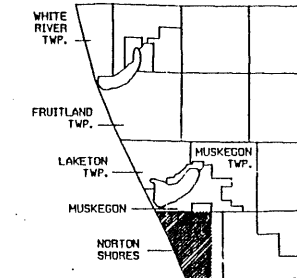


NORTON SHORES

HIGH RISK EROSION AREAS & CRITICAL DUNE AREAS

MUSKEGON COUNTY

T9N,R16W



HIGH RISK EROSION AREAS

THE NUMBER REPRESENTS, IN FEET, THE 38 YEAR PROJECTED RECESSION DISTANCE.
 65' 115'
 105' 125'

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

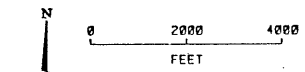
INFORMATION

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
 LAND AND WATER MANAGEMENT DIVISION
 P.O. BOX 30028
 LANSING, MI 48909
 (517) 373-1958

Gis

GREAT LAKES INFORMATION SYSTEM
 MICHIGAN DEPARTMENT OF NATURAL RESOURCES
 LAND AND WATER MANAGEMENT DIVISION

02-08-93
 amended 08-19-93



AREA A

AREA B

Parcels in High Risk Erosion Areas of City of Norton Shores, Muskegon County

HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A4	1	61-27-452-000-0001-00	3.3	115	215
A4	1.2	61-27-452-000-9991-00 Idlewild Resort	3.3	115	215
A4	2	61-27-452-000-0006-00	3.3	115	215
A4	2.2	61-27-452-000-0085-00	3.3	115	215
A4	3	61-27-452-000-0009-00	3.3	115	215
A4	4	61-27-452-000-0010-00	3.3	115	215
A4	4.2	61-27-452-000-0052-00	3.3	115	215
A4	5	61-27-452-000-0012-00	3.3	115	215
A4	6	61-27-452-000-0013-00	3.3	115	215
A4	6.2	61-27-452-000-0049-00	3.3	115	215
A4	7	61-27-452-000-0021-00	3.3	115	215
A4	7.2	61-27-452-000-0020-00	3.3	115	215
A4	7.21	61-27-452-000-0046-00	3.3	115	215
A4	8	61-27-452-000-0024-00	3.3	115	215
A4	8.2	61-27-452-000-0036-00	3.3	115	215
A4	8.21	61-27-452-000-0025-00	3.3	115	215
A4	10	61-27-452-000-0094-50	3.3	115	215
A4	11	61-27-003-200-0012-00	3.3	115	215

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 Norton Shores, Muskegon County

HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A4	12	61-27-447-000-0025-00 Idlewild #2	3.3	115	215
A4	12.2	61-27-447-000-0031-10	3.3	115	215
A4	13	61-27-447-000-0023-00	3.3	115	215
A4	13.2	61-27-447-000-0031-00	3.3	115	215
A4	14	61-27-447-000-0022-00	3.3	115	215
A4	15	61-27-447-000-0020-00	3.3	115	215
A4	15.2	61-27-447-000-0031-20	3.3	115	215
A4	16	61-27-447-000-0019-00	3.3	115	215
A4	18	61-27-447-000-0017-00	3.3	115	215
A4	20	61-27-447-000-0015-00	3.3	115	215
A4	20.2	61-27-447-000-0029-00	3.3	115	215
A4	21	61-27-447-000-0012-00	3.3	115	215
A4	22	61-27-447-000-0010-00	3.3	115	215
A4	23	61-27-447-000-0007-00	3.3	115	215
A4	24	61-27-447-000-0006-00	3.3	115	215
A4	24.2	61-27-447-000-0006-10	3.3	115	215
A4	25	61-27-447-000-0004-00	3.3	115	215
A4	26	61-27-447-000-0002-00	3.3	115	215
A4	26.2	61-27-447-000-0003-00	3.3	115	215

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Parcels in High Risk Erosion Areas of City of Norton Shores, Muskegon County

HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A4	27	61-27-447-000-0001-00	3.3	115	215
A4	28	61-27-450-000-0001-00 Idle-Wild Pines	3.3	115	215
A4	29	61-27-450-000-0004-00	3.3	115	215
A4	30	61-27-450-000-0005-00	3.3	115	215
A4	31	61-27-450-000-0007-00	3.3	115	215
A4	32	61-27-450-000-0013-00	3.3	115	215
A4	33	61-27-450-000-0014-00	3.3	115	215
A4	34	61-27-450-000-0016-00	3.3	115	215
A4	35	61-27-450-000-0018-00	3.3	115	215
A4	36	61-27-450-000-0019-00	3.3	115	215
A4	37	61-27-450-000-0026-00	3.3	115	215
A4	38	61-27-450-000-0028-00	3.3	115	215
A4	39	61-27-010-200-0001-00	3.3	115	215
A4	40	61-27-010-200-0002-00	3.3	115	215
A4	41	61-27-010-200-0004-00	3.3	115	215
A5	42	61-27-010-200-0005-00	1.8	70	125
A5	43	61-27-010-200-0008-00	1.8	70	125
A5	44	61-27-010-200-0009-00	1.8	70	125
A5	45	61-27-010-200-0010-00	1.8	70	125

