Michigan Coastal Zone Management Program

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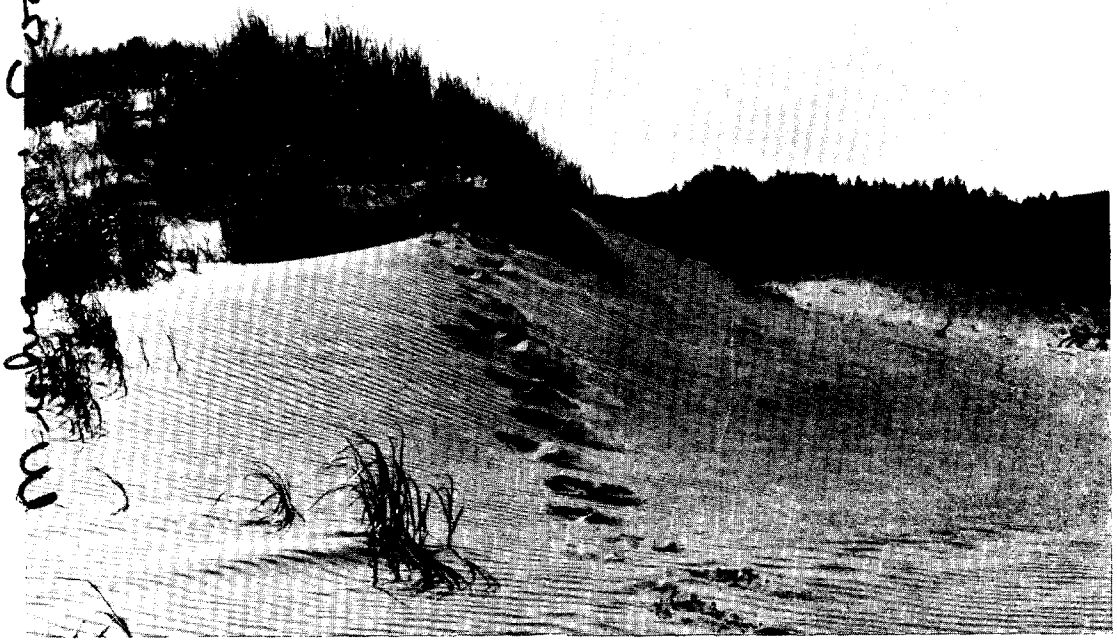
EFFECTIVE AUGUST 15, 1978:
Promulgated under authority of the Sand Dune Protection and Management Act (Act No. 222, P.A. 1976); in accordance with the Administrative Procedures Act (Act No. 306, P.A. 1969 as amended).

POSED

Designated Sand Dune Areas

COASTAL ZONE
INFORMATION CENTER



SERIES I

Designated Sand Dune Areas

On July 30, 1976 Enrolled House Bill No. 4038 was signed into law by Governor Wm. G. Milliken. The action was the culmination of significant efforts on the part of numerous individuals, organizations, and units of government toward the regulation of those actions involving the "extraction of" or "mining" of sand from areas bordering Michigan's Great Lakes shoreline.

This statute, the Sand Dune Protection and Management Act (Act No. 222, P.A. 1976; M.C.L. 281.651 - 281.664), provides the Department of Natural Resources with the authority to undertake specified steps which will assure the wise use and protection of Michigan's dunes and dune-like formations. It provides a mechanism whereby a proposed mining activity is reviewed in light of its potential effects upon the environment and requires the operator to prepare a long-range plan which will asssure the reclamation of land subjected to the removal of sand for commercial or industrial purposes.

Furthermore, the DNR is required to prepare several types of comprehensive studies relating to the dunes and their values for environmental, recreational and industrial purposes.

The department is also provided with the authority to promulgate those administrative rules necessary to implement and administer this act.

The fundamental step in administering this program is that of designating the location of "sand dune" areas in the state. The statute defines a sand dune area as -- *"an area which includes those geomorphic features composed primarily of sand, whether windblown or of other origin and which lie within 2 miles of the ordinary high water mark on a Great Lake."* This definition is significantly broad in nature and is subject to several interpretations.

The Geological Survey Division of the Department has developed additional criteria which relates to the definition and subsequent designation of these areas. This criteria includes the following:

I. An area which contains geomorphic feature(s) of significant topographic relief as determined by a geologist as being composed of more than 50% of unconsolidated sand.

II. Those areas identified as coastal dunes, inland dunes or coastal sand strips (DNR publication entitled "Sand Dunes of Michigan" - 1962).

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III. Those shorelands classified as high sand dunes or low sand dunes by the Great Lakes Basin Frame work Study, "Appendix 12, Shore Use and Erosion, 1975".

IV. An area which contains soil types as identified and qualified by the U.S. Department of Agriculture - Soil Conservation Service as "sand dune types" or "sand dune associated soil types".

V. An area which is identified as a transition or buffer zone bordering or adjoining dune areas.

Sand Dune Area Boundaries

A designated dune area is identified as a land mass which exhibits the physiographic features of a dune-type ecosystem. Dunes are not stable components of the environment. They are formed through the interaction of wind and water, and are subject to change dependent upon natural factors.

The statute provides the department with the authority to designate dune areas within 2 miles of the Great Lakes shoreline. Physiographic features, by their very character, meander from point-to-point. The designated areas, as proposed, have been identified and described in 40 acre increments which include, in some cases, a transition zone.

The designation of these areas shall be accomplished through the promulgation of administrative rules pursuant to the Administrative Procedures Act. This process will provide ample opportunities for review and input from interested citizens, organizations, governmental entities and representatives of industry.

Initial designation shall include seven different land masses all of which are located adjacent to the Lake Michigan shoreline. These areas exhibit some of the most outstanding physical features associated with a dune-type environment and also include the majority of those commercial operations involved in the mining of sand for industrial purposes.

Additional sand dune areas shall be designated in like manner upon the completion of research activities by the department.

Act No. 222
Public Acts of 1976
Approved by Governor
July 30, 1976

STATE OF MICHIGAN
78TH LEGISLATURE
REGULAR SESSION OF 1976

Introduced by Reps. Cawthorne, Anderson, Goemaere, Rosenbaum, Roy Smith, De Stigter, Richard A. Young, Geerlings, Sackett, Sietsema and Raymond W. Hood

ENROLLED HOUSE BILL No. 4038

AN ACT to provide for study, protection, management, and reclamation of Great Lakes sand dunes; to prescribe powers and duties of the department of natural resources; to prescribe fees for the administration and enforcement of this act; and to provide penalties.

The People of the State of Michigan enact:

Sec. 1. This act shall be known and may be cited as the "sand dune protection and management act".

Sec. 2. As used in this act:

(a) "Barrier dune" means the first landward sand dune formation along the shoreline of a Great Lake or a sand dune formation designated by the department.

(b) "Cell-unit" means a subunit of the total sand dune mining project as determined in size and location by the operator, but which shall not exceed 10 acres in size for new operations or the expansion of existing operations, and which shall not exceed 30 acres in size for existing operations.

(c) "Commission" means the natural resources commission.

(d) "Department" means the department of natural resources.

(e) "Great Lakes" means any of the Great Lakes which has a shoreline within the state.

