from Mayor Neslen who requested that Cannon provide a large map covering the district between West Temple and 8th west extending north and south through the entire city.[39]

Cannon and other city officials were extremely disappointed when the 1923 legislature killed a bill introduced by Senator Harrison E. Jenkins of Salt Lake County that would have granted the city comprehensive authority to designate zoning districts. Ironically, Representative Quayle Cannon of Davis County, a cousin of Sylvester's, made the motion to

strike the bill's enacting clause.[40] After strenuous lobbying, the 1925 legislature passed a bill that authorized comprehensive zoning. Introduced by Salt Lake City Representative N. J. Hanson, a member of the city's planning commission, the bill was probably drafted by Salt Lake City Attorney William Folland.[41]

In spite the failure of the 1923 bill, Cannon opposed the spot zoning in which the city had engaged and he urged the city to proceed with the drafting of a "general" zoning ordinance anyway. He believed that the city did not need the legislature's approval to pass such an ordinance, and he cited in support of his position a Utah State Supreme Court decision that upheld the right of the city to prohibit factories in one of the temporary zones the Salt Lake City Commission had designated. In that case businessmen had already begun the construction of a factory before the passage of the ordinance, but they had not actually begun running the facility and the supreme court upheld the authority of the city to force its closure.[42]

In Cannon's view, a comprehensive zoning ordinance would impose order on a landscape that would otherwise become increasingly more chaotic and uncertain. If each function, residential, commercial, and industrial did not remain in its proper place, he wrote, "the values of residence property and of property that properly should be industrial become very uncertain."[43]

Since Cannon was a city appointee rather than an elected official he could recommend, but he could not make such decisions. Even his close relationship with Mayor Neslen whose wife Grace Cannon Neslen was Sylvester's half sister did not influence the city commission to adopt his views. At times Cannon became disturbed by the conflicts between

his views and those of elected officials, but as a professional in service to the city and as a man with an extraordinary ability to control his personal feelings he followed the direction of the mayor and commission. In practice, the city commission allowed him the greatest latitude possible in planning for such zoning, but they would not risk enacting a comprehensive ordinance without legislative authorization.[44]

Moreover, as a proponent of the amalgamated City Beautiful and City Practical movements, Cannon believed that the city must adopt comprehensive plans for its major streets, eliminate railroad grade crossings, mandate the compulsory filing of subdivision plats, and protect its park space. Beyond that, Cannon held views similar to those of Daniel Burnham who devised a regional plan for the Chicago area. Cannon believed that instead of simply confining itself to planning within the city boundaries, the city must engage in regional planning for the whole of Salt Lake County. In his view the planning of "streets, boulevards and other thoroughfares. . . . [and] for more parks and playgrounds . . . as conditions will justify and will make of our towns and cities something more than mere blocks of houses, businesses and industrial structures." Such planning was needed, he said to protect "future occupants of all such buildings and . . . to advance the health, welfare and safety of the residents."[45]

Until 1924, although Cannon had served as principal consultant to the planning commission but he was not actually a member. On March 28, however, he was appointed to a two year term on the commission.[46]

Cannon did not remain as city engineer long enough to see the fruition of his efforts to bring about comprehensive zoning and planning. The city adopted a comprehensive zoning

ordinance in 1927, just short of two years after Cannon left to become LDS Presiding Bishop. Moreover, although the city adopted his ideas about comprehensive planning within its borders, those of his persuasion were never able to convince the county to inaugurate comprehensive planning for the entire region. As a result, much of Salt Lake County suffers today from the often chaotic and incompatible plans drafted by the county, by individual cities, and by subdividers.

