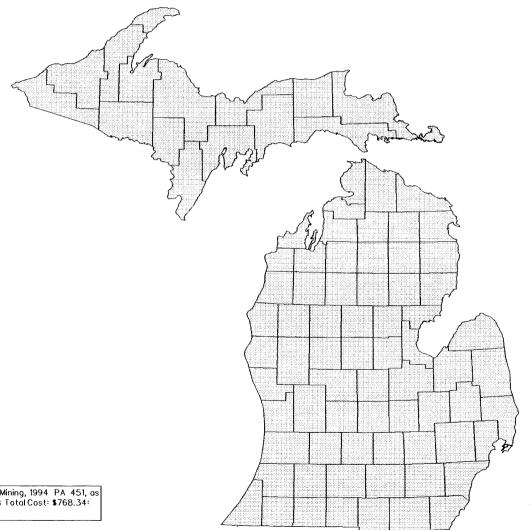
# STATE OF MICHIGAN DESIGNATED AND CRITICAL SAND DUNE AREAS





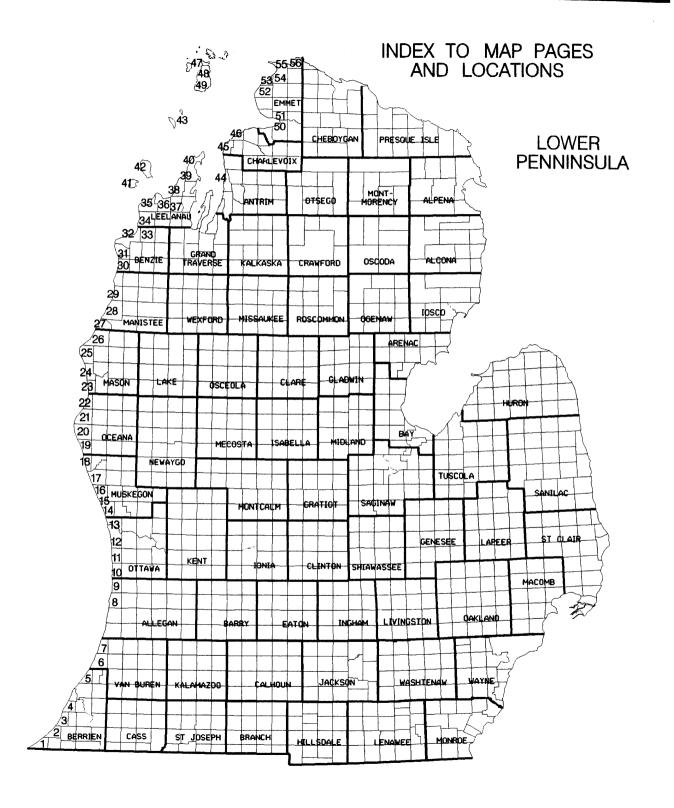
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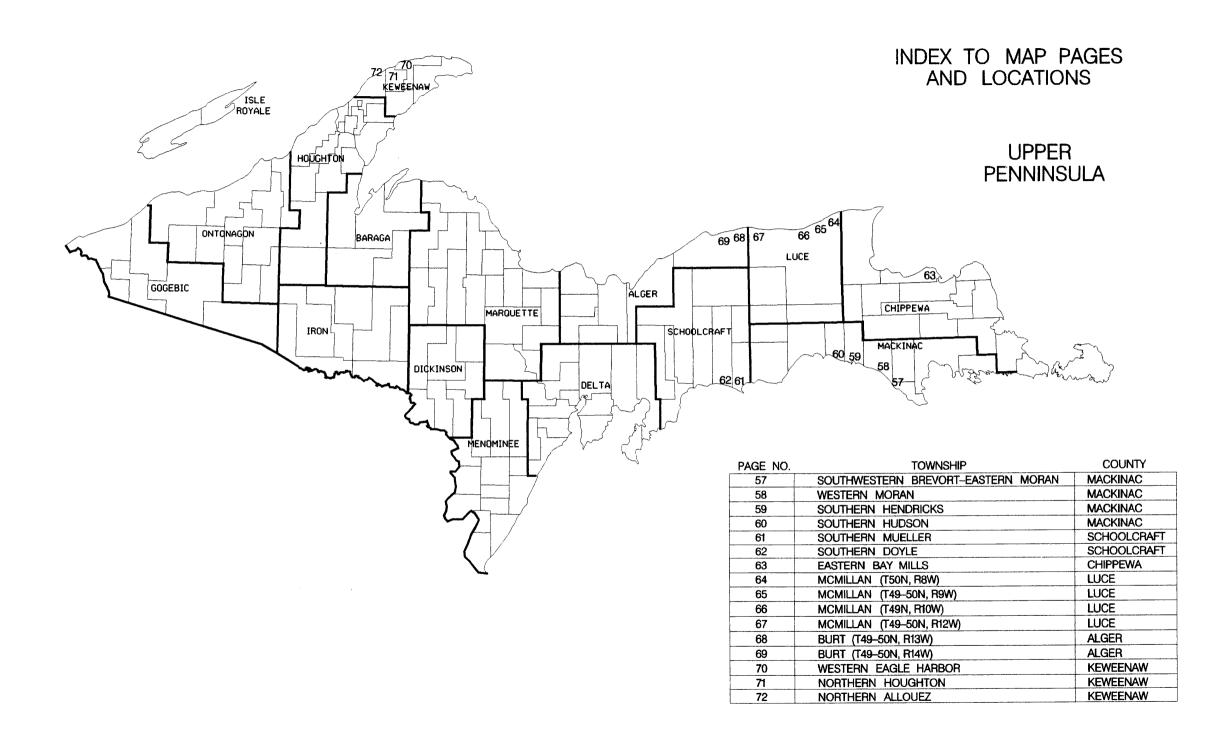
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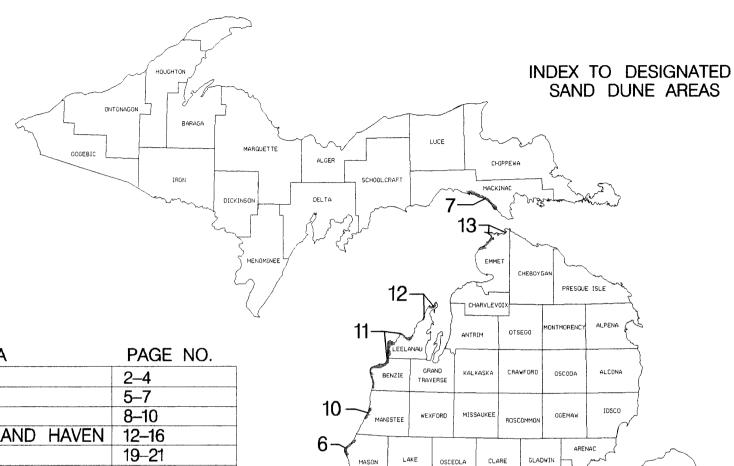
JANUARY 2002

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2	CHIKAMING	BERRIEN
3	LAKE	BERRIEN
4	LINCOLN	BERRIEN
5	HAGAR	BERRIEN
6	COVERT	VAN BUREN
7	SOUTH HAVEN	VAN BUREN
8	SAUGATUCK	ALLEGAN
9	LAKETOWN	ALLEGAN
10	PARK	OTTAWA
11	PORT SHELDON	OTTAWA
12	SOUTHERN GRAND HAVEN	OTTAWA
13	SPRING LAKE-NORTHERN GRAND HAVEN	OTTAWA
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		MASON
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40	NORTHERN LEELANAU	LEELANAU
41	GLEN ARBOR-SOUTH MANITOU ISLAND	LEELANAU
42	GLEN ARBOR-NORTH MANITOU ISLAND	LEELANAU
43	LEELANAU-FOX ISLANDS	LEELANAU
44	NORTHERN TORCH LAKE	ANTRIM
45	NORWOOD	
46	CHARLEVOIX	CHARLEVOIX
47	ST. JAMES-HIGH ISLAND-N. BEAVER ISLAND	CHARLEVOIX
	DEAINE MODITIEDN DEAVED ICLAND	CHARLEVOIX
48	PEAINE-NORTHERN BEAVER ISLAND	CHARLEVOIX
49	PEAINE-SOUTHERN BEAVER ISLAND	CHARLEVOIX
50	NORTHERN BEAR CREEK	EMMET
51	LITTLE TRAVERSE	EMMET
52	READMOND CROSS VIII A OF	EMMET
53	CROSS VILLAGE	EMMET
54	SOUTHERN BLISS	EMMET
55	NORTHERN BLISS	EMMET
56	WAWATAM	EMMET







SAND DUNE AREAS

PRESQUE ISLE

MONTMORENCY ALPENA

OSCODA

OGEMAW

SHIAWASSEE

LENAVEE

MECOSTA

BARRY

CALHOUN

BRANCH

MONTCALM

NEWAYG0

KENT

KALAMAZ00

ST. JOSEPH

MUSKEGON\_

BTTAWA

ALLEGAN

VAN BUREN

CASS

8

3-

ISABELLA

MIDLAND

INGHAM

GRATIOT

CLINTON

ARENAC

ALCONA

IOSCO

HURON

SANILAC

ST. CLAIR

MACOMB

TUSCOLA

OAKLAND

WAYNE

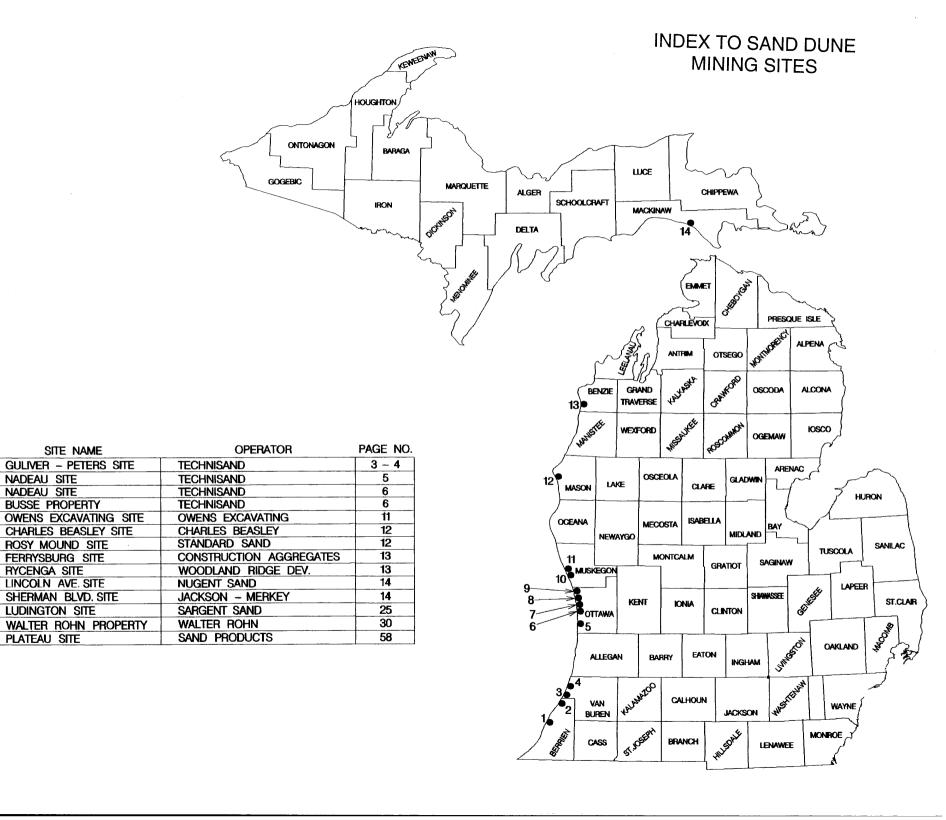
MONROE

GENESEE

LIVINGSTON

WASHTENAW

NO.	DESIGNATED SAND DUNE AREA	PAGE NO.
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MAP NO.

9

10

12

13

14

SITE NAME

NADEAU SITE

NADEAU SITE

BUSSE PROPERTY

ROSY MOUND SITE

FERRYSBURG SITE

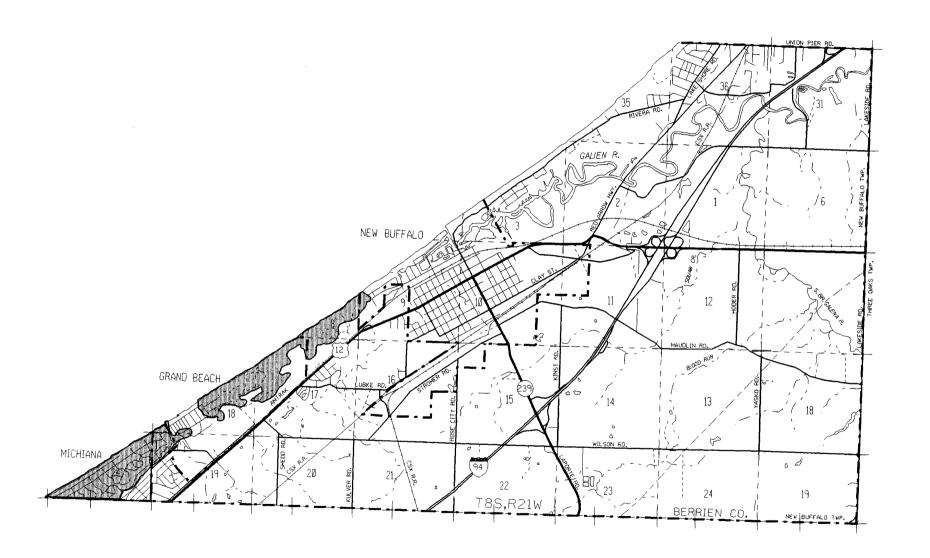
LINCOLN AVE. SITE

LUDINGTON SITE

PLATEAU SITE

SHERMAN BLVD. SITE

RYCENGA SITE



# BERRIEN COUNTY NEW BUFFALO TOWNSHIP

DESIGNATED SAND DUNE AREAS



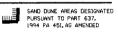
LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

### DESIGNATED SAND DUNE AREAS



PERMITTED SAND DUNE

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LINE CHARACTERISTICS.



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

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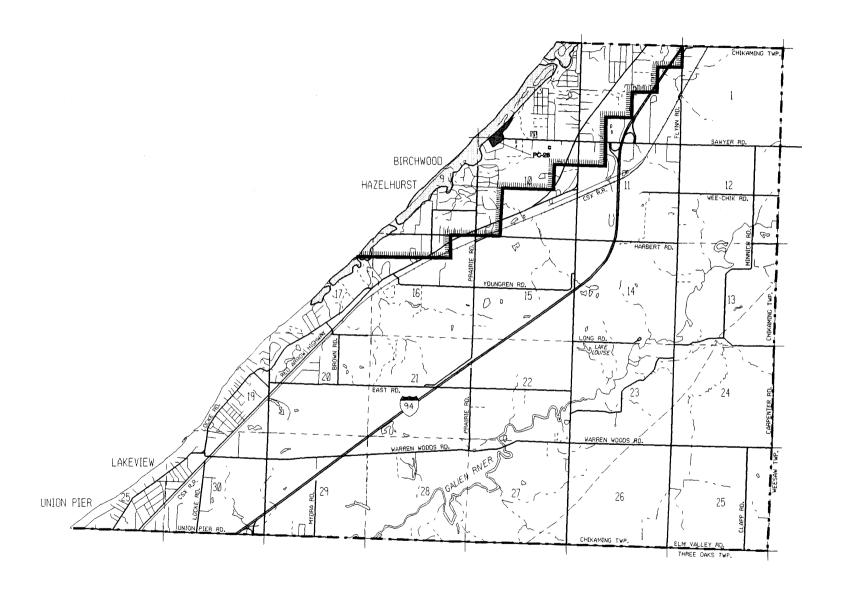
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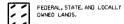
# BERRIEN COUNTY CHIKAMING TOWNSHIP

DESIGNATED SAND DUNE AREAS



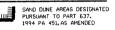
### LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



OWNED LANDS.

# DESIGNATED SAND DUNE AREAS





CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353,1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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.

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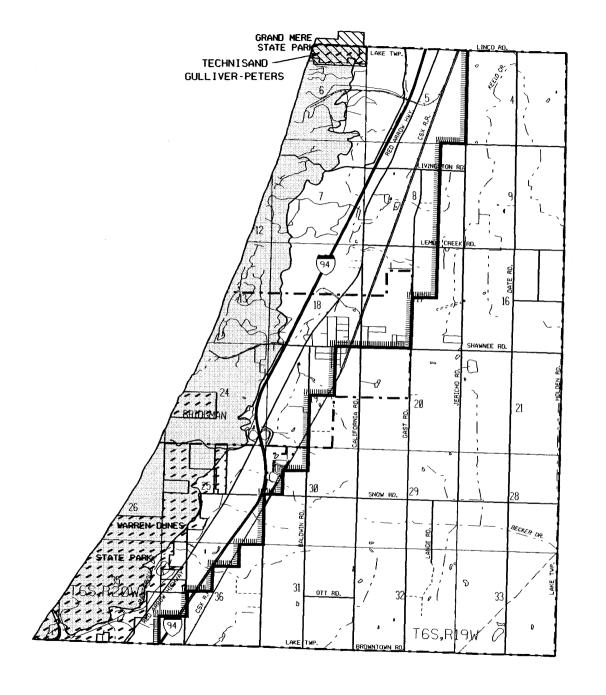






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# BERRIEN COUNTY LAKE TOWNSHIP

Designated Sand Dune Areas



LECEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451. AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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



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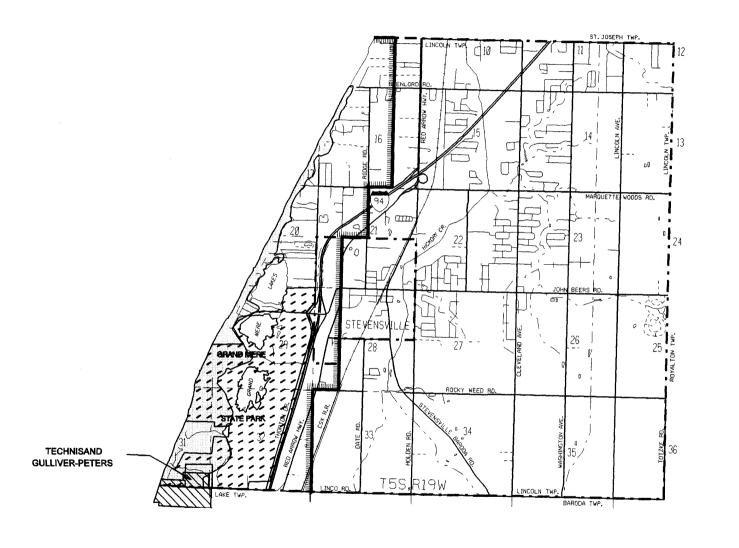
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# BERRIEN COUNTY LINCOLN TOWNSHIP

DESIGNATED SAND DUNE AREAS



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BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



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

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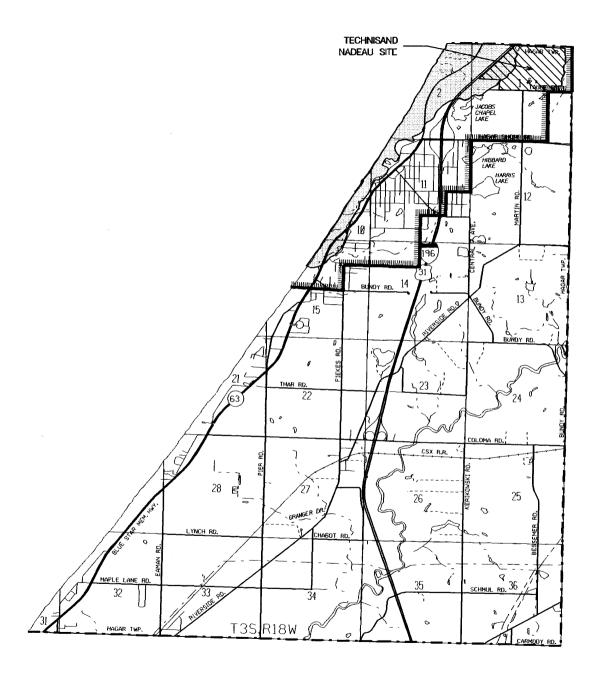
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DEPARTMENT OF ENVIRONMENTAL QUALITY







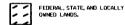
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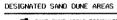
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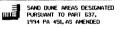


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BDUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.







PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS
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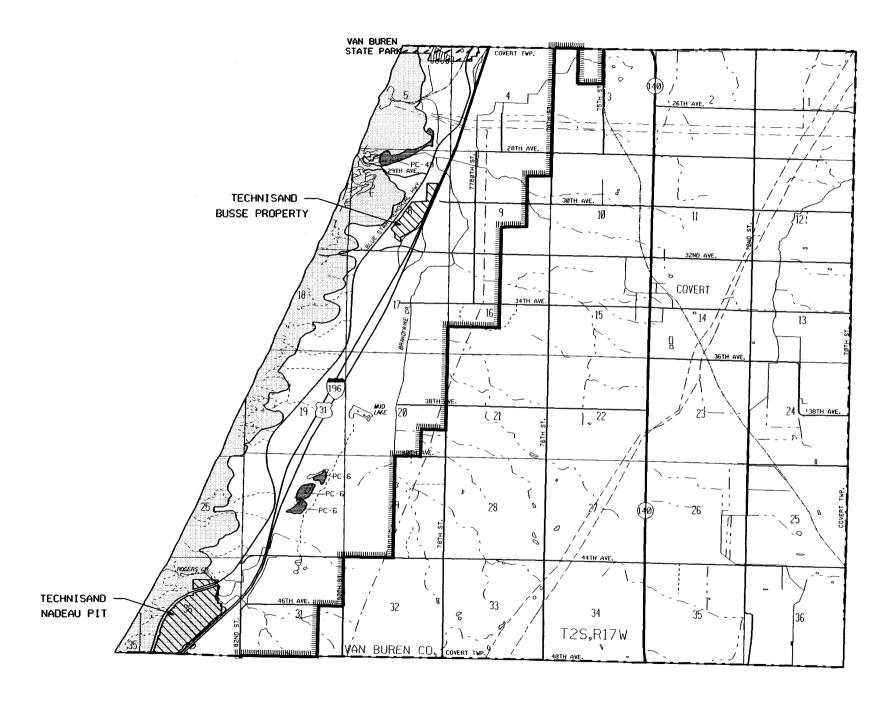
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# VAN BUREN COUNTY **COVERT TOWNSHIP**

DESIGNATED SAND DUNE AREAS

SOLITH	GENEVA TWP.	COLUMBIA	BLOOKENCOALE TMP.	PINE RIVER	1
TMP.	ļ , <b></b>	TMP.	1	THP.	
	BANCOR TMP.	APILINGTON TMP.	WAVERLY TWP.	N.MENA TUP.	123
RITY	HORTFORD TMP.	LAWERENCE TWP.	PAW PAW TWP.	ANTIMERP TMP.	136
	KEELER TWP.	HAMEL TON TMP.	DECATUR TWP.	PORTER THP.	145
	R16N	RISH	Man	RI3V	,

LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS





BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPUSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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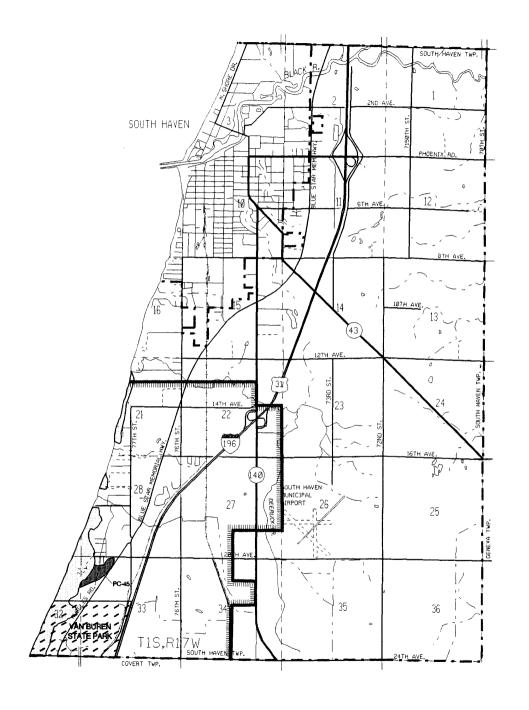
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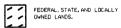
# VAN BUREN COUNTY SOUTH HAVEN TOWNSHIP

DESIGNATED SAND DUNE AREAS

87777				_	
	GENEYA TWP.	COLUMBIA TWP.	BLOOMDIGDALE TWP.	PINE RIVER TWP.	TIS
COVERY TWP.	BANGOR TWP.	ARLINGTON TWP.	WAYERLY TWP.	ALMENA TWP.	T2S
R17W	HARTFORD TWP,	LAWERENCE TWP.	Paw Paw TwP.	ANTWERP TWP.	136
	KEELER TWP.	HAMILTON TWP.	DECATUR THP.	PORTER TWP.	T4S
,	RIGN	RISV	DIAN		J

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 BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
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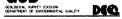
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DEPARTMENT OF NATURAL RESOURCES

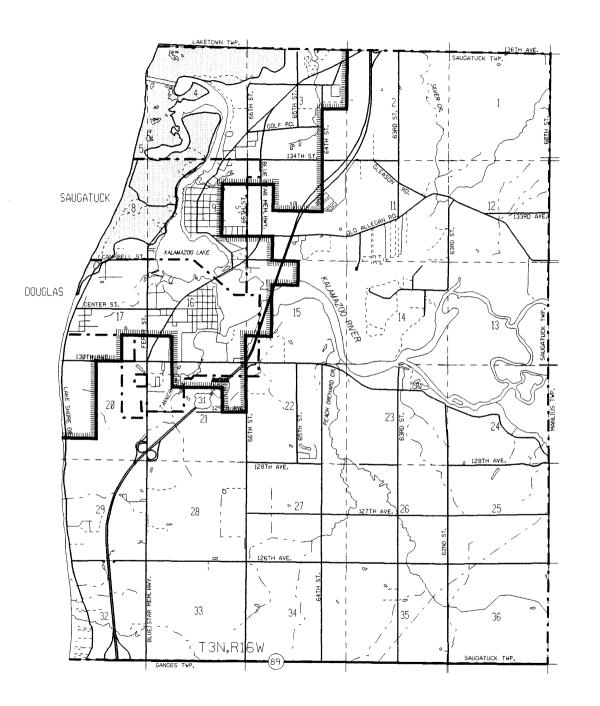


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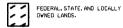
# ALLEGAN COUNTY SAUGATUCK TOWNSHIP

DESIGNATED SAND DUNE AREAS

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	TOWN TYP.	FILLHORE TWF.	OMERSIEL TMP.	SALEH TMP.	DORR TVP.	LEIGHTON TWP.	749
		HAMLILE Typ.	YALLEY TVP.	ALLESAN TVP.	HEPKINS TMP.	WAYLAND TUP.	134
	SANCES TVP.	CLIDE TMP.	WALLEY THP.	ALLEGAN TWP.	HATSON TVP:	SHEERWILLE THP.	Tax
/	CASCO TWP.	LEE Turk	CHESINE TWF.	TROMBRIDGE TMP.	OFSECO TWP.	GUN PLAIN TMP.	TIN
-	RIGH	RUSH	RIN	KLIV	RIZY	Rilly	1

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BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORWATIONS THAT ARE COMPOSED PRIMARLY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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

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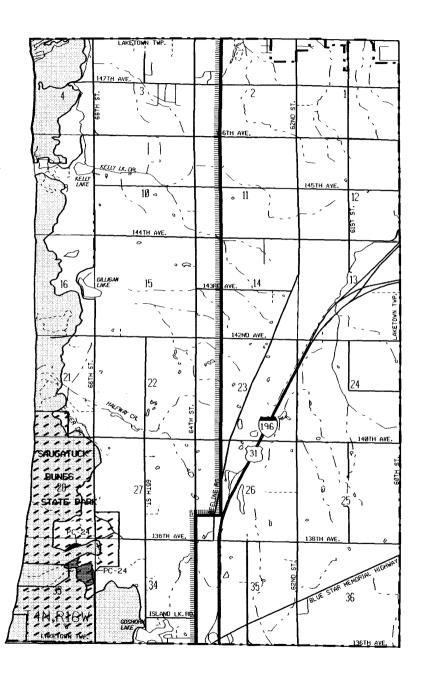
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# ALLEGAN COUNTY LAKETOWN TOWNSHIP

designated Sand Dune Areas

		FELLHORE TVP.	WERSEL THP.	SALEN Tur.	EMPR TMP.	LEIGHTON TMP.	Test
	SHEMATUCK TAP.	HINLES Tur.	WILLEY Pur.	ALLEGAM TMP.	mras Nr.	WATLAND THP.	738
	SMEES TMP.	CLYCE THP.	WLLET TAP.	ALLEEAN TW.	WATSON TUP:	SHEETHYRLE	1294
	CHSCOL THP.	LEE TMP.	CHESSRE TMP.	THOMBREESE THP.	orseed The	GIR PLAM TIP.	-
_	RMEN	RESV	PR-RV	ROW	REEDLE	RIN	•

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BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



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PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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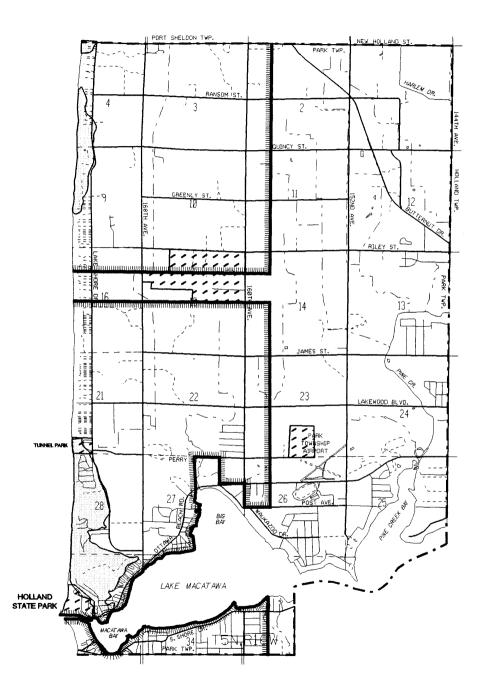


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# OTTAWA COUNTY PARK TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353,1994 PA 451, AS AMENDED



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

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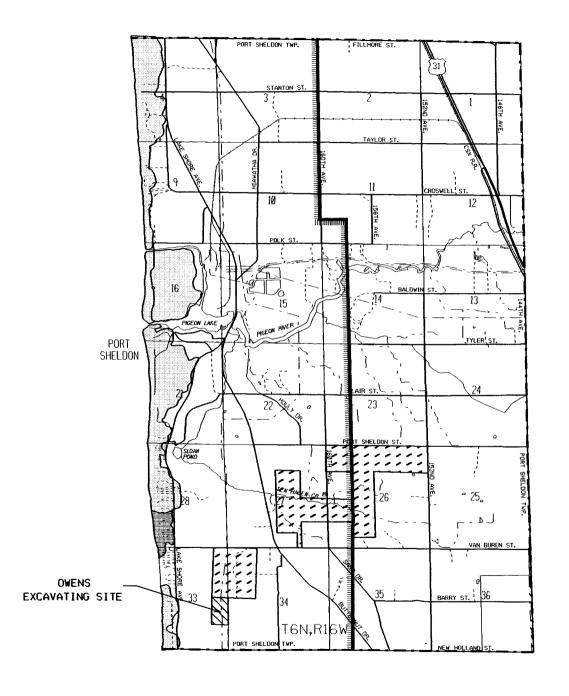


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# OTTAWA COUNTY PORT SHELDON TOWNSHIP

Designated Sand Dune Areas



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637. 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS, MICHIGAN NATURAL FEATURES PC - 00 INVENTORY REFERENCE CODE INDICATED.

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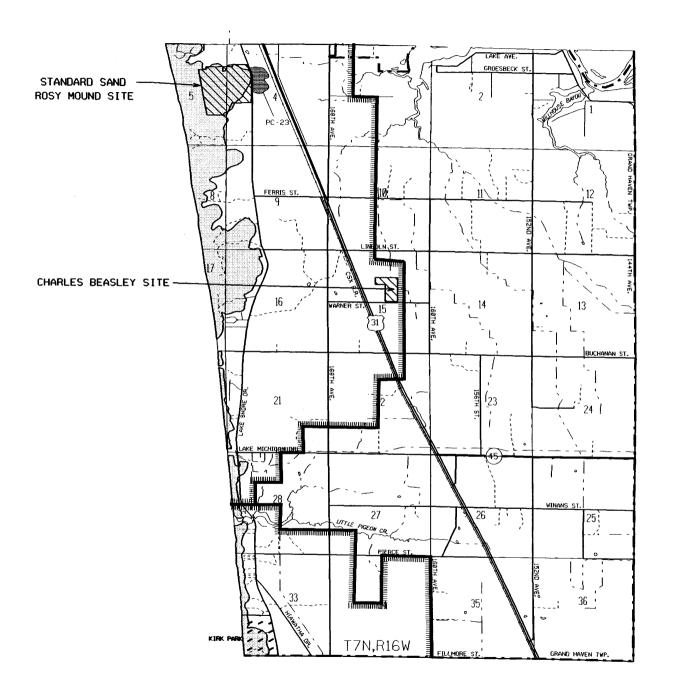
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# OTTAWA COUNTY SOUTHERN GRAND HAVEN TOWNSHIP Designated Sand Dune Areas



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- BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE COSSIGNATED DUNE FORMATIONS. MICHGRAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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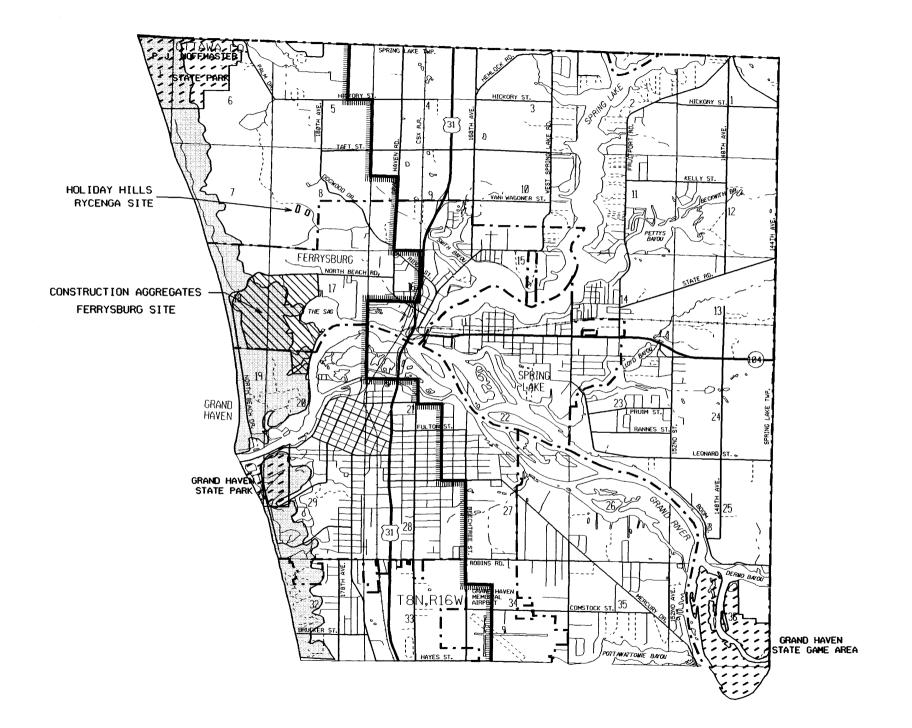
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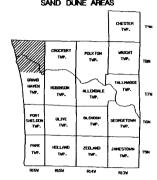
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# OTTAWA COUNTY SPRING LAKE TOWNSHIP **NORTHERN** GRAND HAVEN TOWNSHIP designated Sand Dune Areas



LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES
CURRENT AS DF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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



EXEMPLARY DUNE ASSOCIATED PC - 00 EXEMPLANT COMPANITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN MATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

SOURCE

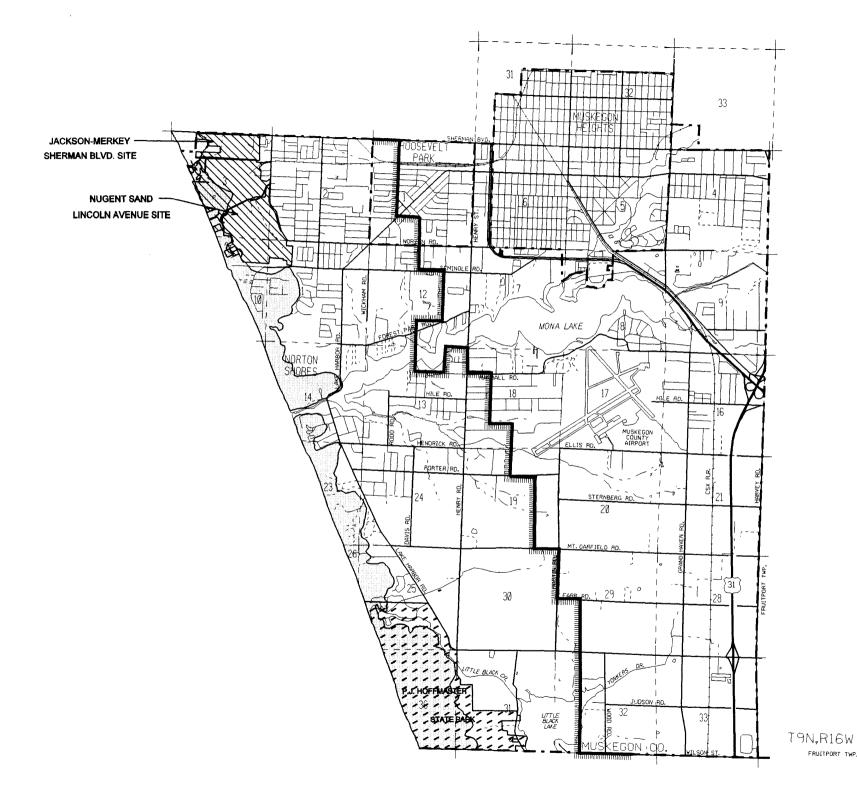
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# MUSKEGON COUNTY NORTON SHORES TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637. 1994 PA 451, AS AMENDED

PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS
THAT ARE COMPOSED PRIMARILY
OF DUNE SAND AND EXHIBIT CHARACTERISTICS.



