PITTSBURGH FLOOD RESCUE MARCH 18, 1936

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THE POLITICS OF PITTSBURGH FLOOD CONTROL, 1908-1936

By Roland M. Smith*

EARLY on St. Patrick's Day of 1936, the greatest flood in Pittsburgh's history struck the city. For more than forty-eight hours flood waters submerged the mills and factories and low-cost housing along the riverbanks, the stores and offices in the central business district, the main water pumping station, and the electrical generating plants. In its wake the flood left 47 dead, 2800 injured, 67,500 homeless, and property losses estimated at $50 million in the Pittsburgh metropolitan area.[1] Three months after the catastrophe, following three decades of agitation for flood control, Congress authorized nine flood control reservoirs above Pittsburgh. This action concluded the first phase of the campaign to bring the flood waters of Pittsburgh's three rivers under control.

This paper will examine the campaign to control floods on Pittsburgh's rivers with particular emphasis on the activities of two agencies appointed by Pittsburgh's Chamber of Commerce—The Flood Commission of Pittsburgh and the Citizens' Committee on Flood Control. It will attempt to answer the following questions: who were the leaders of the Pittsburgh flood control movement; how did their beliefs, values, and socio-economic backgrounds influence their course of action; to what extent did the voluntary organizations through which they operated function as centralized decision-making agencies; and, why did it take the movement almost three decades to accomplish its initial goal? The answers to these questions are significant for three reasons. First, they can help identify the nature of the political forces behind, as well as in opposition to, the environmental reforms initiated during the Progressive Era. Second,

*The author is an Assistant Professor in the Department of History and Philosophy at Carnegie-Mellon University. The author wishes to acknowledge his appreciation to several colleaques for their comments and suggestions, especially Joel Arthur Tarr for his incisive criticism of an earlier version of this paper. He is also grateful to Edwin Fenton, Michael P. Weber, and Anthony N. Penna for their ideas and criticisms.

[1]William H. Shank, *Great Floods of Pennsylvania* (York, Pennsylvania, 1968), 44-46; Dorothy Israel, "Post-Flood Pittsburgh," *Social Work Today,* III (May, 1936), 8; Major General Edward C. Shannon, Commander of Pennsylvania National Guard, to Governor Earle, April 4, 1936, *Report of Military Activities in Flood Emergency Relief, March 18th to April 4th, 1936,* Western Pennsylvania Historical Society.

they can illuminate the manner in which our political system facilitates the articulation, the transformation, and the synthesis of alternative political demands into specific courses of governmental action. And finally, they can provide insight into the problems faced by powerful local elites that attempt to work their will in the national political arena.

The flood control movement in Pittsburgh was one part of a much broader effort to reform physical and social abuses within the city's environment. During the Progressive Era an elite group of business and professional men inaugurated reforms in municipal government, education, housing, welfare, and taxation.[2] For the most part, this group represented the large commercial and financial interests that had developed in the city after the Civil War, and the more prominent professional men.

In a study of municipal reform in the Progressive Era, Samuel Hays confirmed the elite status of Pittsburgh's reform element. According to Hays, 65 percent of the 745 members comprising two of the leading reform organizations—The Civic Club of Allegheny County and the Voters' League—were listed in upper-class city directories which contained only 2 percent of the city's families. Of the 745 members of these organizations, Hays found that corporate and financial executives or their wives made up 52 percent, while professional men accounted for the remaining 48 percent.[3] Many of the same individuals who belonged to the Civic Club and the Voters' League maintained simultaneous membership in the Civic Commission and the Chamber of Commerce. These organizations also reflected the reform aspirations of Pittsburgh's business and professional leaders.[4]

Cosmopolitan and national in outlook, these leaders idealized the orderly and efficient decision-making process inherent in the corporate structure of large scale business and industrial enterprise. They

[2]For a discussion of municipal reform in Pittsburgh see Samuel P. Hays, "The Politics of Reform in Municipal Government in the Progressive Era," *Pacific Northwest Quarterly*, LV (October, 1964), 157-169; Roy Lubove, *Twentieth Century Pittsburgh* (New York, 1969).

[3]Hays, "Politics of Reform in Municipal Government," 160-161.

[4]For a discussion of Pittsburgh's civic leaders and their various affiliations in the Progressive Era see Robert A. Wood, "A City Coming to Itself," *Charities and the Commons*, XXI (February 6, 1909), 785-800; Paul U. Kellogg, "Civic Responsibilities of Democracy in an Industrial District," *Charities and the Commons*, XXI (January 2, 1909), 629-638.

endorsed Paul U. Kellogg's observation in the Pittsburgh Survey[5] that, "In the methods and scope of progressive business organization we have some of the most suggestive clues as to ways for municipal progress."[6] They likewise recognized the close relationship between efficient management of business enterprise and efficient management of the physical and social environment. Speaking for the Chamber of Commerce and its membership in 1911, Logan McKee, secretary of the chamber, aptly summed up the viewpoint of the business-professional elite when he stated:

> The members have come to appreciate that there are other factors necessary to industrial and commercial supremacy besides abundant natural resources for production and transportation facilities for distribution. They have come to realize more fully the importance of the conditions which tend to promote or decrease the efficiency of the City's people, both as an industrial factor, and from the standpoint of citizenship.[7]

