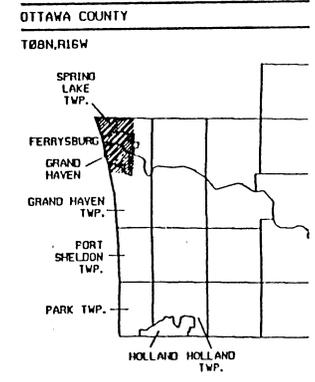
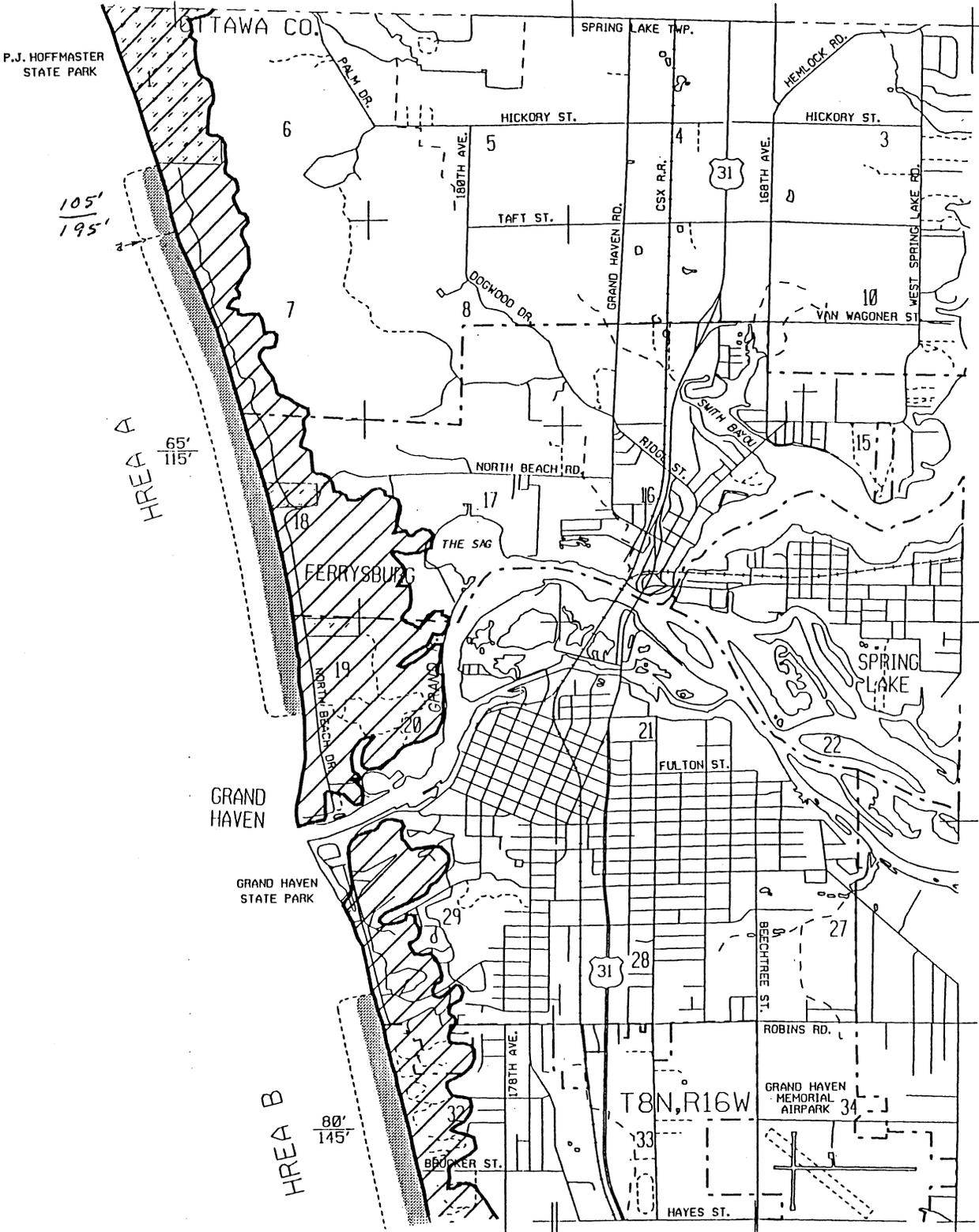


**CITIES OF
FERRYSBURG AND
GRAND HAVEN
SPRING LAKE TWP.**

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



HIGH RISK EROSION AREAS

THE NUMBER REPRESENTS, IN FEET, THE 30 YEAR PROJECTED RECESSION DISTANCE.