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

SOURCE

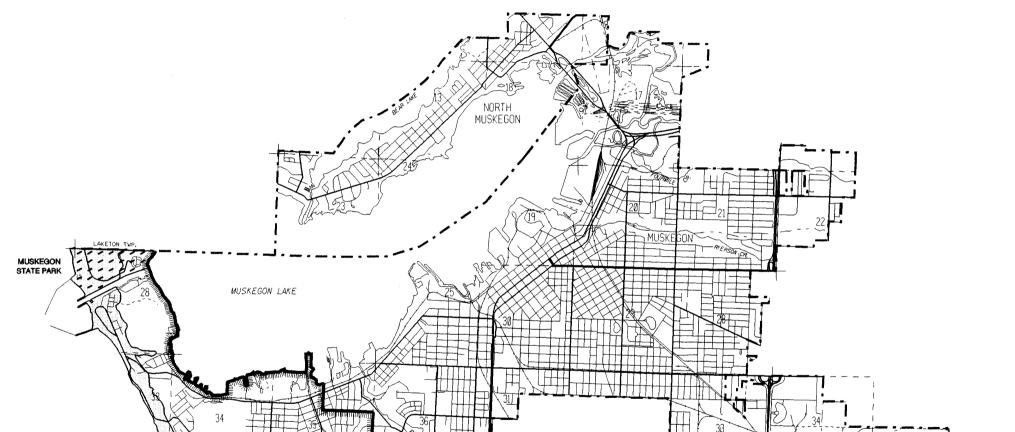
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# MUSKEGON COUNTY CITY OF MUSKEGON

DESIGNATED SAND DUNE AREAS



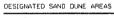


LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LUCALLY OWNED LANDS.





SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED

PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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

FRUITPORT TWP.

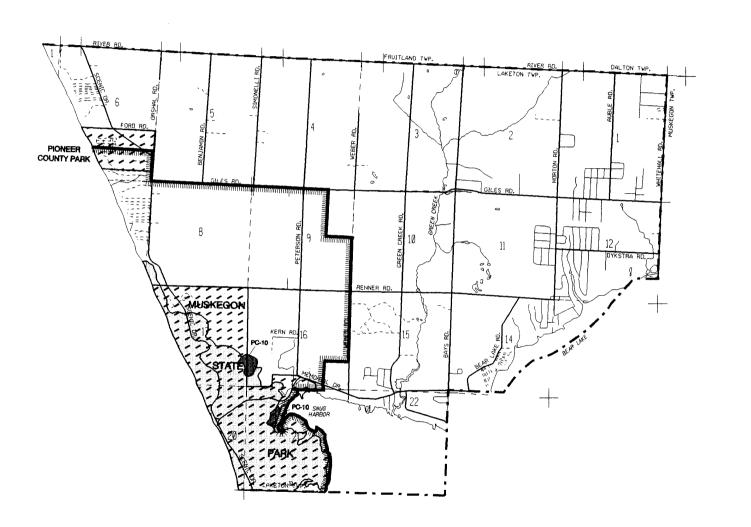
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# MUSKEGON COUNTY LAKETON TOWNSHIP

Designated Sand Dune Areas



### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY

### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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

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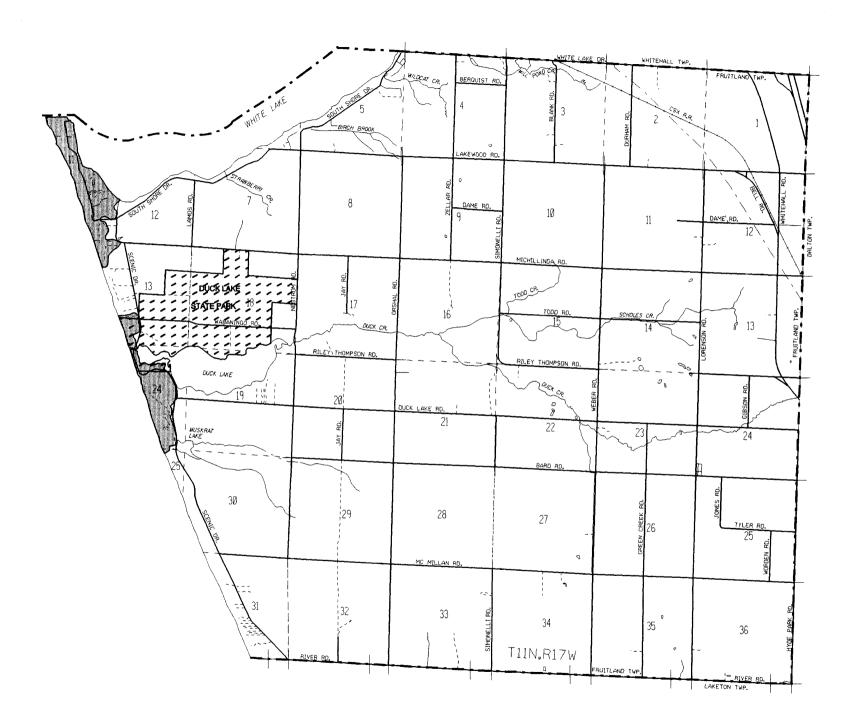


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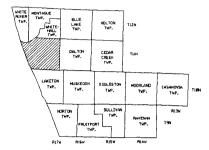






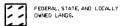
# MUSKEGON COUNTY FRUITLAND TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED







BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353,1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORWATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS, MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE

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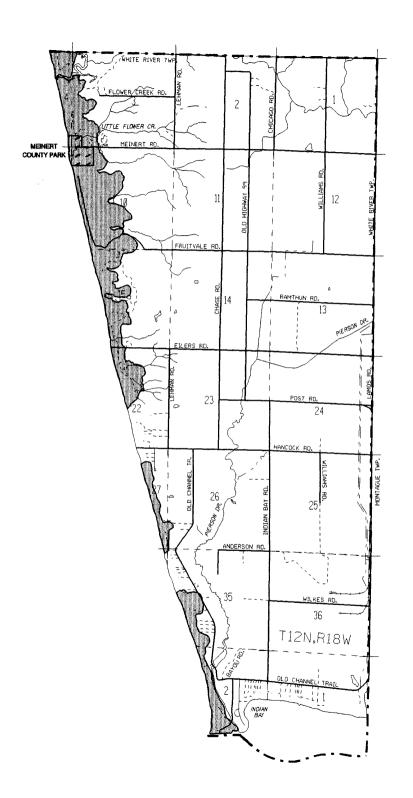
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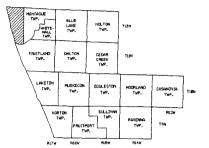






# MUSKEGON COUNTY WHITE RIVER TOWNSHIP

### DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353,1994 PA 451, AS



AREAS NOT INCLUDED AS BARRIER DUNE FORWATTONS THAT ARE COMPOSED PRIVARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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

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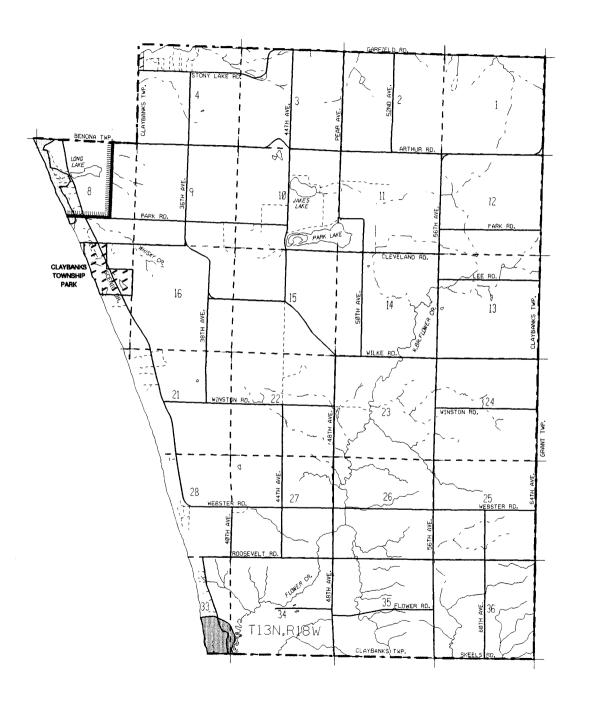
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# OCEANA COUNTY CLAYBANKS TOWNSHIP DESIGNATED SAND DUNE AREAS

	Pen Maries	WEARE TWP.	CRYSTAL TWP.	COLFAX TWP.	TLE
(	GOLDEN TWP.	HART THP.	ELERIDGE TWP.	LEAVITT	1364
	BENONA TWP.	SHELBY TWP.	FERRY TWP.	NEWFIELD TWP.	T14N
\		GRANT THP+	OTTO TWP.	GREENWOOD TWP.	TI3N
	RL8W	R17W	R16W	R15¥	

LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS DF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDEO



AREAS NOT INCLUDED AS BARRIER DUNE FORMATION 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.

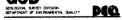
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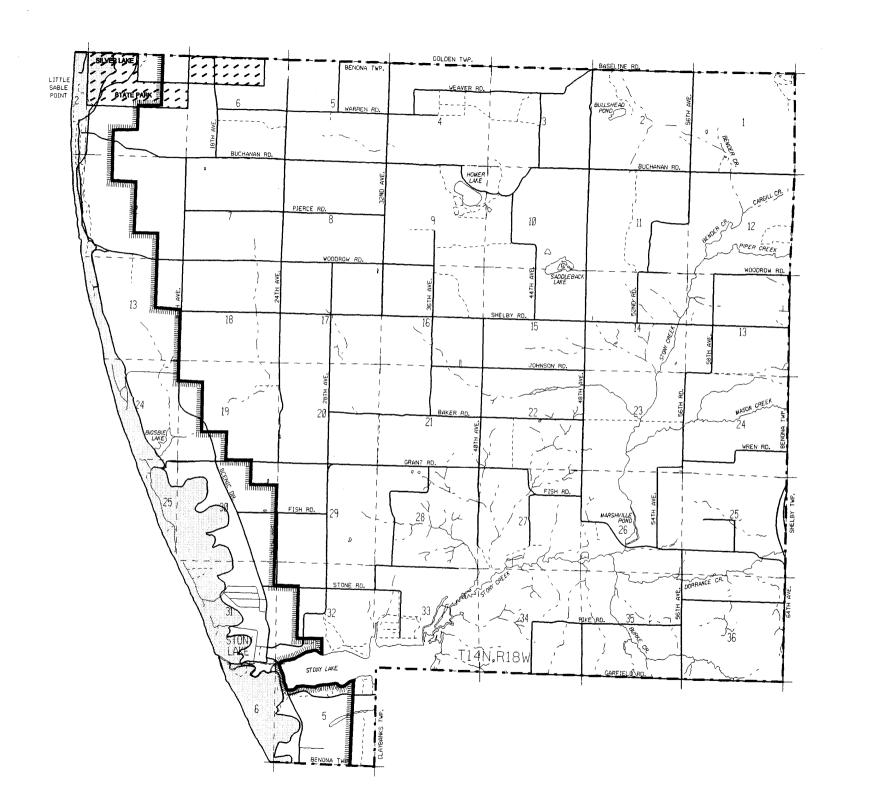
HICHGORD RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



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# OCEANA COUNTY BENONA TOWNSHIP

DESIGNATED SAND DUNE AREAS

Penimus Es	WEARE TWP.	CRYSTAL TWP.	COLFAX TWP.	T16N
GOLDEN TWP.	HART TWP.	ELBRIDGE TWP.	LEAVITT TWP.	T15N
	SHELBY TMP.	FERRY TWP.	NEWFIELD TWP.	T14N
CLAYBANKS TWP.	GRANT TWP.	OTTO TWP.	GREENWOOD TWP.	T13N
RIBH	R17W	R16W	R15W	

LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS, MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE

SOURCE

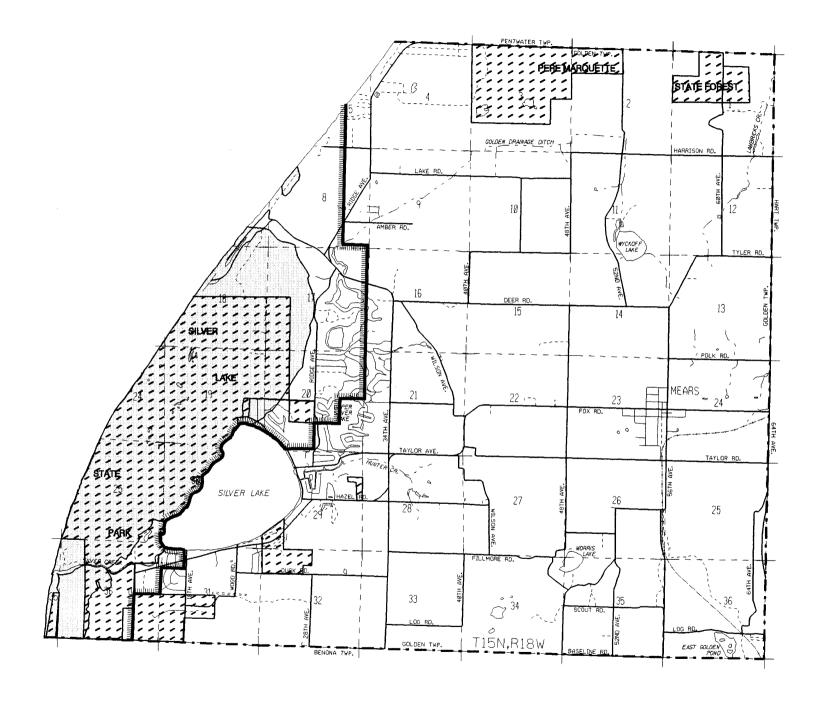




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# OCEANA COUNTY **GOLDEN TOWNSHIP** DESIGNATED SAND DUNE AREAS

	Penning Inc.	WEARE TWP.	CRYSTAL TWP,	COLFAX TWP.	T16#
		HART TWP.	ELBRIDGE TWP.	LEAVITT TWP.	TLEN
	BENONA TWP.	SHELBY TWP.	FERRY TWP.	NEWFIELD TWP.	T14N
`	CLAYBANKS TWP.	GRANT TWP.	OTTO TWP.	GREENWOOD TWP.	TLON
	R18¥	R17W	R16W	Rt5V	

LEGEND

 BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPURATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS
BARRIER DUNE FORMATIONS
THAT ARE COMPOSED PRIMARRLY
OF DUNE SAND AND EXHIBIT
SEVERAL DUNE-LIKE
CHARACTERISTICS.



