

ESA HISTORICAL RECORDS COMMITTEE

(ESTABLISHED 1944)

NEWSLETTER

*Resources for the history of the Ecological Society of America
and the history of ecology and allied sciences*

No. 17

April 2019

Papers and algal collections of Robert Treat Paine at the University of Washington Archives

Susan Paine, daughter of Robert T. Paine, reports that her father's papers have been deposited in the archives of the University of Washington. The archives received 22 boxes but the collection has not yet been catalogued. When the finding aid is ready, it will be posted to the Archives West finding aid database, and we will publish an update in our newsletter. In the meantime, anyone interested in this collection should contact John Bolcer, University Archivist, Special Collections, University of Washington Archives (Email: jbolcer@uw.edu). Dr. Paine's collection of algal patties from experiments on Tatoosh Island, Washington, have also been deposited in the Burke Museum Herbarium collection and are referred to as the "Robert T. Paine Algal Collection" (accession no. 2019-28). The specimens have not yet been catalogued, but anyone interested in this collection should contact the Herbarium Collection Manager, David Giblin (dgiblin@uw.edu) for more information.

A Resolution of Respect was published by James A. Estes et al. in 2016: "A keystone ecologist: Robert Treat Paine, 1933-2016, *Bulletin of the Ecological Society of America* 97 (11): 2905-2909.

Celebrating a Green New Deal, 80 Years Ago

In January 1939 an article in *The Rotarian*, the magazine published by Rotary International, celebrated the completion of a massive flood-prevention system in Ohio's Muskingum Watershed Conservancy District. The project included an integrated network of 14 dams (later 16 dams) and reservoirs on the Muskingum River, a tributary of the Ohio River. Eleven reservoirs were permanent, and 3 were intended to remain dry until needed for flood control. Seven of the lakes had underground pipes to provide water to cities. Along with construction of these reservoirs, a soil conservation program was implemented, which involved planting millions of trees and encouraging farmers to adopt methods to curb erosion. Although the watershed management project was mainly designed to prevent floods, the article's author recognized its importance for "every type of conservation work, vegetable and animal and human."

The Muskingum Watershed Conservancy District was created in 1933, the same year as the more well-known Tennessee Valley Authority (TVA). Unlike the TVA, which was a federal corporation, the

Muskingum conservancy district was a state corporation, designed to protect a watershed basin that covered over 8,000 square miles, roughly one-fifth of the state of Ohio. The project was justly celebrated not only as an engineering marvel but also a model “for other states to examine and emulate.”

The lion’s share of funding, about \$27 million, came from the Public Works Administration (PWA), created in 1933 as part of President Roosevelt’s New Deal legislation to provide employment by funding large-scale projects, many of which also improved the nation’s infrastructure. But federal funding fell short of what was needed for such an ambitious conservation project, and state and local funds were critical to its success, as was the foresight, dedication, and hard work of local leaders. An appraisal of the project as it reached its twenty-year mark in the 1950s noted the significance of its exceptional level of local initiative, planning, organization, and responsibility.

Although the New Deal made federal funding of this project possible, the ideas and local initiative behind the project preceded the New Deal by many years. In 1913 the Muskingum valley and other regions of Ohio had experienced devastating floods. Further west, in the Miami River valley, a conservancy district had been created in 1914 in response to those floods. Fortunately, shortly before the flooding, the State had amended its constitution to allow for the creation of conservancy districts, the first legislation of its kind in the country. When the floods of 1913 hit, causing \$300 million in damage, the citizens of Dayton, in the Miami River watershed, led a campaign to study the problem and devise an engineering solution to prevent future flooding. The Miami River flood control project began construction in 1918 and was completed by 1923.

Citizens in the Muskingum valley had also considered flood prevention plans, but were unable to identify an affordable solution. By 1927, fearing that another great flood was imminent, they broached the subject of creating a conservancy district, taking their cue from the Miami Conservancy District that had protected Dayton. The project centered on the city of Zanesville, northeast of Dayton and downstream of a watershed encompassing about a third of Ohio. Bryce C. Browning, Secretary of Zanesville’s Chamber of Commerce, assumed energetic leadership of a local committee on flood control and prevention. Funds were raised by subscription to pay for an engineering study. Browning brought in Arthur E. Morgan, an expert in water system engineering who had already advised in the Miami River study. (President Roosevelt would later tap Morgan to head the Tennessee Valley Authority in 1933.) Morgan’s first study, presented in 1928, was ambitious but far too expensive for the Zanesville citizens who had commissioned the study.

