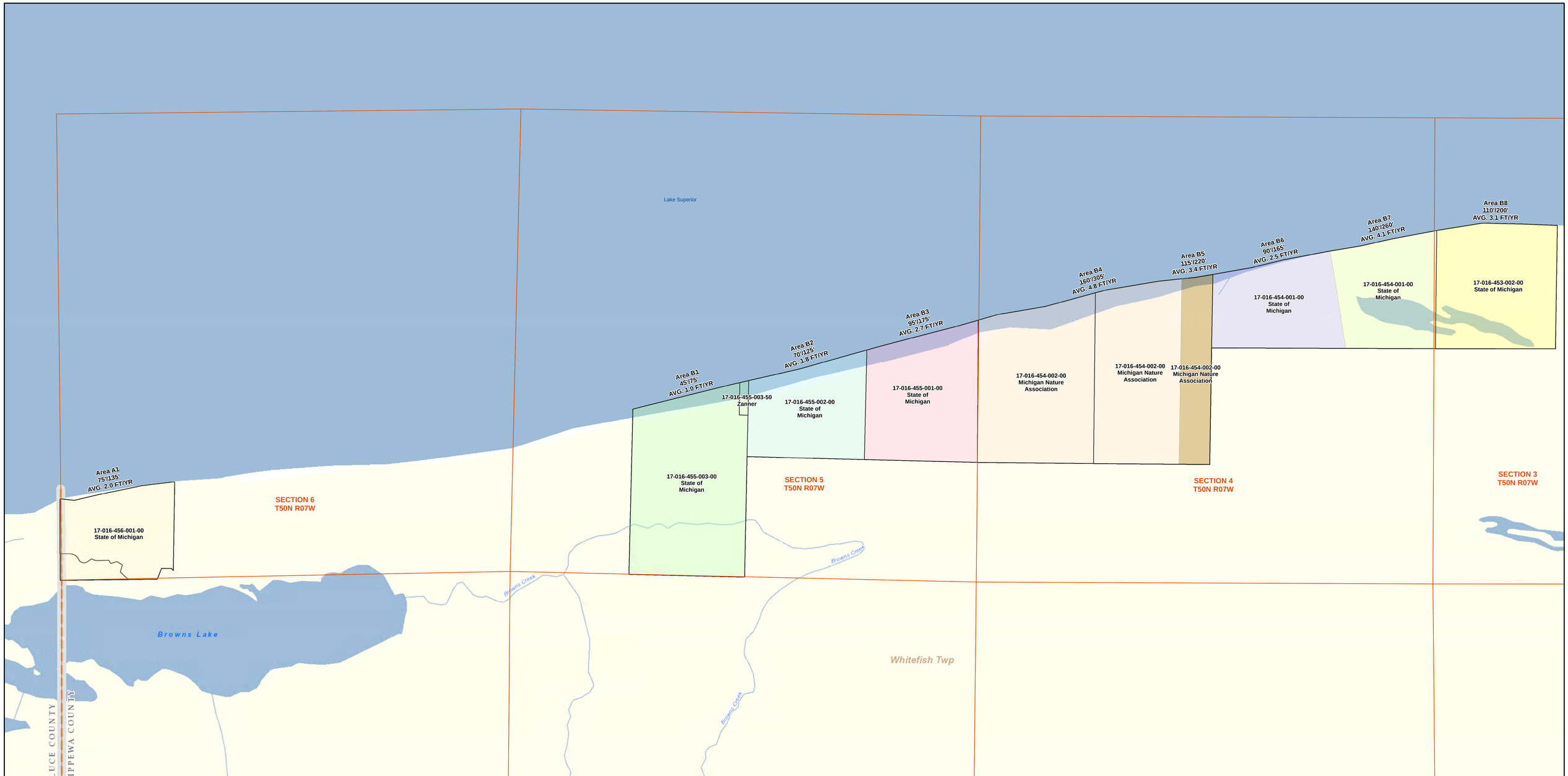


High-Risk Erosion Area Update - 2015

Whitefish Township, Chippewa County
T50N, R07W Sections 06, 05, 04, and 03

High Risk Erosion Areas

30 YR/60 YR Projected Recession Distance (Feet)
Average Annual Rate of Recession (FT/YR)

- AREA A1: 75'/135' (Avg. 2.0 FT/YR)
- AREA B1: 45'/75' (Avg. 1.0 FT/YR)
- AREA B2: 70'/125' (Avg. 1.8 FT/YR)
- AREA B3: 95'/175' (Avg. 2.7 FT/YR)
- AREA B4: 160'/305' (Avg. 4.8 FT/YR)
- AREA B5: 115'/220' (Avg. 3.4 FT/YR)
- AREA B6: 90'/165' (Avg. 2.5 FT/YR)
- AREA B7: 140'/260' (Avg. 4.1 FT/YR)
- AREA B8: 110'/200' (Avg. 3.1 FT/YR)