The topographical, cultural, and political barriers which facilitated division of the metropolitan area into separate districts with strong local identities and loyalties violated the business-professional elite's conception of orderly and efficient management. Allen T. Burns, general secretary of the Pittsburgh Civic Commission, exemplified the dismay with which the business and professional leadership of the city regarded civic disunity. In early 1911 he noted that Pittsburgh "has paid her price in charitable waste and inefficiency, civic supineness and enmity, political crime, and shame. Has she learned her lesson? She is a city ripe for Franklin's proverb, 'We must all hang together else we shall all hang separately.'" But Burns believed that Pittsburgh had, indeed, learned her lesson; "Above all sectionalism, above all personal ambition and pride, above past rivalries and enmities, Pittsburgh is

[5]The Pittsburgh Survey of 1907-1908 was a study of social and environmental conditions in Pittsburgh. Survey Associates of New York conducted the investigation which was financed largely by a grant from the Russell Sage Foundation. The findings of the survey were published in three consecutive monthly issues of *Charities and the Commons*, beginning in January, 1909.

[6]Kellogg, "Civic Responsibilities of Democracy," 630.

[7]Logan McKee, "Civic Work of the Pittsburgh Chamber of Commerce," *American City*, V (July-November, 1911), 12.

rising to her task of united self-assertion for the commonweal of all." As he saw it, "civic unity and consequent efficiency is appearing in all fields in which her past sectionalism appeared . . . ."[8]

This elite not only idealized the orderly and efficient decision-making process inherent in the corporate structure of big business, they also placed a very high valuation on the protection of business prerogatives from governmental encroachment. As Roy Lubove has said, they resolved the conflict between their ideal of "bureaucratic rationalization" and the class, ethnic, and governmental fragmentation that existed in Pittsburgh by creating voluntary civic organizations.[9] These voluntary organizations functioned as centralized decision-making agencies which guarded business autonomy from governmental encroachment. This same business-professional elite inaugurated the Pittsburgh flood control movement as part of a broader effort of physical and social reform of the Pittsburgh environment.

Eleven times between 1832 and 1907, the waters of Pittsburgh's three rivers rose above the twenty-five-foot flood stage at the Point of the "Golden Triangle" where the Allegheny and Monongahela rivers meet to form the Ohio River. Despite these floods, the principal concern over the rivers of Pittsburgh centered on making the Allegheny, Monongahela, and Ohio rivers navigable at Pittsburgh.[10] An organized flood control movement did not emerge until after the great flood of 1907 inundated the city.

The 1907 flood, which crested at 35.5 feet at the Point, submerged some 1600 acres including the central business district and industrial plants along the riverbanks valued at $160 million. The overflow affected 100 office buildings, 33 miles of streets, 17 miles of main line railroad tracks, and 9 miles of street railway tracks. Business stoppages idled more than 100,000 workers for more than a week, causing them to lose $1.3 million in pay. Suspension of operations cost business firms in the affected areas almost $2 million. Had the flood waters risen an additional six inches, they would have incapacitated the main water pumping station, thus depriving the city of

[8]Allen T. Burns, "Coalition of Pittsburgh Civic Forces," *Survey*, XXV (February 4, 1911), 754-759.

[9]Lubove, *Twentieth Century Pittsburgh*, 20-40.

[10]W. E. R. Covell, "The Government and Pittsburgh's Rivers," *Greater Pittsburgh*, XVII (December, 1936), 11, 26.

water for domestic use and for fire fighting. Direct losses from the flood within the city of Pittsburgh totaled more than $6.5 million.[11]

But no organized reaction developed until rising waters, once again, threatened to submerge the city a year later. This time, Pittsburgh's business and professional elite, operating through civic organizations, used their influence and expertise to centralize the political decision-making process relative to flood control. On February 20, 1908, the Chamber of Commerce adopted a resolution establishing a flood committee "to investigate the cause of these floods, and to determine the nature and cost of the best method of relief."[12] The chamber authorized the committee to "add to their number, elect their own officers, and raise funds to prosecute the work assigned to them."[13]

President H. D. W. English of the Chamber of Commerce appointed a seven-man committee, headed by Howard J. Heinz, president of the H. J. Heinz Company. A month later, the committee issued a preliminary report calling for further study covering reforestation, storage reservoirs, elevation or filling of low lying areas, and flood walls. Using the authority granted by the chamber, the committee of seven decided to expand into a flood commission to accomplish this task.[14]

The Flood Commission of Pittsburgh initially consisted of thirty-four members representing the Chamber of Commerce, businessmen, engineers, and other professional men. In 1911 the commission expanded to include city and county officials as well as additional representatives from manufacturing and business concerns affected by floods in the Pittsburgh area. An examination of the affiliations of the commission's officers confirms their elite status and their close connection with the leading reform organizations such as the Civic Club of Allegheny County, the Voters' League, the Civic Commission, and the Chamber of Commerce. H. J. Heinz, the Flood Commission's first president, was also a member of the Civic Commission. H. D. W. English, a prominent insurance executive, a

[11]Flood Commission of Pittsburgh, *Report* (Pittsburgh, 1912), 66; W. W. Ashe, "Effects of Forests on Economic Conditions in the Pittsburgh District," *Charities and the Commons*, XXI (February 6, 1909), 827-832; U.S. *House Document 306, 74 Cong., 3rd sess.* (Washington, D.C., 1933), 72.