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

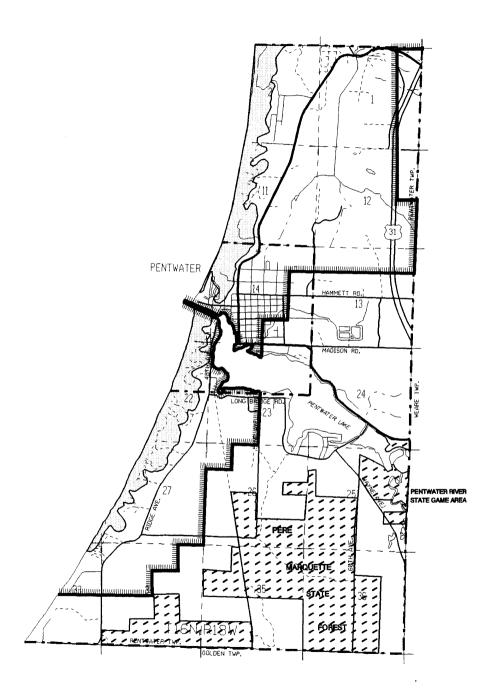
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# OCEANA COUNTY PENTWATER TOWNSHIP DESIGNATED SAND DUNE AREAS

	177				
		WEARE TWP.	CRYSTAL TWP.	COLFAX THP.	TIE
<u> </u>	GOLDEN TWP-	HART TWP.	ELBRIDGE TWP.	LEAVITT TuP.	TISN
	BENONA TWP.	SHELBY TWP.	FERRY THP.	NEWFIELD TWP.	TIN
•	CLAYBANKS TWP.	CRANT TWP,	OTTO TWP.	CREENWOOD TWP.	TISN
	RIBY	R17¥	RLEW	R15W	1

LEGEND

BOUNDARIES OF COUNTIES.
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE



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

SOURCE

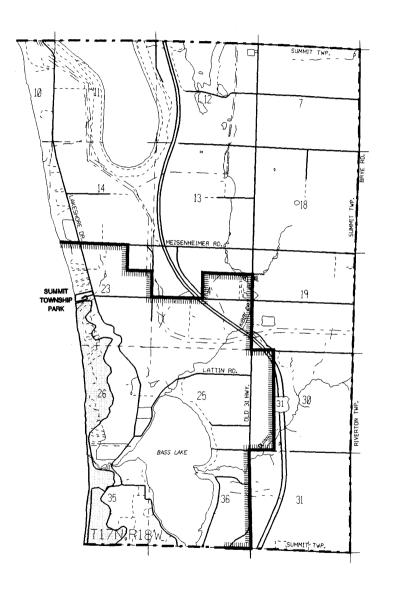
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MICHGAIN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



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# MASON COUNTY SUMMIT TOWNSHIP

DESIGNATED SAND DUNE AREAS

_		GRANT TWP.	FREESOIL TWP.	MEADE TWP,	T201
HAM TI	ILIN WP.	VICTORY TWP.	SHERMAN TWP.	SHERIDAN TWP.	TIGN
1	WARDUETTE.	AMBER TWP.	CUSTER TWP.	BRANCH TWP.	TISN
,		REVERTON TWP.	EDEN TWP.	LOGAN TWP.	TJ7N
	RIBW	RL7W	R16W	RISV	,

LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451 AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, A5
AMENDEO



AREAS NOT INCLUDED AS 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

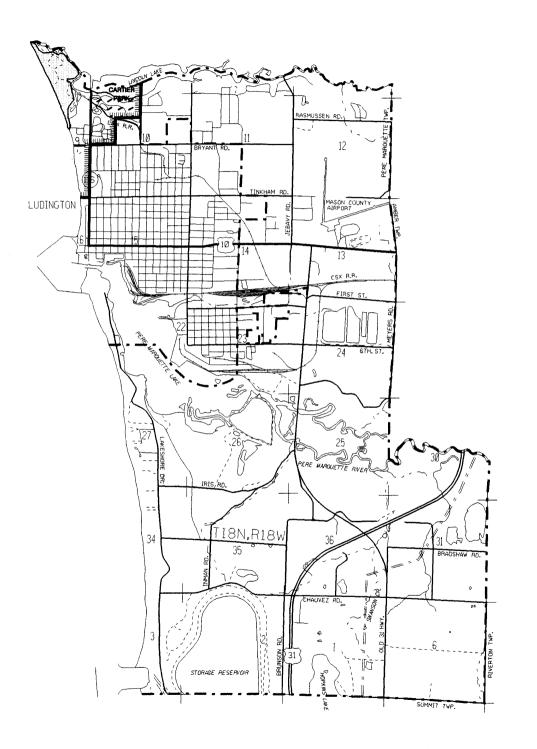
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MICHIGAN RESOURCE DIFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES

GSD







# MASON COUNTY PERE MARQUETTE TOWNSHIP

DESIGNATED SAND DUNE AREAS

	GRANT TUP.	FREESOIL TWP.	MEADE 1WP.	T20N
HAMLIN TWP.	VICTORY TWP.	SHERMAN TWP.	SHERIDAN TWP.	TL9N
	AMBER TWP.	CUSTER TWP.	BRANCH TWP.	TJBN
SUM	MIT WP. RIVERTON TWP.	EDEN TWP.	LOGAN TWP.	T17N
RIE	3W R17W	RIGW	RI5W	

### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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



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

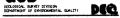
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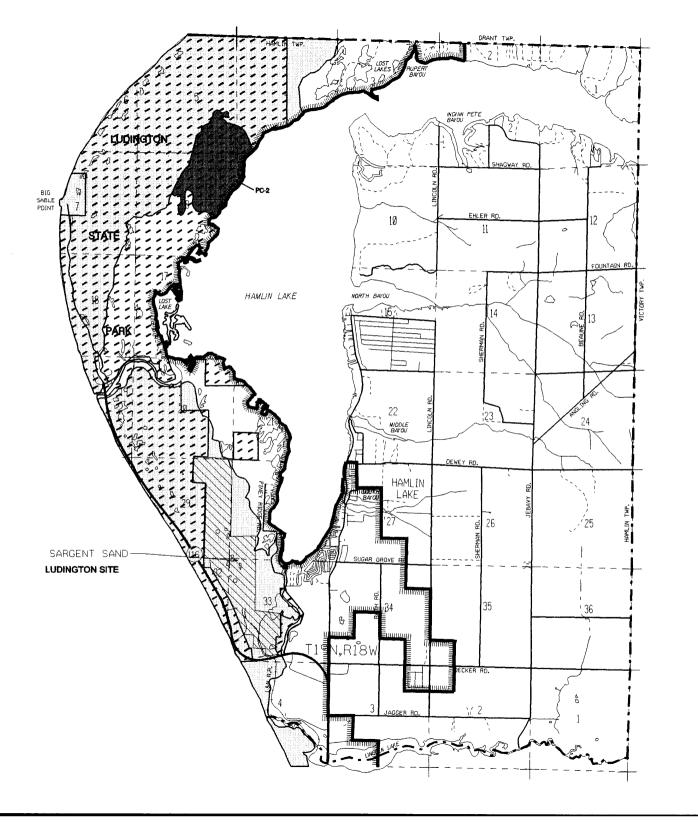
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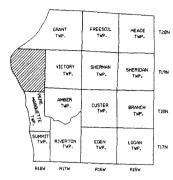
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# MASON COUNTY HAMLIN TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

 BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPDRATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED







BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



AREAS NOT INCLUDED AS 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

MICHIGAN RESOURCE INFORMATION SYSTEM
REAL ESTATE CONSIGN
DEPARTMENT OF NATURAL RESOURCES

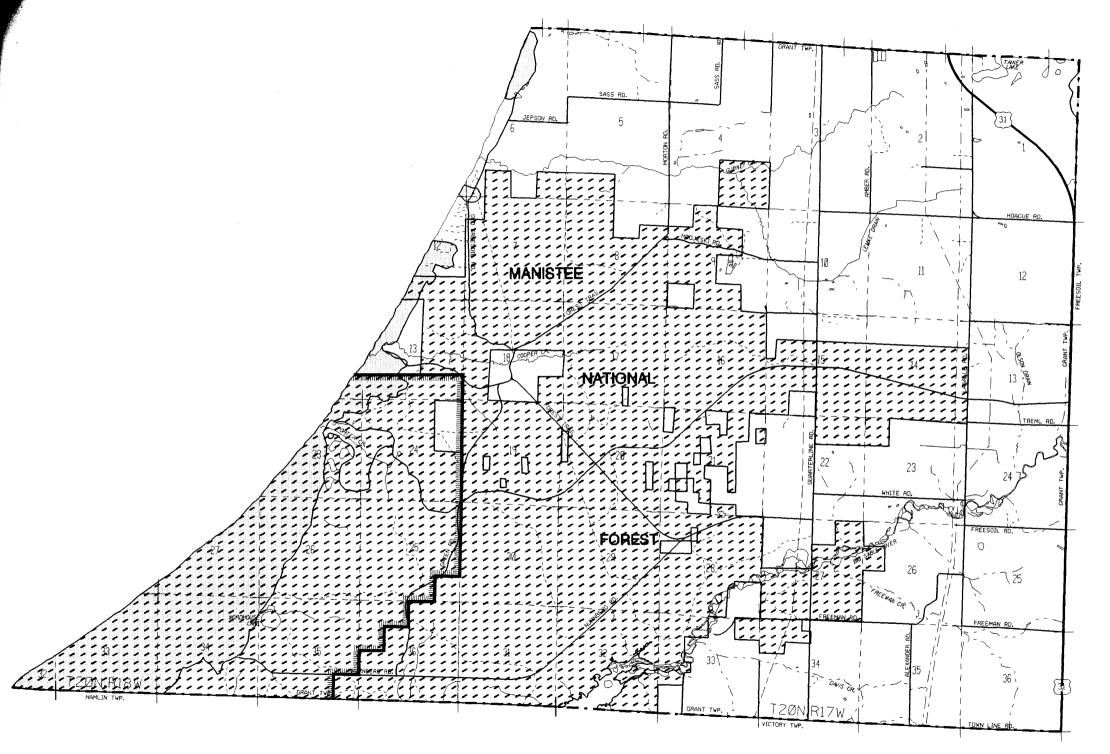


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# MASON COUNTY **GRANT TOWNSHIP** DESIGNATED SAND DUNE AREAS

	mmm	-		
		FREESOIL TWP.	MEADE TWP.	TZEN
HAMLIN TUP.	VICTORY TMP.	SHERMAN TWP.	SHERIDAN TWP,	TIAN
	AMBER TWP.	CUSTER TMP.	BRANCH TWP,	TIBN
SLAMU		EDEN TWP.	LOGAN TWP.	T17N
RLOW	R17W	RIEW	RISV	

LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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



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

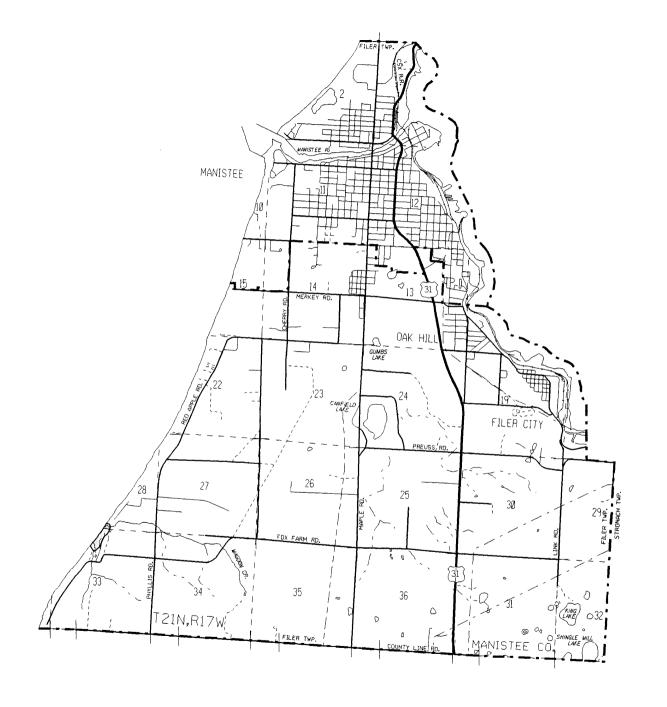
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GSD GENERAL SERVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL DUALITY





# MANISTEE COUNTY FILER TOWNSHIP DESIGNATED SAND DUNE AREAS

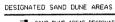


### LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.

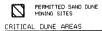


FEDERAL, STATE, AND LOCALLY OWNED LANDS.





SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED





BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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

SOURCE

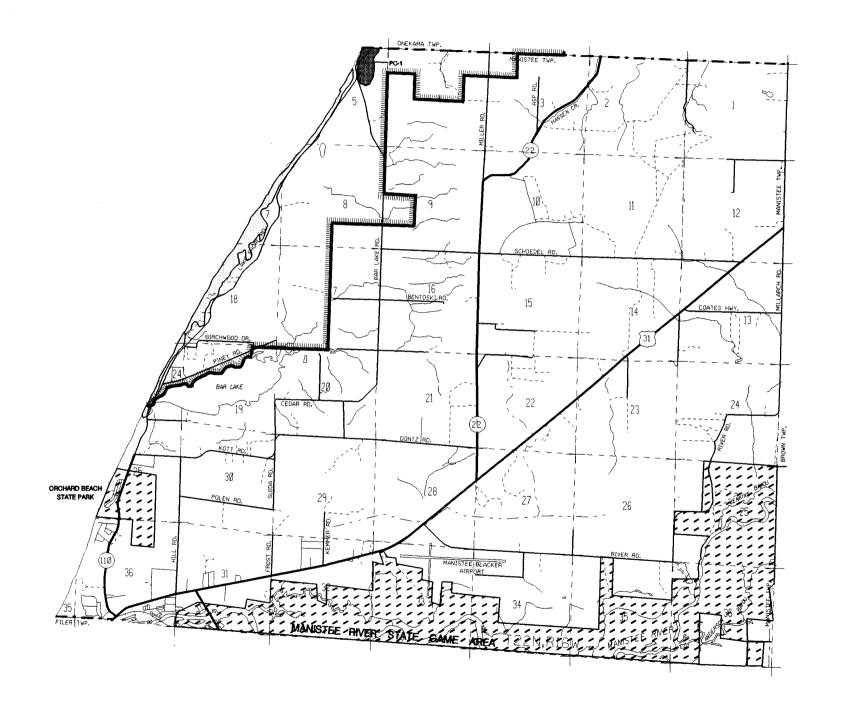
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MINIGAN RESOURCE INFORMATION SYSTEM
REAL ESTATE CONSIGN
DEPARTMENT OF NATURAL RESOURCES

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DEPARTMENT OF ENVIRONMENTAL SUBLETY





# MANISTEE COUNTY **NORTHERN** MANISTEE TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES.
TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS DF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SANO DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



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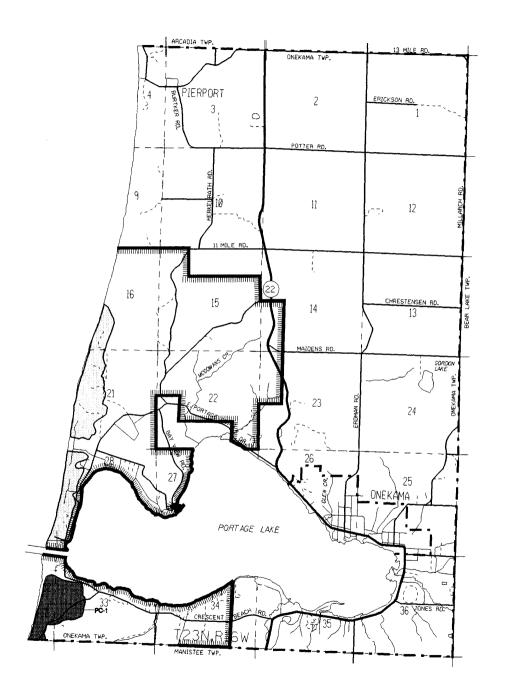
EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE

SOURCE

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# MANISTEE COUNTY ONEKAMA TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
OESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
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AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS 1 THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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

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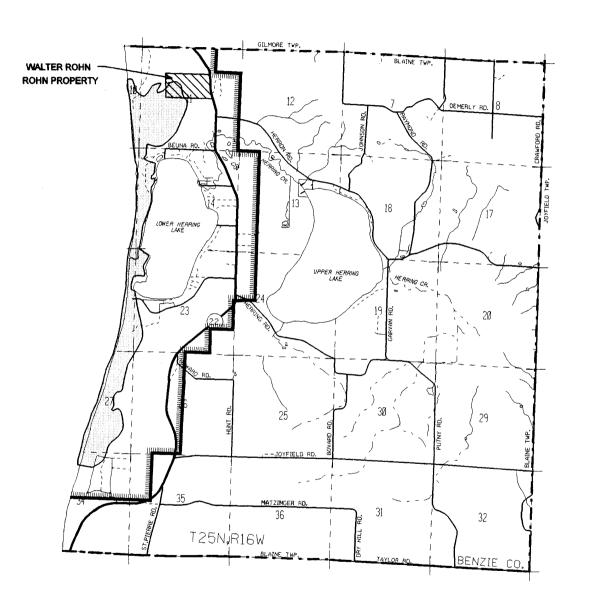


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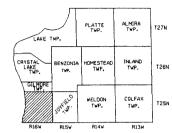
GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY

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# BENZIE COUNTY **BLAINE TOWNSHIP** DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS DF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND ENHIBIT SEVERAL DUNE-LIKE



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

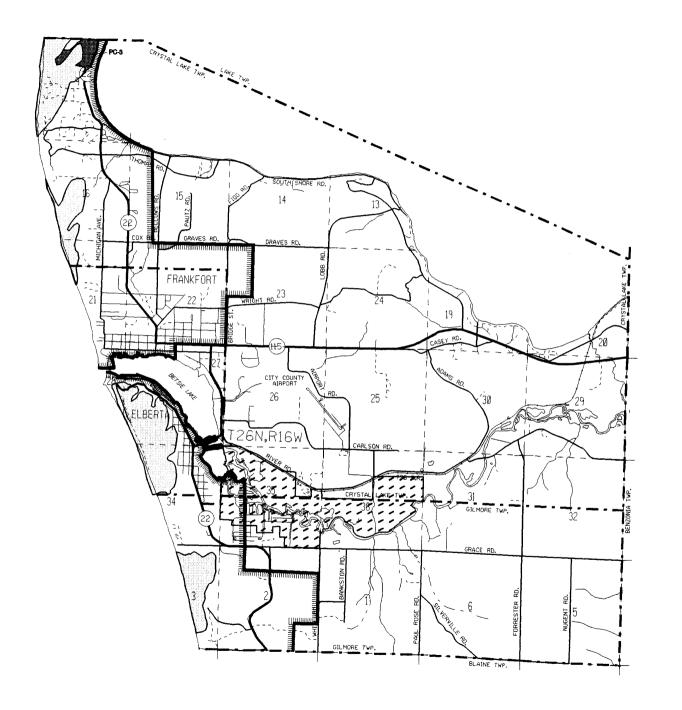
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REAL ESTATE DIVISION
DEPARTMENT OF HATURAL, RESOURCES



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DEPARTMENT OF ENVIRONMENTAL QUALITY





# BENZIE COUNTY CRYSTAL LAKE TOWNSHIP GILMORE TOWNSHIP

DESIGNATED SAND DUNE AREAS

LAKE	TWP.	PLATTE TWP.	ALMIRA TWP.	T27N
	BENZONIA TUP.	HOMESTEAD TWP.	INLAND TWP.	T26N
BLAINE TWP.	104. 10°.	WELDON TWP.	COLFAX TWP.	T25N
R16W	R15W	R14W	R13W	-

LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS 7 THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS,