While he worked on plans for zoning, Cannon also devoted a great deal of time to try to solve environmental problems and to try to improve some of the city's park land. His role in the efforts of Salt Lake City to eliminate air pollution has been detailed elsewhere.[47] Like his predecessors and successors he also became heavily involved in trying to prevent damage to City Creek Canyon part of which the city had previously leased as a gravel pit.[48] As president of the Pioneer Stake, he took a special interest in the beautification of Pioneer Park which lay within the boundaries of his stake and which his members used. In the words of his son, the Pioneer Stake "took the responsibility for keeping the park clean and managing it as a picnic area. The park was quite small, but [Cannon] . . . and others were concerned that it be a place where children could play."[49]

After he became LDS Presiding Bishop his concern about environmental problems such as planning, smoke pollution, and environmental damage did not subside. Perhaps the service with the most wide-ranging environmental implications that Cannon performed took place during 1930 and 1931 when he chaired a special commission appointed by Governor Dern to investigate the causes of recurring summertime rock-mud floods in 1930 in Davis County and since 1888 other parts of the state. Such floods had descended first from the

high plateaus east of Sanpete Valley and had devastated cities and farms there and in various communities along the Wasatch Front from Box Elder to Utah Counties.[50]

Some Mormon leaders like Orson Hyde had warned against the damage overgrazing had caused to ground cover in the valleys and U. S. Forest Service officials had reported on the denudation of mountain watersheds. Nevertheless, the conventional wisdom at the time preached by geologists at the University of Utah like Frederick F. Hintze, officials of the United States Geological Survey like Ralph R. Woolley, and Weather Service officers like J. Cecil Alter held that such erosion and environmental damage resulted from Utah's underlying geological conditions rather than watershed damage from such causes as overgrazing by cattle and sheep.[51]

Cannon brought to the investigation experience as a hydrographic engineer and practice in protecting and rehabilitating the watersheds from which Salt Lake City obtained his culinary water supply. The committee report which he apparently authored reveals that expertise in addition to the contributions of other committee members.

The report rejected the arguments for topographical and geological causation and argued for human initiation of damage. Cannon conceded that the watersheds had been subjected to "Uncommonly heavy rainfall," and that "steep topography and geological conditions conducive to sudden run-off" had contributed to the flooding. Nevertheless, he placed the principal blame on "Scant vegetation on portions of the watersheds . . . due in some cases to natural barrenness, . . . but in many cases such as those in Davis County, to the depletion of the natural plant growth, by overgrazing, by fire and to a small extent by over-cutting of timber."[52] "In general," Cannon continued, "other things being equal, the

degree of surface runoff from heavy rainfall varied roughly with the sparsity of the plant cover on the slopes of the watersheds."[53]

This proved particularly true on the watersheds east of Davis County towns "where natural conditions are favorable for a fairly heavy stand of vegetation, [but] which had been heavily depleted or denuded . . . on critical areas." While maximum plant cover might not "prevent floods from the most extreme rainfalls. There is, however," the report continued, "ample evidence to show that had there been a mantle of vegetation practically equal to the original natural cover on the watersheds of Davis County, all of the serious flooding from the rains of 1930 would have been greatly diminished if not entirely prevented." Moreover, instead of supporting the views of geologists and weathermen, the geologic evidence substantiated Cannon's conclusion. As Cannon's report indicated, "The texture, structure and form of these deposits at the mouths of the canyons show that the floods of 1923 and 1930 in Davis County mark a distinct increase from the normal rate of erosion and deposition of the thousands of years since Lake Bonneville receded to the present level of Great Salt Lake."[54]

Cannon and his committee continued with recommendations for correcting these problems. First the committee proposed the eliminating of grazing on such watersheds for a period of years, protection against fire, and other measures to "promote revegetation." Second, the report suggested the erection of "control works at the mouths of the canyons commensurate with the property values involved." Third, as an overall program, the committee recommended that the state "establish a watershed protection and flood control policy" to "develop and carry out plans for state-wide security from flood losses and from damage to the water supply."[55]

The report went on to recommend specific actions for the Davis County watersheds. These included "acquisition by the State or Federal Government of the critical watershed lands for the protection of both private and public interests." The lands, the report said "should never have passed into private ownership since they are chiefly valuable for watershed protection and as potential forest lands." This was, of course, the basis for the designation of national forests contemplated in the Forest Reserve Act of 1891. Cannon's committee recommended the "immediate acquirement thru purchase, exchange or lease of approximately 5,000 acres of land at the heads of Parrish, Ford, Davis and Steed Canyons" in Davis County. The report further recommended the purchase of additional parcels on the mountain slopes between Centerville Canyon and Weber Canyons, "approximately to the upper limits of ancient Lake Bonneville."[56] The committee recommended that the state prohibit grazing at the heads of Parrish, Ford, Davis, and Steed Canyons "until satisfactory watershed conditions have been restored." Beyond this, the committee suggested the restoration of cover by reseeding and transplanting and by the construction of dams and other works "on the more denuded parts of the watersheds." The committee further recommended the establishment of "effective fire prevention and suppression measures."[57]