[12]Flood Commission, *Report*, 6.

[13]*Ibid.*

[14]*Ibid.*

member of the Voters' League of Allegheny, and president of the Civic Commission as well as the Chamber of Commerce, served as vice president of the Flood Commission. George M. Lehman, a civil engineer, held the post of general secretary. W. M. Jacoby, an influential newspaper editor, later active in reform efforts involving smoke control, zoning, and the formation of the Allegheny Conference on Community Development, served as executive secretary. The Flood Commission hired as its executive director, George H. Maxwell, chairman of the National Irrigation Association. The hiring of Maxwell closely identified the commission with reformers at the national level who advocated a policy of coordinated watershed development—including flood control, power development, navigation, and land reclamation—under a single federal agency. Maxwell and the National Irrigation Association had helped wage the successful fight to secure federal aid for construction of irrigation projects in the West.[15]

The methods employed by the Flood Commission to finance its operations illustrate its quasi-governmental nature. The finance committee of the commission, headed by Julian Kennedy, president of the American Casting Company and the Emerald Coal and Coke Company, and a member of the Civic Commission, procured funds from several sources. As one of its first acts, the finance committee obtained the assessed valuation of all property in the flood affected area, then requested the property owners in the area to contribute on the basis of "one mill on each dollar of the assessed valuation of their property, including buildings."[16] The commission collected $53,380 from this source and $1600 from property owners indirectly affected by floods. Later, when the commission expanded its size again, it asked the new members to contribute $250 each. This method raised $6,990. In addition to these sources, the commission received $51,445 from the City of Pittsburgh, $7500 from the County of Allegheny, and $1000 from the Chamber of Commerce.[17] Contributions from all of these sources amounted to $124,000.

The Flood Commission now turned its attention to the task of gathering and evaluating relevant data, and of considering al-

[15]Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, Massachusetts, 1959), 26.

[16]Flood Commission, *Report*, 433.

[17]*Ibid.*

ternative plans of action. In accomplishing these tasks, the Flood Commission received cooperation from the State Water Supply Commission, the State Forestry Department, the U.S. Weather Bureau, the U.S. Forest Service, and the U.S. Geological Survey.[18] Affiliation with the latter agencies of the federal government closely identified the Flood Commission with federal agencies that favored a centralized approach to the management of water resources. The absence of involvement by the Corps of Engineers—the principal federal agency responsible for river development—in the commission's investigation presaged the conflict that was to develop with the corps.

After four years of exhaustive study, the commission issued its report. The report clearly reflected the thinking of Maxwell and efficiency-minded reformers who favored a rational, multipurpose approach to flood control and inland waterway development. In its recommendations, the commission called for reforestation of denuded forest lands, and the conservation of present forests as a means of controlling runoff during periods of heavy and sudden rainfall. It recommended construction of seventeen storage reservoirs at the headwaters of the Allegheny and Monongahela rivers.[19] Nothing better reflects the Flood Commission's close identification with the centralized approach to waterway development than the formal dinner to receive the commission's report held at the Schenley Hotel on April 16, 1912. At this dinner Senator Francis G. Newland of Nevada, sponsor of the Inland Waterways Bill, and Marshall O. Leighton, chief hydrographer of the U.S. Geological Survey and advisory hydrographer to the Inland Waterways Commission, delivered the principal addresses. Both men strongly supported the approach to flood control advocated by the Flood Commission.[20]

[18]George M. Lehman, "The Investigation of the Flood Commission of Pittsburgh," an address before the fourth National Conservation Congress, Indianapolis, Indiana, October 1-4, 1912, Carnegie Public Library, Pittsburgh.

[19]The Flood Commission's failure to include electric power development as a part of its multipurpose plan probably represented a concession to the coal companies and public utility companies in the Pittsburgh area. As early as 1908, M. O. Leighton, chief hydrographer of the U.S. Geological Survey, noted that storage reservoirs in the Allegheny and Monongahela river basin could generate enough electrical power to finance the whole operation. Inland Waterways Commission, *Preliminary Report, 60th Cong., 1st sess.* (Washington, D.C., 1908).

[20]*Pittsburgh Press*, April 17, 1912.

An analysis of the efforts of the Pittsburgh flood control movement demonstrates the changing dynamics of two sets of historic and antithetical forces at work within the American political system. The first set of forces, operating through the system of checks and balances, and the fragmentation of authority inherent in the federal system, tend to diffuse the decision-making process throughout the political system. The opponents of the Flood Commission's plan epitomized the decentralizing forces in the political system during the Progressive Era. Opposition to the commission's plan came principally from the House Rivers and Harbors Committee and the Corps of Engineers.

The House Rivers and Harbors Committee, composed primarily of representatives from seacoast districts and the Great Lakes region, looked upon inland waterway development under a single agency as a threat to the interests of their areas. Furthermore, Congress as a whole did not look favorably upon proposals that sought to restrict its authority over the development of individual public works projects.[21] The Corps of Engineers comprised another important source of opposition. Congress had authorized the corps to deal only with navigation; hence, the corps feared that a comprehensive program of inland waterway development (including multipurpose flood control) under a single federal agency would threaten its independence.[22] Representatives of the corps contended that reservoirs did little to aid navigation beyond what locks and dams had already accomplished; that they would not control floods occurring in an uncontrolled area of a watershed; and that the costs of a reservoir system outweighed the benefits. The corps supported flood control projects which did not extend beyond the banks of streams, i.e., flood walls and levees.

