

PROJECT AUTHORIZATION

The following provides background information on how, why, and with what authority Zoar Levee and Diversion Dam was constructed and is maintained. Zoar Levee and Diversion Dam are appurtenant structures to Dover Dam, which was authorized as part of a basin-wide plan to control flooding in the Muskingum Watershed through an agreement with a non-federal entity that was authorized by a New Deal program. Therefore, background information is provided on these various authorities.

In response to an economic depression initiated by the collapse of the U.S. stock and bond market in 1929, the U.S. Congress passed the National Industrial Recovery Act (P.L. 73-90, 48 Stat. 195 / Codified at 15 U.S.C. 703) (NIRA) in June of 1933. This act, among other things, authorized the funding and construction of large-scale public works such as bridges, dams, hospitals and schools.

Relevant to this study is Title II of NIRA creating the Federal Emergency Administration of Public Works, which was later renamed the Public Works Administration (PWA) in 1939. Section 202 of NIRA provided for the construction of river and harbor improvements and flood control. Section 202 of NIRA also authorized the federal government to construct, finance, or aid in the construction or financing of any public works projects and allowed the President to make grants to states, municipalities or other public bodies for the construction, repair or improvement of any such project. This section granted the authority used by the federal government to execute the plans discussed below to construct flood control projects in the Muskingum River Basin in cooperation with the Muskingum Watershed Conservancy District (MWCD).

In response to the State of Ohio's flood of 1913, which killed over 400 people and destroyed over 20,000 homes, several studies were conducted to find the best way to manage water resources in the Muskingum River Basin.

In accordance with Section 6101 of the Ohio Revised Code, commonly known as "The Conservancy Act", the MWCD was created on June 3, 1933 with missions of flood control, water conservancy, recreation, erosion control and other general uses of water within 8,000 square miles of drainage basin that ultimately enters the Ohio River at Marietta, Ohio. The impetus for the creation of the MWCD was a study funded by the Muskingum-Tuscarawas Improvement Association in 1930. The study recommended traditional reservoirs and dry reservoirs, along with a series of levees and floodwalls in various communities.

The MWCD's jurisdiction incorporates all or portions of 18 Ohio counties within the Muskingum Watershed. The MWCD is a political subdivision of the State of Ohio. It is the largest conservancy district in the state. The MWCD is governed by a Conservancy Court made up of one common pleas court judge from each of the 18 counties. The Conservancy Court in turn appoints a Board of Directors, which oversees the operations of MWCD.



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Using the 1930 recommendation from the Muskingum-Tuscarawas Improvement Association, the MWCD developed a “General Plan for Flood Protection and Water Conservation” (General Plan). The General Plan was a coordinated and comprehensive program for flood control. Two days after the MWCD Board of Directors adopted the General Plan, it applied to the Ohio State Advisory Board for a grant in the amount of \$41,640,000 to construct several flood control reservoirs. The Ohio State Advisory Board determined there was a federal interest and referred the application to the newly created PWA, with a recommendation that the extent of federal interest be determined by USACE.

Because the MWCD requested more than the standard 30 percent of construction costs allowed by NIRA, Huntington District was assigned to study the plan before the federal government approved it. In 1934, the Public Works Administration (PWA), using authority it was granted by NIRA, awarded a grant of \$22,090,000 to the USACE to construct the proposed plan with the understanding that the MWCD and USACE would cooperate in the preparation of the Official Plan. This understanding was formalized in a contract signed by the federal government and MWCD on January 10, 1934 (1934 Agreement) that provided that an Official Plan for MWCD (Official Plan) be developed cooperatively between USACE and the MWCD.

Originally, the NIRA was to expire in 1935, so efforts to formalize the Official Plan moved quickly. USACE created the Zanesville District to oversee the project. The first Official Plan approved by the Chief of Engineers recommended 15 reservoirs designed to reduce flooding on three of the Muskingum River’s principal tributaries, the Walhonding River, the Tuscarawas River and Wills Creek. This plan was designed to control run-off from a hypothetical storm in which a total five day rainfall of 10 inches would occur. This hypothetical event would be approximately 36 percent greater than the average total rainfall for the 5 days of the 1913 storm.