After proposing specific measures for the Davis County watersheds, Cannon's report urged a comprehensive policy for the entire state. First, the report proposed the "extension of public ownership and control to the little protected part of the 3,000,000 acres of important watershed lands outside the present National Forests." The committee proposed to accomplish this by purchase or exchange either by the state or federal government and suggested the modification of state laws to allow such acquisitions. Secondly, Cannon

proposed the strengthening of state fire law to insure adequate prevention and suppression on private and state watershed lands. Third, he and the committee recommended an "organized plan for the construction of flood control works wherever needed." Fourth, they proposed the establishment of a state conservation survey to study and classify watershed lands and recommend measures for their acquisition and protection to the State Land Board. Fifth, Cannon's group proposed cooperation with the Agricultural Extension Service to promote better management of privately owned lands in the state. Finally, they recommended the expansion of federal and state research on watershed protection.[58]

During the period after 1933, acting on these recommendations and on research by Arnold R. Standing and Clarence Forsling of the Forest Service and Reed Bailey of Utah State University, the federal government undertook an extensive program of watershed rehabilitation and protection. During the New Deal with Civilian Conservation Corps labor and money, the Forest Service established the Davis County Experimental Watershed and began the successful rehabilitation of overgrazed lands and eroded watersheds.[59]

By 1931 Cannon had capped a career in which he helped to make Salt Lake City into more beautiful, healthful, and practically planned urban space by proposing comprehensive planning to prevent flooding and to protect watersheds throughout Utah. His proposals for comprehensive regional planning reached far beyond the vision of most Utahns of the time. By throwing the influence of his position as a Mormon general authority and his professional reputation behind the proposition that flooding had resulted from destruction of plants through overgrazing rather than from underlying geologic conditions, he placed his opponents in an extremely difficult position. In sum, his contributions had an exceptionally long-lasting

effect.

In retrospect, it seems clear that Cannon's work on flooding and his service as city engineer led to the improvement of Utah's physical environment. Although conditions have changed over time, Utah became a more pleasant and healthy place because of the work of Sylvester Q. Cannon.

Are there larger meanings for Cannon's work? There seem to be, and one seems to lie in the relationship between the LDS Church and the Utah environment.

In recent years, a number of scholars writing on Utah's environmental degradation have tried to lay the blame for the sorry state of Utah's land, water, and air on the Latter-day Saints in general and on Mormon theology and prophets in particular. New Mexico geographer John B. Wright, for instance, has argued that Mormons have failed "to embrace land conservation," or "face the limits of water supply" largely because they "await the Millennium, when Jesus will come to Earth (Utah) and rule as a divine King for a thousand years." Wright seemed to forget that Joseph Smith and Brigham Young both preached an environmentally salutary theology which theologian Hugh Nibley and others have reaffirmed in recent years, and he seems completely unaware of the work and beliefs of people like Sylvester Q. Cannon. Rather in an exercise that rated his own ideological assumptions more important than the historical record, Wright asserted that "It is extremely difficult to make significant headway in land-use planning and conservation in a state where the majority of the people await a Millennial rescue when God will come to Utah and 'perfect it as their paradisiacal home.'"[60] More recently, Montana historian Dan Flores, while citing writings that contradict Wright's views, has agreed that "The doctrine of continuing revelation gives

the church's pronouncements supernatural sanction, but it [the LDS Church] has consistently derided environmental protection on the basis that Christ will cleans the earth in a twinkling when he returns."[61]

An understanding of history and of Mormon theology raises serious questions about such analysis. Frankly, such it reeks of the sort of Mormon-bashing all too common in today's world. Many Protestants and Catholics refuse to consider Mormons as Christians, and in May 1995 under extreme pressure leaders of the LDS Church withdrew an application for admission to the Denver ministerial society because of the controversy their application generated. Though Mormons are a minority group, they are not shielded by the injunctions to political correctness which protect women, African Americans, and Latinos from outrageous accusations about their religious beliefs and practices such as those made by Wright and Flores.