(f) "Operator" means an owner or lessee of mineral rights or any other person engaged in or preparing to engage in mining operations with respect thereto within a sand dune area.

(g) "Person" means an individual, partnership, firm, corporation, association, city, village, township, county, or other political subdivision of the state, or a state or state agency.

(h) "Sand dune area" means that area designated by the department which includes those geomorphic features composed primarily of sand, whether windblown or of other origin and which lies within 2 miles of the ordinary high-water mark on a Great Lake as defined in section 2 of Act No. 247 of the Public Acts of 1955, as amended, being section 322.702 of the Michigan Compiled Laws.

(i) "Sand dune mining" means the removal of sand from sand dune areas for commercial, or industrial purposes, or both.

Sec. 3. The department, by July 1, 1977, shall make or cause to be made a comprehensive study and inventory of Great Lakes sand dune areas in the state. The study and inventory shall include:

(a) An economic study of the current and projected sand dune mining practices in the state, showing where the sand is marketed, its uses, and the amount of sand reserves.

(b) A geologic study of sand areas within Michigan, other than Great Lakes sand dune areas, that would contain sufficient reserves and have properties suitable for use as foundry core and molding sands or other uses of sand.

(c) Sand dune areas or portions thereof that, for environmental or other reasons, should be protected through purchase by the state or other persons or interests, or easements including the acquisition of mineral rights by the state, and a priority list of sand dune areas to be acquired by the department.

(d) An identification and designation of barrier dunes along the shoreline, showing their effect on aesthetic, environmental, economic, industrial, and agricultural interests in this state.

(e) Methods for recycling or reusing sand for industrial and commercial purposes, along with alternatives to the use of dune sand and its economic impact.

(f) Recommendations for the protection and management of sand dune areas for uses other than sand mining.

Sec. 4. (1) After July 1, 1977, a person or operator shall not engage in sand dune mining within Great Lakes sand dune areas without first obtaining a permit for that purpose from the department.

(2) Prior to receiving a permit from the department a person or operator shall submit:

(a) A permit application on a form provided by the department.

(b) An environmental impact statement of the proposed mining activity as prescribed by section 5.

(c) A progressive cell-unit mining and reclamation plan for the proposed mining activity as prescribed by section 6.

(d) A 15-year mining plan as prescribed by section 7.

Sec. 5. The environmental impact statement submitted to the department shall follow guidelines prescribed by the department and shall include:

(a) The compatibility of the proposed mining operation with adjacent existing land uses or land use plans.

(b) The impact of the proposed mining operation on flora, fauna, or wildlife habitats.

(c) The economic impact of the mining activity on the surrounding area.

(d) The effects of the mining activity on groundwater supply and flow.

(e) The effects of the mining activity on adjacent surface resources.

(f) Alternatives, if any, to the proposed mining site and the reasons for the choice of the proposed mining site over those alternatives.

Sec. 6. (1) The progressive cell-unit mining and reclamation plan, for both the total project and each cell-unit, shall include:

(a) The method and direction of mining.

(b) Surface overburden stripping plans.

(c) The depth of grade level over the entire site from which the sand will be removed.

(d) Provisions for grading, revegetation, and stabilization that will minimize shore and soil erosion, sedimentation, and public safety problems.

(e) The location of buildings, equipment, stockpiles, roads, or other features necessary to the mining activity and provisions for their removal and restoration of the area at the project termination.

(f) Provisions for buffer areas, landscaping, and screening.

(g) The interim use or uses of reclaimed cell-units before the cessation of the entire mining operation.

(h) Maps and other supporting documents required by the department.

(2) A cell-unit permit to cover existing operations shall not be issued by the department for an area exceeding 30 acres. A cell-unit permit to cover new operations or an expansion of existing operations shall not be issued by the department for an area exceeding 10 acres.

Sec. 7. (1) The 15-year mining plan shall include the following:

(a) The location and acreage of sand dune areas presently being mined and the amount of sand being mined.

(b) The location and acreage of sand dune areas not presently being mined but planned for that purpose and the amount of sand planned to be mined.

(c) A schedule indicating when the mining activity will begin in each sand dune area and the probable termination date of mining activities in each area.

(d) Additional information requested by the director of the department.

(2) A duplicate copy of the cell-unit mining and reclamation plan shall be submitted to the soil conservation district in the county where the mining activity is proposed to occur. The soil conservation district shall have 30 days after receipt of the plan to review the proposal and submit written comments to the department.

Sec. 8. (1) A permit issued by the department shall be valid for not more than 3 years. A permit shall be renewed if the sand dune mining operation has been carried out in compliance with this act, the rules promulgated under this act, and the conditions of the permit issued by the department.

(2) The permit shall state any conditions, limitations, or other restrictions determined by the department, including any setback from the ordinary high-water mark of a Great Lake for the protection of the barrier dune.

(3) In granting a permit, if the department allows for the removal of all or a portion of the barrier dune pursuant to the act, it shall submit to the commission written reasons for permitting the removal.

(4) The department shall approve or deny a permit application within 120 days after the application is received. If a permit is denied the reasons shall be stated in a written report.

(5) A person who desires notification of pending applications may make a written request to the department accompanied by an annual fee of $5.00 which shall be credited to the state general fund. The department shall prepare a list every 4 months of the applications made during the previous quarter and shall promptly mail copies of the list for the remainder of the calendar year to persons who have so requested notice. The quarterly list shall give the name and address of each applicant, the legal description of the lands included in the project, and a summary statement of the purpose of the statement.

Sec. 9. The department shall deny a permit if, upon review of the environmental impact statement, it determines that the proposed sand mining operation would have an irreparable harmful effect on the environment.

Sec. 10. The state or an instrumentality of the state shall not engage in the extraction of sand or other minerals from a sand dune area, except as required in the interest of public health and safety in an emergency situation resulting from a natural disaster as defined in section 2 of Act No. 154 of the Public Acts of 1953, as amended, being section 30.222 of the Michigan Compiled Laws.

Sec. 11. (1) For purposes of surveillance, monitoring, administration, and enforcement of this act, an operator is assessed a fee of not more than 1 cent per ton of sand mined from a sand dune area for the calendar year reported as described in subsection (2). Funds collected by the assessment of the fee shall not exceed the actual costs to the department of implementing this act.

(2) An operator shall file an annual report on or before January 31 of each year. The report shall show the areas mined and describe the progress of restoration and reclamation activities of the operator for the preceding year. The report shall contain:

(a) The number of tons of sand mined from a sand dune area.

(b) Location of the sand dune area.

(3) The fee described in subsection (1) shall be due not more than 30 days after the department sends written notice to the operator of the amount due.

(4) The surveillance fee and annual report required by this section shall be confidential and shall not be available for public inspection without the written consent of the person filing the fee and report, except in accordance with judicial order.

(5) Failure to submit an annual report in compliance with rules promulgated by the department shall constitute grounds for revocation of a permit.

(6) A penalty equal to 10% of the amount due, or $1,000.00, whichever is greater, shall be assessed against the operator for a fee not paid when due. An unpaid fee and penalty shall constitute a debt and become the basis of a judgment against the operator. Penalties paid pursuant to this section shall be used for the implementation, administration, and enforcement of this act.

