

STATE OF MICHIGAN
Rick Snyder, GOVERNOR

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Dan Wyant, DIRECTOR

Michigan's Sand Dune Mining Regulations

Natural Resources and Environmental Protection Act
Act No. 451 of the Public Acts of 1994, as amended

Part 637



Michigan Department of Environmental Quality
Office of Oil, Gas, and Minerals
P.O. Box 30256
Lansing, Michigan 48909

Office of Oil, Gas, and Minerals, telephone number 1-517-241 1515
Environmental Assistance Center, telephone number 1-800-662-9278

Copyright ©1996-2013, Michigan Department of Environmental Quality,
Office of Oil, Gas, and Minerals.

All rights reserved. Any unauthorized reproduction, sale, or other commercial use is prohibited.

Table of Contents

Part 637 - Sand Dune Mining	4
324.63701 Definitions.....	4
324.63702 Sand dune mining permit within critical dune area; "adjacent" defined.	5
324.63703 Great Lakes sand dune areas; comprehensive study and inventory.	5
324.63704 Sand dune mining; permit; requirements.	5
324.63705 Environmental impact statement.	5
324.63706 Progressive cell-unit mining and reclamation plan; sand dune mining permit; requirements.	6
324.63707 Fifteen-year mining plan; submission of duplicate copy of cell-unit mining and reclamation plan.	7
324.63708 Sand dune mining permit; duration; renewal; contents; reasons for permitting removal of barrier dune; approval or denial; list of pending applications.	7
324.63709 Denial of sand dune mining permit.	7
324.63710 Extraction of sand or other minerals by state.	8
324.63711 Assessment of fee for surveillance, monitoring, administration, and enforcement of part; disposition of unexpended fees; annual report of operator; confidentiality; failure to submit annual report; penalty for unpaid fee; records; annual report of department.	8
324.63712 Conformance bond; reclassification of active cell-unit to interim cell-unit; notice of completion or acceptance of reclamation activity; compliance or approval required for mining or extraction; violation as ground for revocation of permit.	8
324.63713 Rules	10
Sec. 63713. The department shall promulgate rules to implement and administer this part.	10
R 281.401 Lincoln--Lake--Chikaming sand dune area; Berrien County.	10
R 281.402 South Haven--Covert--Hagar sand dune area; Van Buren and Berrien counties.	10
R 281.403 Park--Laketown--Saugatuck sand dune area; Ottawa and Allegan counties.	11
R 281.404 Laketon--Fruitport--Spring Lake--Grand Haven sand dune area; Muskegon and Ottawa counties.	11
R 281.405 Golden--Benona--Claybanks sand dune area; Oceana County.	11
R 281.406 Grant--Hamlin--Pere Marquette sand dune area; Mason County.	11
R 281.407 Hendricks--Moran sand dune area; Mackinac County.	12
R 281.408 Grand Haven--Port Sheldon--Park sand dune area; Ottawa County.	12
R 281.409 Pentwater--Summit sand dune area; Oceana and Mason counties.	12
R 281.410 Onekama--Manistee sand dune area; Manistee County.	12
R 281.411 Sleeping Bear Dunes sand dune area; Benzie and Leelanau counties.	13
R 281.412 Leelanau--Leland sand dune area; Leelanau County.	13
R 281.413 Wawatam--Bliss--Cross Village--Readmond sand dune area; Emmet County.	14

Part 637 - Sand Dune Mining

324.63701 Definitions.

Sec. 63701. As used in this part:

- (a) "Active cell-unit" means a cell-unit set forth in the approved progressive cell-unit mining and reclamation plan provided for in section 63706(1), in which vegetation and topsoil have been removed in preparation for sand dune mining or sand removal has been initiated after the date of issuance of the sand dune mining permit. Vegetation removal does not preclude the removal of marketable forest products from a cell-unit, if the removal maintains the ground cover and topsoil within the cell-unit in stable condition.
- (b) "Administratively complete" means an application for a sand dune mining permit that is determined by the department to satisfy all of the conditions of this part and rules promulgated under this part.
- (c) "Barrier dune" means the first landward sand dune formation along the shoreline of a Great Lake or a sand dune formation designated by the department.
- (d) "Beneficiation" means to process sand for any of the following purposes, but does not include the drying process:
- (i) Regulating the grain size of the desired product.
 - (ii) Removing unwanted constituents.
 - (iii) Improving the quality and purity of the desired product.
- (e) "Cell-unit" means a subunit of the total sand dune mining project as determined in size and location by the operator. A cell-unit shall not exceed 10 acres in size for sand dune mining operations that commence operation after March 31, 1977 or for the expansion of sand dune mining operations that existed before March 31, 1977. A cell-unit shall not exceed 30 acres in size for operations that existed before March 31, 1977.
- (f) "Conformance bond" means a surety bond that is executed by a surety company authorized to do business in this state, cash, certificates of deposit, letters of credit, or other securities that are filed by an operator to ensure compliance with this part, rules promulgated under this part, or conditions of a sand dune mining permit.
- (g) "Environmental elements" means the biological, physical, and chemical characteristics of the environment, including but not limited to the following:
- (i) Watersheds. (ii) Water bodies. (iii) Forests.
 - (iv) Existing areas maintained for public recreation. (v) Shorelands.
 - (vi) Habitat areas.
- (h) "Great Lakes" means any of the Great Lakes that have a shoreline within this state.
- (i) "Interim cell-unit status" means a cell-unit as set forth in an approved progressive cell-unit mining and reclamation plan provided for in section 63706(1), in which all sand dune mining and reclamation within the cell-unit has been completed, but the vegetation has not sustained itself through 1 full growing season. A cell-unit placed in interim cell-unit status is required to retain the conformance bond provided in section 63712 until reclassification by the department as provided in section 63712(5). Each sand dune mining activity shall be limited to no more than 3 cell-units in interim cell-unit status at any 1 time.
- j) "Operator" means an owner or lessee of mineral rights or any other person engaged in or preparing to engage in sand dune mining activities with respect to mineral rights within a sand dune area.
- (k) "Sand dune area" means that area designated by the department that includes those geomorphic features composed primarily of sand, whether windblown or of other origin and that lies within 2 miles of the ordinary high-water mark on a Great Lake as defined in section 32502, and includes critical dune areas as defined in part 353.
- (l) "Sand dune mining" means the removal of sand from sand dune areas for commercial or industrial purposes, or both. The removal of sand from sand dune areas in volumes of less than 3,000 tons is not sand dune mining if the removal is a 1-time occurrence and the reason the sand is removed is not for the direct use for an industrial or commercial purpose. However, the removal of any volume of sand that is not sand dune mining within a critical dune area as defined in part 353 is subject to the critical dune protection provisions of part 353. The department may authorize in writing the removal of more than 3,000 tons of sand without a sand dune mining permit issued pursuant to section 63704 for a purpose related to protecting an occupied dwelling or other structure from property damage related to the migration of sand or the instability of sand. This removal may be for more than 1 occurrence, but a written authorization from the department is required for each removal.
- (m) "Water table" means the surface in an unconfined aquifer at which the pressure is atmospheric. The water table is found at the level at which water stands in wells that penetrate the aquifer.

