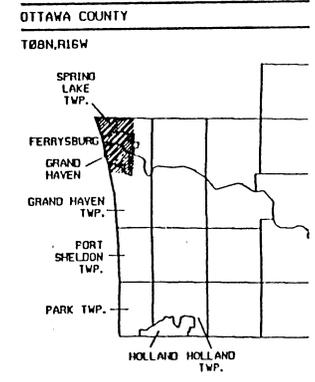
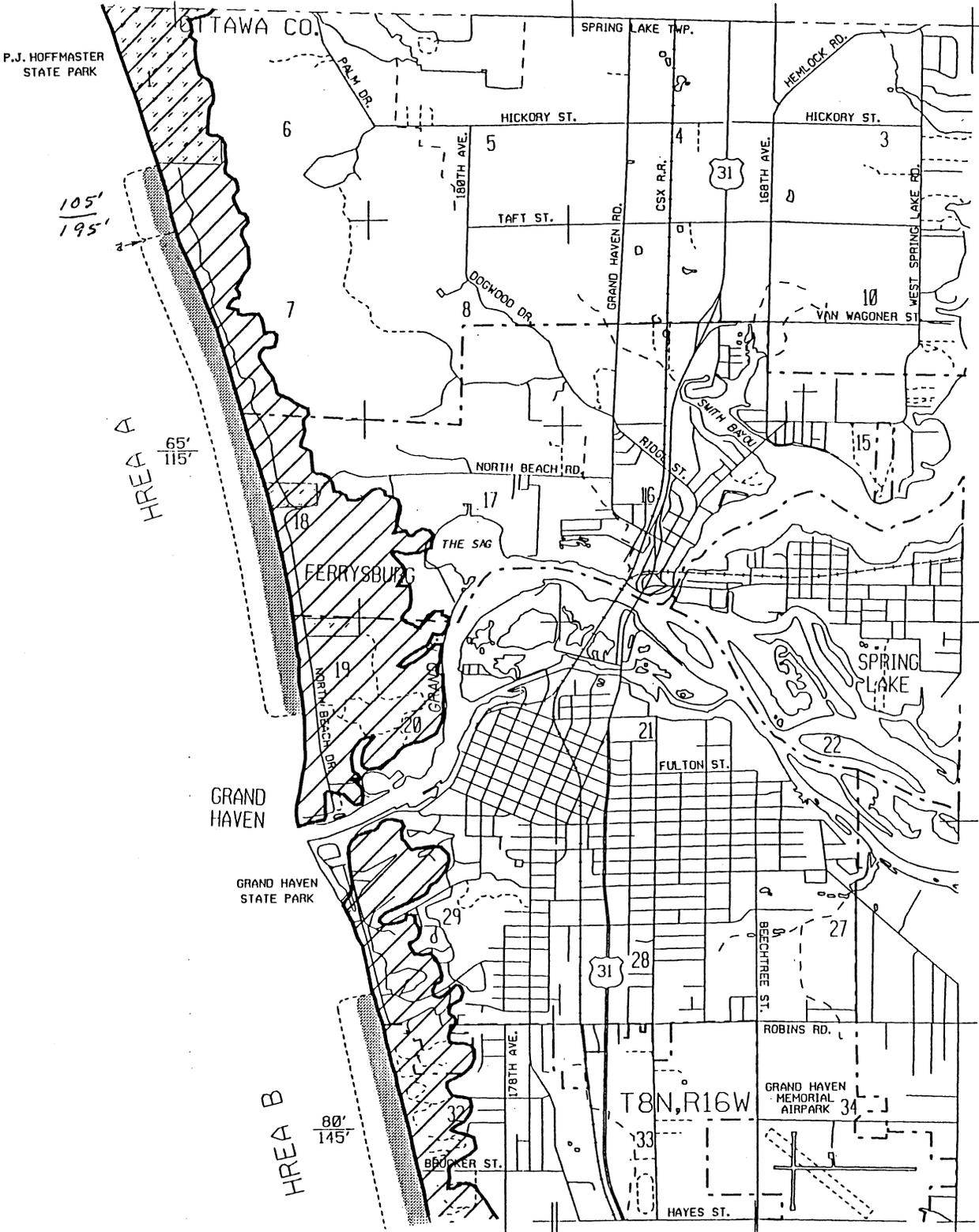