(7) Records upon which the annual report is based shall be preserved for 3 years and shall be subject to audit by the department.

(8) The department shall annually prepare and submit to the house and senate committees on conservation a report on the sand mining surveillance activities taken by the department for the immediately preceding year and the cost thereof.

Sec. 12. (1) Prior to the initiation of a disturbance of land, the holder of a permit shall file with the department a bond in favor of the state, executed by an approved surety in this state.

(2) The bonds shall be filed for a maximum of 3 cell-units within the permit and shall be for an amount equal to $10,000.00 per cell-unit or $1,000.00 per each acre in the cell-units, whichever is greater.

(3) The bonds shall be transferable to other cell-units contained within the permit upon faithful conformance with the approved reclamation plan as provided in section 6.

(4) The bond shall be conditioned upon the faithful performance of the requirements set forth in the approved reclamation plan as provided in section 6. Liability under the bond shall be maintained as long as the reclamation is not completed in compliance with the approved plan.

(5) Notification shall be given upon completion or acceptance by the department of the reclamation activity.

(6) Mining or extraction of sand dune minerals from any other cell-unit contained within the permit shall be prohibited until compliance or approval has been attained from the department.

(7) A violation of this section shall constitute grounds for revocation of the permit.

Sec. 13. The department shall promulgate rules pursuant to Act No. 306 of the Public Acts of 1969, as amended, being sections 24.201 to 24.315 of the Michigan Compiled Laws, to implement and administer this act.

Sec. 14. (1) If the department finds that an operator is not in compliance with this act, the rules promulgated under this act, or a provision of a permit, the department may suspend or revoke the permit.

(2) At the request of the department, the attorney general may institute an action in the circuit court for a restraining order or injunction or other appropriate remedy to prevent or preclude a violation of a permit, this act, or the rules promulgated under this act. This shall be in addition to the rights provided in Act No. 127 of the Public Acts of 1970, being sections 691.1201 to 691.1207 of the Michigan Compiled Laws.

(3) A person who violates this act or a permit issued under this act is guilty of a misdemeanor punishable by a fine of not more than $5,000.00.

T. Thos. Thatcher

Clerk of the House of Representatives.

Billie S. Farnum

Secretary of the Senate.

Approved _____

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Governor.

DEPARTMENT OF NATURAL RESOURCES

GEOLOGICAL SURVEY DIVISION

SAND DUNE AREAS

Filed with the Secretary of State on

These rules take effect 15 days after being filed with the Secretary of State

(By authority conferred on the commission of natural resources by section 13 of Act No. 222 of the Public Acts of 1976 being § 281.663 of the Michigan Compiled Laws)

R 281.401. Lincoln - Lake - Chikaming sand dune area - Berrien County

Rule 1. The following described area is designated as a sand dune area under the designation of the Lincoln - Lake - Chikaming sand dune area: NW Frl ¼ of SE Frl ¼, SW Frl ¼ of SE Frl ¼, Sec. 9, W 3/4 Frl Sec. 16, Entire Sec's 17, 20, NW¼, W½ of SW¼ Sec. 21, W½, Sec. 28, Entire Sec's 29, 30, 31, 32, T 5 S, R 19 W, Entire Sec's 5, 6, 7, W 3/4, Sec. 8, W½ of NE¼, W½, Sec. 17, Entire Sec. 18, W½ of NE¼, W Frl ½, Frl Sec. 19, NE¼ of NW Frl ¼, W Frl ½ of NW Frl ¼, Frl Sec. 30, T 6 S, R 19 W, Entire Sec's 12, 13, 24, 25, 26, 34, 35, NW¼ of NE¼, NW¼, NW¼ of SW¼, Sec. 36, T 6 S, R 20 W, N Frl ½ of NE Frl ¼, SW¼ of NE Frl ¼, NW Frl ¼, N½ of SW¼, SW¼ of SW¼, Frl Sec. 2, Entire Frl. Sec's 3, 9, N½ of NE¼, SW¼ of NE¼, NW¼, W½ of SW¼, Sec. 10, NW¼ of NW¼, Sec. 11, NW¼ of NE¼, N Frl ½ of NW Frl ¼, Frl Sec. 16, NE Frl ¼ of NE Frl ¼, Frl. Sec. 17, T 7 S, R 20 W - Berrien County

R 281.402. South Haven - Covert - Hagar sand dune area - VanBuren and Berrien counties

Rule 2. The following described area is designated as a sand dune area under the designation of the South Haven - Covert - Hagar sand dune area:

S Frl ½ of N Frl ½, S Frl ½, Frl. Sec. 21, S 3/4 Sec. 22, W½ of SW¼, Sec. 23, W½ of NW¼, NW¼ of SW¼, Sec. 26, N½, SW¼, N½ of SE¼, Sec. 27, Entire Sec's 28, 29, 32, 33, SW¼ of NE¼, W½, Sec. 34, T 1 S, R 17 W, NE Frl ¼ of NW Frl ¼, Frl. Sec. 3, Entire Sec's 4, 5, 7, 8, N½ of NE¼, SW¼ of NE¼, W½, NW¼ of SE¼, Sec. 9, NW¼, N½ of SW¼, Sec. 16, Entire Sec's 17, 18, 19, Entire Sec. 20 except SE¼ of SE¼, W½, Sec. 29, Entire Sec. 30, E½ of NE¼, W 3/4 Sec. 31, T 2 S, R 17 W, Entire Sec's 24, 25, 35, 36, T 2 S, R 18 W - Van Buren County

Entire Sec. 1 except E½ of SE¼, Entire Sec's 2, 10, NE Frl ¼, W Frl ½, NW¼ of SE¼, Frl. Sec. 11, N½ of NW¼, Sec. 14, NE Frl ¼ of NE Frl ¼, W Frl ½ of NE Frl ¼, NW Frl ¼, Frl. Sec. 15, T 3 S, R 18 W - Berrien County

R 281.403. Park - Laketown - Saugatuck sand dune area - Ottawa and Allegan counties

Rule 3. The following described area is designated as a sand dune area under the designation of the Park - Laketown - Saugatuck sand dune area: W½ of SW¼, Sec. 14, S½, Sec. 15, S½, Sec. 16, Entire Sec's 21, 22, W¼, Sec. 23, W½ of NW¼, Sec. 26, N 40 acres of Gov't Lot 1, NW¼, Gov't Lots 3, 4, W½ of SW¼, Sec. 27, Entire Sec's 28, 33 and 34, W Frl ½ of SW Frl ¼, Sec. 35, T 5 N, R 16 W - Ottawa County

W¼, Sec. 2, Entire Sec's 3, 4, 9, 10, W¼, Sec. 11, W¼, Sec. 14, Entire Sec's 15, 16, 21, 22, W¼, Sec. 23, W½ of NW¼, NW¼ of SW¼, Sec. 26, Entire Sec's 27, 28, 33, 34, T 4 N, R 16 W, Entire Sec. 3 except E½ of SE¼, Entire Sec's 4, 5, 8, Gov't Lots 1, 2, 3, 4, 5, 6, n Frl ½ of NE¼, SW¼ of NE¼, S½

of SE¼, NW¼ of SE¼, Sec. 9, W½ of NE¼, N½ of NW¼, SE¼ of NW¼, SW¼ of SW¼, Sec. 10, Gov't Lots 1, 2, 3, Sec. 15, Entire Sec. 16 except SW¼ of SW¼, Entire Sec. 17 except SE¼ of SE¼, Gov't Lots 1, 2, 3, Sec. 20, N½ of NE¼, SE¼ of NE¼, NE¼ of NW¼, Sec. 21, T 3 N, R 16 W - Allegan County