324.63702 Sand dune mining permit within critical dune area; "adjacent" defined.

Sec. 63702. (1) Notwithstanding any other provision of this part, the department shall not issue a sand dune mining permit within a critical dune area as defined in part 353 after July 5, 1989, except under either of the following circumstances:

- (a) The operator seeks to renew or amend a sand dune mining permit that was issued prior to July 5, 1989, subject to the criteria and standards applicable to a renewal or amendatory application.
 - (b) The operator holds a sand dune mining permit issued pursuant to section 63704 and is seeking to amend the mining permit to include land that is adjacent to property the operator is permitted to mine, and prior to July 5, 1989 the operator owned the land or owned rights to mine dune sand in the land for which the operator seeks an amended permit.
- (2) As used in this section, "adjacent" means land that is contiguous with the land for which the operator holds a sand dune mining permit issued pursuant to section 63704, provided no land or space, including a highway or road right-of-way, exists between the property on which sand dune mining is authorized and the adjacent land.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63703 Great Lakes sand dune areas; comprehensive study and inventory.

Sec. 63703. The department, by July 1, 1977, shall make or cause to be made a comprehensive study and inventory of Great Lakes sand dune areas in the state. The study and inventory shall include all of the following:

- (a) An economic study of the current and projected sand dune mining practices in the state, showing where the sand is marketed, its uses, and the amount of sand reserves.
- (b) A geologic study of sand areas within this state, other than Great Lakes sand dune areas, that would contain sufficient reserves and have properties suitable for use as foundry core and molding sands or for other uses of sand.
- (c) Sand dune areas or portions of sand dune areas that, for environmental or other reasons, should be protected through purchase by the state or other persons or interests, or easements including the acquisition of mineral rights by the state, and a priority list of sand dune areas to be acquired by the department.
- (d) An identification and designation of barrier dunes along the shoreline, showing their effect on aesthetic, environmental, economic, industrial, and agricultural interests in this state.
- (e) Methods for recycling or reusing sand for industrial and commercial purposes, along with alternatives to the use of dune sand and its economic impact.
- (f) Recommendations for the protection and management of sand dune areas for uses other than sand mining.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63704 Sand dune mining; permit; requirements.

Sec. 63704. (1) After July 1, 1977, a person or operator shall not engage in sand dune mining within Great Lakes sand dune areas without first obtaining a permit for that purpose from the department.

- (2) Prior to receiving a permit from the department, a person or operator shall submit all of the following:
- (a) A permit application on a form provided by the department.
 - (b) An environmental impact statement of the proposed mining activity as prescribed by section 63705.
 - (c) A progressive cell-unit mining and reclamation plan for the proposed mining activity as prescribed by section 63706.
 - (d) A 15-year mining plan as prescribed by section 63707.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63705 Environmental impact statement.

Sec. 63705. The environmental impact statement submitted to the department shall comply with the requirements of the department and shall include, but is not limited to, the following:

- (a) The compatibility of the proposed sand dune mining activity with adjacent existing land uses or land use plans.
- (b) The impact of the proposed sand dune mining activity on flora, fauna, or wildlife habitats.
- (c) The economic impact of the proposed sand dune mining activity on the surrounding area.
- (d) The effects of the proposed sand dune mining activity on groundwater supply, level, quality, and flow on site and within 1,000 feet of the proposed sand dune mining activity.
- (e) The effects of the proposed sand dune mining activity on adjacent surface resources.
- (f) The effect of the proposed sand dune mining activity on air quality within 1,000 feet of the proposed sand dune mining activity.

- (g) Whether the proposed sand dune mining activity is located within any of the following: (i) 1,000 feet of a residence.
- (ii) 2,000 feet of a school.
- (iii) 500 feet of a commercial development.
- (h) Alternatives, if any, to the location of the proposed sand dune mining activity and the reasons for the choice of the location of the proposed sand dune mining activity over those alternatives.
- (i) A description of the environment as it exists prior to commencement of sand dune mining activity of area of the proposed sand dune mining activity. The environmental impact statement shall provide the greatest detail of the areas and the environmental elements that receive the major impacts from the proposed activity, but also shall include areas that may be impacted as an indirect result of the project.
- j) An inventory of the physical environmental elements of the proposed site. The inventory shall be conducted at a time or at different times of the year that will provide the most complete information regarding the existing conditions of the area that will be impacted directly or indirectly by the proposed activity.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63706 Progressive cell-unit mining and reclamation plan; sand dune mining permit; requirements.

Sec. 63706. (1) The progressive cell-unit mining and reclamation plan, for both the total project and each cell-unit, shall include all of the following:

- (a) The method and direction of mining. (b) Surface overburden stripping plans.
- (c) The depth of grade level over the entire site from which the sand will be removed.
- (d) Provisions for grading, revegetation, and stabilization that will minimize shore and soil erosion, sedimentation, and public safety problems.
- (e) The location of buildings, equipment, stockpiles, roads, or other features necessary to the mining activity and provisions for their removal and restoration of the area at the project termination.
- (f) Provisions for buffer areas, landscaping, and screening.
- (g) The interim use or uses of reclaimed cell-units before the cessation of the entire mining operation. (h) Maps and other supporting documents required by the department.

(2) The department shall not issue a sand dune mining permit for any of the following:

- (a) A sand dune mining operation that existed before March 31, 1977, if the progressive cell-unit mining and reclamation plan includes more than 3 30-acre cell-units.
- (b) A sand dune mining operation that commenced after March 31, 1977, if the progressive cell-unit mining and reclamation plan includes any cell-unit having an area exceeding 10 acres.
- (c) The expansion of an existing sand dune mining operation if that expansion includes any cell-unit having an area exceeding 10 acres.