**CITIES OF
FERRYSBURG AND
GRAND HAVEN
SPRING LAKE TWP.**

**HIGH RISK EROSION AREAS &
CRITICAL DUNE AREAS**



HIGH RISK EROSION AREAS

THE NUMBER REPRESENTS, IN FEET, THE
60 YEAR PROJECTED RECESSION DISTANCE.
105' THE NUMBER REPRESENTS, IN FEET, THE
60 YEAR PROJECTED RECESSION DISTANCE.

HIGH RISK EROSION AREA
(shading alongshore)

THESE AREAS ARE LEGALLY DEFINED BY THE
SHORELANDS PROTECTION AND MANAGEMENT ACT,
1970 P.A. 245, AS AMENDED, AS BEING GREAT
LAKES SHORELAND AREAS DOCUMENTED TO RECEDE
AN AVERAGE OF ONE FOOT OR MORE PER YEAR.

CRITICAL DUNE AREAS

BARRIER DUNES
BARRIER DUNE FORMATIONS DESIGNATED
PURSUANT TO 1976 P.A. 222

AREAS NOT INCLUDED IN DESIGNATED
BARRIER DUNE FORMATIONS THAT ARE
COMPOSED PRIMARILY OF DUNE SAND
AND EXHIBIT SEVERAL DUNE-LIKE
CHARACTERISTICS.

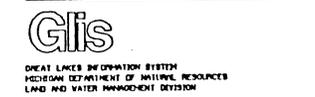
EXEMPLARY DUNE ASSOCIATED PLANT
COMMUNITIES OUTSIDE DESIGNATED
DUNE FORMATIONS, MICHIGAN NATURAL
FEATURES INVENTORY REFERENCE CODE
INDICATED.

SOURCE

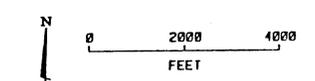
STATE OF MICHIGAN ACT 245 RECESSION
RATE MAPS & ATLAS OF CRITICAL DUNE AREAS

INFORMATION

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
LAND AND WATER MANAGEMENT DIVISION
P.O. BOX 30028
LANSING, MI 48989
15171 373-1958



11-18-94
Amended 11-94, 4-97



P.J. HOFFMASTER
STATE PARK

105'
195'

HREA A
65'
115'

GRAND
HAVEN

GRAND HAVEN
STATE PARK

HREA B
80'
145'

SPRING LAKE TWP.

OTTAWA CO.

T8N,R16W

GRAND HAVEN
MEMORIAL
AIRPARK

HAYES ST.

ROBINS RD.

BEECHTREE ST.

FULTON ST.

SPRING
LAKE

NORTH BEACH RD.

TAFT ST.

HICKORY ST.

HICKORY ST.

31

CSX R.R.

GRAND HAVEN RD.

168TH AVE.

168TH AVE.

HEMLOCK RD.

WEST SPRING LAKE RD.

VAN WAGONER ST.

168TH AVE.

DOGWOOD DR.

RIDGE ST.

SMITH BAYOU

NORTH BEACH RD.

THE SAG

FERRYSBURG

NORTH BEACH RD.

GRAND HAVEN

GRAND HAVEN
STATE PARK

31

178TH AVE.

BOOKER ST.

ROBINS RD.

BEECHTREE ST.

FULTON ST.

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FULTON ST.