R 281.404. Laketon - Fruitport - Spring Lake - Grand Haven sand dune area - Muskegon and Ottawa counties

Rule 4. The following described area is designated as a sand dune area under the designation of the Laketon - Fruitport - Spring Lake - Grand Haven sand dune area: SE¼ of SE¼, Gov't Lot 10, Sec. 6, Entire Sec's 7, 8, Entire Sec. 9 except E½ of NE¼, Entire Sec. 16 except SE¼ of SE¼, Entire Sec. 21 except Gov't Lot 1, Entire Sec's 17, 20, 28, 33, 34, Gov't Lots 2, 3, 4, S½ of SW¼, SE¼, Sec. 35, T 10 N, R 17 W, W½ of NW¼, W½ of SW¼, SE¼ of SW¼, Sec. 1, Entire Sec's 2, 3, 10, 11, SW¼ of NE¼, NW¼, W½ of SW¼, NE¼ of SW¼, Gov't Lot 3, NW¼ of SE¼ Sec. 12, Entire Sec's 13, 14, 23, 24, 25, 26 and 36, T 9 N, R 17 W, SW Frl ¼ of NW Frl ¼, W Frl ½ of SW Frl ¼, SE¼ of SW Frl ¼, Sec. 18, SW¼ of NE¼, NW Frl. ¼, SW Frl ¼, W½ of SE¼, Sec. 19, W½ of SW¼ Sec. 29, Entire Frl Sec's 30, 31, Gov't Lot 1, Sec. 32, T 9 N, R 16 W - Muskegon County

Entire Sec. 1, T 8 N, R 17 W, Entire Sec. 5 except E½ of NE¼, Entire Sec's 6, 7, 8, SW¼ of NW¼, W½ of SW¼ Sec. 9, NW¼, Sec. 16, Entire Sec's 17, 18, 19, and 20, Gov't Lot 12, SW¼, W½ of SE¼, Sec. 21, Entire Sec. 28 except NE¼ of NE¼, Entire Sec's 29, 32, 33, SW¼ of NW¼, W½ of SW¼, Sec. 34, T 8 N, R 16 W, W½ of NW¼, SW¼, Sec. 3, Entire Sec's 4, 5, 8, 9, W½, SW¼ of SE¼, Sec. 10, W 3/4, Sec. 15, Entire Sec's 16, 17, 20, Entire Sec. 21 except SE¼

of SE¼, NW¼ of NE¼, NW¼, N½ of SW¼, Sec. 22, NE¼ of NW¼, Gov't Lots 1 and 2, Sec. 28, T 7 N, R 16 W - Ottawa County

R 281.405. Golden - Benona - Claybanks sand dune area - Oceana county

Rule 5. The following described area is designated as a sand dune area under the designation of the Golden - Benona - Claybanks sand dune area: Gov't Lot 3, Sec. 5, Entire Sec. 7, W½ of NE¼, Gov't Lots 1, 2, 3 SW¼ of SW¼, E½ of SW¼, W½ of SE¼, Sec. 8, Entire Sec's 17, 18 and 19, N½, Gov't Lots 1, 2, NE¼ of SW¼, NW¼ of SE¼, Sec. 20, W½, Sec. 30, N½ of Gov't Lot 4, Sec. 31, T 15 N, R 18 W, Entire Sec's 13, 24, 25, 26, and 35, Entire Sec. 36 except E½ of SE¼, T 15 N, R 19 W. W½ of NE¼, NW¼, N½ of SW¼, SW¼ of SW¼, Sec. 1, Entire Sec's 2 and 11, NW¼ of NW¼, S½ of NW¼, SW¼, SW¼ of SE¼, Sec. 12, Entire Sec. 13 except E½ of NE¼, Entire Sec. 24 and 25, T 14 N, R 19 W, SW¼ of NW¼, W½ of SW¼, SE¼ of SW¼, Sec. 19, Entire Sec. 30 except NE¼ of NE¼, Entire Sec. 31, SW¼ of NW¼, Gov't Lots 3 and 4, Sec. 32, T 14 N, R 18 W, Gov't Lots 2, 3, 4, SW¼, W½ of SE¼, Sec. 5, Entire Sec. 6, W½ of NE¼, Gov't Lots 1, 2, 3, NW¼ of SE¼, Sec. 8, T 13 N, R 18 W - Oceana County

R 281.406. Grant - Hamlin - Pere Marquette sand dune area - Mason county

Rule 6. The following described area is designated as a sand dune area under the designation of the Grant - Hamlin - Pere Marquette sand dune area: S½, Sec. 13, Entire Sec's 14, 23, 24, Entire Sec. 25 except SE¼ of SE¼, Entire Sec's 26, 27, 28, 32, 33, 34, Entire Sec. 35 except SE¼ of SE¼, N½ of NW¼, SW¼ of NW¼, Sec. 36, T 20 N, R 18 W. Gov't Lot 1, Sec. 2, Gov't Lots 1, 2, 3, 4, 5, Sec. 3, N Frl ½, Gov't Lots 1, 2, 3, NW¼ of SW¼, Sec. 4, Entire Sec's 5, 6, 7, 8, 9, 17, 18, 19, 20, 21, NW Frl ¼ of NW Frl ¼,