(3) The progressive cell-unit mining and reclamation plan for sand dune mining permits issued 30 days or more after June 23, 1994 shall meet the following requirements:

- (a) All upland reclamation grades for sand dune mining operations shall have a slope not steeper than 1-foot vertical rise in a 3-foot horizontal plane, except that the department may approve plans that allow steeper reclaimed slopes in order to provide a smoother transition to undisturbed topographic features or the protection of existing environmental features.
- (b) All submerged grades established by the excavation of material below the water table and the creation of a water body shall have underwater slopes as follows:
 - (i) For water bodies with a surface area less than 5 acres, the submerged grades shall be 1-foot vertical rise in a 3-foot horizontal plane, or flatter, to a depth of 6 feet.
 - (ii) For water bodies with a surface area 5 acres or greater, the submerged grades shall be 1-foot vertical rise in a 6-foot horizontal plane, or flatter, to a depth of 6 feet.
 - (iii) For all water bodies where the progressive cell-unit mining and reclamation plan designates a final use after sand dune mining as public access, the area designated for public access shall have submerged grades of 1-foot vertical rise in a 10-foot horizontal plane, or flatter, to a depth of 6 feet.
- (c) A 200-foot minimum setback distance from the property line to the cell-unit boundary line shall be provided on all cell-unit mining and reclamation plans, except the department may approve plans with less than 200-foot minimum setback distances if the department determines that the sand dune mining activity is compatible with the adjacent existing land use.

(d) A 500-foot minimum setback distance from the ordinary high-water mark of the Great Lakes shall be provided on all cell-unit mining and reclamation plans. As used in this subdivision, ordinary high-water mark means for the lands bordering or adjacent to waters or land affected by levels of the Great Lakes landward of the ordinary high-water mark as defined by section 32502, and those lands between the ordinary high-water mark and the water's edge.

(e) All cell-unit mining and reclamation plans shall include fencing or other techniques to minimize trespass or unauthorized access to the sand dune mining activity.

(f) If the proposed sand dune mining activity proposes to mine below the water table, the department may require a hydrogeological survey of the surrounding area.

(g) If threatened or endangered species are identified within the cell-unit boundaries, the cell-unit mining and reclamation plan shall indicate how the threatened or endangered species shall be protected or, if not protected, what mitigation measures shall be performed.

(h) If the proposed sand dune mining activity includes beneficiation or treatment of the sand, the application documents shall include specific plans depicting the methods, techniques, and manufacturer's material safety data sheets on all chemicals, or other additives that are not natural to the site, that will be utilized in the process. The operator shall also obtain all applicable state and federal permits prior to beginning the beneficiation process.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63707 Fifteen-year mining plan; submission of duplicate copy of cell-unit mining and reclamation plan.

Sec. 63707. (1) The 15-year mining plan shall include the following:

(a) The location and acreage of sand dune areas presently being mined and the amount of sand being mined.

(b) The location and acreage of sand dune areas not presently being mined but planned for that purpose and the amount of sand planned to be mined.

(c) A schedule indicating when the mining activity will begin in each sand dune area and the probable termination date of mining activities in each area.

(d) Additional information requested by the department.

(2) A duplicate copy of the cell-unit mining and reclamation plan shall be submitted to the soil conservation district in the county where the mining activity is proposed to occur. The soil conservation district shall have 30 days after receipt of the plan to review the proposal and submit written comments to the department.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63708 Sand dune mining permit; duration; renewal; contents; reasons for permitting removal of barrier dune; approval or denial; list of pending applications.

Sec. 63708. (1) A sand dune mining permit issued by the department is valid for not more than 5 years. A sand dune mining permit shall be renewed if the sand dune mining activities have been carried out in compliance with this part, the rules promulgated under this part, and the conditions of the sand dune mining permit issued by the department.

(2) The sand dune mining permit shall state any conditions, limitations, or other restrictions determined by the department, including any setback from the ordinary high-water mark of a Great Lake for the protection of the barrier dune.

(3) In granting a sand dune mining permit, if the department allows for the removal of all or a portion of the barrier dune pursuant to this part, it shall submit to the commission written reasons for permitting the removal.

(4) The department shall approve or deny a sand dune mining permit application in writing within 120 days after the application is received and is determined by the department to be administratively complete. If a sand dune mining permit is denied, the reasons shall be stated in a written report.

(5) The department shall provide a list of all pending sand dune mining applications upon a request from a person. The list shall give the name and address of each applicant, the legal description of the lands included in the project, and a summary statement of the purpose of the application.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63709 Denial of sand dune mining permit.

Sec. 63709. The department shall deny a sand dune mining permit if, upon review of the environmental impact statement, it determines that the proposed sand dune mining activity is likely to pollute, impair, or destroy the air, water, or other natural resources or the public trust in those resources, as provided by part 17.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63710 Extraction of sand or other minerals by state.

Sec. 63710. The state or an instrumentality of the state shall not engage in the extraction of sand or other minerals from a sand dune area, except as required in the interest of public health and safety in an emergency situation resulting from a disaster as defined in section 2 of the emergency preparedness act, Act No. 390 of the Public Acts of 1976, being section 30.402 of the Michigan Compiled Laws.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63711 Assessment of fee for surveillance, monitoring, administration, and enforcement of part; disposition of unexpended fees; annual report of operator; confidentiality; failure to submit annual report; penalty for unpaid fee; records; annual report of department.

Sec. 63711. (1) For purposes of surveillance, monitoring, administration, and enforcement of this part, an operator is assessed a fee of not more than 10 cents per ton of sand mined from a sand dune area for the calendar year reported as described in subsection (2). Funds collected by the assessment of the fee shall not exceed the actual costs to the department of implementing the sections of this part that pertain to sand dune mining. Any fees collected under this subsection that are unexpended at the end of a fiscal year shall be credited to a separate fund of the department, carried over to the succeeding fiscal year, and deducted from the amount appropriated for that year for surveillance, monitoring, administration, and enforcement of this part for purposes of computing the fee to be assessed for that year.

(2) An operator shall file an annual report on or before January 31 of each year. The report shall show the areas mined and describe the progress of restoration and reclamation activities of the operator for the preceding calendar year. The report shall contain both of the following:

(a) The number of tons of sand mined from a sand dune area.

(b) Location of the sand dune area.

(3) The fee described in subsection (1) shall be due not more than 30 days after the department sends written notice to the operator of the amount due.

(4) The surveillance fee and annual report required by this section is confidential and shall not be available for public inspection without the written consent of the person filing the fee and report, except in accordance with judicial order.

(5) Failure to submit an annual report in compliance with rules promulgated by the department constitutes grounds for revocation of a permit.

(6) A penalty equal to 10% of the amount due, or \$1,000.00, whichever is greater, shall be assessed against the operator for a fee that is not paid when due. An unpaid fee and penalty shall constitute a debt and become the basis of a judgment against the operator. Penalties paid pursuant to this section shall be used for the implementation, administration, and enforcement of this part.

(7) Records upon which the annual report is based shall be preserved for 3 years and are subject to audit by the department.