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

105' 195'

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

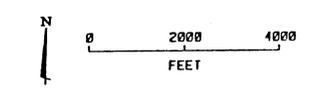
INFORMATION

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

Gis

ON-AT LINES INFORMATION SYSTEM
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
LAND AND WATER MANAGEMENT DIVISION

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

Parcels in High Risk Erosion Areas of Spring Lake Township, 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*
A1	5	70-03-06-352-025	3.0	105	195
A1	5.2	70-03-06-352-020	3.0	105	195
A1	6	70-03-06-351-018	3.0	105	195
A1	9	70-03-06-351-005	3.0	105	195
A1	10	70-03-06-351-006	3.0	105	195
A1	11	70-03-06-351-007	3.0	105	195
A1	12	70-03-06-351-008	3.0	105	195
A1	13	70-03-06-351-009	3.0	105	195
A1	14	70-03-06-351-010	3.0	105	195
A1	15	70-03-06-351-011	3.0	105	195
A1	16	70-03-06-351-012	3.0	105	195
A1	17	70-03-06-351-013	3.0	105	195
A1	18	70-03-06-351-014	3.0	105	195
A1	19.2	70-03-06-352-004	3.0	105	195
A1	19.21	70-03-06-352-005	3.0	105	195
A1	19.22	70-03-06-352-006	3.0	105	195
A1	19.23	70-03-06-352-007	3.0	105	195
A1	19.24	70-03-06-352-008	3.0	105	195
A1	19.25	70-03-06-352-009	3.0	105	195

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 Spring Lake Township, 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*
A1	19.26	70-03-06-352-010	3.0	105	195
A1	19.27	70-03-06-352-023	3.0	105	195
A1	19.28	70-03-06-352-024	3.0	105	195
A1	20	70-03-07-126-011	3.0	105	195
A1	20.2	70-03-07-127-026	3.0	105	195
A1	21	70-03-07-126-001	3.0	105	195
A2	22	70-03-07-126-002	1.7	65	115
A2	23	70-03-07-126-003	1.7	65	115
A2	24	70-03-07-126-013	1.7	65	115
A2	26	70-03-07-126-006	1.7	65	115
A2	27	70-03-07-126-007	1.7	65	115
A2	28	70-03-07-126-008	1.7	65	115
A2	29	70-03-07-126-009	1.7	65	115
A2	30	70-03-07-126-010	1.7	65	115
A2	31	70-03-07-126-012	1.7	65	115
A2	32	70-03-07-175-001	1.7	65	115
A2	33	70-03-07-175-002	1.7	65	115
A2	34	70-03-07-175-003	1.7	65	115
A2	35	70-03-07-175-004	1.7	65	115
A2	36	70-03-07-175-005	1.7	65	115

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Parcels in High Risk Erosion Areas of Spring Lake Township, 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	37	70-03-07-175-006	1.7	65	115
A2	38	70-03-07-175-013	1.7	65	115
A2	39	70-03-07-175-008	1.7	65	115
A2	40	70-03-07-175-010	1.7	65	115
A2	41	70-03-07-177-006	1.7	65	115
A2	41.2	70-03-07-178-007	1.7	65	115
A2	42	70-03-07-177-001	1.7	65	115
A2	43	70-03-07-177-002	1.7	65	115
A2	44	70-03-07-177-003	1.7	65	115
A2	45	70-03-07-177-004	1.7	65	115
A2	46	70-03-07-177-005	1.7	65	115
A2	46.2	70-03-07-178-006	1.7	65	115
A2	46.21	70-03-07-178-003	1.7	65	115
A2	46.22	70-03-07-178-004	1.7	65	115
A2	46.23	70-03-07-178-005	1.7	65	115
A2	48	70-03-07-326-001	1.7	65	115
A2	49	70-03-07-326-002	1.7	65	115
A2	50	70-03-07-326-003	1.7	65	115
A2	50.2	70-03-07-327-003	1.7	65	115
A2	51	70-03-07-326-004	1.7	65	115

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Parcels in High Risk Erosion Areas of Spring Lake Township, 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	51.2	70-03-07-327-004	1.7	65	115
A2	52	70-03-07-326-005	1.7	65	115
A2	53	70-03-07-326-006	1.7	65	115
A2	54	70-03-07-326-008	1.7	65	115
A2	55	70-03-07-376-001	1.7	65	115
A2	56	70-03-07-376-002	1.7	65	115
A2	57	70-03-07-376-003	1.7	65	115
A2	58	70-03-07-376-004	1.7	65	115
A2	59	70-03-07-376-005	1.7	65	115
A2	60	70-03-07-376-006	1.7	65	115
A2	61	70-03-07-376-007	1.7	65	115
A2	62	70-03-07-376-008	1.7	65	115
A2	63	70-03-07-376-009	1.7	65	115
A2	64	70-03-07-376-010	1.7	65	115
A2	65	70-03-07-376-011	1.7	65	115
A2	66	70-03-07-376-012	1.7	65	115
A2	67	70-03-07-376-013	1.7	65	115
A2	68	70-03-07-376-014	1.7	65	115
A2	69	70-03-07-376-015	1.7	65	115
A2	70	70-03-07-376-016	1.7	65	115

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Parcels in High Risk Erosion Areas of Spring Lake Township, 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	71	70-03-07-376-017	1.7	65	115
A2	72	70-03-07-376-018	1.7	65	115

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