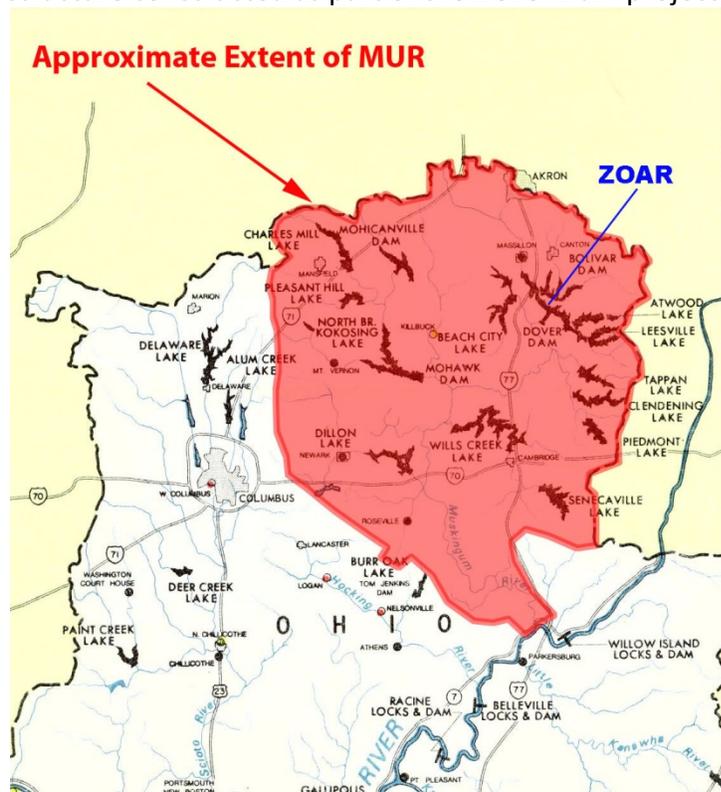
The Walhonding River system would be controlled by three small upstream reservoirs; Pleasant Hill Dam on Clear Fork, Charles Mill on Black Fork, and Mohicanville on Lake Fork that would flow into Mohawk Dam on the Walhonding River.

The upper Tuscarawas River system would be controlled by three upstream reservoirs; Massillon Dam on the Tuscarawas River, and Atwood and Leesville Dams on tributaries to Conotton Creek, that would flow into Dover Dam on the Tuscarawas River. As discussed later, Massillon Dam was eliminated in favor of a new reservoir, Bolivar Dam on Sandy Creek, to facilitate among other things, the lowering of Dover Dam’s spillway height to aid in reducing the cost of protecting Zoar Village.

Stillwater Creek, another tributary of the Tuscarawas River, would be controlled by four reservoirs, Tappan on Little Stillwater, Clendening on Brushy Fork, Piedmont on Stillwater, and Freeport on Skull Fork. Freeport Dam was later eliminated due to public concerns during several hearings held by the Conservancy Court.

Wills Creek, another large tributary of the Muskingum River would be controlled by Wills Creek Dam and Senecaville Dam on Seneca Fork.

Following several hearings, the Official Plan was amended to include 14 reservoirs and several upstream appurtenant levees to protect critical infrastructure and some communities located upstream of these reservoirs. As discussed above, Zoar Levee and Diversion Dam was one such structure constructed as part of the Dover Dam project. The Official Plan was approved in 1934.



A specific formulation document for Zoar Levee and Diversion Dam has not been identified to date. However, original documentation concerning the decision to construct the levee versus remove the town from Dover Dam's flowage easement indicates that public concern caused the MWCD and USACE to consider the historical significance of the community when making this decision.

A book dating from 1935 maintained by Zoar Village contains written correspondence lobbying the USACE to reconsider citing Dover Dam elsewhere and or otherwise protecting Zoar Village from being

evacuated because of its historical significance. This book indicates that after receiving letters of protest from Zoar residents, concerned historians, the Ohio State Archaeological and Historical Society (OSAHS), and finally U.S. Senator Robert J. Buckley, a decision was made by USACE to design a levee rather than purchase and evacuate that portion of the Zoar Village that would have been within Dover Dam's flowage easement.

It is notable that Zoar Village was also documented during this time by another New Deal era program, entitled the Historic American Building Survey (HABS). HABS was established by the National Park Service in 1933 as "make-work program" for architects, draftsmen and photographers left jobless during the Great Depression. They were tasked with documenting a representative sampling of America's architectural heritage by creating an archive of historic structures. It is unknown if HABS documentation was conducted to record what might be lost due to Dover Dam or if it had any role in the development of Zoar Levee and Diversion Dam.

