
NATURAL RESOURCES JOURNAL

Volume 8
Issue 3 *Resources of the Sea*

Summer 1968

Wixom and Zeisler, Industrial Uses of Water in Michigan

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Industrial Uses of Water in Michigan

By

CHARLES W. WIXOM AND KARL F. ZEISLER

Ann Arbor: University of Michigan Press. 1966.

Pp. xxvii, 427, $7.50

Given the rising concern about the adequacy and proper utilization of our fresh water supplies, a study investigating the industrial uses of water in one of our leading manufacturing states appears timely indeed. Unfortunately, Charles W. Wixom's and Karl F. Zeisler's treatment of the subject matter is disappointing.

The first three chapters are introductory, dealing with water as a natural resource, the hydrological cycle and other background information. Here the two authors are at their best. Showing their professional skill (both are journalists by trade) and writing for a lay-public, they spike their story with little anecdotes and asides which make for disorganized, but entertaining reading.

Chapter four, "Water and Industry in Michigan," delves into the main theme. Various tables, mostly reproduced from the 1958 Census of Manufacturers, list industries in Michigan and elsewhere, number of employees, dollar amounts of value added, and various water use data on a per employee and dollar of value added basis. From the overall discussion two factors stand out. First, Michigan is one of the "water-rich" states in the nation in terms of annual surface run-off (amounting to some ten inches); furthermore, no city in the state is more than 85 miles distant from any one of the Great Lakes which form the world's largest storage basin of fresh water supplies.[1] Second, Michigan's "wet" industries—primary metals, chemicals and allied products, paper and allied products, stone, clay and glass products, and coal and petroleum products—account for some 84 per cent of the water withdrawn by the manufacturing sector and produce some 20 per cent of the value added by industry, whereas the rest of the manufacturing sector accounts for some 60 per cent of the state's value added but uses only about 23 per cent of the water withdrawn.[2]

Given these facts it would appear that water availability is not

1. C. Wixom and K. Zeisler, Industrial Uses of Water in Michigan 52 (Bureau of Business Research, Graduate School of Business Administration, The University of Michigan 1966).

2. *Id.* at 59.

a problem of absolute scarcity (as it rarely is) but more a matter of water costs and efficient water administration. Furthermore, it could be assumed that the major problems, if problems exist, would center around the "wet" industries. One would expect to find a discussion of these problems, an attempt to correlate the location of these industries with available water supplies, and a projection of estimated future demands, together with an indication of where and how these demands can be satisfied. Unfortunately, this information has not been provided. There is, instead, a rather general discussion of water utilization in various industries. Sprinkled in between are a number of statistics which show water requirements for specific processes or products per unit of output. However, we are neither told whether these products are being made in Michigan[3] nor, if they are made, how much of them are produced and where. As a result, most of the data gathered together so diligently (there are twenty-six tables and several figures in this chapter alone) is of little benefit to the reader, particularly since all of it has been copied from published sources elsewhere and therefore presents nothing new.

Even less informative is the chapter entitled "Projections and Predictions." All it contains are some well-known national projections of industrial growth and future water demand. The only data provided for Michigan show estimates of future employment by industrial sector. What this means in terms of water demand we are not told, apart from some vague and general comments which refer more to the national than to the Michigan scene. Given the low value of water as a productive input, even in the "wet" industries,[4] this reviewer cannot share the quoted opinion that "certain parts of the United States have become overloaded with consumers of water. . . . [I]ndustry cannot continue to move to California; it may soon have to move back to where it should be."[5] What evidence there is—the California Water Plan, the new Los Angeles desalinization plant—points in the opposite direction.

3. Of the sixteen chemical and allied products listed, for example, at least two, alumina and magnesium hydroxide from seawater, never have been and never will be produced in Michigan. Similar criticism can be levied against almost all of the other tables.

4. For example, Blair T. Bower reports that for chemical companies the proportion of total production costs represented by total water utilization costs ranged from about 0.1 per cent to about three per cent. B. Bower, *Economics of Industrial Water Utilization* in Kneese & Smith, eds., Water Research, 150 (Johns Hopkins Press, 1966).

5. C. Wixom and K. Zeisler, p. 263.

As it turns out, the heart of the book does not deal with industrial use of water in Michigan at all. It deals with water law, water administration, constitutional reorganization, and the whole gamut of decision making in the field of water administration. It is in these areas that it makes its most important contribution, not so much by clear, incisive, analytical comments—these are lacking, and the few conclusions drawn are debatable—but simply by providing a whole series of sketches, case studies, and reported opinions and statements by responsible officials. What emerges is a picture of confusion surrounding a legal structure built on common law doctrine and overlaid by state laws and regulations, permits, and new federal legislation. What emerges are the jealousies among competing state agencies, the hostility of state officials toward federal regulation and intervention, and the pressure of special interest groups both inside and outside the legislature. What we must conclude is that Michigan, hailed as one of the most progressive states in the water administration field, still has a long, long way to go. Ad hoc decisions, uncoordinated planning, and wasteful competition among individual communities and firms are still the rule rather than the exception.

"Problems, Long, Large and Wide" is the heading of another chapter. Long, large and wide ranges the discussion carried on in the book: from the California water plan to weather modification, from research and development expenditures by industry to the St. Lawrence Seaway, from Canadian water diversion plans to the early history of Michigan, from air pollution to radiation hazards. Much of the information provided is interesting in itself, but often its relationship to the subject matter at hand is not explained. This lack of organization and purposeful discussion is one of the major shortcomings of the book. To treat a particular issue it is not enough to juxtapose opinions of others, particularly if these opinions differ widely. More often than not the reader is left puzzled, wondering which, if any, he should believe. A book should be more than a collection of interviews, quotations from already published sources, and reproduction of borrowed statistics. It should be more than a series of—in part very well written—newspaper stories. Unfortunately, this one is not.

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