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

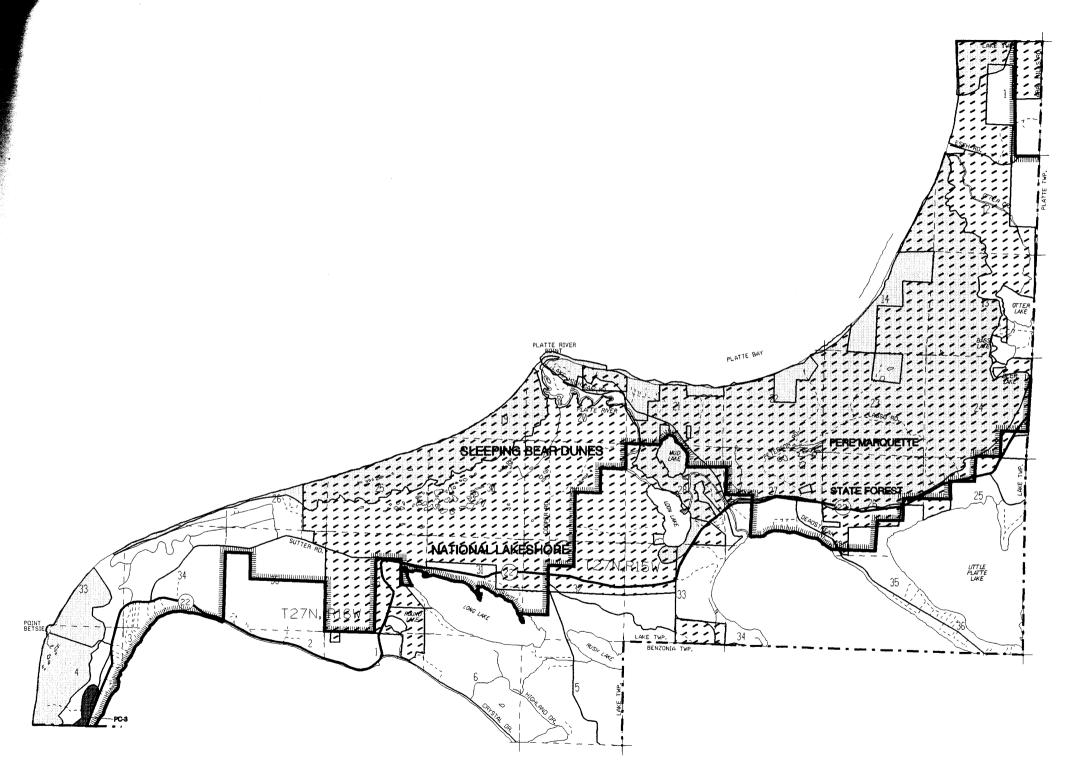
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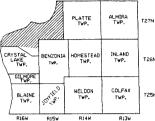


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## BENZIE COUNTY LAKE TOWNSHIP DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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

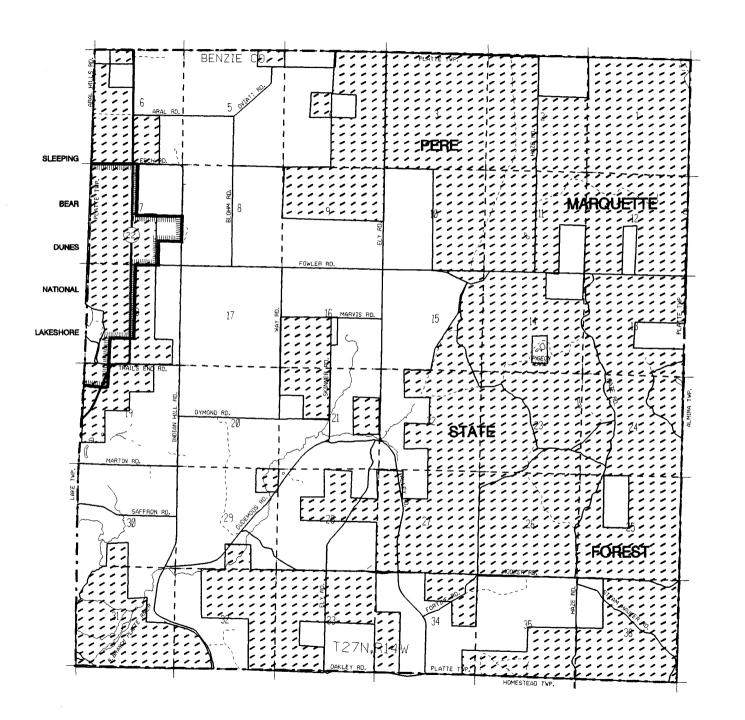
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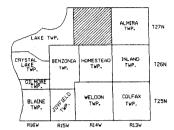


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## BENZIE COUNTY PLATTE TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987,



FEDERAL, STATE, AND LOCALLY

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451. AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS ARKEAS NOT INCLUDED AS 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

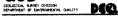
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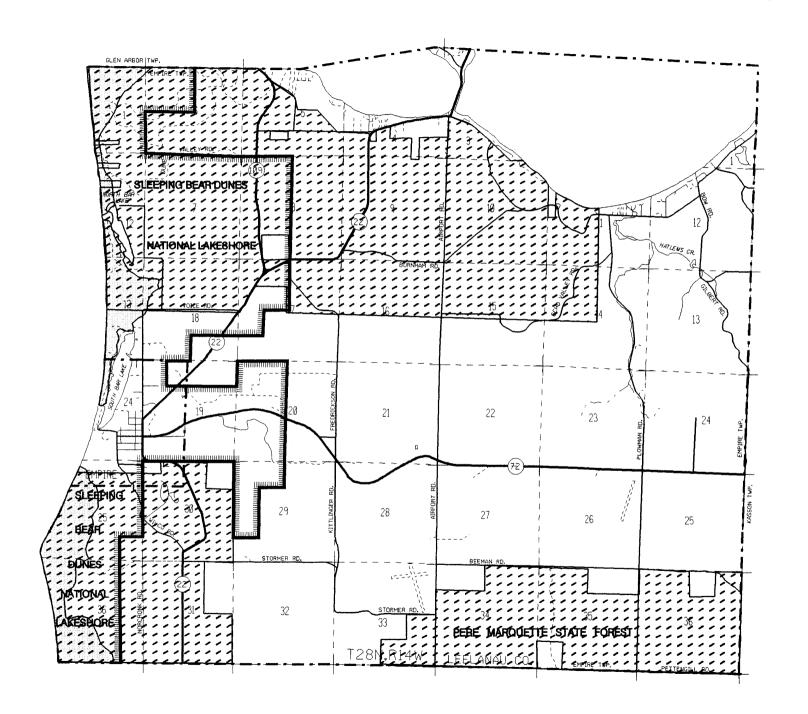
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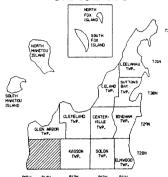






## LEELANAU COUNTY **EMPIRE TOWNSHIP**

DESIGNATED SAND DUNE AREAS



LEGEND

 BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS AMENDED



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



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

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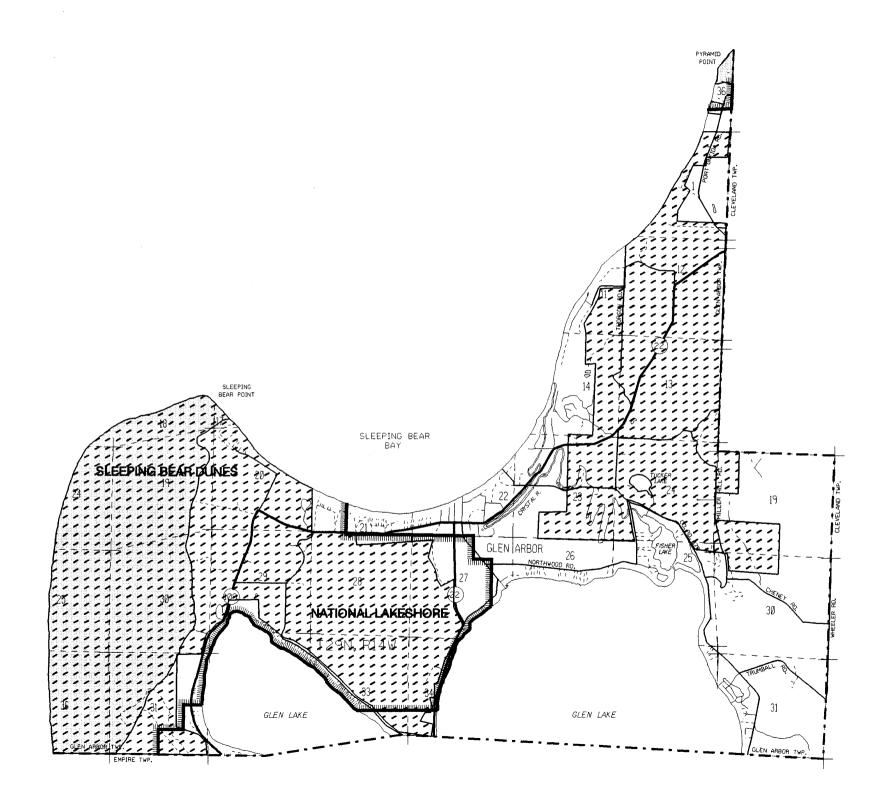
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DEPARTMENT OF ENVIRONMENTAL QUALITY

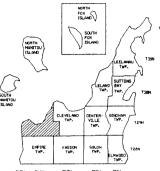






## LEELANAU COUNTY GLEN ARBOR TOWNSHIP

DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

SOURCE



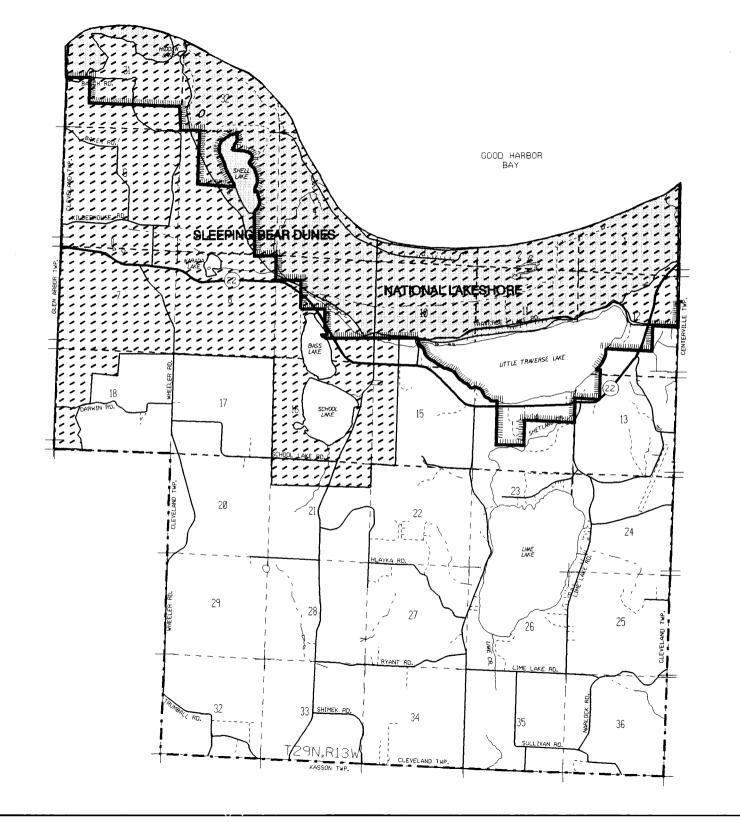
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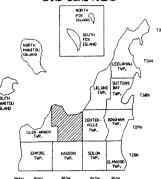






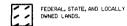
## LEELANAU COUNTY CLEVELAND TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES
CURRENT AS OF 1987.



OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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PC-00

EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE

PC-00

PC-00

EXEMPLARY DUNE FORMATIONS.

MICHIGAN NATURAL FEATURES

INVENTORY REFERENCE CODE

INDICATED.

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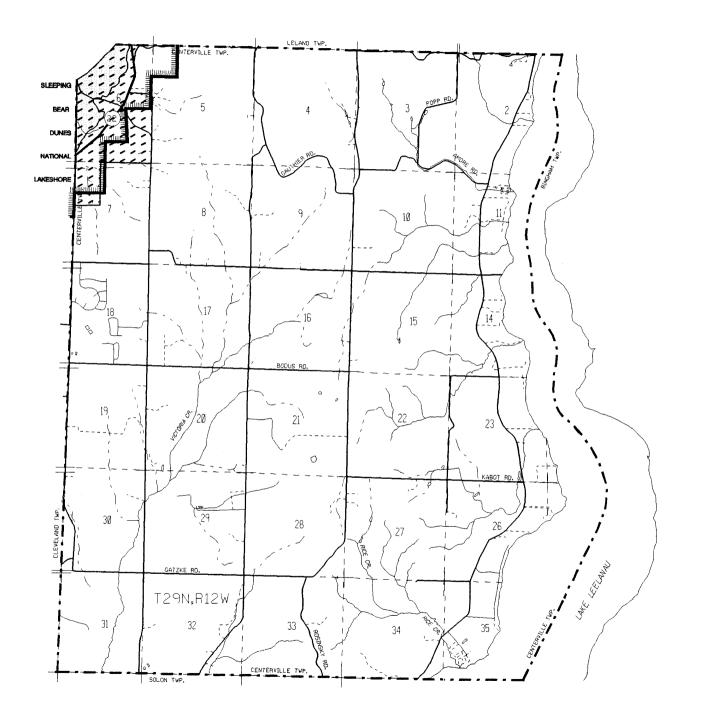
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DEPARTMENT OF ENVIRONMENTAL QUALITY





## LEELANAU COUNTY CENTERVILLE TOWNSHIP

DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL. STATE, AND LOCALLY OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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

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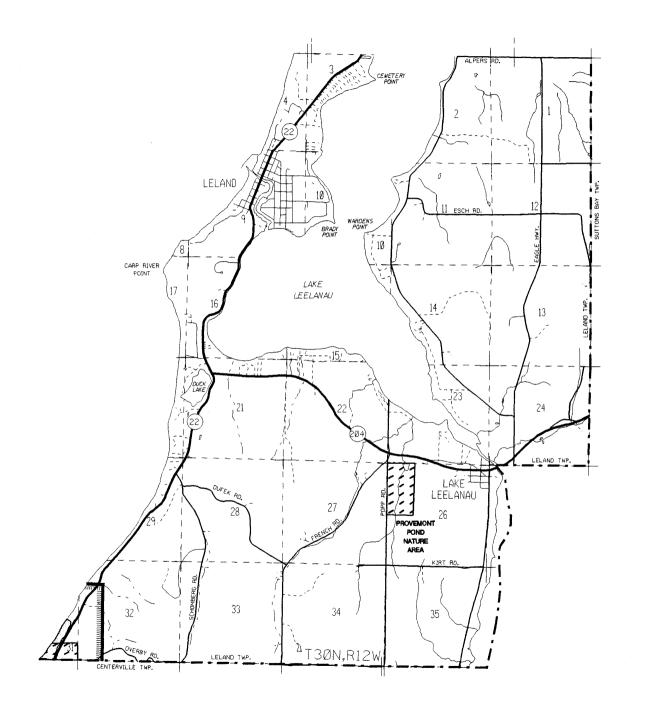
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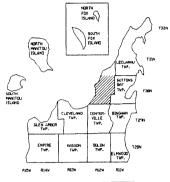






## LEELANAU COUNTY SOUTHERN LELAND TOWNSHIP

## designated Sand Dune Areas



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

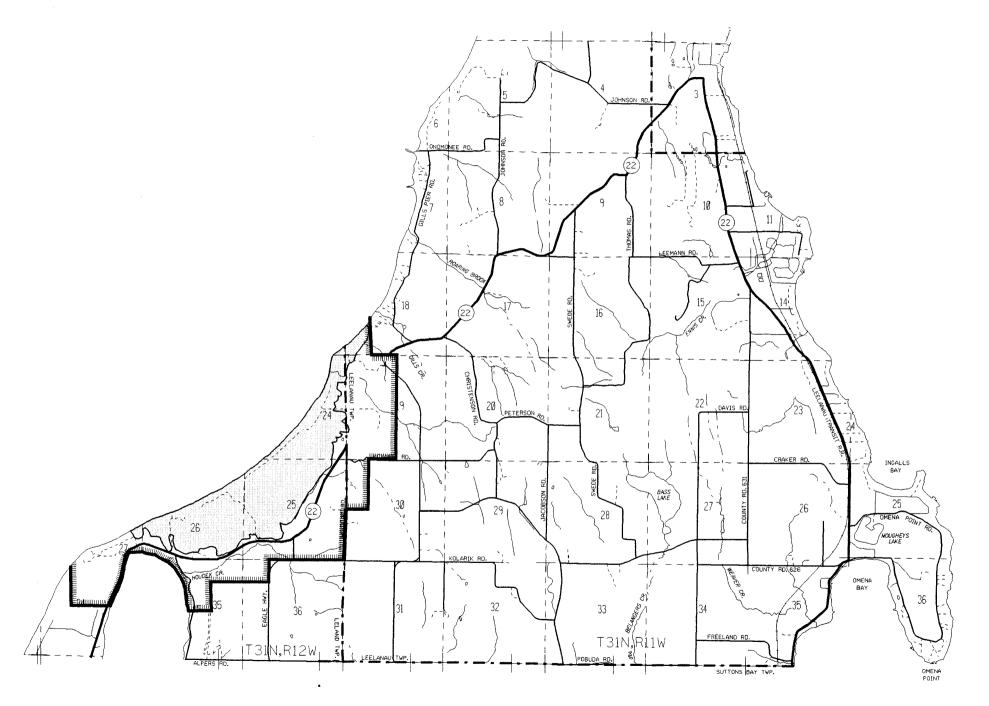
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#### LEELANAU COUNTY