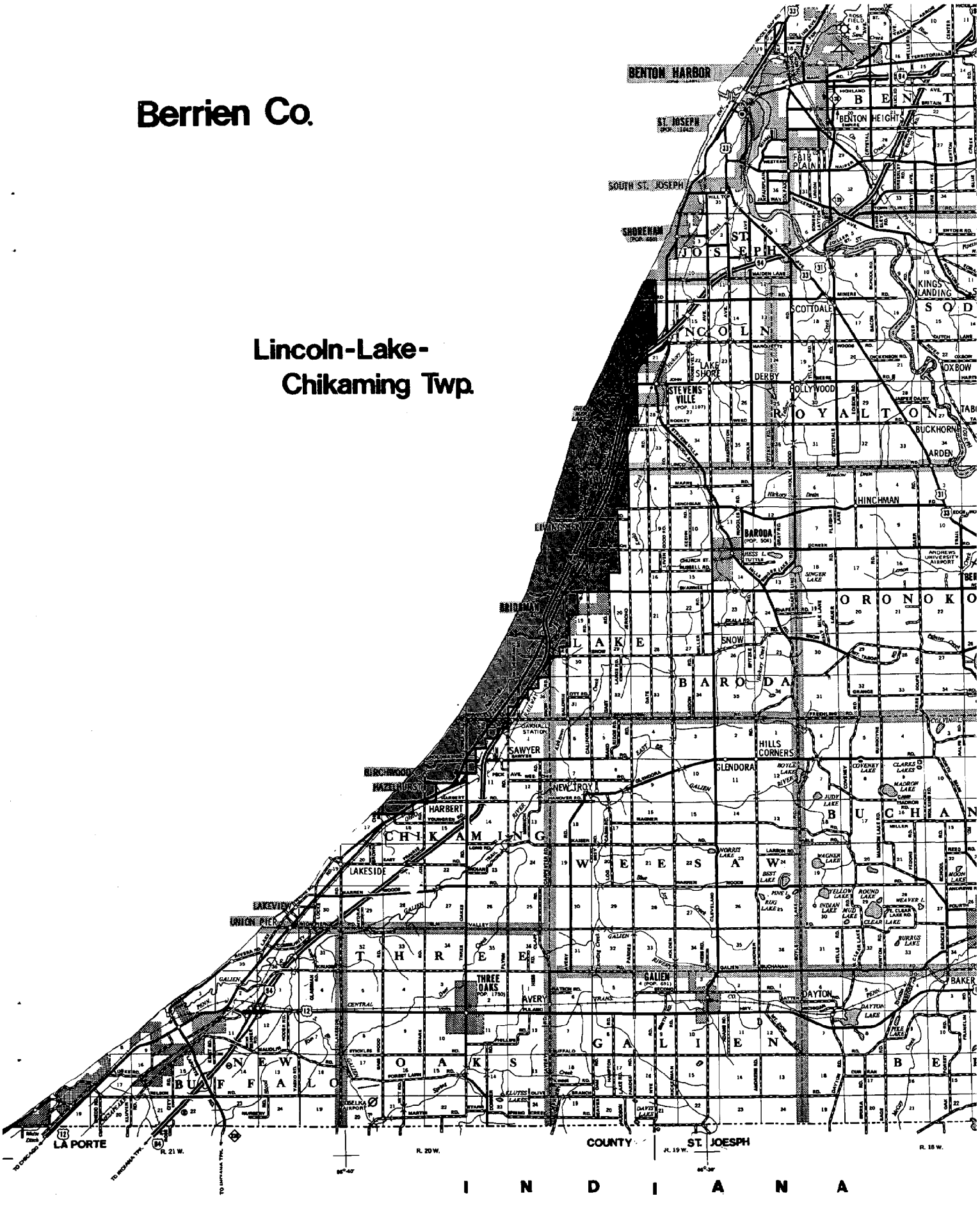
S½ of NW Frl ¼, SW¼, SW¼ of SE¼, Sec. 27, Entire Sec's 28, 29, 30, 32, 33, NW¼ of NE¼, S½ of NE¼, NW¼, NW¼ of SW¼, SE¼ of SE¼, N½ of SE¼, Sec. 34, SW¼ of SW¼ Sec. 35, T 19 N, R 18 W, NW¼ of NW¼, Sec. 2, NE¼ of NE¼, Gov't Lot 1, S 13.8 acres of Gov't Lot 2, Sec. 3, Entire Sec's 4, 9, Gov't Lots 2, 3, SW¼ of NW¼, Sec. 10, T 18 N, R 18 W - Mason County

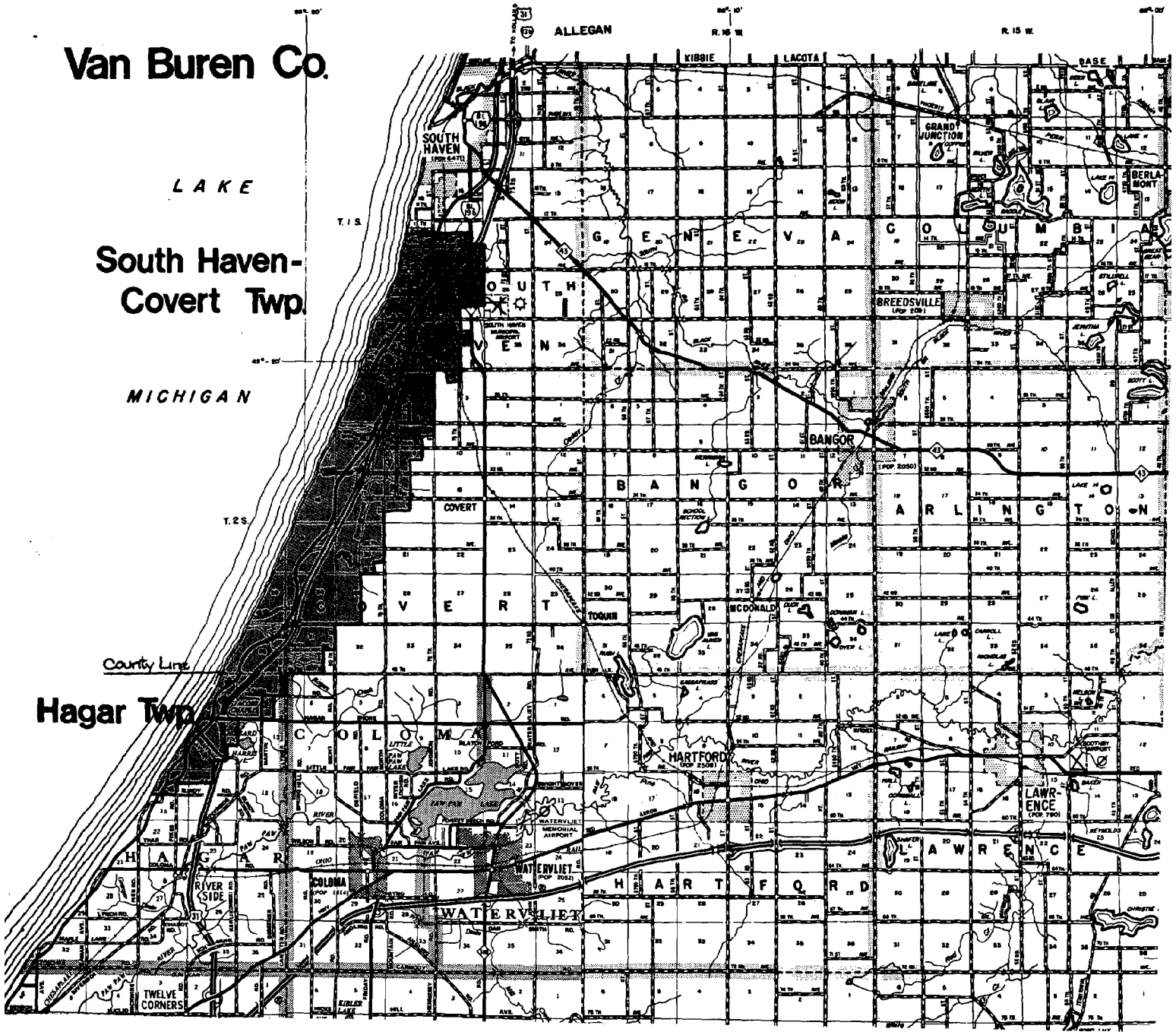
R 281.407. Hendricks - Moran sand dune area - Mackinac county