The campaign for a reservoir system to protect Pittsburgh sheds light on a second set of forces at work within the political system. These forces, often operating outside the formally established governmental structure through voluntary organizations, such as

[21]Forrest Crissey, *Theodore E. Burton: American Statesman* (Cleveland, 1956), 180-185.

[22]H. C. Newcomer, "The Proposed Reservoir System in Ohio River Basin," summarized in Flood Commission, *Report*, 359-360; Hiram M. Chrittenden, "Forests and Reservoirs in Their Relations to Stream Flow with Particular Reference to Navigable Rivers," summarized in Flood Commission, *Report*, 352; Hays, *Conservation*, 215.

political parties, political machines, and pressure groups, work to centralize the political decision-making process. The Pittsburgh Flood Commission and its supporters at the national level epitomized these centralizing forces. The recommendations of the Flood Commission received the endorsement of both local and national reformers who favored a comprehensive program of inland waterway development under a single independent agency of the federal government. Therefore, the fate of the Flood Commission's plan hinged on the extent to which the forces favoring scientific management of the nation's inland waterways could overcome opposition from those interests favoring a more decentralized approach to the problem.

The Flood Commission launched a campaign to implement its program before officially announcing the results of its investigation. In an attempt to gain the support of the National Waterways Commission, the Flood Commission invited that body to review its preliminary recommendations. On April 17, 1911, Senator Theodore E. Burton, chairman of the Waterways Commission, and five other members of his commission visited Pittsburgh.[23] After meeting with the Flood Commission and officials of the Chamber of Commerce, Senator Burton showed little enthusiasm for the preliminary plans of the Flood Commission. He indicated that no precedent existed for the federal government to aid such a project unless it aided navigation. He further noted that the Corps of Engineers claimed that reservoir systems would not materially aid navigation.[24]

Senator Burton's reaction should not have come as a complete surprise to the Flood Commission. President Theodore Roosevelt, who wanted to develop multipurpose waterways under a single agency, had appointed Senator Burton to serve as chairman of the Inland Waterways Commission in 1907 in an attempt to gain Burton's support for such an approach. However, the ploy failed, for Senator Burton, who had sponsored creation of the Army's Board of Engineers for Rivers and Harbors, continued to support the Corps of Engineers in their opposition to multipurpose river development.[25]

The efforts which the Flood Commission directed toward accomplishing its reforestation goals received a more favorable response. Despite initial opposition from the State Forestry Department, the

[23]*Pittsburgh Post*, April 17, 1911.
[24]*Ibid.*
[25]Hays, *Conservation*, 99-100, 112-113.

state legislature passed legislation drafted by the Flood Commission providing for reforestation. This legislation opened the way for the federal government to purchase denuded forest areas for reforestation under the Weeks Act of 1911.[26] By April, 1936, as a result of the Flood Commission's lobbying at the state and national levels, the federal government had purchased 1,252,000 acres of forest land (out of two million acres authorized for purchase) in the Allegheny and Monongahela watersheds.[27]

But the campaign for a system of reservoirs encountered more resistance than did that for reforestation. At the request of the Flood Commission, Congress, in the Rivers and Harbors Act of July 25, 1912, authorized a special board consisting of three officers of the Corps of Engineers to investigate the commission's plan. The board met at Pittsburgh on September 7, 1912, to commence its study of the proposed reservoir system. After three months of hurried study, the Army Engineers reported to Congress that:

> A system of impounding reservoirs at the headwaters of the Allegheny, Monongahela, and Ohio Rivers and their tributaries, while probably feasible, would be of such small benefit to navigation that the Federal Government would not be justified in cooperating with local interests for their construction.[28]

Despite this adverse report, the Flood Commission continued the fight for multipurpose flood control at the state and national levels of government. Responding to demands from the Pittsburgh Flood Commission and similar organizations throughout the country, the House of Representatives created a Committee on Flood Control on February 3, 1916. A month later a delegation from Pittsburgh appeared before the committee in support of a bill drafted by the

[26]Flood Commission, *Pamphlet* (Pittsburgh, 1921), 8.

[27]U.S., Congress, House, Committee on Flood Control, *A Permanent System of Flood Control, 74 Cong., 2nd sess.* (Washington, D.C., 1936), 14.

[28]U.S., Congress, House, *House Document 1289, 62nd Cong., 3rd sess.* (Washington, D.C., 1913), 8-9.

Flood Commission.[29] The bill, introduced by Congressman William H. Coleman of Pittsburgh, provided for an appropriation of $25 million to construct the seventeen reservoirs in the Flood Commission plan. The Coleman bill called for the federal government to contribute $15 million and for a local agency to contribute the remaining $10 million. The committee chairman, Representative Benjamin C. Humphreys of Mississippi, reminded the delegation that no governmental machinery existed for making an investigation of rivers and watersheds, except for purposes of navigation, but promised the delegation that if Congress provided the machinery, his committee would consider the Coleman bill.[30]

Governor Martin Brumbaugh, meanwhile, asked the Flood Commission to draft legislation that would facilitate cooperation among the Flood Commission, the City of Pittsburgh, the state government, and the federal government.[31] In response to this request, the commission drafted a bill which provided for the state legislature to appropriate funds to assist the federal government in financing a comprehensive survey of the Flood Commission plan. The state legislature enacted this legislation in 1917 and re-enacted it in 1919 and 1923.