All told, the environmental spin that such scholars have placed on Mormon theology is absurd in the extreme. No sincere student who has actually read the official declarations of Mormon prophets could reasonably interpret them as recommending that members trash or even show lack of concern for the environment on any ground let alone the belief that Christ will return to clean up their filth. Instead, Church leaders have encouraged members to care for the environment and for living things.[62]

This does not mean that Mormons have not damaged the environment. Clearly they have. The blame, as I have argued elsewhere, has resulted not from LDS theology or from official statements of Church leaders but from the secularization of the economic sphere of life. Since the 1890s many Mormons simply have chosen not to link environmental matters

with their religious beliefs. On the other hand, some, like Cannon, have seen environmental problems as clearly related to their religion.

Most of the sorry condition of Utah's environment is clearly unrelated to the LDS Church. The leading anti-environmentalist in the state legislature, Met Johnson of New Harmony, has characterized himself as an "unorthodox" Mormon who seldom sees the inside of a Mormon chapel. Much of the trashing of the environment in Utah has resulted from the activities of mining and other corporations managed from outside the state.

More seriously, such anti-Mormon interpretations of Utah environmental damage fail to take into consideration the activities, statements, and beliefs of Mormon officials like Sylvester Q. Cannon. A clearly orthodox Mormon, a stake president, LDS Presiding Bishop, and a member of the Quorum of Twelve Apostles, Cannon championed comprehensive planning and environmental protection. Indeed, Cannon's hopes for regional planning, a smoke free urban environment, and a beautiful and functional city reached beyond the vision of most contemporaries. His views may well outreach the vision of most Utahns today. The analysis and recommendations on the causes and prevention of damage to mountainsides and watersheds drafted while he served as an LDS general authority mapped out a course eventually taken in part by the state of Utah and the Forest Service and is one many environmentalists would recommend today.

Still, Cannon does not fit the mold of a 1990s environmentalist since he favored the construction of dams, reservoirs, and waterworks and he had little to say about preserving wilderness. Nevertheless, he promoted comprehensive planning and tried to make the city a pleasant place for people to live and to make Utah's watersheds safe and functional. At the

same time, he enjoyed visits to wilderness areas and the out-of-doors. Cannon wore his concern for and actions in behalf of the physical environment close to the surface just as he did his devotion to the Mormon Church, to its prophets, and to its theology. In the light of his attitudes and activities, scholars will have to search elsewhere than Mormon theology and official Church attitudes to find the source of anti-environmentalism in this region.

Notes

[1]Doctrine and Covenants, 77: 2-3; 88:25-26; Hugh W. Nibley, "Subduing the Earth," in Hugh W. Nibley, Nibley on the Timely and Timeless: Classic Essays of Hugh Nibley (Provo, UT: Religious Studies Center, 1978), 85-99; idem., "Brigham Young on the Environment," in Truman G. Madsen and Charles D. Tate, eds. To the Glory of God: Mormon Essays on Great Issues . . . (Salt Lake City: Deseret Book, 1972), 3-29; Richard H. Jackson, "Righteousness and Environmental Change: The Mormons and the Environment," in Essays on the American West, 1973-1974 ed. Thomas G. Alexander, Charles Redd Monographs in Western History, no 5 (Provo, UT: Brigham Young University Press, 1975); Jeanne Kay and Craig J. Brown, "Mormon Beliefs about Land and Natural Resources, 1847-1877," Journal of Historical Geography 11 (July 1985): 253-67. For a general treatment of the theme of caring for God's creation in religious philosophy see Max J. Oelschlaeger, Caring for Creation (New Haven: Yale University Press, 1994).