Rule 7. The following described area is designated as a sand dune area under the designation of the Hendricks - Moran sand dune area: SE¼ of SE¼, Sec. 25, E¼, Sec. 36, T 43 N, R 8 W, S½ of SW¼, Sec. 27, S¼, Sec. 28, S¼, Sec. 29, S¼, Sec. 30 Entire Sec's 31, 32, 33, 34, SW¼ of NW¼, SW¼, NW¼ of SE¼, S½ of SE¼, Sec. 35, S½ of SW¼, SW¼ of SE¼, Sec. 36, T 43 N, R 7 W, Entire Sec's 1, 2, 3, 4, 5, NE¼, Gov't Lot 1, Sec. 6, Entire Sec's 7, 8, 9, 10, 11, 12, 13, T 42 N, R 7 W, SW¼ of SW¼, Sec. 5, S½ of NW¼, SW¼, NW¼ of SE¼, S½ of SE¼, Sec. 6, Entire Sec. 7, Entire Sec. 8 except N½ of NE¼, SW¼ of NW¼, S½, Sec. 9, SW¼, S½ of SE¼, Sec. 10, SW¼ of SW¼, Sec. 11, SW¼ of NW¼, SW¼, SW¼ of SE¼, Sec. 13, Entire Sec. 14 except N½ of NE¼, Entire Sec's 15, 16, 17, 18, 19, 20, 21, 22, 23, Entire Sec. 24 except E½ of NE¼, Entire Sec's 25, 26, 36, T 42 N, R 6 W, Gov't Lots 3, 4, 5, W Frl ½ of NW Frl ¼, SW Frl ¼ of SW Frl ¼, Sec. 19, Entire Sec's 30, 31, 32, 33, T 42 N, R 5 W, Entire Sec's 3, 4, 5, 6, 8, 9, 10, SW¼ SW¼ of SE¼, Sec. 11, Entire Sec's 14, 15, 16, 22, N½, N½ of SW¼, SW¼ of SW¼, N 40 acres of Gov't Lot 1, N 40 acres of Gov't Lot 2, Gov't Lot 3, Sec. 23, Entire Sec's 26, 27, T 41 N, R 5 W - Mackinac County

Berrien Co.

Lincoln-Lake-
Chikaming Twp.




Van Buren Co.
LAKE
South Haven-
Covert Twp.
MICHIGAN
County Line
Hagar Twp.
Berrien Co.
ALLEGAN
KIBBIE
LACOTA
BASE
R. 16 W.
R. 15 W.
T. 1 S.
T. 2 S.
SOUTH HAVEN
GRAND JUNCTION
BERLAMONT
GENEVA
COLUMBIA
SOUTH HAVEN
BREEDSVILLE
BANGOR
COVERT
BANGOR
ARLINGTON
TOQUIN
MCDONALD
HARTFORD
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HAGAR
COLOMA
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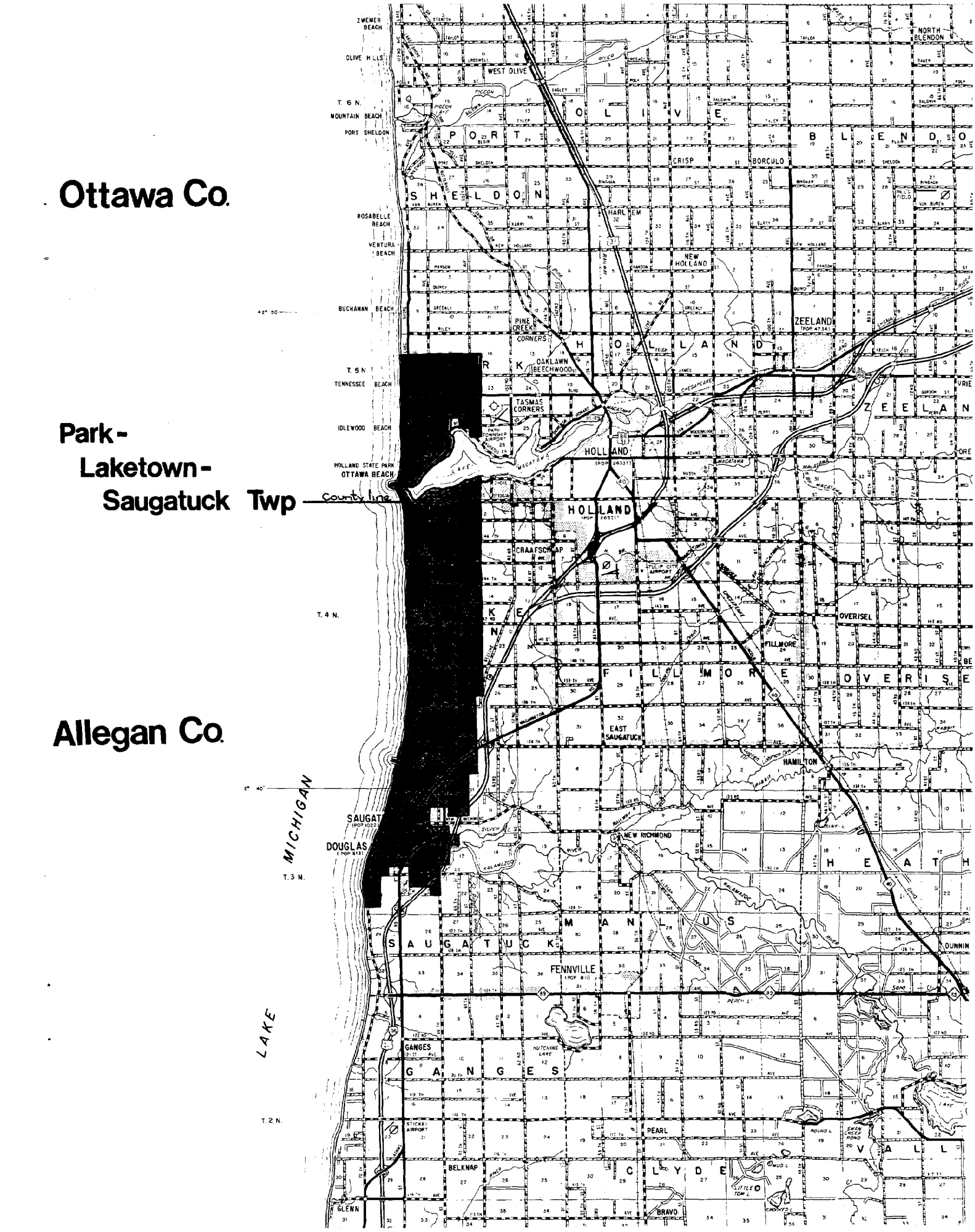
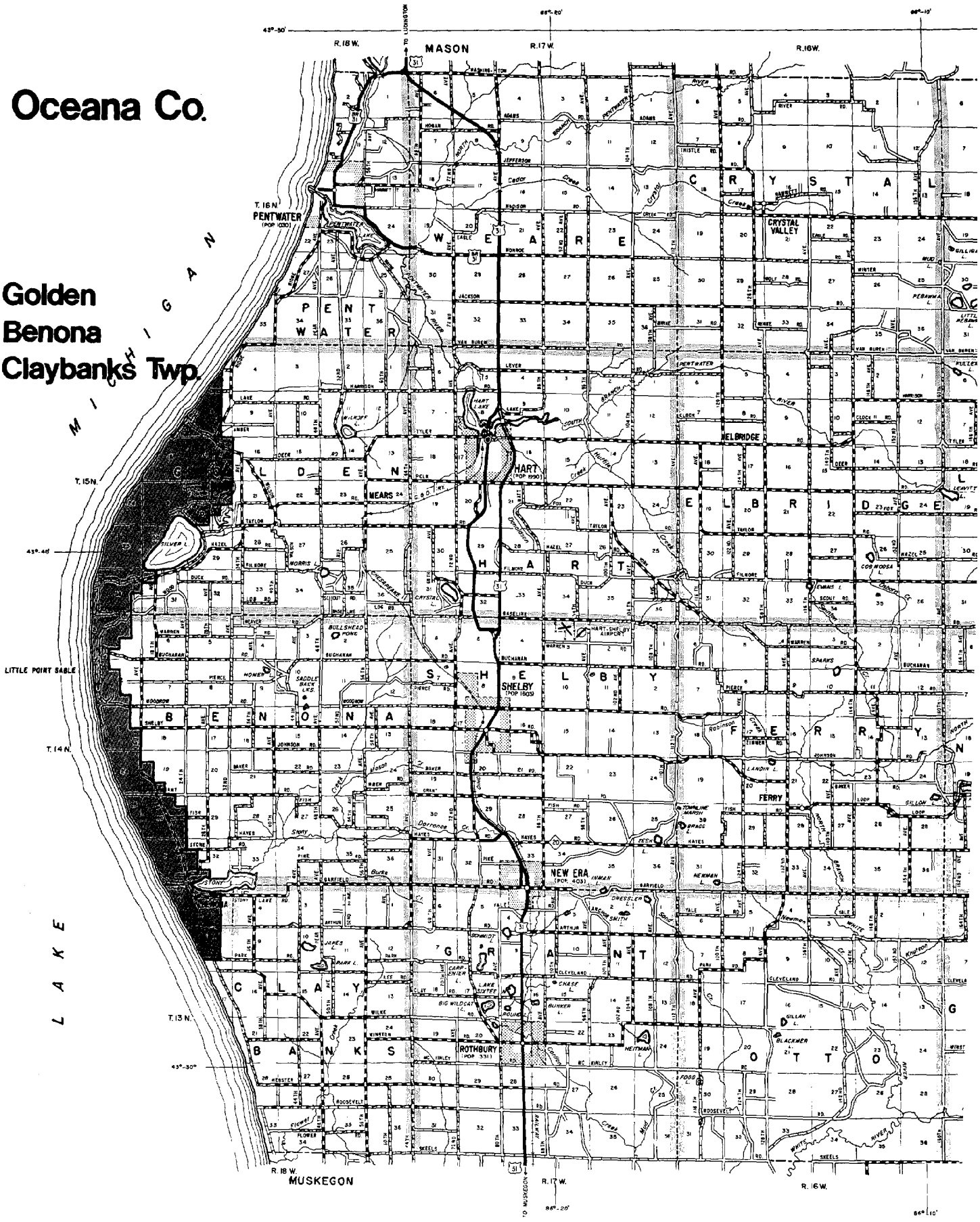
HARTFORD
TWELVE CORNERS