(8) The department shall annually prepare and submit to the house of representatives and senate standing committees with jurisdiction over subject areas related to natural resources and the environment a report on the sand mining surveillance activities undertaken by the department for the immediately preceding year and the cost of those activities.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63712 Conformance bond; reclassification of active cell-unit to interim cell-unit; notice of completion or acceptance of reclamation activity; compliance or approval required for mining or extraction; violation as ground for revocation of permit.

Sec. 63712. (1) Prior to the initiation of a disturbance of land, the holder of a sand dune mining permit shall file with the department a conformance bond in favor of the state.

(2) The conformance bonds shall be filed for a maximum of 3 active cell-units and 3 cell-units in interim cell-unit status within the sand dune mining permit and shall be for an amount equal to \$10,000.00 per cell-unit or \$1,000.00 per each acre in the cell-units, whichever is greater, for cell-units bonded prior to June 23, 1994. For all cell-units that are bonded after June 23, 1994, the conformance bond shall be for an amount equal to \$20,000.00 per cell-unit or \$2,000.00 per each acre in the cell-units, whichever is greater. The bond for a cell-unit bonded prior to June 23, 1994 shall remain in effect until the cell-unit is released from the requirements of the conformance bond as provided in subsection (4) or the cell-unit boundary is revised as approved by the department. If an existing cell-unit boundary is revised, the conformance bond for the cell-unit shall be increased to the amounts provided for cell-units bonded after June 23, 1994.

- (3) The conformance bonds shall be transferable to other cell-units contained within the sand dune mining permit upon faithful conformance with the approved reclamation plan as provided in section 63706.
- (4) The conformance bond shall be conditioned upon the faithful performance of the requirements set forth in the approved reclamation plan as provided in section 63706. Liability under the conformance bond shall be maintained as long as the reclamation is not completed in compliance with the approved plan. The conformance bond shall remain in full force until the release of the cell-unit from the conformance bond requirements, including the period of time the cell-unit may have been placed in interim cell-unit status.
- (5) The department shall not reclassify a cell-unit from active to interim cell-unit status until the following minimum conditions or requirements have been met:
- (a) All permitted sand dune mining activities within the cell-unit have been completed.
 - (b) All extraction or processing equipment has been removed from the cell-unit, except that a roadway, conveyor, or slurry pipeline corridor may be maintained through a cell-unit and the cell-unit still may be reclassified to interim cell-unit status. This roadway, conveyor, or slurry pipeline corridor shall be considered part of the plant site and shall be removed and revegetated as provided by section 63706(1)(e).
 - (c) All upland areas within the cell-unit that were disturbed by sand dune mining have been regraded as provided in section 63706(3)(a).
 - (d) All submerged grades within the cell-unit established by sand dune mining have been regraded as provided in section 63706(3)(b).
 - (e) All upland areas within the cell-unit that were disturbed by sand dune mining have been revegetated utilizing native or indigenous species or other plant material pursuant to the approved progressive cell-unit mining and reclamation plan as provided in section 63706(1). The vegetation that has been planted shall have germinated or taken root and cover a minimum of 80% of the upland areas disturbed by sand dune mining, and no single area exposed to the elements shall be greater than 25 square feet.
 - (f) The operator shall provide proper measures to aid in the establishment of growth of the planted vegetation until adequate root systems have developed to provide sustained growth.
- (6) The department may reclassify an active cell-unit to interim cell-unit status upon receipt of a written request by the operator. The department shall conduct an on-site inspection of the reclamation activities that have been completed and determine if the completed reclamation activities are adequate to reclassify the active cell-unit to interim cell-unit status. The department shall schedule the on-site inspection within 45 days of the written request. The department shall notify the operator within 30 days following the date of the inspection of the department's decision to grant or deny the request for interim cell-unit status. If the department determines the reclamation activities conducted within the cell-unit do not meet the conditions and requirements for interim cell-unit status, the notification shall include information detailing the reasons for denial.
- (7) If the department determines the status of an active cell-unit does not meet the conditions or requirements for reclassification to interim cell-unit status, the operator may not reapply for reclassification of the same active cell-unit until 1 year from the previous request.
- (8) Notification shall be given to the operator upon completion or acceptance by the department of the reclamation activity. The notification constitutes the release of the cell-unit from the conformance bond requirements if:
- (a) All permitted sand dune mining activities within the cell-unit have been completed.
 - (b) All extraction or processing equipment has been removed from the cell-unit, except a roadway, conveyor, or slurry pipeline corridor may be maintained through a cell-unit and the cell-unit still released from bond. This roadway, conveyor, or slurry pipeline corridor shall be considered part of the plant site and shall be removed and revegetated as provided by section 63706(1)(e).
 - (c) All upland areas within the cell-unit that were disturbed by sand dune mining have been regraded as provided in section 63706(3)(a).
 - (d) All submerged grades within the cell-unit established by sand dune mining have been regraded as provided in section 63706(3)(b).
 - (e) All upland areas within the cell-unit that were disturbed by sand dune mining have been revegetated utilizing native or indigenous species or other plant material pursuant to the approved reclamation plan as provided in section 63706(1).
 - (f) There are no areas within the revegetated portions of the cell-unit where a 10-foot by 10-foot test plot can be measured with less than 80% survival of the planted vegetation.
 - (g) The plant material shall be required to sustain itself through 1 full growing season.

(h) There are no areas within the revegetated portion of the cell-unit with ongoing erosion, except some wind erosion shall be allowed if the wind erosion that is occurring does not threaten the stability of the regraded slopes or the ability of the plant material to accommodate the accretion of sand.

(9) Mining or extraction of sand dune minerals from any other cell-unit contained within the sand dune mining permit is prohibited until compliance or approval is attained from the department.

(10) A violation of this section constitutes grounds for revocation of the sand dune mining permit.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63713 Rules.

Sec. 63713. The department shall promulgate rules to implement and administer this part.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

324.63714 Suspension or revocation of permit; restraining order, injunction, or other appropriate remedy; violation as misdemeanor; penalty.

Sec. 63714. (1) If the department finds that an operator is not in compliance with this part, the rules promulgated under this part, or a permit issued under this part, the department may suspend or revoke the permit.

(2) At the request of the department, the attorney general may institute an action in the circuit court for a restraining order or injunction or other appropriate remedy to prevent or preclude a violation of this part, a permit issued under this part, or the rules promulgated under this part. This shall be in addition to the rights provided in part 17.

(3) A person who violates this part or a permit issued under this part is guilty of a misdemeanor, punishable by a fine of not more than \$5,000.00.

History: Add. 1995, Act 57, Imd. Eff. May 24, 1995.