In the meantime, an important development had occurred at the national level. With the passage of the Flood Control Act of 1917,

[29]The delegation included A. J. Kelly, Jr., the new president of the Flood Commission; Dr. J. P. Kerr, president of City Council; Robert Swain, City Director of Public Works; A. C. Gumbert, county commissioner; N. S. Sprague, city chief engineer; E. K. Morse, chairman of the Flood Commission's Engineering Committee; Morris Knowles, chairman of the Flood Commission's Sewage Disposal Committee; John B. Eichenauer, assistant city solicitor, member of the Flood Commission, and author of the Coleman Bill; W. M. Jacoby, executive secretary of the Flood Commission; William McClurg Donley, county engineer; A. J. Burchfeld, S. G. Porter, and William H. Coleman, Congressmen from Pittsburgh; and George H. Maxwell, the former executive director of the Flood Commission, who more recently had organized agitation for the multipurpose approach in the Mississippi River Valley. *Pittsburgh Press*, March 27, 1916; Hays, *Conservation*, 227.

[30]U.S., Congress, House, Committee on Flood Control, *Flood Control at Pittsburgh: Hearings on H.R. 13, 280, 64th Cong., 2nd sess.* (Washington, D.C., 1916), 14-18.

[31]Public Affairs Information Service, *Annual Cumulative Bulletin* (New York, 1916), 104; Flood Commission, *River Regulation and Flood Control: A National Policy Advocated by the Flood Commission* (Pittsburgh, 1921), 13-15.

Congress for the first time committed the federal government to flood control under the general welfare clause of the Constitution. In this act, Congress authorized $50.6 million for the construction of levees and retaining walls in the Mississippi and Sacramento river valleys. The act reflected growing congressional awareness of the multipurpose approach to waterway development. In one of its key provisions, the act directed the Corps of Engineers to investigate the possibilities of coordinating other water uses with flood control in future flood control surveys.

The Flood Commission acted immediately to take advantage of the new law. A delegation representing the Flood Commission, the city, and Allegheny County appeared before the House Flood Control Committee on April 3, 1918. The delegation urged Congress to appropriate $15,000 to supplement $15,000 authorized by the state legislature for a detailed survey of the Flood Commission plan. However, Representative Humphreys, the committee chairman, told the delegation that the war rendered it unlikely that Congress would appropriate the money.[32]

Six years later Congress finally authorized preliminary examinations and surveys of the Allegheny and Monongahela watershed. The Flood Control Act of 1924 authorized $25,000 for the study contingent upon the state's contributing a similar sum. A year later Congress further exhibited its growing awareness of the possible benefits of coordinated watershed development by approving the Rivers and Harbors Act of March 3, 1925. The act directed the Corps of Engineers and the Federal Power Commission to prepare a joint estimate of the costs of making surveys of major streams for power development, navigation, irrigation, and flood control. On March 12, 1926, Dwight F. Davis, Secretary of War and chairman of the Federal Power Commission, sent the estimated costs of making the surveys to Congress. The report stated that a survey of the Ohio River watershed, including the Allegheny and Monongahela rivers and their tributaries, would cost $393,100.[33] The Rivers and Harbors Act of January 21, 1927, authorized the survey and appropriated the funds for this purpose.

[32]*Pittsburgh Gazette Times*, April 4, 1918.

[33]U.S., Congress, House, *House Document 308, 69th Cong., 1st sess.* (Washington, D.C., 1926), 2.

To understand the next set of developments requires re-examining the changing attitude of the Corps of Engineers toward multipurpose flood control schemes. Since 1913 Congress had steadily expanded the corps' responsibilities for flood control. The corps, nevertheless, still took a narrow view of these responsibilities because it feared subordination to some other federal agency. Thus, into the 1920s the corps continued to advocate a single-purpose approach to flood control. The Army Engineers argued that only a system of strong levees provided a practical and economic means of flood control.[34]

In compliance with the Flood Control Act of 1924, the district engineer at Pittsburgh initiated an investigation of the watersheds above Pittsburgh. He compiled the results of his findings and recommendations in a report in 1928. The report stated that a system of eleven reservoirs above Pittsburgh with a storage capacity of 2,612,000 acre-feet would eliminate more than 99 percent of the damage caused by a flood of the 1907 magnitude. However, the report concluded that the $96,378,000 needed to build such a system rendered it uneconomical. The report observed that:

> On a simple investment basis it would appear more practical to sustain the losses, or were it possible, to invest $25,000,000, the approximate capitalized value of future flood damages, and use the return thereon to pay the damages, rather than to suffer a greater annual loss in carrying charges on an investment of $60,740,000, which is the difference between the cost of the reservoir plan and the value of the increased benefits other than relief from flood damages received.[35]

The Corps of Engineers never published this report. While the district engineer prepared the report for submission to the Board of Engineers for Rivers and Harbors in Washington, D.C., the most

[34]In a letter to the district engineer at Chattanooga, Tennessee, in 1924, General Harry Taylor, chief of engineers, stated that "flood control, power development, navigation, and land reclamation are four entirely separate subjects . . . ." Quoted in Donald C. Swain, *Federal Conservation Policy, 1921-1933* (Berkeley, 1936), 101.