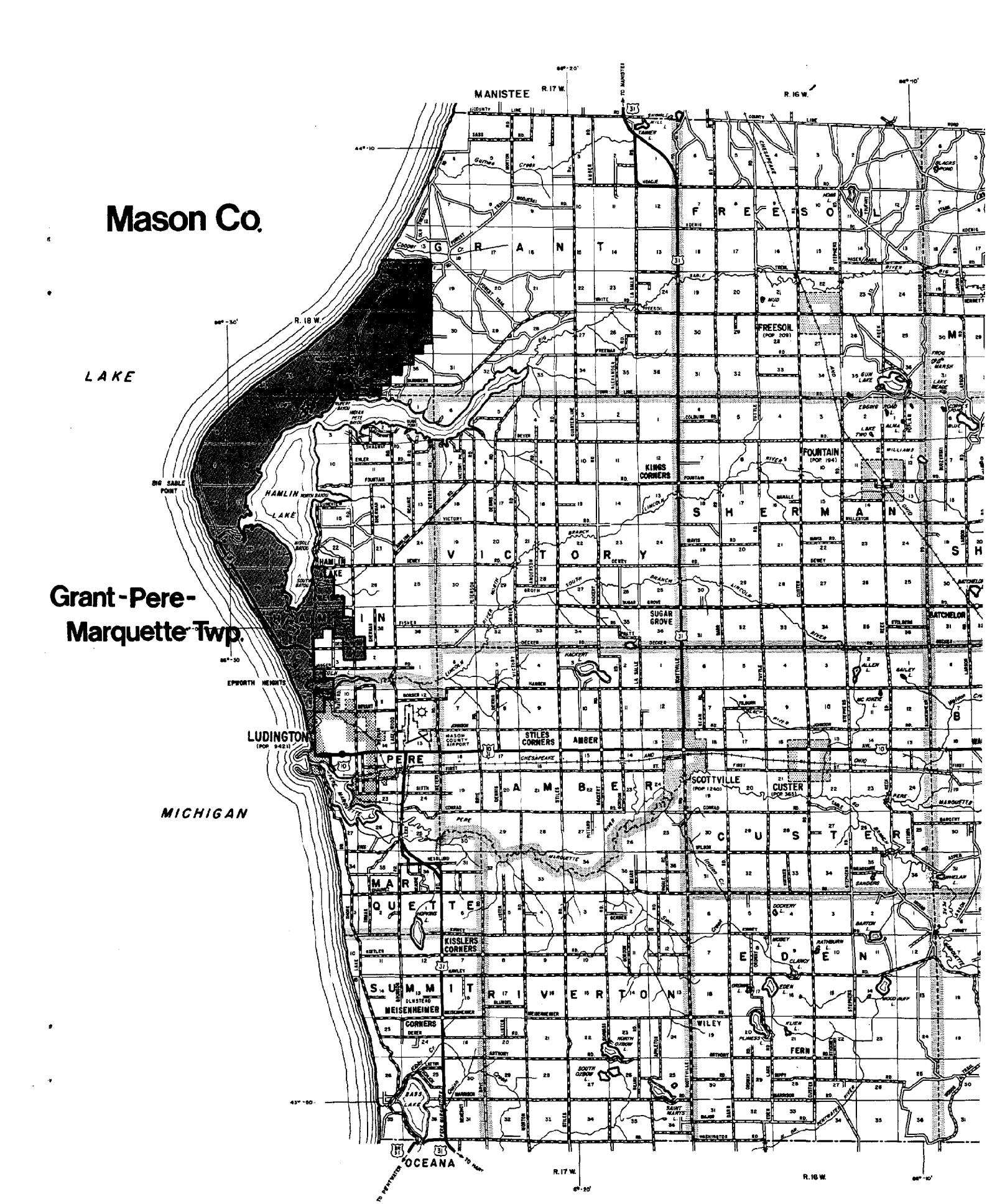

Ottawa Co.
Park-
Laketown-
Saugatuck Twp
Allegan Co.
County line
LAKE MICHIGAN
T. 6 N.
T. 5 N.
T. 4 N.
T. 3 N.
T. 2 N.
42° 50'
2° 40'
ZWEMER BEACH
OLIVE HILLS
WEST OLIVE
NORTH BLENDON
MOUNTAIN BEACH
PORT SHELDON
ROSABELLE BEACH
VENTURA BEACH
BUCHANAN BEACH
TENNESSEE BEACH
IDLEWOOD BEACH
HOLLAND STATE PARK
OTTAWA BEACH
PINE CREEK CORNERS
OAKLAWN BEECHWOOD
TASMAS CORNERS
NEW HOLLAND
ZEELAND (POP 4734)
HOLLAND (POP 26337)
CRAAFSCHAP
TULIP CITY AIRPORT
OVERISEL
FILLMORE
EAST SAUGATUCK
HAMILTON
NEW RICHMOND
SAUGATUCK (POP 1022)
DOUGLAS (POP 893)
FENNVILLE (POP 811)
GANGES
PEARL
BELKNAP
CLYDE
BRAVO
GLENN
STICKEL AIRPORT
P O R T
S H E L D O N
O L I V E
B L E N D O N
H O L L A N D
Z E E L A N D
F I L L M O R E
O V E R I S E
M A N L U S
S A U G A T U C K
H E A T H
G A N G E S
V A L L E Y
C L Y D E

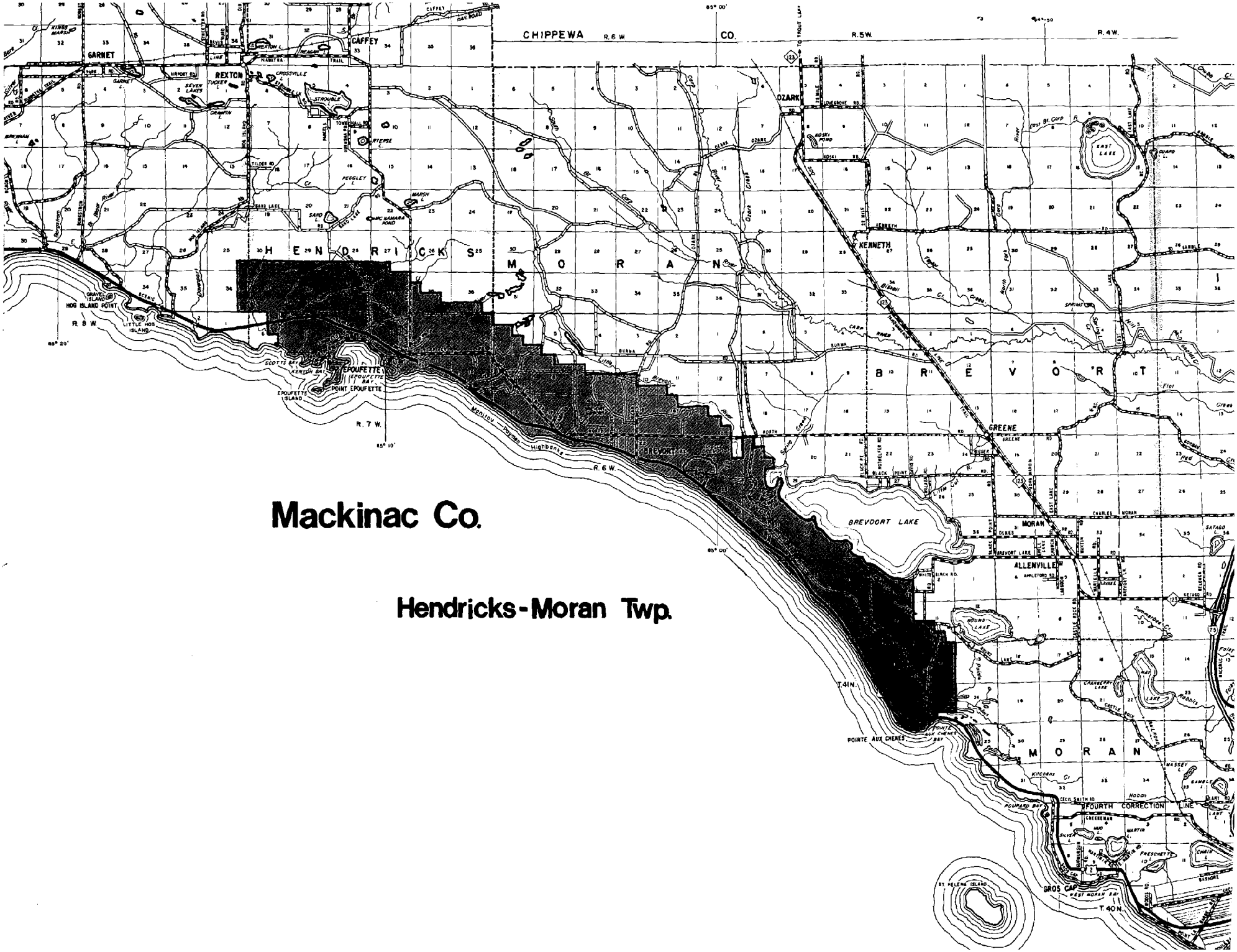
Muskegon Co.
Laketon - Fruitport Twp.
County Line
Ottawa Co.
Spring Lake - Grand Haven Twp.
MUSKEGON
NORTH MUSKEGON
MUSKEGON HEIGHTS
NORTON SHORES
FRUITPORT
SPRING LAKE
GRAND HAVEN
CROCKERY