While none of the appurtenant structures built for the 1930's flood control reservoirs in the Muskingum are specifically mentioned in the Official Plan, Zoar Levee and Diversion Dam was

by default authorized by an amendment to the Official Plan, in which it was determined to replace a planned reservoir at Massillon with one at Bolivar.



During hearings held by the Conservancy Court (which oversees MWCD) in 1934, the Court decided to amend

the Official Plan to substitute Bolivar Reservoir for one planned at Massillon reservoir to allow lowering of Dover Dam’s spillway height by four feet to elevation 916 to among other things “...provide easier access to the village of Zoar..” and ... simplify “...the problem of protecting the historic village of Zoar.” (Hal Jenkins 1976:76-77). Volume II of the Official Plan also demonstrates that land within Zoar Village would be impacted by the Official Plan for purchase of land required to construct Zoar Levee and Diversion Dam.

Post-construction documents confirm that Zoar Village’s historical significance and tourism potential were the key factors in deciding to construct Zoar Levee and Diversion Dam instead of acquire Zoar Village.

A 1949 design memorandum concerning the capacity of the Zoar pump station states that “...protection of the village instead of evacuation was adopted because of its historical significance...”

A 1950 memorandum concerning raising the crest of Zoar Levee stated:

“At the time Dover Dam was being planned, consideration was given to evacuating the population of 200 persons. However, since the village is of considerable historical importance and since two state-owned museums are located there, it was decided to protect the site by constructing earth levees rather than to evacuate the population.”

Further, a 2001 article from the National Park Service’s magazine entitled CRM stated:

“...in 1929, under pressure from the U.S. Army Corps of Engineers to move the town to higher ground to accommodate a nearby flood-control dam, the villagers began to recognize their

heritage and restored the central garden and opened a museum. A levee was built instead.”
(Fernandez 2001).

A 2002 history of the Muskingum Basin also indicates that the historical significance of Zoar Village is a major reason Zoar Levee and Diversion Dam were constructed (Kemp 2002:151-152).

Construction of the project began in 1935 with the award of construction contracts. Construction of the Dover Dam was completed on November 29, 1937 at a cost of \$7,755,300 which included levees at Zoar, Somerdale, three industrial levees to protect the Corundite Refractory near Zoar, the Fairfield Brick Company at Zoarville, the Norton Chemicals Company at Mineral City and associated study costs. In the case of Somerdale, a small levee was built to facilitate the raising of a railroad grade that also protected a small number of individual homes. As opposed to Zoar Levee and Diversion Dam, the industrial levees no longer protect significant resources.

On July 1, 1938, the 14 dams and their appurtenant structures were turned over to the MWCD for operation in accordance with the Official Plan, and the Zanesville District was dissolved.

The Flood Control Act of 1938 also authorized seven additional flood risk management projects in the Muskingum Basin. Of these, Dillon Lake and Local Protection Projects (LPP) at the communities of Massillon, Newark, and Roseville, Ohio were constructed. The Flood Control Act of 1962 also authorized the construction of North Branch of Kokosing River Lake, which was completed in 1972.

Under terms of the 1934 Agreement, USACE held complete responsibility for project construction. The MWCD held responsibility to acquire all necessary real estate. USACE later reimbursed the MWCD for real estate costs pursuant to the Rivers and Harbors Act of 1938. The MWCD later conveyed all real estate around the dam sites to the federal government. Pursuant to § 4 of the Flood Control Act of 1939 (53 Stat. 1414) (FCA 1939), the MWCD transferred all operation and maintenance responsibility to the USACE.

In general, FCA 1939 returned the dams and their appurtenant structures to the federal government and flood control operations back to USACE, and adopted the Official Plan as USACE’s authorization. This action was taken to ensure that the system of dams built in the Muskingum Valley would be operated to alleviate flooding on the Ohio River downstream as far as Cincinnati.

The flood-control plan for the Ohio River Basin authorized in section 4 of the Act of June 28, 1938.....shall include the Muskingum River valley dams and reservoirs as set forth in the Official Plan of the Muskingum Watershed Conservancy District and the provisions of section 2 of said Act (for acquiring by the United States of lands, easements, and rights-of-way for flood-control projects) shall apply thereto.....



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Therefore, the FCA 1939, and by default the Official Plan, are the authority the federal government uses to operate and maintain the Muskingum projects constructed in accordance with the 1934 Agreement, including Zoar Levee and Diversion Dam.

For more information or to provide comments, please contact:

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