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Parcels in High Risk Erosion Areas of City of Norton Shores, Muskegon County

HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A5	46	61-27-010-200-0011-00	1.8	70	125
A5	47	61-27-010-200-0012-00	1.8	70	125
A5	48	61-27-010-200-0013-00	1.8	70	125
A5	49	61-27-489-000-0001-00	1.8	70	125
A5	50	61-27-489-000-0002-00 Lake Michigan Estates	1.8	70	125
A5	51	61-27-489-000-0003-00	1.8	70	125
A5	52	61-27-489-000-0004-00	1.8	70	125
A5	53	61-27-489-000-0005-00	1.8	70	125
A5	54	61-27-489-000-0006-00	1.8	70	125
A5	55	61-27-489-000-0007-00	1.8	70	125
A5	56	61-27-489-000-0008-00	1.8	70	125
A5	57	61-27-489-000-0009-00	1.8	70	125
A5	58	61-27-489-000-0010-00	1.8	70	125
A5	59	61-27-489-000-0011-00	1.8	70	125
A5	60	61-27-489-000-0012-00	1.8	70	125
A5	61	61-27-489-000-0013-00	1.8	70	125
A5	62	61-27-489-000-0014-00	1.8	70	125
A5	63	61-27-489-000-0015-00	1.8	70	125
A5	64	61-27-489-000-0016-00	1.8	70	125

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Parcels in High Risk Erosion Areas of City of Norton Shores, Muskegon County

HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A5	65	61-27-489-000-0017-00	1.8	70	125
A5	66	61-27-010-400-0001-00	1.8	70	125
A5	67	61-27-010-400-0003-00	1.8	70	125
A5	68	61-27-014-100-0006-00 Lake Harbor Park	1.8	70	125
B1	69	61-27-592-000-0000-00 southern 1,500 feet; Maranatha	1.7	65	115
B1	69.1	61-27-023-200-0001-10	1.7	65	115
B1	70	61-27-023-200-0002-00	1.7	65	115
B1	71	61-27-023-200-0003-00	1.7	65	115
B1	72	61-27-023-200-0042-00	1.7	65	115
B1	73	61-27-023-200-0043-00	1.7	65	115
B2	74	61-27-023-200-0049-00	3.7	125	235
B2	75	61-27-023-200-0045-00	3.7	125	235
B2	76	61-27-023-200-0046-00	3.7	125	235
B2	77	61-27-023-200-0047-00	3.7	125	235
B2	78	61-27-023-200-0058-00	3.7	125	235
B2	79	61-27-023-200-0059-00	3.7	125	235
B2	80	61-27-023-400-0001-00	3.7	125	235
B2	80.1	61-27-023-400-0001-01	3.7	125	235

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HREAs identified North to South Date of Designation: December 20, 1993

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
B2	81	61-27-023-400-0002-00	3.7	125	235
B2	82	61-27-023-400-0003-00	3.7	125	235
B3	83	61-27-023-400-0008-00	2.2	80	145
B3	84	61-27-023-400-0009-00	2.2	80	145
B3	85	61-27-023-400-0010-00	2.2	80	145
B3	85.1	61-27-023-400-0010-10	2.2	80	145
B3	86	61-27-023-400-0011-00	2.2	80	145
B3	87	61-27-026-200-0001-00	2.2	80	145
B3	88	61-27-026-200-0002-00	2.2	80	145
B3	89	61-27-026-200-0003-00	2.2	80	145
B3	90	61-27-026-200-0004-00	2.2	80	145
B3	91	61-27-026-200-0005-00	2.2	80	145
B3	92	61-27-026-200-0006-00	2.2	80	145
B3	93	61-27-026-200-0007-00	2.2	80	145
B3	94	61-27-026-200-0008-00	2.2	80	145
B3	95	61-27-026-200-0009-00	2.2	80	145
B3	96	61-27-026-200-0010-00	2.2	80	145
B3	97	61-27-025-100-0015-00, PJ Hofmaster State Park, northern 600 ft of park shoreline	2.2	80	145

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