## SOUTHERN LEELANAU TOWNSHIP

## NORTHERN LELAND TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. PC-00 DUNE FORMATIONS.
MICHIGAN NATURAL FEATURES
INVENTORY REFERENCE CODE
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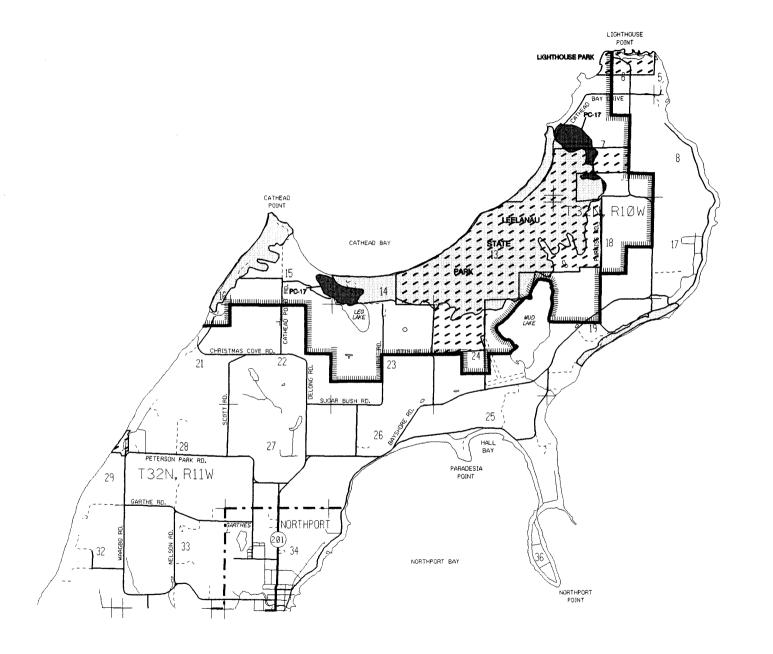
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## LEELANAU COUNTY NORTHERN LEELANAU TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

 BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL STATE AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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

SOURCE



MICHIDAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES

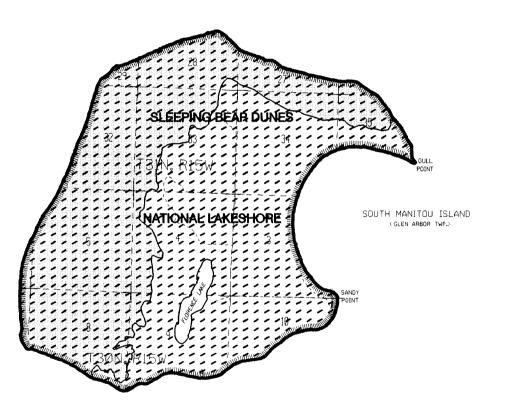


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### LEELANAU COUNTY GLEN ARBOR TOWNSHIP

DESIGNATED SAND DUNE AREAS



BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MENING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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

SOURCE

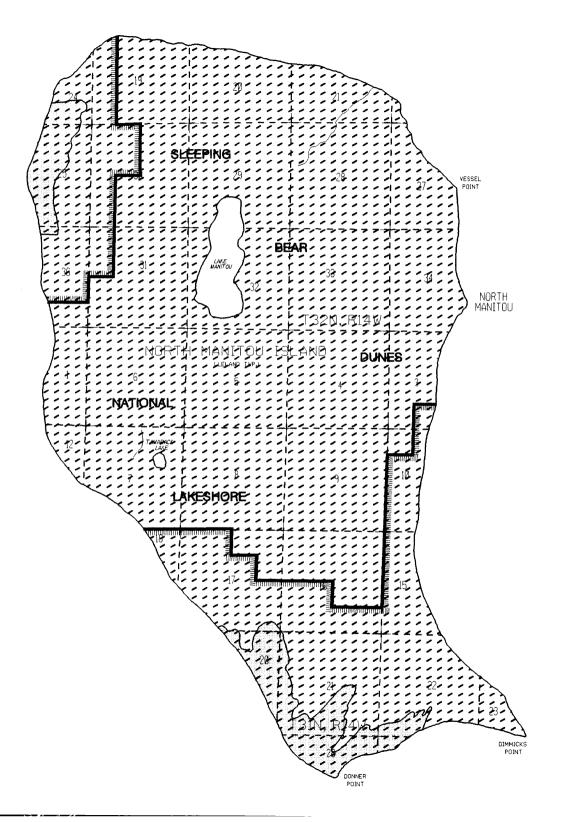
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## LEELANAU COUNTY LELAND TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353,1994 PA 451, AS
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AREAS NOT INCLUDED AS 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.

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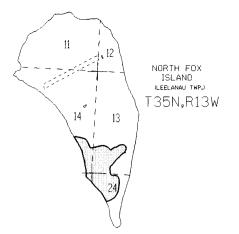
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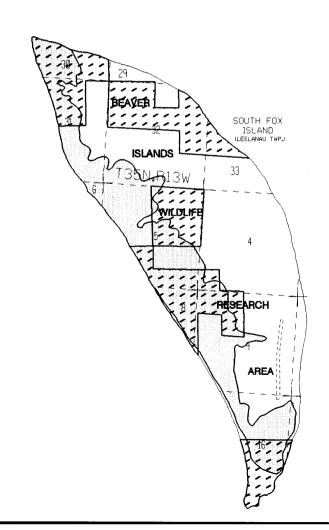












## LEELANAU COUNTY LEELANAU TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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

SOURCE



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REAL ESTATE DIVISION
DEPARTMENT OF NATURAL RESOURCES

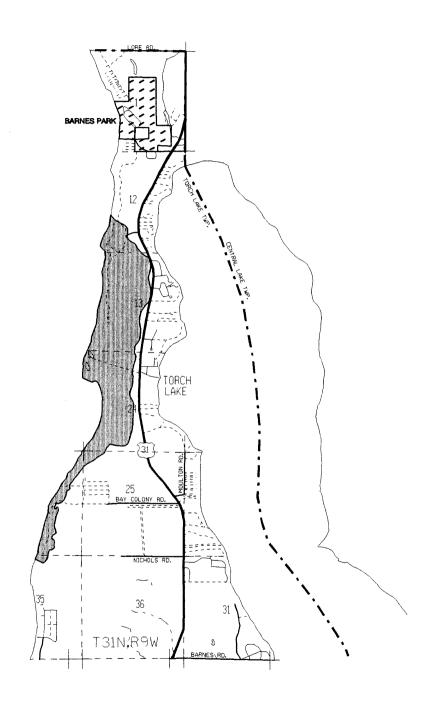


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## ANTRIM COUNTY NORTHERN TORCH LAKE TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
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AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DISIONE DOING FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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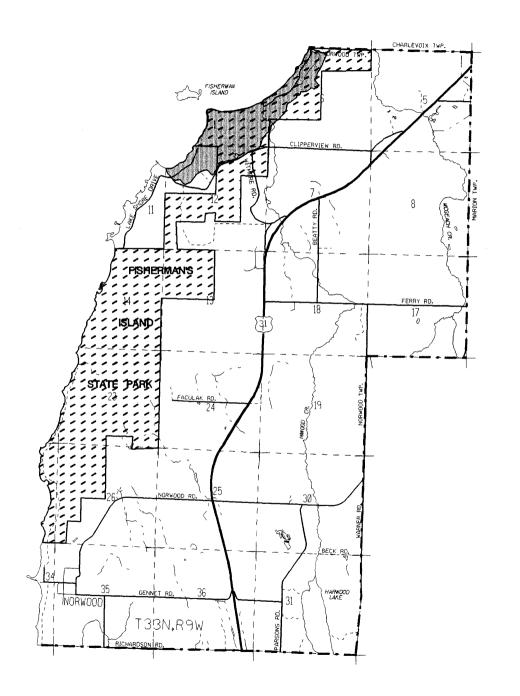


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GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY







## CHARLEVOIX COUNTY NORWOOD TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS HART ARE COMPOSED PRIMARILY DE DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS.

MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE

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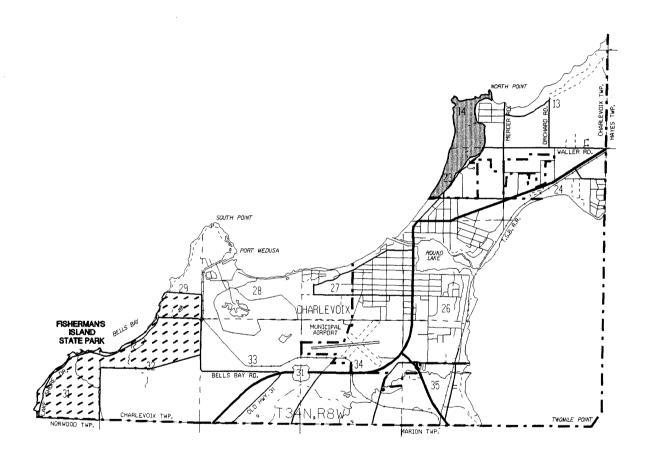
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REAL ESTATE DIVISION
DEPARTMENT OF NATURAL RESOURCES



GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY







## CHARLEVOIX COUNTY CHARLEVOIX TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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

SOURCE

MICHIGAN RESOURCE DIFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES

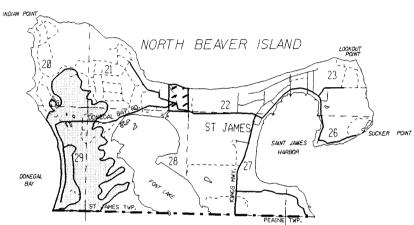


GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL GUALITY





HIGH ISLAND



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## CHARLEVOIX COUNTY ST. JAMES TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS DF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE
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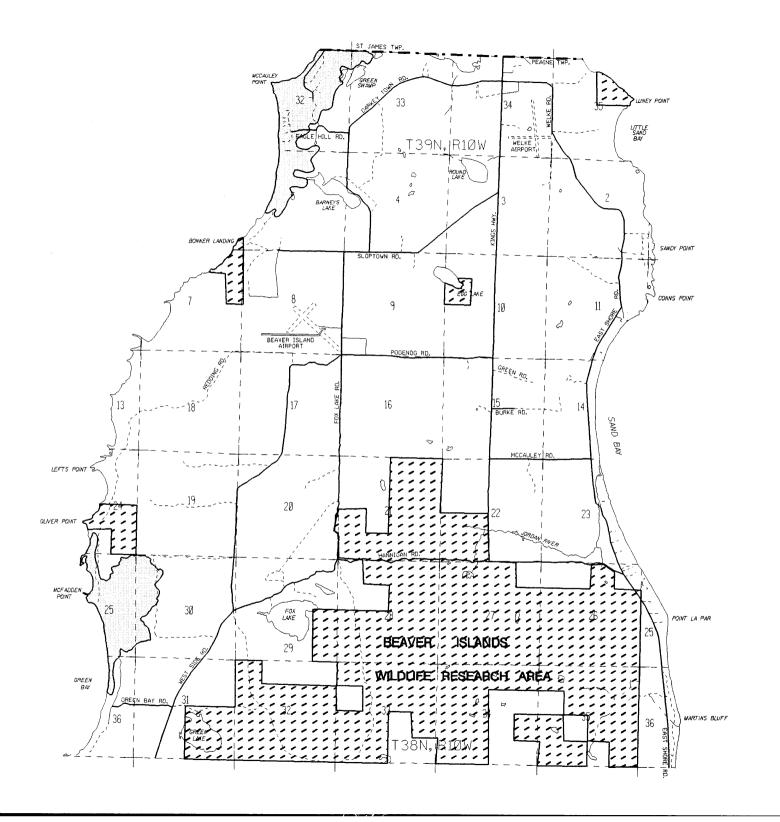
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MICHIGAN RESOURCE DIFFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



GSD





#### CHARLEVOIX COUNTY NORTHERN PEAINE TOWNSHIP

DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS. AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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



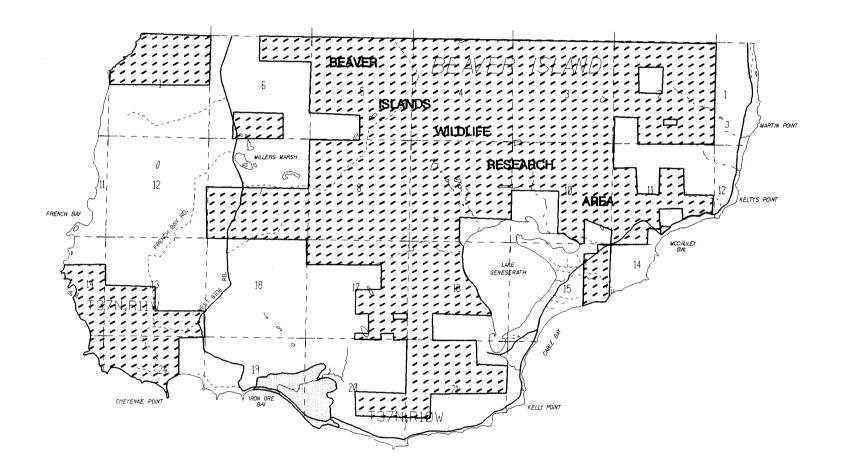
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GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY







### CHARLEVOIX COUNTY SOUTHERN PEAINE TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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
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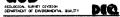
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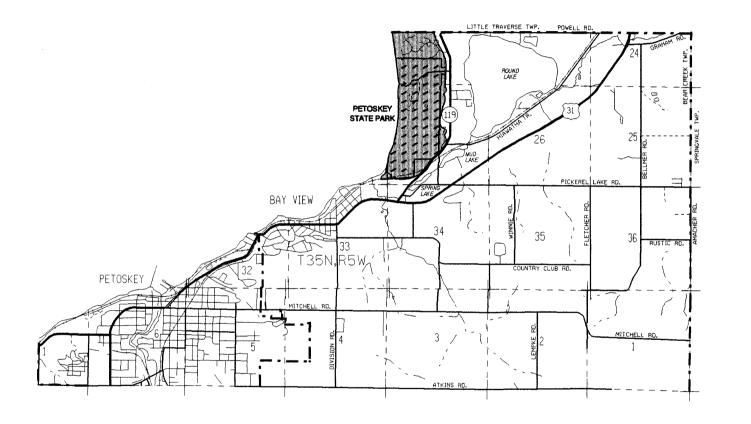
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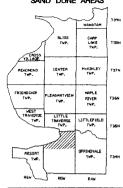
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## **EMMET COUNTY NORTHERN** BEAR CREEK TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



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



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EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE

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EXEMPLARY DUNE FORMATIONS, MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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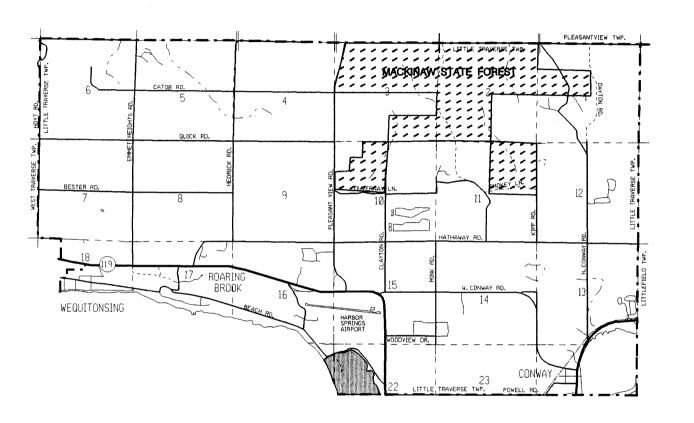
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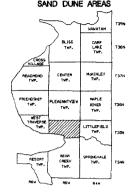
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## **EMMET COUNTY** LITTLE TRAVERSE TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMITTED SAND DUNE
MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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



PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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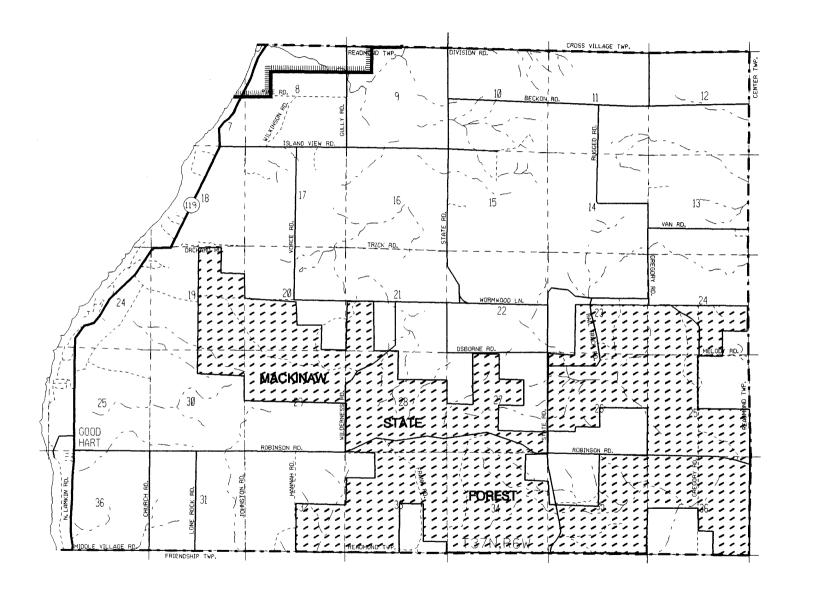
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GSD DEPARTMENT OF ENVIRONMENTAL QUALITY







#### **EMMET COUNTY** READMOND TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353,1994 PA 451,AS AMENDED



AREAS NOT INCLUDED AS 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.

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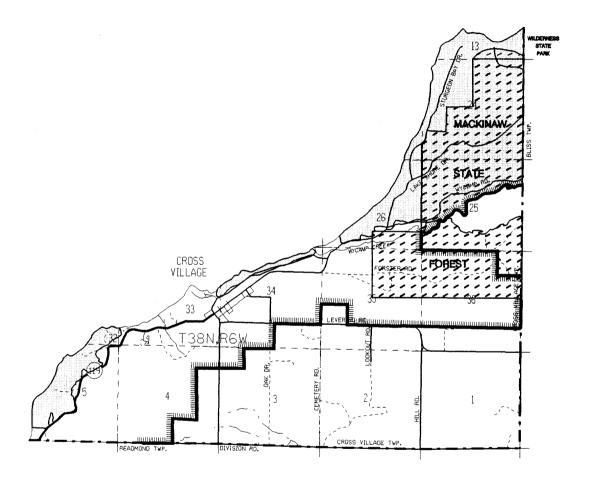
MICHIGAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



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DEPARTMENT OF ENVIRONMENTAL CHALITY







# EMMET COUNTY CROSS VILLAGE TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL. STATE. AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



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



EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS, MICHIGAN NATURAL FEATURES INVENTOR REFERENCE CODE INDICATED.