ROBINSON
OLIVE
PORT SHELDON
LAKE MICHIGAN
T. 10 N.
T. 9 N.
T. 8 N.
T. 7 N.
T. 6 N.

Oceana Co.

Golden
Benona
Claybanks Twp.




Mason Co.
Grant-Pere-Marquette Twp.
MANISTEE
R. 17 W.
R. 16 W.
R. 18 W.
TO MANISTEE
LAKE
MICHIGAN
BIG SABLE POINT
HAMLIN LAKE
HAMLIN LAKE
EPWORTH HEIGHTS
LUDINGTON
(POP 9421)
MASON COUNTY AIRPORT
KINGS CORNERS
FREESOIL
(POP 209)
FOUNTAIN
(POP 194)
SUGAR GROVE
STILES CORNERS
AMBER
SCOTTVILLE
(POP 1240)
CUSTER
(POP 365)
KISSLERS CORNERS
MEISENHEIMER CORNERS
WILEY
FERN
BATCHELOR
OCEANA
TO WESTWATER
TO HART
PERE MARQUETTE
SUMMIT
RIVERTON
EDEN
VICTORY
SHERMAN
FREESOIL
GRANT


Mackinac Co.
Hendricks-Moran Twp.
CHIPPEWA CO.
R. 6 W.
R. 5 W.
R. 4 W.
R. 8 W.
R. 7 W.
R. 6 W.
T. 41 N.
T. 40 N.
HENDRICKS
MORAN
BREVORT
GARNET
CAFFEY
REXTON
OZARK
KENNETH
GREENE
MORAN
ALLENVILLE
HOG ISLAND POINT
LITTLE HOG ISLAND
EPOUFETTE
POINT EPOUFETTE
EPOUFETTE ISLAND
SCOTTS BAY
KENSON BAY
Brevort
BREVOORT LAKE
POINTE AUX CHENES
ST. HELENA ISLAND
GROS CAP
FOURTH CORRECTION LINE
Manistique - Paynes Highway

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