

MINERAL RESOURCES OF WICOMICO COUNTY MARYLAND

By
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STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
MARYLAND GEOLOGICAL SURVEY
Kenneth N. Weaver, Director

SAND AND GRAVEL RESOURCES OF WICOMICO COUNTY

Introduction

This map shows past and present mining operations and areas of potential mineral resources in Wicomico County. Sand and, to a lesser extent, gravel are the county's only mineral resources. Because the county is located at a considerable distance from the major population centers, most of the material is used locally. The gravels of the Eastern Shore counties tend to be finer grained than those west of Chesapeake Bay. In most pits 90% of the material will pass 16mm.

The sand and gravel industry has grown from four operators in 1966 to seven in 1989. As of 1989, there were nine active pits in the county. Production from Wicomico County in 1988 was 945,320 tons.

Approximately 322 acres have been disturbed by mining since the Surface Mining Act of 1975, of which about 26% have been reclaimed. The following chart gives a summary of the disturbed land in 1989:

Inactive and Abandoned Acreage	Reclaimed Acreage	Working Acreage	Total Acreage
93	85	227	415

Acreage data were compiled from surface-mining permits, field investigations, aerial photographs, and information furnished by various sand and gravel operators. Numerous older pits, some not found and some obliterated by time, are not reflected in these figures.

Geology

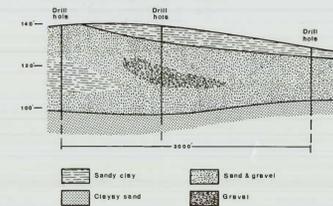
The sand and gravel deposits of Wicomico County are confined principally to three stratigraphic units. In decreasing order of importance, these are the Parsonsburg Sand (Pleistocene), the Kent Island Formation (Pleistocene), and the Beaverdam Sand, (Upper? and Middle? Pliocene). These units, depending on their locations, can be in excess of 30 feet thick.

These formations are not everywhere suitable for aggregate or fill. The quality of the material is variable and its use is often determined by its location and the particular specifications of the job for which it is needed. In addition, suitable aggregate or fill material may sometimes be found outside the area outlined as potential sand and gravel resources.

During the course of this survey, 22 exposures and a number of drill hole logs were examined. Using sand and gravel thickness from these sources, an attempt was made to delineate those areas in which economic sand and gravel deposits are most likely to occur, but deposits tend to be site specific and no continuity could be established. A large area of Parsonsburg lying along the eastern edge of the county has been included as a resource, but drill holes indicate the formation here is usually less than 10 feet thick. Generally speaking, those areas covered by the Walston Silt or the Ormar Formation have been omitted from the resource area. Small isolated areas of Parsonsburg and Beaverdam, not shown on the map, may occur within the Walston Silt and could have limited economic potential. Marshes and tidal wetlands were not considered as potential mineral resources because of environmental considerations. No attempt was made to examine quality or overburden thickness. The information on this map should be used with great caution because sand and

gravel deposits commonly change in thickness and composition over short distances, and in some cases location is the determining factor as to whether a particular deposit can be used. Specific site investigations must be made before any actual reserve estimates or economic projections can be made.

The following cross section from a site west of Leonardtown, Maryland serves to illustrate both the lateral and vertical facies changes that can occur over relatively short distances.



Resource Pre-emption

Other factors not considered here influence economic viability of sand and gravel operations in certain areas. Important among these are both the proximity to and pre-emption by urban development.

Selected References

Bachman, L. J. and Wilson, J. M., 1984, The Columbia aquifer of the Eastern Shore of Maryland: Maryland Geological Survey Rept. of Invest. No. 40, p 144.

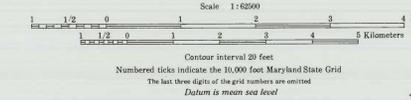
Cleaves, Emery T., et al., 1987, Quaternary geologic map of the Chesapeake Bay 4° x 6° quadrangle, United States: U.S. Geological Survey, map I-1420, scale 1:1,000,000.

Denny, C. S. et al., 1979, The Parsonsburg Sand in the central Delmarva Peninsula, Maryland and Delaware: U.S. Geological Survey Prof. Paper 1067-B, 15 p.

Hess, Melodie, 1977, Drill hole logs and location map of surface and shallow subsurface geologic studies in the emerged coastal plain of the Middle Atlantic States: U.S. Geological Survey Prof. Paper 1067-A, 28 p.

Owens, J. P. and Denny, C. S., 1979, Surface and shallow subsurface geologic studies in the emerged coastal plain of the Middle Atlantic States: U.S. Geological Survey Prof. Paper 1067-A, 28 p.