N W E S

0 500 1,000 1,500 Feet
1 inch = 62.9 feet

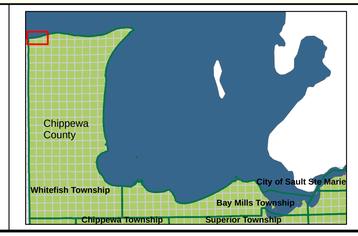
Sections
HREA Parcels
Roads

MAP INFORMATION:

This map identifies potential High-Risk Erosion Areas under Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The shaded areas indicate recession of at least one foot per year.

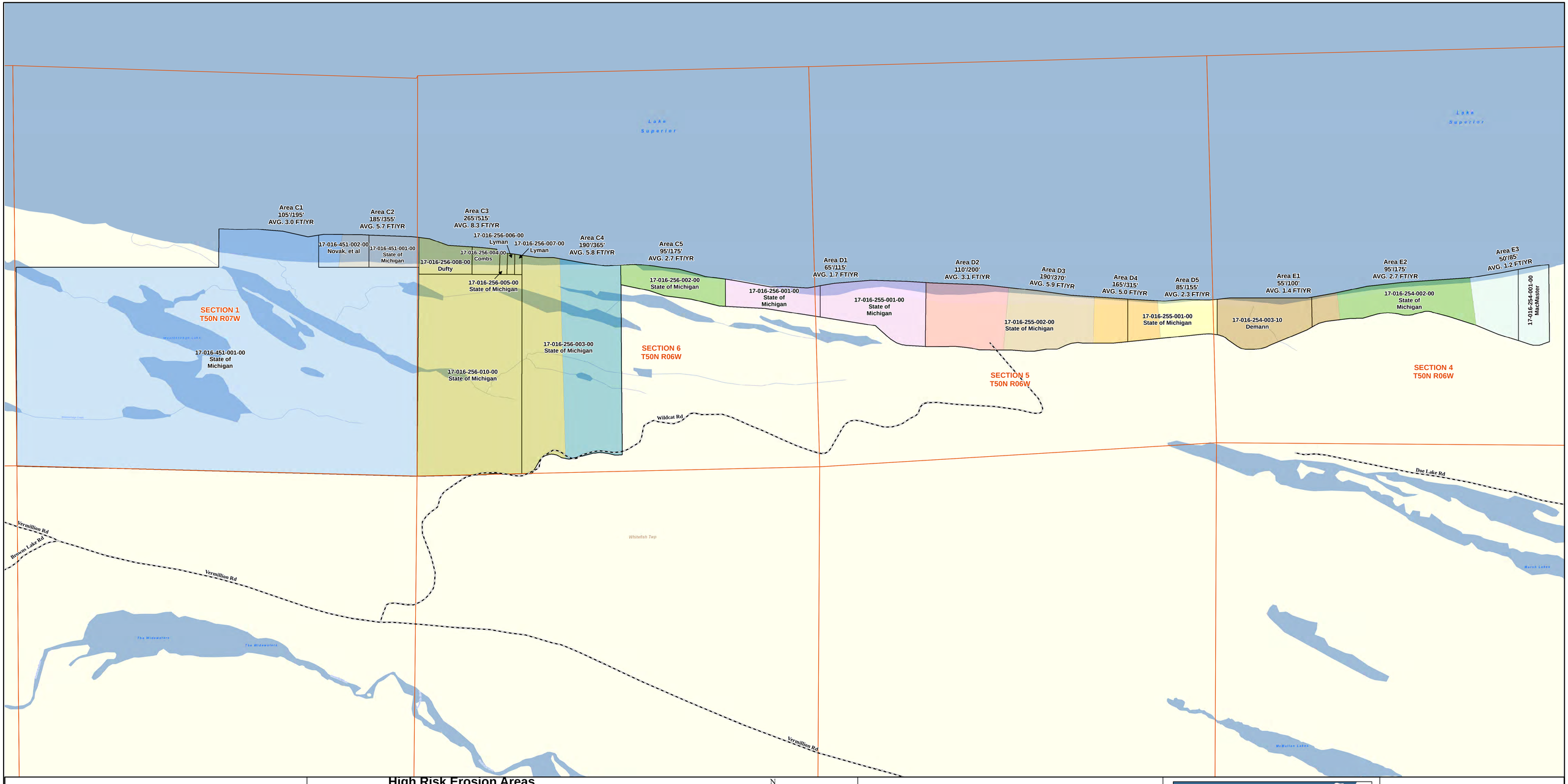
Background, roads and survey data were provided by the State of Michigan, Center for Shared Solutions and Technology Partnerships.