Department of Environmental Quality, Geological Survey Division, Sand Dune Areas (By authority conferred on the commission of natural resources by section 13 of Act No. 222 of the Public Acts of 1976, being 8281.663 of the Michigan Compiled Laws)

R 281.401 Lincoln--Lake--Chikaming sand dune area; Berrien County.

Rule 1. The following described area is designated as a sand dune area under the designation of the Lincoln--Lake--Chikaming sand dune area: Northwest fractional $\frac{1}{4}$ of southeast fractional $\frac{1}{4}$, southwest fractional $\frac{1}{4}$ of southeast fractional $\frac{1}{4}$, section 9; west $\frac{3}{4}$ fractional section 16; entire sections 17 and 20; northwest $\frac{1}{4}$, west $\frac{1}{2}$ of southwest $\frac{1}{4}$, section 21; west $\frac{1}{4}$, section 28; entire sections 29, 30, 31, and 32, T5S, R19W; entire sections 5, 6, and 7; west $\frac{3}{4}$, section 8; west $\frac{1}{2}$ of northeast $\frac{1}{4}$, west $\frac{1}{2}$, section 17; entire section 18, west $\frac{1}{2}$ of northeast $\frac{1}{4}$, west fractional $\frac{1}{2}$, fractional section 19; northeast $\frac{1}{4}$ of northwest fractional $\frac{1}{4}$, west fractional $\frac{1}{2}$ of northwest fractional $\frac{1}{4}$, fractional section 30, T6S, R19W; entire sections 12, 13, 24, 25, 26, 34, and 35; northwest $\frac{1}{4}$ of northeast $\frac{1}{4}$, northwest $\frac{1}{4}$, northwest $\frac{1}{4}$ of southwest $\frac{1}{4}$, section 36, T6S, R20W; north fractional $\frac{1}{2}$ of northeast fractional $\frac{1}{4}$, southwest $\frac{1}{4}$ of northeast fractional $\frac{1}{4}$, northwest fractional $\frac{1}{4}$, north $\frac{1}{2}$ of southwest $\frac{1}{4}$, southwest $\frac{1}{4}$ of southwest $\frac{1}{4}$, fractional section 2; entire fractional sections 3, and 9; north $\frac{1}{2}$ of northeast $\frac{1}{4}$, southwest $\frac{1}{4}$ of northeast $\frac{1}{4}$, northwest $\frac{1}{4}$, west $\frac{1}{2}$ of southwest $\frac{1}{4}$, section 10; northwest $\frac{1}{4}$ of northwest $\frac{1}{4}$, section 11; northwest of northeast $\frac{1}{4}$, north fractional $\frac{1}{2}$ of northwest fractional $\frac{1}{4}$, fractional section 16; northeast fractional $\frac{1}{4}$ of northeast fractional $\frac{1}{4}$, fractional section 17, T7S, R20W, Berrien county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.402 South Haven--Covert--Hagar sand dune area; Van Buren and Berrien counties.

Rule 2. The following described area is designated as a sand dune area under the designation of the South Haven--Covert--Hagar sand dune area: South fractional $\frac{1}{2}$ of north fractional $\frac{1}{2}$, south fractional $\frac{1}{2}$, fractional section 21; south $\frac{3}{4}$ section 22; west $\frac{1}{2}$ of southwest $\frac{1}{4}$, section 23; west $\frac{1}{2}$ of northwest $\frac{1}{4}$, northwest $\frac{1}{4}$ of southwest $\frac{1}{4}$, section 26; north $\frac{1}{2}$, southwest $\frac{1}{4}$, north $\frac{1}{2}$ of southeast $\frac{1}{4}$, section 27; entire sections 28, 29, 32, and 33; southwest $\frac{1}{4}$ of northeast $\frac{1}{4}$, west $\frac{1}{2}$, section 34, T1S, R17W; northeast fractional $\frac{1}{4}$ of northwest fractional $\frac{1}{4}$, fractional section 3; entire sections 4, 5, 7, and 8; north $\frac{1}{2}$ of northeast $\frac{1}{4}$, southwest $\frac{1}{4}$ of northeast $\frac{1}{4}$, west $\frac{1}{2}$, northwest $\frac{1}{4}$ of southeast $\frac{1}{4}$, section 9; northwest $\frac{1}{4}$, north $\frac{1}{2}$ of southwest $\frac{1}{4}$, section 16; entire sections 17, 18, and 19; entire section 20 except southeast $\frac{1}{4}$ of southeast $\frac{1}{4}$; west $\frac{1}{2}$, section 29; entire section 30; east $\frac{1}{2}$ of northeast $\frac{1}{4}$ and west $\frac{3}{4}$, section 31, T2S, R17W; entire sections 24, 25, 35, and 36, T2S, R18W, Van Buren county. Entire section 1 except east $\frac{1}{2}$ of southeast $\frac{1}{4}$; entire sections 2, and 10; northeast fractional $\frac{1}{4}$, west fractional $\frac{1}{2}$ and northwest $\frac{1}{4}$ of southeast $\frac{1}{4}$, fractional section 11; north $\frac{1}{2}$ of northwest $\frac{1}{4}$, section 14; northeast fractional $\frac{1}{4}$ of northeast fractional $\frac{1}{4}$, west fractional $\frac{1}{2}$ of northeast fractional $\frac{1}{4}$ and northwest fractional $\frac{1}{4}$, fractional section 15, T3S, R18W, Berrien county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.403 Park--Laketown--Saugatuck sand dune area; Ottawa and Allegan counties.

Rule 3. The following described area is designated as a sand dune area under the designation of the Park--Laketown--Saugatuck sand dune area: West 1/2 of southwest 1/4, section 14; south 1/2, section 15; south 1/2, section 16; entire sections 21, and 22; west 1/4, section 23; west 1/2 of northwest 1/4, section 26; north 40 acres of Government Lot 1, northwest 1/4, Government Lots 3, 4 and west 1/2 of southwest 1/4, section 27; entire sections 28, 33, and 34; west fractiona11/2 of southwest fractional1/4, section 35, T5N, R16W, Ottawa county. West 1/4, section 2; entire sections 3, 4, 9, and 10; west 1/4, section 11; west 1/4, section 14; entire sections 15, 16, 21, and 22; west 1/4, section 23; west 1/2 of northwest 1/4 and northwest 1/4 of southwest 1/4, section 26; entire sections 27, 28, 33, and 34, T4N, R16W; entire section 3 except east 1/2 of southeast 1/4; entire sections 4, 5, and 8; Government Lots 1, 2, 3, 4, 5, and 6; north fractional1/2 of northeast 1/4, southwest 1/4 of northeast 1/4, south 1/2 of southeast 1/4 and northwest 1/4 of southeast 1/4, section 9; west 1/2 of northeast 1/4, north 1/2 of northwest 1/4, southeast 1/4 of northwest 1/4, southwest 1/4 of southwest 1/4, section 10; Government Lots 1, 2, and 3, section 15; entire section 16 except southwest 1/4 of southwest 1/4; entire section 17 except southeast 1/4 of southeast 1/4, Government Lots 1, 2, and 3, section 20; north 1/2 of northeast 1/4, southeast 1/4 of northeast 1/4, northeast 1/4 of northwest 1/4, section 21, T3N, R16W, Allegan county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.404 Laketon--Fruitport--Spring Lake--Grand Haven sand dune area; Muskegon and Ottawa counties.