[2]For a discussion of this development see: Thomas G. Alexander, "Stewardship and Enterprise: The LDS Church and the Wasatch Oasis Environment, 1847-1930," Western Historical Quarterly 25 (Autumn 1994): 341-364; Charles S. Peterson, "Small Holding Land Patterns in Utah and the Problem of Forest Watershed Management," Forest History 17 (July 1973): 5-13; Dan L. Flores, "Agriculture, Mountain Ecology, and the Land Ethic: Phases of the Environmental History of Utah," in Working on the Range: Essays on the History of Western Land Management and the Environment, ed. John R. Wunder (Westport, CT: Greenwood, 1985). For a general discussion of the movement that changed Mormon culture during this period see: Edward Leo Lyman, Political Deliverance: The Mormon Quest for

Utah Statehood (Urbana: University of Illinois Press, 1986); Thomas G. Alexander, Mormonism in Transition: A History of the Latter-day Saints 1890-1900 (Urbana: University of Illinois Press, 1986); and idem., Things in Heaven and Earth: The Life and Times of Wilford Woodruff, a Mormon Prophet (Salt Lake City: Signature Books, 1991), 261-287.

[3]For a discussion of these developments in Salt Lake City see: Thomas G. Alexander, "Cooperation, Conflict, and Compromise: Women, Men, and the Environment in Salt Lake City, 1890-1930," (Karl G. Maeser Distinguished Faculty Lecture, Brigham Young University, February 1994).

[4]Thomas G. Alexander, "Senator Reed Smoot and Western Land Policy," Arizona and the West 13 (Autumn 1971): 245-264; and idem. "Teapot Dome Revisisited: Reed Smoot and Conservation in the 1920s" Utah Historical Quarterly 45 (Fall 1977): 352-368.

[5]Richard R. Lyman, R. A. Hart, and R. K. Brown, "American Society of Civil Engineers, Memoir, Sylvester Quayle Cannon," (photocopy in author's possession) and information supplied by Winfield Q. Cannon.

[6]Undated list on the letterhead of the Salt Lake City Engineering Department, lists members of the Board of Adjustments, indicating Cannon's service until April 23, 1929, Folder, City Planning, 1929-1930, Salt Lake City Engineer's Records, Salt Lake City and County Building, Basement Storage Room. Salt Lake City, An Ordinance Creating the Zoning Commission, May 26, 1927, Folder, City Planning, 1926-1928, ibid.

[7]On some of the activities as chair of the Smokeless City committee see: Alexander, Cooperation, Conflict, and Compromise," 21-23.

[8]Oral History Interview with Winfield Q. Cannon by Thomas G. Alexander, April 25, 1994, (typescript), p. 3.

[9]For the information on his disposition see Winfield Cannon's comments on his dealings with the children and with citizens of Salt Lake City, and Winfield's comparison with the relatively more excitable temper of his mother. Winfield Cannon interview, p. 9.

[10]Winfield Q. Cannon to Thomas G. Alexander, April 29, 1995, in author's possession. For one of these conflicts in connection with the construction of Mountain Dell Reservoir, see Winfield Q. Cannon oral history interview, p. 6.

[11]Cannon to Alexander, April 29, 1995.

[12]Winfield Cannon interview, pp. 2, 8.

[13]The following information is taken from Warren H. Manning, "Summary of Answers Received to Questionnaire Sent City Engineers of Cities Over 100,000 Population," 1917, Copy in Salt Lake City Engineer's Records, folder, City Planning 1914-1922, Box A-2-I-24, Salt Lake City and County Building Records Center.

[14]For a discussion of the pressure to construct these amenities see: Alexander, "Cooperation, Conflict, and Compromise," 1-2, 4-7.

[15]Winfield Cannon interview, 5-6.

[16]David C. Hammack, "Comprehensive Planning Before the Comprehensive Plan: A New Look at the Nineteenth Century American City," in Two Centuries of American Planning ed. Daniel Schaffer (Baltimore: Johns Hopkins, 1988), 152. On the City Beautiful Movement see: William H. Wilson, The City Beautiful Movement (Baltimore: Johns Hopkins, 1889). For a discussion of the City Beautiful Movement in a western city see Thomas J. Noel and Barbara S. Norgren, Denver: The City Beautiful and Its Architects, 1893-1941 (Denver: Historic Denver, Inc., 1987).

[17]M. Christine Boyer, Dreaming the Rational City: The Myth of American City Planning (Cambridge: MIT Press, 1983), 4-5.