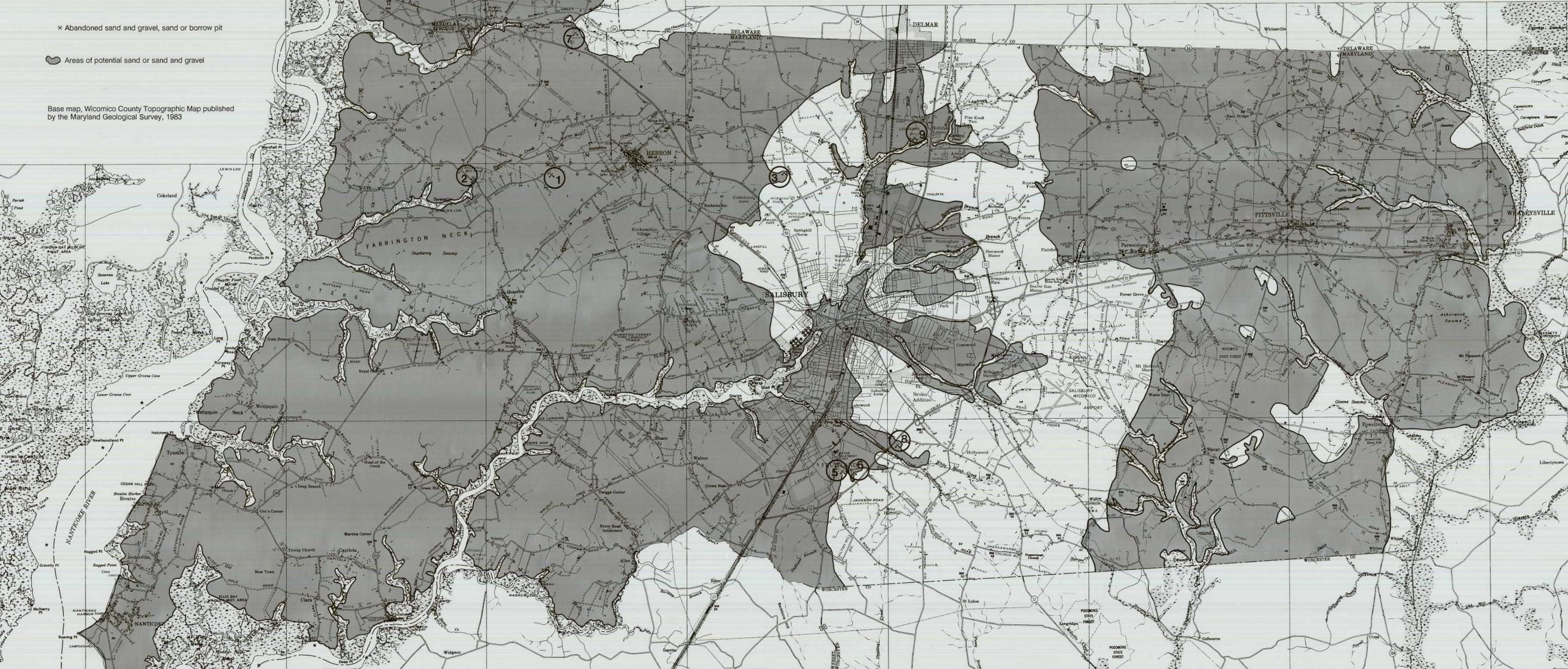
1979, Geologic map of Wicomico County: Maryland Geological Survey, scale 1:62,500.



MAP SYMBOLS

- ⊗ Active sand and gravel, sand, or borrow pit
Number refers to operator.
- * Abandoned sand and gravel, sand or borrow pit
- ☉ Areas of potential sand or sand and gravel

Base map, Wicomico County Topographic Map published by the Maryland Geological Survey, 1983



ACTIVE OPERATIONS

1. Culver, Inc.
2. Culver, Inc.
3. Dashiell, J. Roland & Sons
4. Hanson, John H.
5. Hobbs, James B.
6. Hobbs, James B.
7. Howard Sand & Gravel, Inc.
8. I. A. Construction Corp.
9. P & A Engineering Co., Inc.

- Sand & gravel
- Sand & gravel
- Fill material
- Bankrun
- Sand & gravel
- Sand & gravel
- Sand & gravel
- Sand & gravel
- Fill material

MAP SYMBOLS

CULTURE
(printed in black)

- Dual highway
- Main highway
- Surfaced secondary highway
- Light-duty road
- Unimproved dirt road
- Trail
- Railroads
- Power transmission line
- Pipeline
- Shopping center
- Buildings in general
- Tanks, towers, silo
- Lighthouse, beacon, church, school
- Police station
- Fire station
- Dam

RELIEF
(printed in brown)

- Contours
- Depression contours
- Cuts
- Fills

WATER
(printed in blue)

- Perennial streams
- Intermittent streams
- Lake or pond
- Canal or ditch
- Aqueduct or waterpipe
- Marsh

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