Questions regarding this map should be directed to the Michigan Department of Environmental Quality at 517-284-5567.



Map Created by: Jeremy Jones
Environmental Quality Analyst
Water Resources Division
Michigan Department Of Environmental Quality
7/10/2015

Recession/Accretion values for each area were calculated using the Digital Shoreline Analysis System from the USGS (Thieler, E.R., Himmelstoss, E.A., Zichichi, J.L., and Ergul, Ayhan, 2009, Digital Shoreline Analysis System (DSAS) version 4.0 - An ArcGIS extension for calculating shoreline change: U.S. Geological Survey Open-File Report 2008-127)



High-Risk Erosion Area Update - 2015

Whitefish Township, Chippewa County
T50N, R07W Section 01
T50N, R06W Sections 06, 05, 04

High Risk Erosion Areas

30 YR/60 YR Projected Recession Distance (Feet)
Average Annual Rate of Recession (FT/YR)

- AREA C1: 105'/195' (Avg. 3.0 FT/YR)
- AREA C2: 185'/355' (Avg. 5.7 FT/YR)
- AREA C3: 265'/515' (Avg. 8.3 FT/YR)
- AREA C4: 190'/365' (Avg. 5.8 FT/YR)
- AREA C5: 95'/175' (Avg. 2.7 FT/YR)
- AREA D1: 65'/115' (Avg. 1.7 FT/YR)
- AREA D2: 110'/200' (Avg. 3.1 FT/YR)
- AREA D3: 190'/370' (Avg. 5.9 FT/YR)
- AREA D4: 165'/315' (Avg. 5.0 FT/YR)
- AREA D5: 85'/155' (Avg. 2.3 FT/YR)
- AREA E1: 55'/100' (Avg. 1.4 FT/YR)
- AREA E2: 95'/175' (Avg. 2.7 FT/YR)
- AREA E3: 50'/85' (Avg. 1.2 FT/YR)

N W E S

0 500 1,000 1,500 Feet

1 inch = 501 feet

Roads
Sections
HREA Parcels

MAP INFORMATION:

This map identifies potential High-Risk Erosion Areas under Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The shaded areas indicate recession of at least one foot per year.

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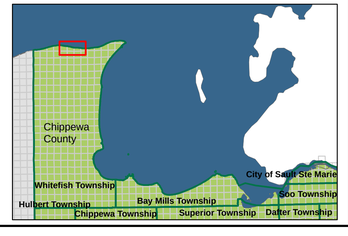

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Environmental Quality Analyst
Water Resources Division
Michigan Department Of Environmental Quality
7/10/2015