[18]Wilson, City Beautiful, 286.

[19]Sam Bass Warner, Jr. The Urban Wilderness: A History of the American City (New York: Harper and Row, 1972), 26 cited in David C. Hammack, "Comprehensive Planning before the Comprehensive Plan: A New Look at the Nineteenth Century American City," in Two Centuries of American Planning (Baltimore: Johns Hopkins, 1988), 141.

[20]Quoted in Richard E. Fogelsong, Planning the Capitalist City: The Colonial Era to the 1920s (Princeton: Princeton University Press, 1986), 202-03, see also chapters 5 and 7. Charles Mulford Robinson of the University of Illinois, called the City Practical, "the adaption to purpose and cooperative harmony of parts." William H. Wilson, The City Beautiful Movement (Baltimore: Johns Hopkins, 1989), 286-88.

[21]Wilson, City Beautiful, 289.

[22]For a discussion of these matters see Alexander, "Cooperation, Conflict, and Compromise," 6-9, 14-15.

[23]J. Leo Fairbanks, "The Civic Planning and Art Commission," Municipal Record (Salt Lake City), 4 (June 10, 1915): 5.

[24]J. Leo Fairbanks to John D. Spencer, May 31, 1918, folder, Planning 1914-1922, Salt Lake City Engineer's Records, Box A-2-I-24.

[25]Fogelsong, Planning the Capitalist City, 164-65.

[26]Alexander, "Cooperation, Conflict, and Compromise," 8-9.

[27]Fogelsong, Planning the Capitalist City, 200; Allen Z. Guttenberg, The Language of Planning: Essays on the Origins and Ends of American Planning Thought (Urbana:

University of Illinois Press, 1993), 112, 223-24.

[28]"An Ordinance Designating and Setting Aside a Certain Portion of Salt Lake City as a Residence District," June 12, 1917, copy in folder, City Planning 1914-1922, Salt Lake City Engineer's Records, Box A-2-I-24.

[29]Cannon to Mayor and Board of Commissioners, March 12, 1923, Salt Lake City Engineer's Records, folder, planning 1923-1924, box A-2-I-24.

[30]Wilson, City Beautiful, 106-112, 181, 261-69; Salt Lake City, City Commission Minutes, May 3, December, 1917, January 28, 1918, City Offices, Salt Lake City and County Building; C. Clarence Neslen to Charles W. Leavitt, December 9, 1920, folder, Planning 1914-1922, Salt Lake City Engineer's Records, Box A-2-I-24.

[31]"Ordinance Amending Section 1 of an Ordinance Creating a Civic Planning and Art Commission," April 8, 1918, copy in ibid.

[32]"An Ordinance Creating the Zoning Commission . . . ." May 26, 1927, copy, Salt Lake City Engineer's Records, folder Planning 1926-1928, ibid.

[33]Sylvester Q. Cannon to Technical advisory Corporation, March 21, 1921, folder, Planning, 1914-1921, Salt Lake City Engineer's Records, box A-2-I-24.

[34]Hammack, "Comprehensive Planning," 141.

[35]Cannon to Editor, American City, June 30, 1917, folder, Planning 1914-1922, Salt Lake City Engineer's Records, Box A-2-I-24 and Dorsey W. Hyde, Jr. to Cannon, July 3, 1917, ibid; Cannon to John Ericson, June 30, 1917 and Ericson to Cannon, July 3, 1917, ibid.

[36]Cannon to Nelson P. Lewis, President of the Conference and Chief Engineer in the Division of Public Improvements for New York City, June 7, 1920, folder, City Planning

1914-1922, Salt Lake City Engineer's Records, box A-2-I-24. Significantly, Lewis had written him that the "membership list of the Conference contains the names of surprisingly few municipal engineers, yet they are the men who must lay the foundations for city plans." Lewis to Cannon, July 11, 1919, ibid. See additional correspondence from officials of the Conference in these same files.

[37]Cannon to Division of Building and Housing, Department of Commerce, November 17, 1922, folder, Planning 1914-1922, Salt Lake City Engineer's Records, box A-2-I-24.