Rule 4. The following described area is designated as a sand dune area under the designation of the Laketon--Fruitport--Spring Lake--Grand Haven sand dune area: Southeast 1/4 of southeast 1/4, Government Lot 10, section 6; entire sections 7, and 8; entire section 9 except east 1/2 of northeast 1/4; entire section 16 except southeast 1/4 of southeast 1/4; entire section 21 except Government Lot 1; entire sections 17, 20, 28, 33, and 34; Government Lots 2, 3, and 4, south 1/2 of southwest 1/4, southeast 1/4, section 35, T10N, R17W; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, southeast 1/4 of southwest 1/4, section 1; entire sections 2, 3, 10, and 11; southwest 1/4 of northeast 1/4, northwest 1/4, west 1/2 of southwest 1/4, northeast 1/4 of southwest 1/4, Government Lot 3, northwest 1/4 of southeast 1/4, section 12; entire sections 13, 14, 23, 24, 25, 26, and 36, T9N, R17W; southwest fractional1/4 of northwest fractional1/4, west fractional1/2 of southwest fractional1/4, southeast 1/4 of southwest fractional1/4, section 18; southwest 1/4 of northeast 1/4, northwest fractional1/4, southwest fractional1/4, west 1/2 of southeast 1/4, section 19; west 1/2 of southwest 1/4, section 29; entire fractional sections 30, and 31; Government Lot 1, section 32, T9N, R16W, Muskegon county. Entire section 1, T8N, R17W; entire section 5 except east 1/2 of northeast 1/4; entire sections 6, 7, and 8; southwest 1/4 of northwest 1/4, west 1/2 of southwest 1/4, section 9; northwest 1/4, section 16; entire sections 17, 18, 19, and 20; Government Lot 12, southwest 1/4, west 1/2 of southeast 1/4, section 21; entire section 28 except northeast 1/4 of northeast 1/4; entire sections 29, 32, and 33; southwest 1/4 of northwest 1/4, west 1/2 of southwest 1/4, section 34, T8N, R16W; west 1/2 of northwest 1/4, southwest 1/4, section 3; entire sections 4, 5, 8, and 9; west 1/2, southwest 1/4 of southeast 1/4, section 10; west 3/4, section 15; entire sections 16, 17, and 20; entire section 21 except southeast 1/4 of southeast 1/4; northwest 1/4 of northeast 1/4, northwest 1/4, north 1/2 of southwest 1/4, section 22; northeast 1/4 of northwest 1/4, Government Lots 1 and 2, section 28, T79, R16W, Ottawa county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.405 Golden--Benona--Claybanks sand dune area; Oceana County.

Rule 5. The following described area is designated as a sand dune area under the designation of the Golden--Benona--Claybanks sand dune area: Government Lot 3, section 5; entire section 7; west 1/2 of northeast 1/4, Government Lots 1, 2, and 3, southwest 1/4 of southwest 1/4, east 1/2 of southwest 1/4, west 1/2 of southeast 1/4, section 8; entire sections 17, 18, and 19; north 1/2, Government Lots 1 and 2, northeast 1/4 of southwest 1/4, northwest 1/4 of southeast 1/4, section 20; west 1/2, section 30; north 1/2 of Government Lot 4, section 31, T15N, R18W; entire sections 13, 24, 25, 26, and 35; entire section 36 except east 1/2 of southeast 1/4, T15N, R19W; west 1/2 of northeast 1/4, northwest 1/4, north 1/2 of southwest 1/4, southwest 1/4 of southwest 1/4, section 1; entire sections 2 and 11; northwest 1/4 of northwest 1/4, south 1/2 of northwest 1/4, southwest 1/4, southwest 1/4 of southeast 1/4, section 12; entire section 13 except east 1/2 of northeast 1/4; entire sections 24 and 25, T14N, R19W; southwest 1/4 of northwest 1/4, west 1/2 of southwest 1/4, southeast 1/4 of southwest 1/4, section 19; entire section 30 except northeast 1/4 of northeast 1/4; entire section 31; southwest 1/4 of northwest 1/4, Government Lots 3 and 4, section 32, T14N, R18W; Government Lots 2, 3, and 4, southwest 1/4, west 1/2 of southeast 1/4, section 5; entire section 6; west 1/2 of northeast 1/4, Government Lots 1, 2, and 3, northwest 1/4 of southeast 1/4 section 8, T13N, R18W, Oceana county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.406 Grant--Hamlin--Pere Marquette sand dune area; Mason County.

Rule 6. The following described area is designated as a sand dune area under the designation of the Grant--Hamlin--Pere Marquette sand dune area: South 1/4, section 13; entire sections 14, 23, and 24; entire section 25 except southeast 1/4 of southeast 1/4; entire sections 26, 27, 28, 32, 33, and 34; entire section 35 except southeast 1/4 of southeast 1/4, north 1/2 of northwest 1/4, southwest 1/4 of northwest 1/4, section 36, T20N, R18W, Government Lot 1, section 2; Government Lots 1, 2, 3, 4, and 5, section 3; north fractional1/2, Government Lots 1, 2, and 3, northwest 1/4 of southwest 1/4, section 4; entire sections 5, 6, 7, 8, 9, 17, 18, 19, 20, and 21; northwest fractional1/4 of northwest fractional1/4, south 1/2 of northwest fractional1/4, southwest 1/4, southwest 1/4 of southeast 1/4, section 27; entire sections 28, 29, 30, 32, and 33; northwest 1/4 of northeast 1/4, south 1/2 of northeast 1/4, northwest 1/4, northwest 1/4 of southwest 1/4, southeast 1/4 of southeast 1/4, north 1/2 of southeast 1/4, section 34; southwest 1/4 of southwest 1/4 section 35, T19N, R18W; northwest 1/4 of northwest 1/4, section 2; northeast 1/4 of northeast 1/4, Government Lot 1, south 13.8 acres of Government Lot 2, section 3; entire sections 4, and 9; Government Lots 2 and 3, southwest 1/4 of northwest 1/4, section 10, T18N, R18W, Mason county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.407 Hendricks--Moran sand dune area; Mackinac County.