[35]Quoted in Flood Commission of Pittsburgh, *Review of Report of the U.S. Army Engineers on Flood Control Survey, Allegheny and Monongahela Rivers* (Pittsburgh, 1930), 9.

disastrous flood in the history of the Mississippi Valley struck in the spring of 1927. Flood waters went over, around, and through the system of levees. Two hundred and fifty persons lost their lives, while flood waters forced 700,000 people to abandon their homes. Property damage totaled $364 million.[36]

Proponents of coordinated waterway development took this opportunity to condemn the flood control record of the Corps of Engineers. Chairman Frank R. Reid and Representative Philip Swing of the House Flood Control Committee accused the corps of promoting policies geared to protecting their traditional prerogatives.[37] Congress responded to the mounting discontent by moving away from the levees-only approach to flood control. In the Flood Control Act of 1928, Congress directed the Corps of Engineers to develop a plan for the Mississippi River Valley which would supplement the levees with reservoirs and diversionary spillways.

The turning point in the campaign for flood control in the upper Ohio River Valley came in the early 1930s. Beginning in 1930 and continuing into 1934, severe drought conditions accompanied the economic depression in the northeastern states. In 1930 low water levels on the Monongahela resulted in complete suspension of navigation beyond Point Marion, Pennsylvania. To correct this situation, in 1934, the Public Works Administration authorized construction of the Tygart Dam and Reservoir in West Virginia to aid navigation and flood control and to provide work for the unemployed.[38]

This action by the Public Works Administration paved the way for a more comprehensive flood control program. On August 14, 1935, the Corps of Engineers, in compliance with the Rivers and Harbors Act of 1927, submitted to Congress a plan calling for nine reservoirs above Pittsburgh in addition to the Tygart Reservoir.[39] The corps estimated that the nine reservoirs, with a total capacity of 1,944,500 acre-feet, would cost $44,215,000. In a complete reversal of previous

[36]Swain, *Federal Conservation*, 108-109.

[37]*Ibid.*

[38]The Chamber of Commerce, "The Army Engineers' View on the Reservoirs System of Flood Control for Pittsburgh," September 15, 1953, Chamber of Commerce Library (Pittsburgh, 1953), 3-4.

[39]U.S., Congress, House, *House Document 306, 74th Cong., 1st sess.* (Washington, D.C., 1934), 3.

policy, the Board of Engineers for Rivers and Harbors noted that:

> The proposed reservoirs on the Ohio Rivers are some of the most important in the proposed general system, especially from the viewpoint of the benefits to the Ohio River. These reservoirs, and particularly those on the Allegheny and the Monongahela and their tributaries will, aside from their value for flood control, be beneficial in a general way to navigation by increasing the vertical clearance under bridges during stages of high water, by decreasing the acid content of the rivers during periods of low water, and by alleviating to some extent delays due to ice.[40]

Thus, drought, economic depression, and agitation from the nation's flood-threatened river valleys persuaded the Congress and the Corps of Engineers to accept a multipurpose approach to flood control. On August 22, 1935, the House of Representatives passed the Omnibus Flood Control bill and sent it to the Senate. The bill included provisions for the nine reservoirs above Pittsburgh recommended by the Army Engineers. But, while the Senate Commerce Committee debated the fate of the bill, the great St. Patrick's Day flood of 1936 struck the city.

Since the Pittsburgh Flood Commission had become relatively inactive by 1936, the Pittsburgh City Council attempted to fill the leadership void. The city council passed a resolution on March 23, asking Mayor William McNair to call a conference of business and industrial leaders to discuss rehabilitation of the flood affected areas.[41] However, the Chamber of Commerce seized the initiative. H. B. Kirkpatrick, president of the chamber, called a meeting, and on March 27 more than fifty business, industrial, financial, professional, and governmental leaders in Allegheny County assembled at the Pittsburgh Athletic Club to "consider the situation arising from the flood disaster."[42] The gathering reiterated the earlier view of the Flood Commission that the magnitude of the flood menace called for federal action. To pursue the goal of seeking federal intervention, Kirkpatrick appointed the Citizens' Committee

[40] *Ibid.*
[41] *Pittsburgh Post-Gazette*, March 23, 1936.
[42] *Greater Pittsburgh*, XVI (March, 1936), 3.

on Flood Control and named William P. Witherow, an executive of Republic Steel Corporation, to head it.[43]

The Citizens' Committee on Flood Control and the Tri-State Authority, led by State Senator William B. Rodgers of Pittsburgh and consisting primarily of mayors and burgesses in the tri-state area of the upper Ohio River watershed, decided to merge their activities and function as a single unit. The merger of these two organizations centralized decision making relating to flood control on a regional basis. The activities of Pittsburgh's business-professional elite were now coordinated with those of the region's political leadership, and public opinion was mobilized on a regional basis. This merger, moreover, forecast the prominent role that political leaders and government intervention, as opposed to voluntary associations, would play in the post-World War II "Pittsburgh Renaissance."