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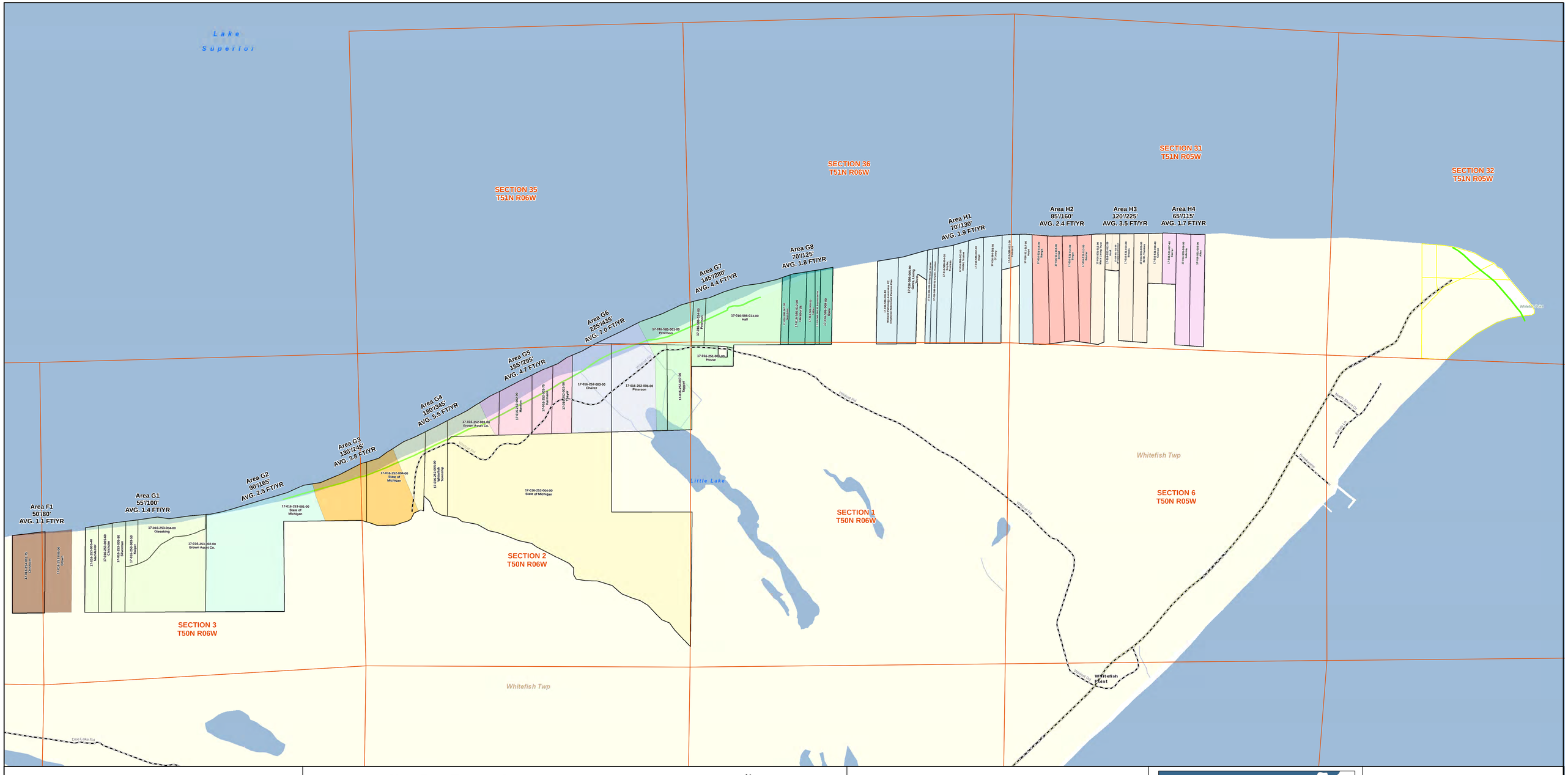

High-Risk Erosion Area Update - 2015

Whitefish Township, Chippewa County
T50N, R06W Sections 04, 03, 02
T51N, R06W Sections 35, 36
T51N, R05W Section 31

High Risk Erosion Areas

30 YR/60 YR Projected Recession Distance (Feet)
Average Annual Rate of Recession (FT/YR)

- AREA F1: 50'/80' (Avg. 1.1 FT/YR)
- AREA G1: 55'/100' (Avg. 1.4 FT/YR)
- AREA G2: 90'/165' (Avg. 2.5 FT/YR)
- AREA G3: 130'/245' (Avg. 3.8 FT/YR)
- AREA G4: 180'/345' (Avg. 5.5 FT/YR)
- AREA G5: 155'/295' (Avg. 4.7 FT/YR)
- AREA G6: 225'/435' (Avg. 7.0 FT/YR)
- AREA G7: 145'/280' (Avg. 4.4 FT/YR)
- AREA G8: 70'/125' (Avg. 1.8 FT/YR)
- AREA H1: 70'/130' (Avg. 1.9 FT/YR)
- AREA H2: 85'/160' (Avg. 2.4 FT/YR)
- AREA H3: 120'/225' (Avg. 3.5 FT/YR)
- AREA H4: 65'/115' (Avg. 1.7 FT/YR)

N W E S

0 450 900 1,800

1 inch = 897 feet

- Roads
- Sections
- HREA Parcels
- 1982 HREAs (approximate)
- De-Designated Parcels

MAP INFORMATION:

This map identifies potential High-Risk Erosion Areas under Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The shaded areas indicate recession of at least one foot per year.