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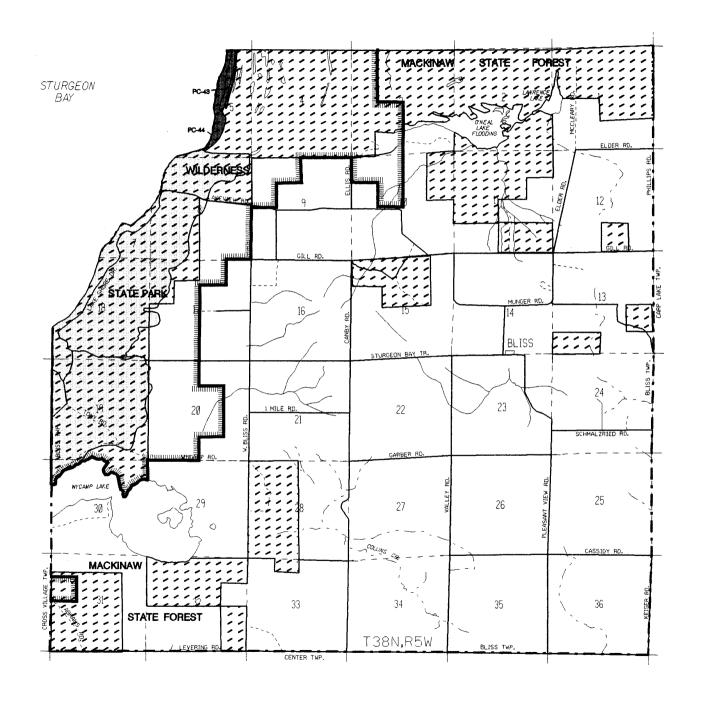


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#### **EMMET COUNTY** SOUTHERN BLISS TOWNSHIP

#### DESIGNATED SAND DUNE AREAS



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BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637. 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



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



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DESIGNATED DUNE FORMATIONS.
MICHIGAN NATURAL FEATURES
INVENTORY REFERENCE CODE
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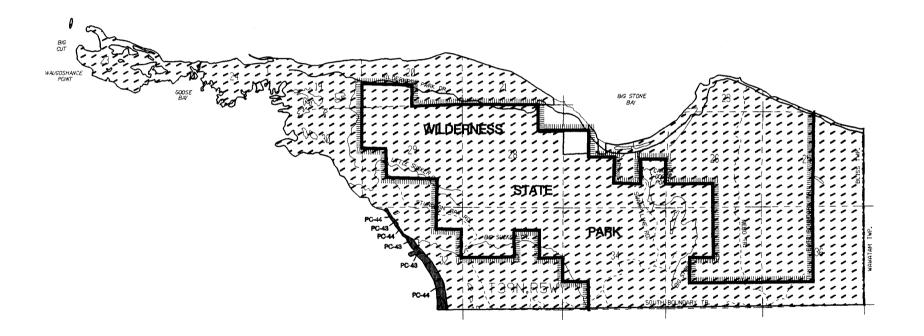
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## **EMMET COUNTY** NORTHERN BLISS TOWNSHIP

## DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



## CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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



PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE SIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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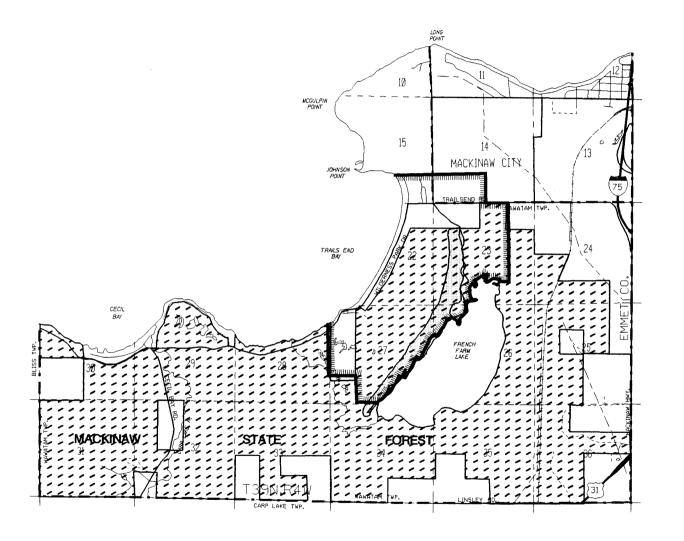


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GEOLOGICAL SURVEY DIVISION
DEPORTMENT OF ENTRINMENTAL QUALITY







## EMMET COUNTY WAWATAM TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

 BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL. STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353,1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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.

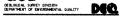
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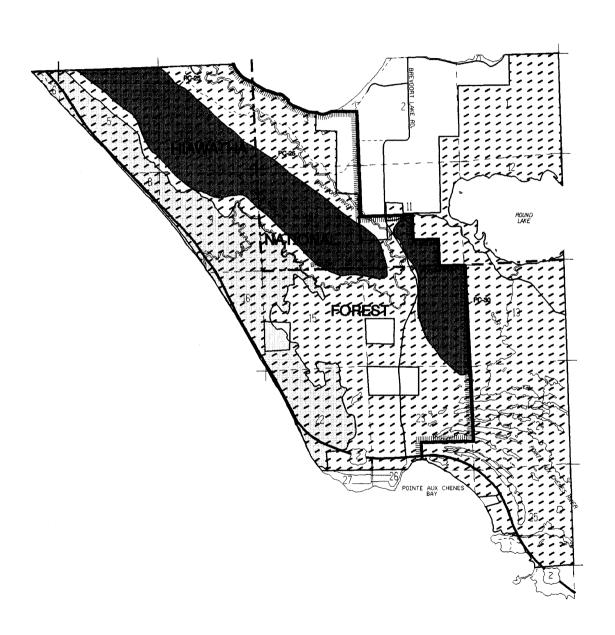


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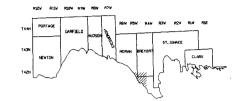
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#### MACKINAC COUNTY SOUTHWESTERN BREVORT TOWNSHIP SOUTHERN MORAN TOWNSHIP

DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS 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.

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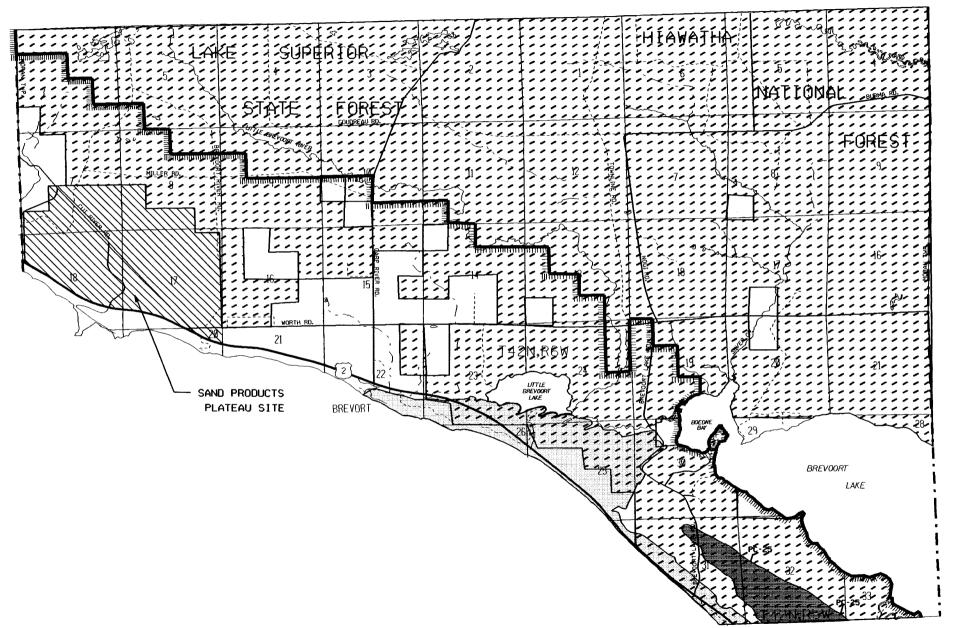
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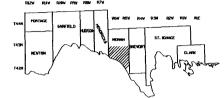
GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENGROWENTAL QUALITY







## MACKINAC COUNTY WESTERN MORAN TOWNSHIP DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMETTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS



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



EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORWATIONS. MICHIGAN MATURAL FEATURES INVENTORY REFERENCE CODE DIDICATED.

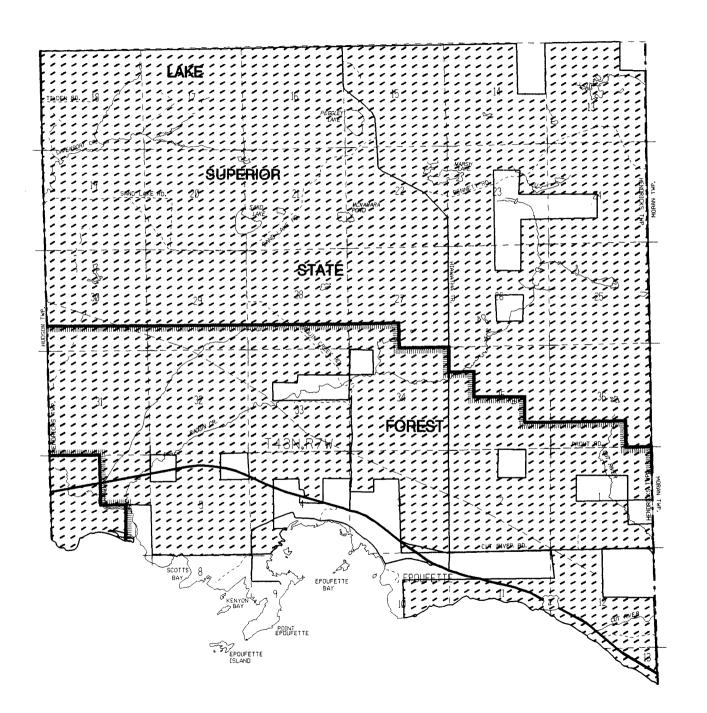
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## MACKINAC COUNTY SOUTHERN HENDRICKS TOWNSHIP DESIGNATED SAND DUNE AREAS

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BOUNDARIES OF COUNTIES. TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS 1 THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHIBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS, MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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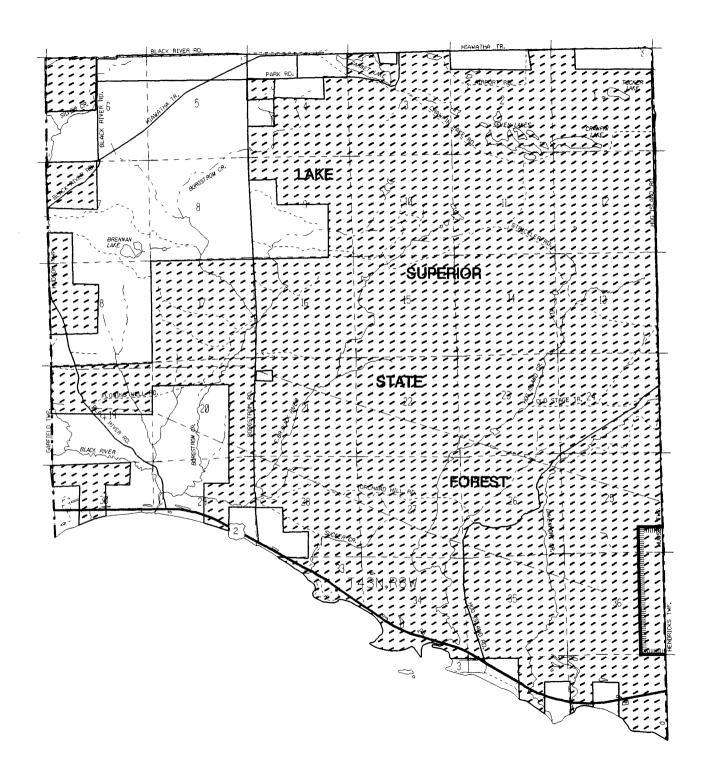


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## MACKINAC COUNTY SOUTHERN HUDSON TOWNSHIP Designated Sand Dune Areas



#### LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED





BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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

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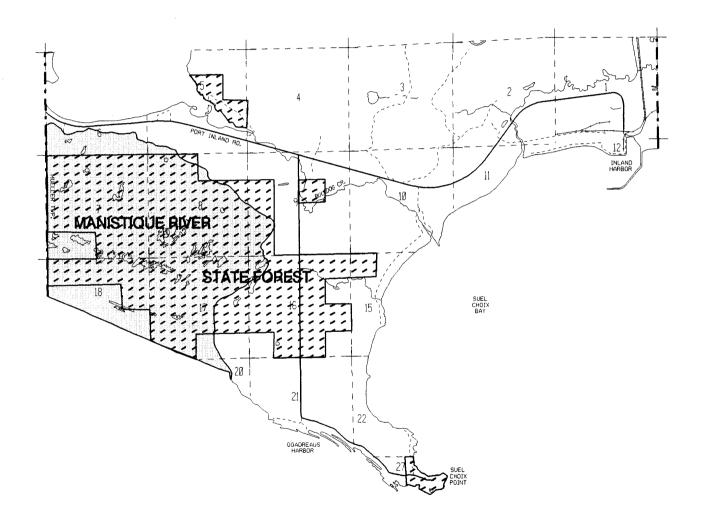


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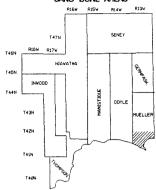






### SCHOOLCRAFT COUNTY SOUTHERN MUELLER TOWNSHIP

DESIGNATED SAND DUNE AREAS



BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED

PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NOT INCLUDED AS
BARRIER DUME FORMATION
THAT ARE COMPOSED PRIMARILY
OF DUME SAND AND EXHIBIT
SEVERAL DUME-LIKE
CHARACTERISTICS.



PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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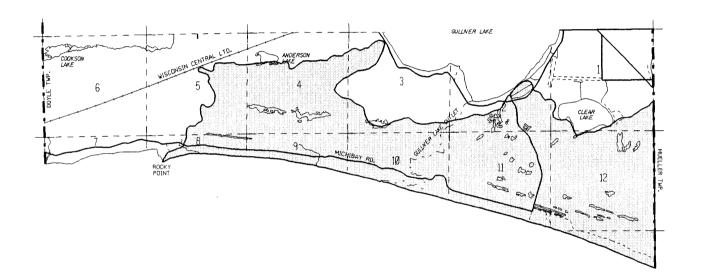


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DEPORTMENT OF ENVIRONMENTAL QUALITY

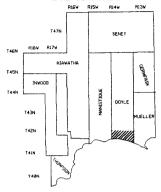






### SCHOOLCRAFT COUNTY SOUTHERN DOYLE TOWNSHIP

## DESIGNATED SAND DUNE AREAS



BOUNDARIES OF COUNTIES.
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS DF 1987.



LEGEND

FEDERAL, STATE, AND LOCALLY DWNED LANDS.

#### DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451. AS AMENDED



#### CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS
AMENDED



AREAS NDT INCLUDED AS
BARRIER DUNE FORMATIONS
THAT ARE COMPOSED PRIMARILY
OF DUNE SAMD AND EXHIBIT
SEVERAL DUNE-LIKE
CHARACTERISTICS.



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

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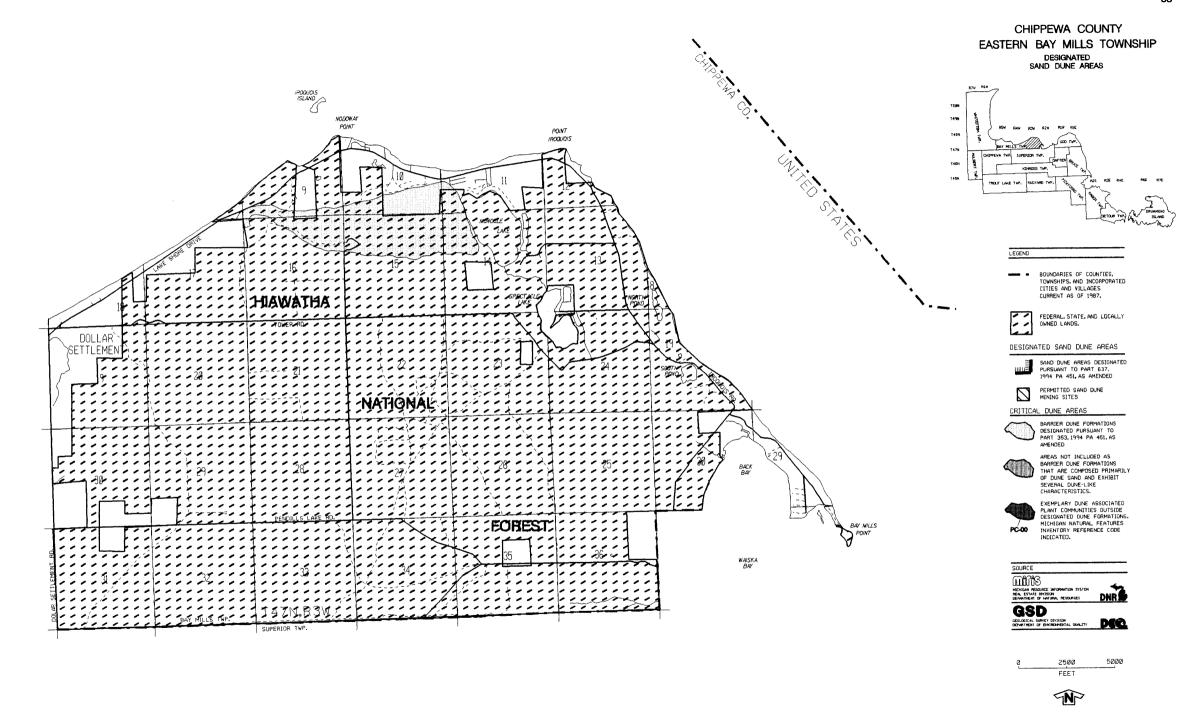
MICHIGAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES

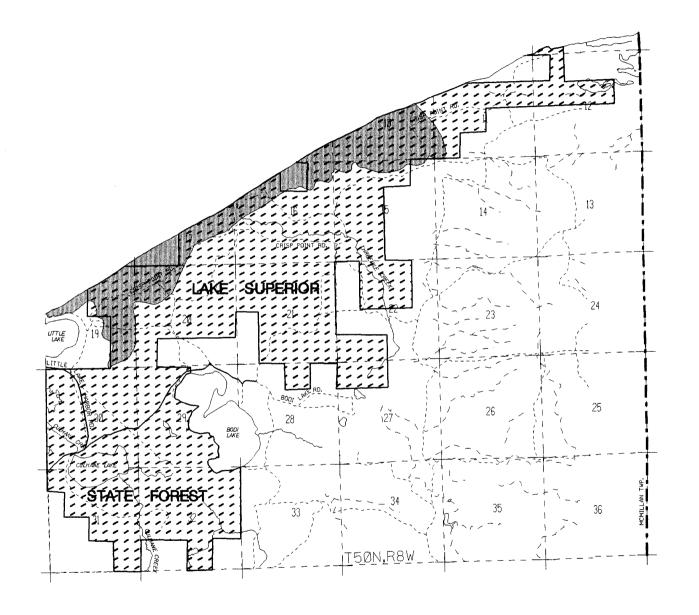


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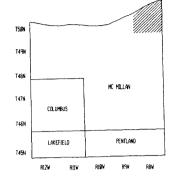






## LUCE COUNTY T50N, R8W MCMILLAN TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1967.



FEDERAL, STATE, AND LOCALLY DWNED LANGS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS



AREAS NOT INCLUDED AS BARRIER DUNE FORMATIONS THAT ARE COMPOSED PRIMARILY OF DUNE SAND AND EXHBIT SEVERAL DUNE-LIKE CHARACTERISTICS.