Meanwhile, these merged agencies organized flood control committees in 400 communities in the tri-state area. These committees sent telegrams, letters, resolutions, and personal appeals to representatives in Harrisburg and Washington. They issued more than 100,000 booklets, sponsored talks before civic clubs, and gave radio broadcasts in support of flood control. They also cooperated with the Allegheny County League of Women Voters in promoting a May 18 rally in Washington, D.C., in support of the Omnibus Flood Control bill.[44] A month later these merged agencies sponsored a meeting at Harrisburg, attended by delegates from flood-threatened communities throughout the northeastern states. This group formed the United States Flood Control Federation and chose State Senator William B. Rodgers as its president.[45]

In June, 1936, Congress passed two acts which concluded the first

[43]Other members included: Frank R. Phillips of Duquesne Light Company; W. M. Jacoby, editor of *Pittsburgh Sun-Telegraph* and a flood commission member; W. H. Burchfield of the Joseph Horne Company and a flood commission member; Curtis M. Yohe of Pittsburgh and Lake Erie Railroad; C. D. Scully, president of the city council; Dr. James H. Greene, executive secretary of Retail Merchants Association; and Frank C. Harper, secretary-manager of the Chamber of Commerce; Arthur E. Braun of the Farmers Deposit National Bank; Howard Heinz of H. J. Heinz Company and a flood commission member; H. B. Kirkpatrick, president of Chamber of Commerce; H. S. Wherrett of Pittsburgh Plate Glass Company; and Benjamin F. Fairless of U.S. Steel Corporation.

[44]William B. Rodgers, "Flood Control is on the Way," *Greater Pittsburgh*, XVI (August, 1936), 36.

[45]*Ibid.*

phase of the campaign to bring flood control to Pittsburgh. On June 20 Congress approved an act authorizing examination of the unsurveyed portions of the Allegheny River watershed. Two days later, with the enactment of the Copeland Omnibus Flood Control Act of 1936, Congress inaugurated the country's first nationwide flood control program. This act, which authorized the construction of nine reservoirs above Pittsburgh, declared that where floods adversely affected the lives and security of people, flood control, as distinct from navigation, constituted a legitimate federal function. Thus ended the first phase of the struggle to bring flood control to Pittsburgh.

In final analysis, the first phase of the campaign for a reservoir system to protect Pittsburgh from floods illustrates how an elite group of business and professional men, working through voluntary civic organizations, used their influence and expertise to centralize the decision-making process relative to flood control. Both the Flood Commission and the later Citizens' Committee on Flood Control functioned successfully as centralized decision-making agencies at the state and local level. They drafted legislation and coordinated a range of activities cutting across local, state, and national jurisdiction.

While these voluntary organizations embodied the business-professional elite's desire for agencies capable of overcoming the diffusion of political power inherent in our governmental system, they also served another purpose. They permitted the business community to seek a solution to the flood menace that was compatible with business interests and which maximized business autonomy. Surprisingly, the Pittsburgh business-professional elite, representing some of the most powerful economic interests in the nation, proved rather ineffectual in its dealings at the national level. Why was this the case?

At its inception, the Pittsburgh flood control movement identified with reform elements at the national level who favored a comprehensive and coordinated approach to waterway development under a single federal agency. Since Congress and the Corps of Engineers rejected this concept until the late 1920s, the Pittsburgh flood control movement did not have access to a powerful federal agency sympathetic to its approach to flood control.

Although Congress continued to reject the concept of a single agency responsible for inland waterway development, it did develop

a growing interest in the multipurpose approach. Throughout the 1920s Congress authorized studies to determine the feasibility of applying the multipurpose approach to river basin development. Then, after a series of floods struck the Mississippi Valley and the levee system failed, after drought conditions dried up many navigable streams in the northeast, and after economic depression created a demand for work relief projects, Congress accepted a coordinated and comprehensive approach to flood control. The great flood which paralyzed the upper Ohio River basin in 1936 finally prompted Congress to approve a comprehensive flood control plan for the protection of Pittsburgh.

Although a detailed discussion of the post-1936 campaign for flood control falls outside the scope of this study, it seems important to mention several occurrences that logically followed from previous events. The Citizens' Committee on Flood Control, The Tri-State Authority, The U.S. Flood Control Federation, and all parties interested in flood control for Pittsburgh had to continually pressure Congress to authorize construction of the reservoir system. Not until flood waters threatened Pittsburgh again in 1937 and devastated the Ohio Valley below the city did Congress act. After this flood, Congress appropriated funds for the start of construction on five of the nine original dams and empowered the Chief of Engineers to shift the location of any or all of the dams above Pittsburgh. By the end of 1942 the city had obtained half the flood storage capacity authorized in 1936. World War II, along with problems encountered in acquiring some dam and reservoir sites, delayed completion of the reservoir system.[46]

After the war ended, the campaign for flood control resumed. The success of this campaign played a prominent role in efforts to regenerate Pittsburgh's decaying central business district. Mayor David L. Lawrence stated in 1948 that the Equitable Life Insurance Society pinpointed flood control as one of the crucial factors affecting its willingness to finance development of the twenty-three acres adjacent to Point Park. The insurance company withheld ap-