SPRING
LAKE

Parcels in High Risk Erosion Areas of City of Grand Haven, Ottawa County

HREAs identified North to South Date of Designation: November 23, 1994

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A2	1	70-03-19-226-001 south of Maryland Ct	1.7	65	115
A2	2	70-03-19-226-002	1.7	65	115
A2	3	70-03-19-226-003	1.7	65	115
A2	4	70-03-19-226-032	1.7	65	115
A2	4.01	70-03-19-226-033	1.7	65	115
A2	5	70-03-19-226-005	1.7	65	115
A2	6	70-03-19-226-034	1.7	65	115
A2	6.01	70-03-19-226-035	1.7	65	115
A2	8	70-03-19-226-030	1.7	65	115
A2	9	70-03-19-226-031	1.7	65	115
A2	10	70-03-19-226-009	1.7	65	115
A2	11	70-03-19-226-010	1.7	65	115
A2	12	70-03-19-226-011	1.7	65	115
A2	13	70-03-19-226-012	1.7	65	115
A2	14	70-03-19-226-013	1.7	65	115
A2	15	70-03-19-226-015	1.7	65	115
A2	16	70-03-19-226-016	1.7	65	115
A2	17	70-03-19-226-017	1.7	65	115
A2	18	70-03-19-226-018	1.7	65	115

HREA* - Some parcels may be in multiple HREAs due to their large size.

30 yr PRD* is the Projected Recession Distance (feet) landward from the Erosion Hazard Line for readily moveable structures including those structures 3,500 square feet or less and built on a basement, crawlspace or pilings. Additional restrictions may apply per Administrative Rules 281.21-22.

60 yr PRD* is the Projected Recession Distance (feet) landward from the Erosion Hazard Line for non-readily moveable structures such as large structures and septic systems.

Designation runs with the land including subsequent splits. Absence of a property number does not guarantee the property is located outside of an HREA. Contact the Great Lakes Shorelands Unit, Water Resources Division, DEQ in Lansing or the local DEQ field office for assistance.

Parcels in High Risk Erosion Areas of City of Grand Haven, Ottawa County

HREAs identified North to South Date of Designation: November 23, 1994

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A2	19	70-03-19-226-019	1.7	65	115
A2	20	70-03-19-226-020	1.7	65	115
A2	21	70-03-19-226-021	1.7	65	115
A2	22	70-03-19-226-022	1.7	65	115
A2	23	70-03-19-226-023	1.7	65	115
A2	24	70-03-19-226-024	1.7	65	115
A2	25	70-03-19-226-025	1.7	65	115
A2	26	70-03-19-226-026	1.7	65	115
A2	27	70-03-19-226-027	1.7	65	115
A2	28	70-03-19-226-028	1.7	65	115
A2	29	70-03-19-226-029	1.7	65	115
A2	30	70-03-19-426-001	1.7	65	115
A2	31	70-03-19-426-002	1.7	65	115
A2	32	70-03-19-426-034	1.7	65	115
A2	33	70-03-19-426-035	1.7	65	115
A2	34	70-03-19-426-006	1.7	65	115
B1	35	70-03-29-373-019	2.2	80	145
B1	35	70-03-29-373-020	2.2	80	145
B1	37	70-03-29-373-017 Grand Ave.	2.2	80	145

HREA* - Some parcels may be in multiple HREAs due to their large size.

30 yr PRD* is the Projected Recession Distance (feet) landward from the Erosion Hazard Line for readily moveable structures including those structures 3,500 square feet or less and built on a basement, crawlspace or pilings. Additional restrictions may apply per Administrative Rules 281.21-22.

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Parcels in High Risk Erosion Areas of City of Grand Haven, Ottawa County

HREAs identified North to South Date of Designation: November 23, 1994

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
B1	38	70-03-29-375-001	2.2	80	145
B1	38.2	70-03-29-378-029	2.2	80	145
B1	39	70-03-29-375-002	2.2	80	145
B1	39.2	70-03-29-378-035	2.2	80	145
B1	40	70-03-29-375-003	2.2	80	145
B1	41	70-03-29-375-004	2.2	80	145
B1	42	70-03-29-375-005	2.2	80	145
B1	43	70-03-29-375-006	2.2	80	145
B1	44	70-03-29-375-007	2.2	80	145
B1	45	70-03-29-375-008	2.2	80	145
B1	46	70-03-29-375-017	2.2	80	145
B1	48	70-03-29-375-011	2.2	80	145
B1	49	70-03-29-375-012	2.2	80	145
B1	50	70-03-29-375-015	2.2	80	145
B1	51	70-03-29-375-016	2.2	80	145

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