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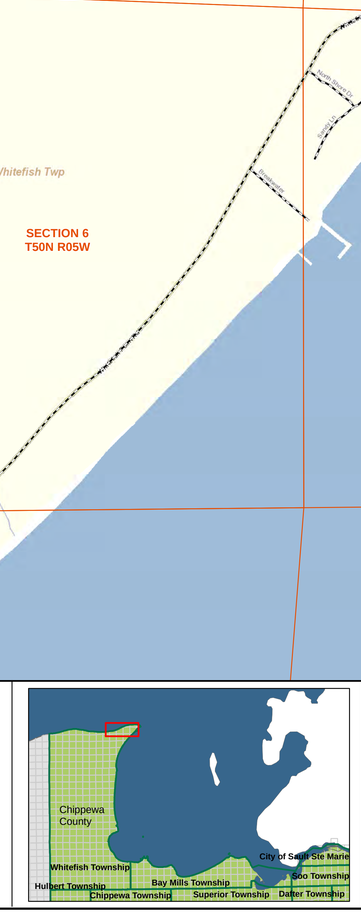

Map Created by: Jeremy Jones
Environmental Quality Analyst
Water Resources Division
Michigan Department Of Environmental Quality

7/10/2015

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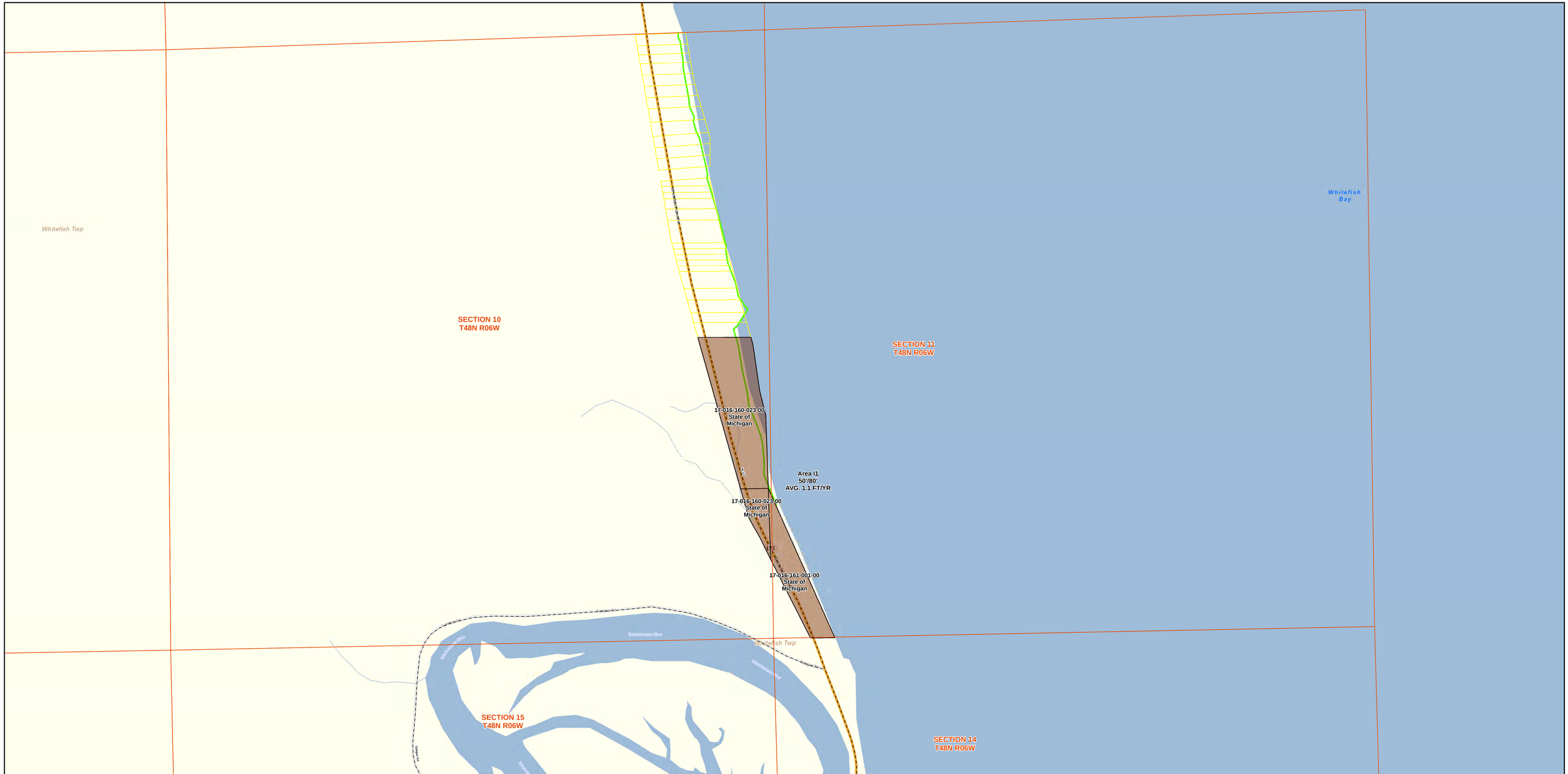