Rule 7. The following described area is designated as a sand dune area under the designation of the Hendricks--Moran sand dune area: Southeast 1/4 of southeast 1/4, section 25; east 1/4, section 36, T43N, R8W; south 1/2 of southwest 1/4, section 27; south 1/4, section 28; south 1/4, section 29; south 1/4, section 30; entire sections 31, 32, 33, and 34; southwest 1/4 of northwest 1/4, southwest 1/4, northwest 1/4 of southeast 1/4, south 1/2 of southeast 1/4, section 35; south 1/2 of southwest 1/4, southwest 1/4 of southeast 1/4, section 36, T43N, R7W; entire sections 1, 2, 3, 4, and 5; northeast 1/4, Government Lot 1, section 6; entire sections 7, 8, 9, 10, 11, 12, and 13, T42N, R7W; southwest 1/4 of southwest 1/4, section 5; south 1/2 of northwest 1/4, southwest 1/4, northwest 1/4 of southeast 1/4, south 1/2 of southeast 1/4, section 6; entire section 7; entire section 8 except north 1/2 of northeast 1/4; southwest 1/4 of northwest 1/4, south 1/2, section 9; southwest 1/4, south 1/2 of southeast 1/4, section 10; southwest 1/4 of southwest 1/4, section 11; southwest of northwest 1/4, southwest 1/4, southwest 1/4 of southeast 1/4, section 13; entire section 14 except north 1/2 of northeast 1/4; entire sections 15, 16, 17, 18, 19, 20, 21, 22, and 23; entire section 24 except east 1/2 of northeast 1/4; entire sections 25, 26, and 36, T42N, R6W; Government Lots 3, 4, and 5, west fractional 1/2 of northwest fractional 1/4, southwest fractional 1/4 of southwest fractional 1/4, section 19; entire sections 30, 31, 32, and 33, T42N, R5W; entire sections 3, 4, 5, 6, 8, and 10; southwest 1/4 of southeast 1/4, of southeast 1/4, section 11; entire sections 14, 15, 16, and 22; north 1/2, north 1/2 of southwest 1/4, southwest 1/4 of southwest 1/4, north 40 acres of Government Lot 1, north 40 acres of Government Lot 2, Government Lot 3, section 23; entire sections 26 and 27, T41N, R5W, Mackinac county.

History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC.

R 281.408 Grand Haven--Port Sheldon--Park sand dune area; Ottawa County.

Rule 8. The following described area is designated as a sand dune area under the designation of the Grand Haven--Port Sheldon--Park sand dune area: West fractional 1/2 of northwest fractional 1/4, west 1/2 of southwest 1/4, fractional section 2; entire fractional sections 3, 4, and 9; entire section 10; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 11; northwest 1/4 of northwest 1/4, section 14; section 15; north 1/4 of fractional section 16, T5N, R16W; entire fractional sections 3, 4, 9, and 10; southwest 1/4 of southwest 1/4, section 11; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 14; entire fractional sections 15, 16, 21, and section 22; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 23; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 26; entire section 27; entire fractional sections 28 and 33; entire section 34; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 35, T6N, R16W; southwest 1/4 of southwest 1/4, section 27; southwest fractional 1/4, south 1/2 of southeast 1/4, fractional section 28; entire fractional section 33; northwest 1/4, west 1/2 of northwest 1/4, southwest 1/4, southeast 1/4, section 34, T7N, R16W, Ottawa county.

History: 1979 ACS 5, Eff. Mar. 17, 1981.

R 281.409 Pentwater--Summit sand dune area; Oceana and Mason counties.

Rule 9. The following described area is designated as a sand dune area under the designation of the Pentwater--Summit sand dune area: West 3/4 of fractional section 1; entire sections 2 and 11; west 1/2, southeast 1/4, west 1/2 of northeast 1/4 of section 12; north 1/4 of section 13; north 1/2 of northeast 1/4, southwest 1/4 of northeast 1/4, east 1/2 of northwest 1/4, government lots 1, 2, 3, and 4, northeast 1/4 of southwest 1/4, northwest 1/4 of southeast 1/4, section 14; entire sections 15 and 22; government lots 1, 3, and 4, west 1/2 of southwest 1/4, southeast 1/4 of southwest 1/4, section 23; northwest 1/4 of northwest 1/4 of section 26; entire section 27; government lot 1 section 33; northwest 1/4 of northeast 1/4, northwest 1/4, section 34, T16S, R18W, Oceana county. West fractional 1/4 of section 30, T17N, R17W; northwest 1/4 of northeast 1/4, south 1/2 of northeast 1/4, government lots 1, 2, 3, and 4, southeast 1/4, section 23; south 1/2 of northeast 1/4, south 1/2, section 24; entire sections 25, 26, 35, and 36, T17N, R18W, Mason county.

History: 1979 ACS 5, Eff. Mar. 17, 1981.

R 281.410 Onekama--Manistee sand dune area; Manistee County.

Rule 10. The following described area is designated as a sand dune area under the designation of the Onekama--Manistee sand dune area: Northwest fractional 1/4 of northwest fractional 1/4, fractional section 3; north fractional 1/2 of northeast fractional 1/4, southeast 1/4 of northeast fractional 1/4, north fractional 1/2 of northwest fractional 1/4, southeast 1/4 of northwest fractional 1/4, fractional section 4; entire section 5; entire section 7; east 1/2 of northeast 1/4, southwest 1/4 of northeast 1/4, government lots 1 and 2, south 1/2 of northwest 1/4, southwest 1/4, north 1/2 of southeast 1/4, section 8; northwest 1/4 of southwest 1/4, section 9; northwest 1/4, north 1/2 of southwest 1/4, government lots 1 and 2, section 17; entire section 18; government lots 1, 2, 3, and 4, section 19, T22N, R16W; northeast fractional 1/4, government lot 1, section 24, T22N, R17W; west 1/2 of southwest 1/4, section 14; south 1/2 of northeast 1/4, south 1/2 of northwest 1/4, northwest 1/4 of northwest 1/4, southwest 1/4, southeast 1/4, section 15; entire fractional section 16; entire section 21; northwest 1/4, northwest 1/4, government lot 1, north 1,320 feet of government lot 2, and north 1,320 feet of government lot 3, northeast 1/4 of southeast 1/4, section 22; west 1/2 of northwest 1/4, section 23; entire fractional section 27; entire fractional sections 28 and 32; entire section 33; government lots 1, 2, and 3, southwest 1/4 of southwest 1/4, section 34, T23N, R16W; Manistee county.