[38]Charles B. Ball to Cannon, May 23, 1925, folder, City Planning 1925, Salt Lake City Engineer's Records, box A-2-I-24.

[39]C. Clarence Neslen to Cannon, April 29, 1919, folder, Planning 1914-1922, Salt Lake City Engineer's Records, Box A-2-I-24.

[40]State of Utah, Senate Journal, Fifteenth Session of the Legislature of the State of Utah, 1923, 408-09, 409; State of Utah, House Journal, Fifteenth Session of the Legislature of the State of Utah, 1923, 560.

[41]State of Utah, House Journal, Sixteenth Session of the Legislature of the State of Utah, 1925, 64-65, 98-99, 102, 106, 549-50.

[42]Cannon to Rudolph Benson, December 14, 1923, folder, City Planning 1923-1924, Salt Lake City Engineer's Records, box A-2-I-24.

[43]Cannon to Neslen, June 7, 1922, folder City Planning, 1914-1922, Salt Lake City Engineer's Records, box A-2-I-24.

[44]Winfield Cannon Interview, 4-5. Winfield Cannon did not know on which matters the disagreements between himself and the city commission developed, but they may well have been on the question of the comprehensive zoning plan, since Cannon expressed his views to

several other people and they were at odds with the position of the city commission.

[45]Sylvester Q. Cannon, "Review of Progress in City Planning," MS prepared for the Ogden chapter of the American Association of Engineers, April 26, 1924, Folder City Planning, 1923-1924, Salt Lake City Engineer's Records, box A-2-I-24.

[46]W. A. Leatham to Cannon, March 28, 1924, folder Planning 1923-1924, Salt Lake City Engineer's Records, box A-2-I-24.

[47]Alexander, "Cooperation, Conflict, and Compromise," 17-24.

[48]Neslen to Cannon, January 24, 1920, Cannon to Neslen, February 24, 1920, Salt Lake City Engineer's Records, folder, City Planning 1914-1922, box A-2-I-24; Salt Lake City Law Department to Cannon, August 18, 1922, Theodore T. Burton to Cannon, February 4, 1924, City Engineer's Records, box A-2-E-6; Harry C. Jessen to Shirley P. Jones, June 27, 1929, ibid., box A-2-I-24.

[49]Winfield Cannon interview, 7.

[50]On this matter see Peterson, "Small Holding Land Patterns," 5-13 and Thomas G. Alexander, The Rise of Multiple-use Management in the Intermountain West: A History of Region 4 of the Forest Service (Washington, D. C.: USDA Forest Service, 1987), 104-105.

[51]Alexander, "Stewardship and Enterprise," 343, 350, idem., The Rise of Multiple-use Management, 105.

[52][Sylvester Q. Cannon, et al] "The Flood Commission appointed to study and report upon the causes of, and upon the prevention and control measures for, the recurring floods in Davis County and other parts of the State report as follows:" (Typescript, ca.1931: File 1658, Historical data, 6 Watershed and Multiple Use Management, Uinta National Forest, Provo, Utah.

[53]Ibid., 2.

[54]Ibid., 2a.

[55]Ibid., 4.

[56]Ibid., 5-6.

[57]Ibid., 7,8.

[58]Ibid., 12.

[59]Alexander, The Rise of Multiple-use Management, 105-06.

[60]John B. Wright, Rocky Mountain Divide: Selling and Saving the West (Austin: University of Texas Press, 1993), 245-246. He cites no source for the quotation, but it though he placed it in quotation marks, it is probably a paraphrase of part of the tenth Article of Faith which has nothing to do with environmental theology but which states a position common to all Christian churches predicting Christ's second coming.

[61]Dan Flores, "Historical Commentary: The Rocky Mountain West, Fragile Space, Diverse Place," Montana: The Magazine of Western History 45 (Winter 1995): 56. Flores cites no source for the alleged authoritative statements. Frankly, he would he hard pressed to find them, since the Church leadership has made no such pronouncements and has rather urged its members to care for the environment. See also idem., "Agriculture, Mountain Ecology, and the Land Ethic," for a larger introduction to his views on the Mormons and the environment in the nineteenth century.

[62]See packet of materials and statements furnished individuals who request it from the Church Publications Department.