High-Risk Erosion Area Update - 2015

Whitefish Township, Chippewa County
T48N, R06W Sections 10, 11

High Risk Erosion Areas

30 YR/60 YR Projected Recession Distance (Feet)
Average Annual Rate of Recession (FT/YR)

AREA I1: 50'/80' (Avg. 1.1 FT/YR)

N
W E
S

0 400 800 1,200 Feet

1 inch = 333 feet

Roads
Sections
De-Designated Parcels
1982 HREAs (approximate)
HREA Parcels

MAP INFORMATION:

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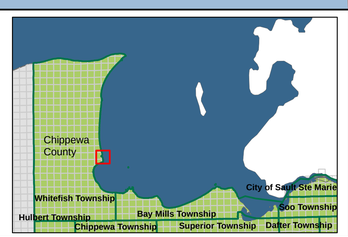

Map Created by: Jeremy Jones
Environmental Quality Analyst
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Michigan Department Of Environmental Quality

7/10/2015

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Parcels in High Risk Erosion Areas of Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
A1	1	17-016-456-001-00	2.0	75	135
B1	2	17-016-455-003-00	1.0	45	75
B1	3	17-016-455-003-50	1.0	45	75
B2	4	17-016-455-002-00	1.8	70	125
B3	5	17-016-455-001-00	2.7	95	175
B5	6	17-016-454-002-00 eastern 380 feet	3.4	115	220
B4	6	17-016-454-002-00 western 990 feet	4.8	160	305
B7	7	17-016-454-001-00 eastern 1,230 feet	4.1	140	260
B6	7	17-016-454-001-00 western 1,400 feet	2.5	90	165
B8	8	17-016-453-002-00 western 680 feet	3.1	110	200
C1	9	17-016-451-001-00	3.0	105	195
C2	9	17-016-451-001-00	5.7	185	355
C2	10	17-016-451-002-00 eastern 350 feet	5.7	185	355
C1	10	17-016-451-002-00 western 310 feet	3.0	105	195
C3	11	17-016-256-008-00	8.3	265	515

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 Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
C3	11.2	17-016-256-010-00 western 700 feet	8.3	265	515
C3	12	17-016-256-004-00	8.3	265	515
C3	13	17-016-256-005-00	8.3	265	515
C3	14	17-016-256-006-00	8.3	265	515
C3	15	17-016-256-007-00	8.3	265	515
C4	16	17-016-256-003-00 eastern 800 feet	5.8	190	365
C3	16	17-016-256-003-00 western 500 feet	8.3	265	515
C5	17	17-016-256-002-00 western 690 feet	2.7	95	175
D1	18	17-016-256-001-00 eastern 340 feet	1.7	65	115
D1	19	17-016-255-001-00	1.7	65	115
D3	20	17-016-255-002-00 eastern 1,100 feet then eastern 1,130 feet	5.9	190	370
D2	20	17-016-255-002-00 western 1,100 feet	3.1	110	200
D4	20	17-016-255-002-00 eastern 445 feet	5.0	165	315
D4	21	17-016-255-001-00 eastern 390 feet	5.0	165	315