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

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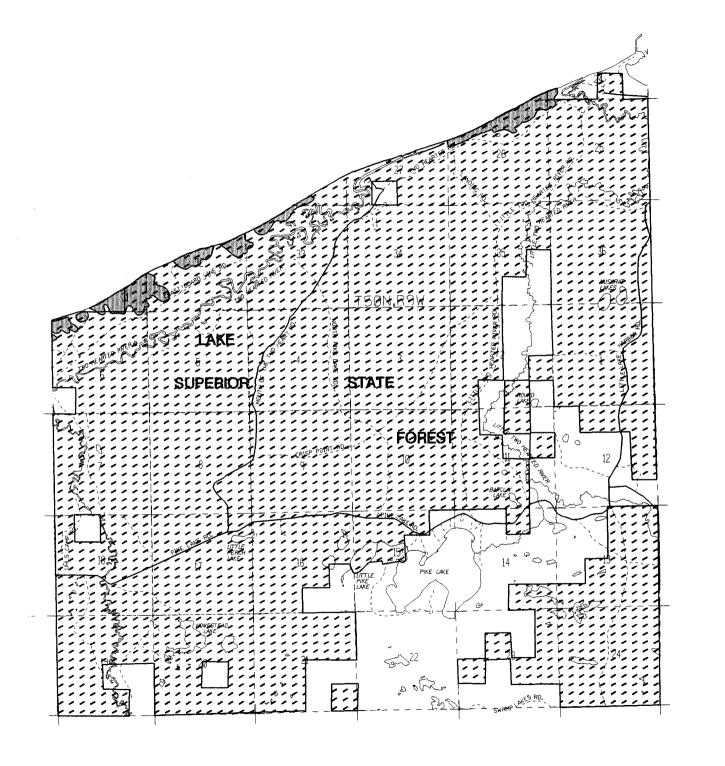
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DEPARTMENT OF HATURAL RESOURCES



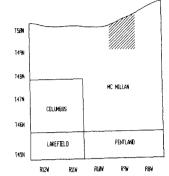
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## LUCE COUNTY T49-50N, R9W MCMILLAN TOWNSHIP DESIGNATED SAND DUNE AREAS



BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.

FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED

PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS

BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED

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



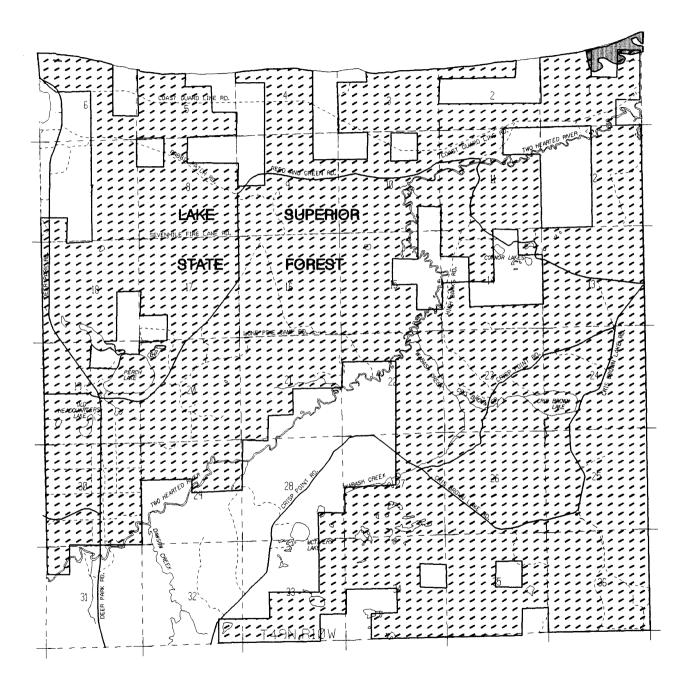
EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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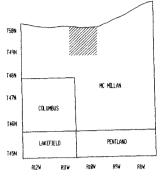
GEOLOGICAL SLAWEY DIVISION
DEPORTMENT OF ENVIRONMENTAL QUALITY





## LUCE COUNTY T49N, R10W MCMILLAN TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES,
 TOWNSHIPS, AND INCORPORATED
 CITIES AND VILLAGES
 CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353,1994 PA 451, AS AMENDED



AREAS NOT INCLUDED AS 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
INDICATEO.

SOURCE

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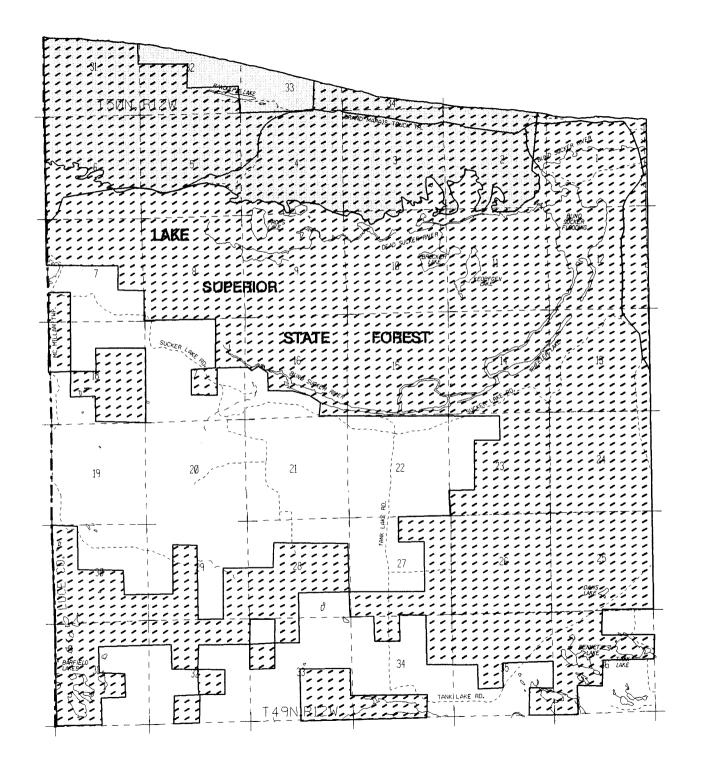
MICHISAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION ORPARTMENT OF NATURAL RESOURCES



CECLOSICAL SURVEY STYLISION
DEPARTMENT OF ENVIRONMENTAL QUALITY







## LUCE COUNTY T49-50N, R12W MCMILLAN TOWNSHIP DESIGNATED SAND DUNE AREAS

MC MELLAN T47N COLUMBUS T46N PENTLAND LAKEFIELD

LEGEND

BOUNDARIES OF COUNTIES,
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.

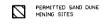


FEDERAL, STATE, AND LOCALLY

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



CRITICAL DUNE AREAS



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

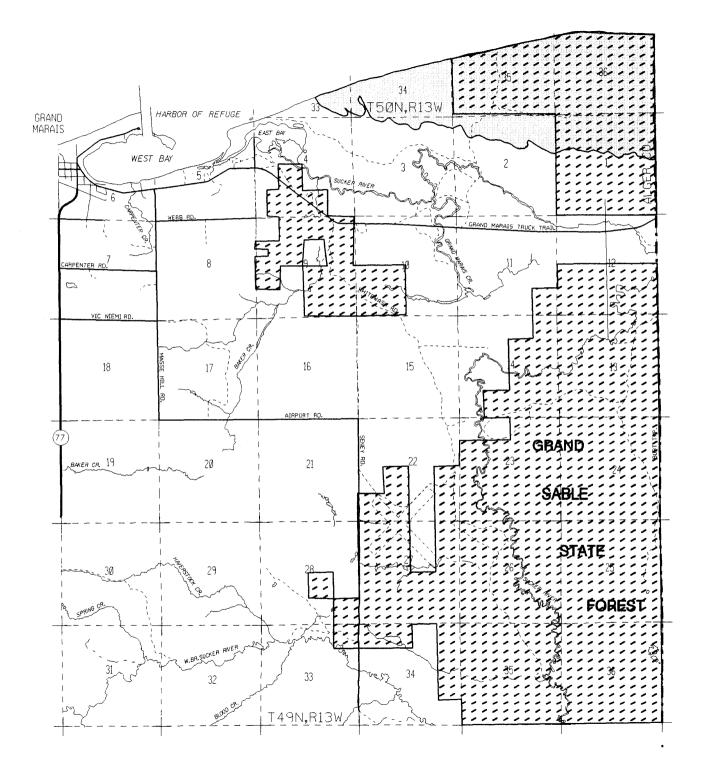
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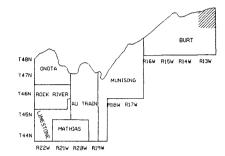


GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF EMPROMENTAL QUALITY





## ALGER COUNTY T49-50N, R13W **BURT TOWNSHIP** DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES





BARRIER DUNE FORMATIONS DESIGNATED PURSUANT TO PART 353, 1994 PA 451, AS AMENDED



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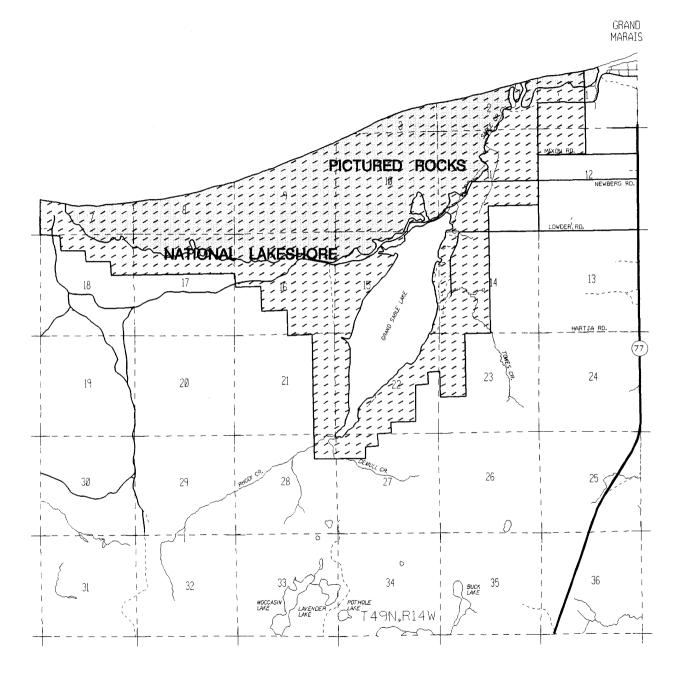
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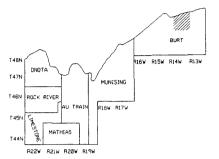








## ALGER COUNTY T49N, R14W **BURT TOWNSHIP** DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



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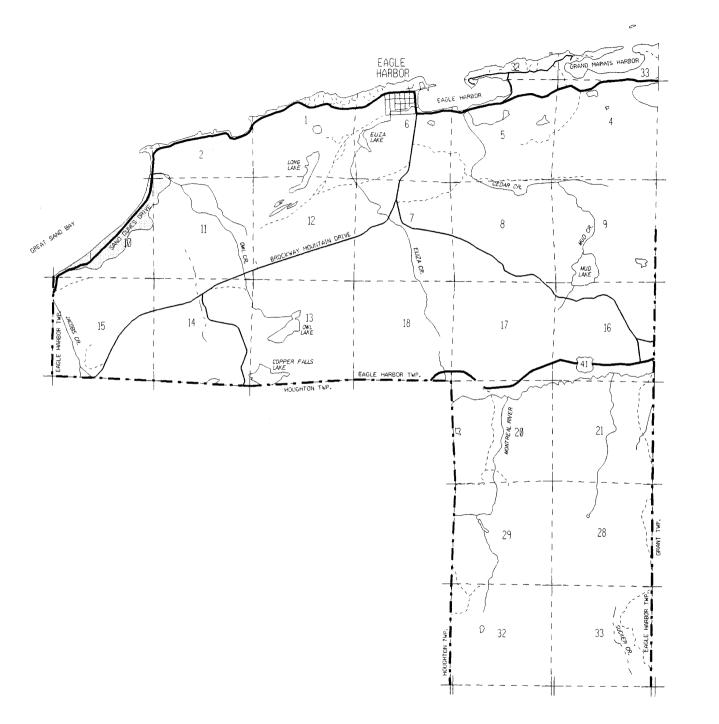
MICHIGAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



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DEPARTMENT OF ENVIRONMENTAL BURLITY

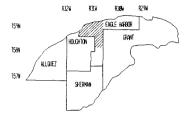






## KEWEENAW COUNTY EAGLE HARBOR TOWNSHIP

DESIGNATED SAND DUNE AREAS



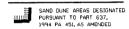
LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



BARRIER DUNE FORMATIONS
DESIGNATED PURSUANT TO
PART 353, 1994 PA 451, AS AMENDED



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PC-00

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

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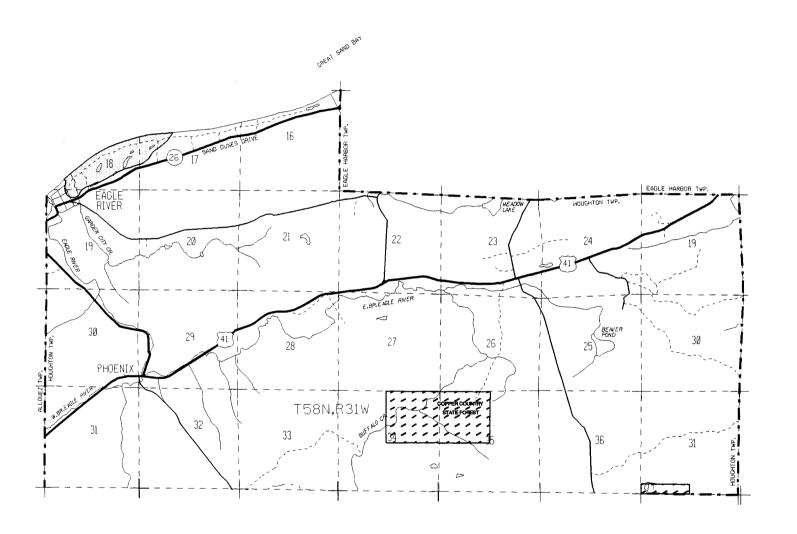
MICHIGAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF NATURAL RESOURCES



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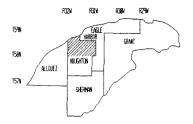






### KEWEENAW COUNTY HOUGHTON TOWNSHIP

DESIGNATED SAND DUNE AREAS



LEGEND

BOUNDARIES OF COUNTIES, TOWNSHIPS, AND INCORPORATED CITIES AND VILLAGES CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY OWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637, 1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

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BARRIER DUNE FORMATIONS
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PART 353, 1994 PA 451, A5
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PC-00 EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES DUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

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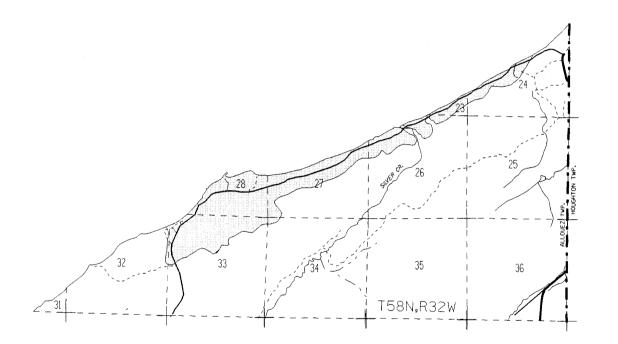
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GSD GEOLOGICAL SURVEY DIVISION
DEPARTMENT OF ENVIRONMENTAL CLIALITY







### KEWEENAW COUNTY ALLOUEZ TOWNSHIP

DESIGNATED SAND DUNE AREAS



#### LEGEND

BOUNDARIES OF COUNTIES.
TOWNSHIPS, AND INCORPORATED
CITIES AND VILLAGES
CURRENT AS OF 1987.



FEDERAL, STATE, AND LOCALLY DWNED LANDS.

DESIGNATED SAND DUNE AREAS



SAND DUNE AREAS DESIGNATED PURSUANT TO PART 637.
1994 PA 451, AS AMENDED



PERMITTED SAND DUNE MINING SITES

CRITICAL DUNE AREAS



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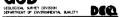
EXEMPLARY DUNE ASSOCIATED PLANT COMMUNITIES OUTSIDE DESIGNATED DUNE FORMATIONS. MICHIGAN NATURAL FEATURES INVENTORY REFERENCE CODE INDICATED.

SOURCE

HIGHIGAN RESOURCE INFORMATION SYSTEM REAL ESTATE DIVISION DEPARTMENT OF HATURAL RESOURCES



GSD







## **ERRATA**

Pg. 18 - listed as Ottawa County, should be Muskegon County

Please note on the page listed as *INDEX TO SAND DUNE MINING SITES* the following three sites are closed:

- 1. Garage Site
- 2. Bridgman North Site
- 3. Rose Pit Site
- 4. Bridgman South Site

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