What began as a movement for flood control expanded within a couple of years to a movement for comprehensive water management. The Chamber of Commerce enlisted the support of George H. Maxwell, a lawyer who for many years had been an activist in promoting water management policy. Maxwell moved to Zanesville in 1930 and campaigned tirelessly for water management as well as erosion control. The idea of a conservancy district did not initially have the full support of all communities in the watershed, however. Upland communities had no interest in flood control for the cities downstream. But the valley experienced an unusually severe drought in 1930, and this shock made people listen more attentively to Maxwell’s water conservation proposals.

Upstate at New Philadelphia, Ohio, other citizens formed the Muskingum-Tuscarawas Improvement Association, to explore plans to deepen the rivers, which would help to control flooding and at the same time improve navigation on the rivers. The study, also by Arthur Morgan’s engineering company, was

made public in 1931, and confirmed that controlling flooding was feasible in the Muskingum valley, but was very complex and difficult, and therefore well beyond the resources of the community.

Federal aid seemed a remote possibility in 1931. But in March 1933, newly-elected President Roosevelt announced his plans for employment relief, including creation of the Public Works Administration (PWA). The same month saw severe flooding in the Muskingum valley, prompting Browning and other Muskingum leaders to head to Washington, plans in hand, to lobby for federal funds for watershed management. Because a legally constituted local authority was needed for a federal contract, should funding be approved, the Muskingum Watershed Conservancy District was duly created in mid-1933, with Browning as its secretary. In August 1933 it became the first group to apply for funds from the new Public Works Administration. Although the initial PWA grant of about \$22 million fell short of the more than \$42 million requested, dam construction started in early 1934 under the direction of the Army Corps of Engineers.

As noted in *The Rotarian*, the funding of the project involved an “amazing reconciliation” of Federal, State, and local interests. But the reconciliation required many years of work and readjustments as the project got underway. Eighteen counties in the watershed had to create a comprehensive plan that would serve different interests, including flood control, navigation, and water conservation. PWA funds paid for the major engineering and construction work on dams for flood control. The District assumed the costs of acquiring land, easements and relocations, as well as legal and administrative expenses. The District initially was to assume the operation and maintenance costs of the dams as well. The State of Ohio picked up half the local share of costs, which left the District with a hefty sum that had to be covered by special assessments on residents in the benefited communities. As the project got underway, some local residents protested these assessments, culminating in a tax strike by the citizens of Newcomerstown in 1938, who argued that the federal government should basically take over the District’s responsibility for flood control. Changes to the Flood Control Act in 1939 relieved the District of any obligation to maintain and operate the dams, and transferred the flood-control portion of the project to the Corps of Engineers. That partnership is maintained today, with the Corps of Engineers operating the dams for flood control, and the District managing most of the reservoir areas behind the dams.

This spring we learned of devastating flooding in the Midwest, with cost estimates expected to top \$3 billion. As we consider the possibilities of “Green New Deals” for future environmental engineering projects, it is worth revisiting the Green New Deals of the past to see whether we can bring about a similar reconciliation of federal, state, and local interests. The following sources provide a good starting point for understanding the complex web of interests that were involved in the Muskingum River project in the New Deal era and earlier: Fred B. Barton, “Ohio Moves to End Floods,” *The Rotarian*, 54 (January 1939): 40-43; Hal Jenkins, *A Valley Renewed: the History of the Muskingum Watershed Conservancy District*, Kent State University Press, 1976; Lyle E. Craine, “The Muskingum Watershed Conservancy District: A study of local control,” *Law and Contemporary Problems* 22 (3) (1957): 378-404.

The Historical Records Committee invites ecologists to share their memories of the Muskingum Watershed Conservancy District and would be pleased to publish reminiscences in a future newsletter. Please send any contributions or ideas to the newsletter editor, Sharon Kingsland (sharon@jhu.edu).