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

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Parcels in High Risk Erosion Areas of Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
D5	21	17-016-255-001-00 eastern 590 feet from the west half	2.3	85	155
E1	22	17-016-254-003-10 eastern 410 feet	1.4	55	100
E2	23	17-016-254-002-00 middle 1,765 feet	1.2	50	85
E3	23	17-016-254-002-00 western 220 feet	1.2	50	85
E1	23	17-016-254-002-00 western 340 feet	1.4	55	100
E3	24	17-016-254-001-00	1.2	50	85
F1	25	17-016-254-001-75	1.1	50	80
F1	26	17-016-253-005-00	1.1	50	80
G1	27	17-016-253-005-40	1.4	55	100
G1	28	17-016-253-005-60	1.4	55	100
G1	29	17-016-253-005-80	1.4	55	100
G1	30	17-016-253-003-50	1.4	55	100
G1	31	17-016-253-004-00	1.4	55	100
G1	32	17-016-253-002-00	1.4	55	100
G2	33	17-016-253-001-00 western 1,800 feet	2.5	90	165

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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 Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
G3	33	17-016-253-001-00 eastern 950 feet	3.8	130	245
G4	34	17-016-252-004-00 eastern 600 feet	5.5	180	345
G3	34	17-016-252-004-00 western 475 feet	3.8	130	245
G4	35	17-016-252-005-00	5.5	180	345
G5	36	17-016-252-001-00 eastern 380 feet and the western 150 feet	4.7	155	295
G4	36	17-016-252-001-00 western 600 feet and eastern 350 feet	5.5	180	345
G5	37	17-016-252-002-00	4.7	155	295
G5	38	17-016-252-003-75	4.7	155	295
G5	39	17-016-252-003-50	4.7	155	295
G6	40	17-016-252-003-00	7.0	225	435
G7	41	17-016-252-006-00 eastern 300 feet	4.4	145	280
G6	41	17-016-252-006-00 western 615 feet	7.0	225	435
G7	42	17-016-585-001-00 eastern 1,000 feet	4.4	145	280

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 Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
G6	42	17-016-585-001-00 western 750 feet	7.0	225	435
G7	42.2	17-016-252-007-00	4.4	145	280
G7	43	17-016-586-014-00	4.4	145	280
G7	43.2	17-016-251-006-00	4.4	145	280
G7	44	17-016-586-013-00	4.4	145	280
G8	45	17-016-586-007-00	1.8	70	125
G8	46	17-016-586-012-00	1.8	70	125
G8	47	17-016-586-008-00	1.8	70	125
G8	48	17-016-586-006-00	1.8	70	125
G8	49	17-016-586-009-00	1.8	70	125
H1	50	17-016-586-005-80	1.9	70	130
H1	51	17-016-586-005-90	1.9	70	130
H1	52	17-016-586-005-25	1.9	70	130
H1	53	17-016-586-005-00	1.9	70	130
H1	54	17-016-586-004-00	1.9	70	130
H1	55	17-016-586-003-00	1.9	70	130
H1	56.1	17-016-586-002-10	1.9	70	130
H1	56.2	17-016-586-002-20	1.9	70	130
H1	56.3	17-016-586-002-30	1.9	70	130

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Parcels in High Risk Erosion Areas of Whitefish Township, Chippewa County

HREAs identified West to East Date of Designation: July 10, 2015

HREA*	Sequence No.	Parcel Identification Number	Rate (feet/year)	30 yr PRD*	60 yr PRD*
H1	57	17-016-586-001-50	1.9	70	130
H1	58	17-016-586-001-00	1.9	70	130
H1	59	17-016-531-017-00	1.9	70	130
H2	60	17-016-531-016-00	2.4	85	160
H2	61	17-016-531-015-00	2.4	85	160
H2	62	17-016-531-014-00	2.4	85	160
H2	63	17-016-531-013-00	2.4	85	160
H3	64	17-016-531-012-00	3.5	120	225
H3	65	17-016-531-011-25	3.5	120	225
H3	66	17-016-531-011-00	3.5	120	225
H3	67	17-016-531-010-00	3.5	120	225
H3	68	17-016-531-009-00	3.5	120	225
H3	69	17-016-531-008-40	3.5	120	225
H4	70	17-016-531-007-40	1.7	65	115
H4	71	17-016-531-006-00	1.7	65	115
H4	72	17-016-531-005-00	1.7	65	115
I1	73	17-016-160-023-00 southern 960 feet	1.1	50	80
I1	74	17-016-161-001-00	1.1	50	80

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