[46]Allen B. Lee, "The Kinzua Dam Project: A Case Study of the Politics of Flood Control" (unpublished Ph.D. dissertation, University of Pittsburgh, 1959); U.S., Congress, House, Committee on Flood Control, *Comprehensive Flood Control Plans: Hearings on H.R. 9640, 76th Cong., 3rd sess.* (Washington, D.C., 1940), 115.

proval until Congress appropriated funds for completion of key dams in the reservoir system.[47]

As of 1968, the status of the reservoir system above Pittsburgh stood as follows:[48]

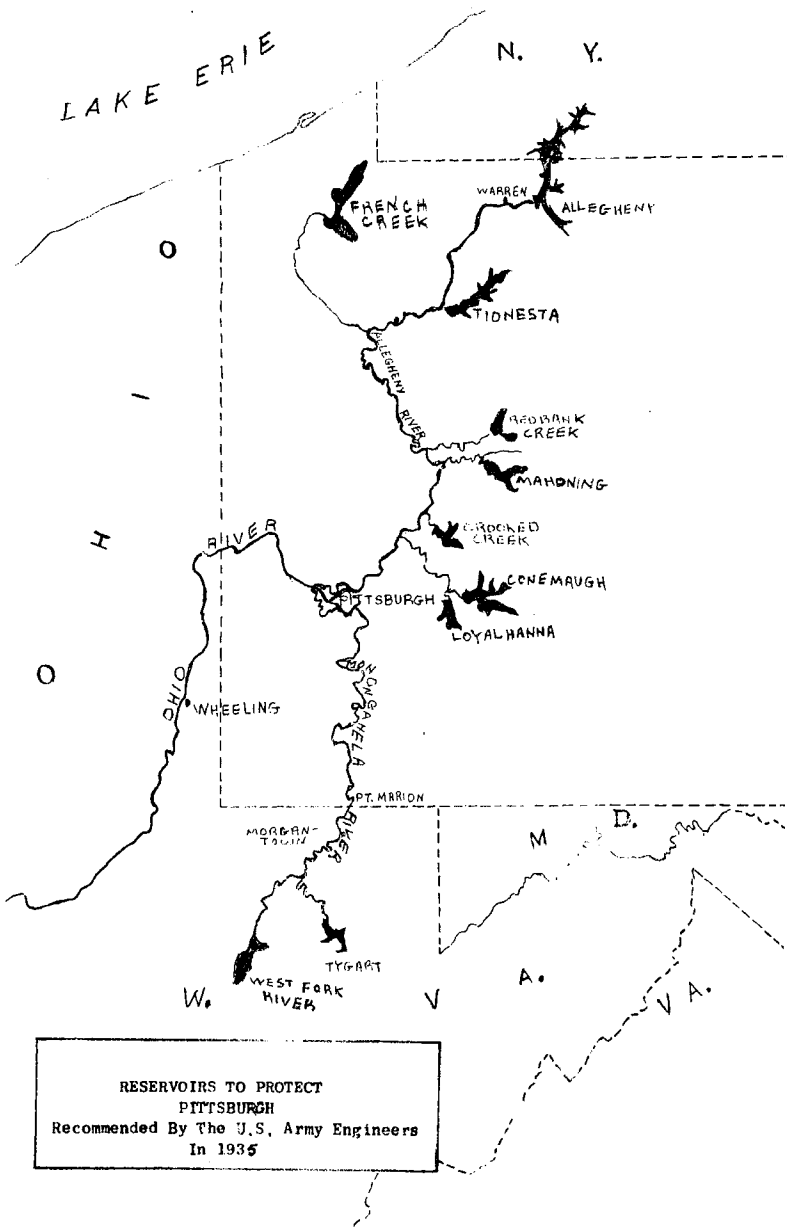
RESERVOIRS	DATE STARTED	DATE COMPLETED
MONONGAHELA BASIN		
Tygart	1934	February, 1938
Youghiogeny	June, 1940	May, 1944
West Fork	Awaiting Construction	
ALLEGHENY BASIN		
Tionesta	May, 1938	January, 1941
Crooked Creek	March, 1938	October, 1940
Mahoning	February, 1939	June, 1941
Loyalhanna	October, 1939	June, 1942
East Branch Clarion	June, 1947	June, 1952
Conemaugh	April, 1949	September, 1953
Allegheny	September, 1960	December, 1965
Union City	December, 1966	
Muddy Creek	Awaiting Construction	
Woodcock Creek	Awaiting Construction	

According to the Pittsburgh district engineer's office, this system of reservoirs will reduce a flood of the 1936 magnitude by about ten feet at the Point, given the same set of conditions which caused Pittsburgh's greatest flood.[49] Map 1 on the following page shows the sites of these dams.

[47]*Pittsburgh Press*, December 12, 1948.

[48]U.S. Army Engineers, *1968 Annual Report of the Chief of Engineers on Civil Works Activities* (Washington, D.C., 1969), II, 791-808.

[49]Dale K. Williams, public affairs officer, U.S. Army Engineer District, Pittsburgh, Pa., personal interview with the author, Pittsburgh, January 4, 1971.



RESERVOIRS TO PROTECT
PITTSBURGH
Recommended By The U.S. Army Engineers
In 1935