History: 1979 ACS 5, Eff. Mar. 17, 1981.

R 281.411 Sleeping Bear Dunes sand dune area; Benzie and Leelanau counties.

Rule 11. The following described area is designated as a sand dune area under the designation of the Sleeping Bear Dunes sand dune area: South 1/2 of northeast 1/4, northwest fractional 1/4 of northwest fractional 1/4, south 1/2 of northwest fractional 1/4, southwest 1/4, southwest 1/4 of southeast 1/4, north 1/2 of southeast 1/4, section 2; entire sections 3 and 10; northwest 1/4 of northeast 1/4, south 1/2 of northeast 1/4, northwest 1/4, southwest 1/4 of southeast 1/4, section 11; west 1/2 of northwest 1/4, west 1/2 of southwest 1/4, section 13; entire sections 14, 15, and 22; government lots 1, 2, 3, southeast 1/4 of northeast 1/4, southwest 1/4, southwest 1/4 of southeast 1/4, north 1/2 of southeast 1/4, section 23; west 1/2 of northwest 1/4, section 24; west 1/2, section 26; entire section 27; government lots 1 and 2, east 1/2 of northeast 1/4, section 34; west 1/2 of northwest 1/4, section 35, T25N, R16W; fractional section 3; entire sections 4 and 9; government lot 4, west 1/2 of southwest 1/4, section 15; entire fractional sections 16 and 21; entire section 22; west 1/2 of northwest 1/4, section 23; government lots 1, 5, 6, 7, and 8, section 27; entire fractional sections 28 and 34; government lot 2, except east 1,320 feet, west 1/2 of southwest 1/4, section 35, T26N, R16W; northwest fractional 1/4, southwest fractional 1/4, north 1/2 of southeast 1/4, southwest 1/4 of southeast 1/4, fractional section 7; northeast fractional 1/4, northeast 1/4 of southwest fractional 1/4, west fractional 1/2 of southwest fractional 1/4, section 18; northwest fractional 1/4 of northwest fractional 1/4, fractional section 19, T27N, R14W; government lots 1, 2, 3, and 4, northwest fractional 1/4 of northeast fractional 1/4 of southwest 1/4 of northeast fractional 1/4, west 1/2 of southeast 1/4, fractional section 1; entire sections 11, 12, 13, 14, 19, 20, 21, 22, and 23; northeast 1/4, northwest 1/4, southwest 1/4, north 1/2 of southeast 1/4, southwest 1/4 of southeast 1/4, section 24; north 1/2 of northwest 1/4, north 1,320 feet of government lot 1, section 25; northeast 1/4, northwest 1/4, southwest 1/4, northwest 1/4 of southeast 1/4, section 26; northeast 1/4, northwest 1/4, government lots 2, 3, and 4, section 27; north 1/2 of northeast 1/4, except Mud lake, section 28; north 1/2 of northeast 1/4, southwest 1/4 of northeast 1/4, northwest 1/4, southwest 1/4, section 29; entire fractional section 30; east 1/2 of northeast 1/4, northwest 1/4 of northeast 1/4, north fractional 1/2 of northwest fractional 1/4, government lots 1, 2, 3, and 4, section 31: north 1/2 of northwest 1/4, southwest 1/4 of northwest 1/4, government lot 1, section 32, T27N, R15W; entire sections 25, 26, 27, 33, and 34; northeast 1/4, north 1/2 of northwest 1/4, southeast 1/4 of northwest 1/4, section 35; government lot 1, northwest 1/4 of northeast 1/4, northwest 1/4, southwest 1/4, section 36, T27N, R16W; Benzie county. Northwest fractional 1/4, fractional section 6; entire fractional section 7; northwest 1/4, southwest 1/4, section 8; northwest 1/4, northwest 1/4, of southwest 1/4, section 17; northeast 1/4, northwest fractional 1/4, southwest fractional 1/4, north 1/2 of southeast 1/4, fractional section 18; south 1/2 of northeast 1/4, northwest fractional 1/4 of northwest fractional 1/4, south fractional 1/2 of northwest fraction 1/4, southwest fractional 1/4, southeast 1/4, fractional section 19; northwest 1/4, southwest 1/4, section 20; north 1/2 of northwest 1/4, southwest 1/4 of northwest 1/4, northwest 1/4 of southwest 1/4, section 29, T28N, R14W; entire sections 1, 12, 13, and 24; northeast 1/4, government lots 1, 2, 3, and 4, east 1/2 of southwest 1/4, southwest 1/4 of southeast 1/4, north 1/2 of southeast 1/4, section 25; west 1/4 of northeast 1/4, east 1/2 of northwest 1/4, government lots 1, 2, 3, and 4, west 1/2 of southeast 1/4, section 36, T28N, R15W; northwest fractional 1/4 of northwest fractional 1/4, fractional section 5; northeast fractional 1/4 of northeast fraction 1/4, 1/2 of northeast fractional 1/4, government lots 1, and 2, south fractional 1/2 of northwest fractional 1/4, southwest fractional 1/4, northwest 1/4 of southeast 1/4, fractional section 6; north fractional 1/2 of northwest fractional 1/4, fractional section 7, T29N, R12W; entire sections 1, 2, 3, and 4; government lots 1, 2, 3, 6, and 7, southeast 1/4 of southeast 1/4, section 5; northeast 1/4, north 1/2 of northwest 1/4, southeast 1/4 of northwest 1/4, government lot 2, northeast 1/4 of southeast 1/4, section 9; northeast 1/4, northwest 1/4, north 1/2 of southwest 1/4, government lots 2 and 3, section 10; entire section 11; northeast 1/4, north 1/2 of northwest 1/4, government lots 1, 2, and 3, northwest 1/4 of southeast 1/4, section 12; northwest fraction 1/4 of northwest 1/4 section 13; government lots 1, 2, 3, northeast 1/4 of southwest 1/4, section 14, T29N, R13W; fractional section 17; entire section 18; entire fractional section 19; entire section 20; government lot 4, section 21; northwest 1/4 of northwest 1/4, south 1/2 of northwest 1/4, west 1,320 feet of government lot 3, west 1/2 of southwest 1/4, northeast 1/4 of southwest 1/4, section 27; entire sections 28 and 29; entire fractional section 30; fractional northeast 1/4, fractional northwest 1/4, fractional southwest 1/4, northwest 1/4 of southeast 1/4, fractional section 31; government lot 1, section 32; northeast 1/4, east 1/2 of northwest 1/4, northwest 1/4 of northwest 1/4, government lots 1, 2, and the north 1,320 feet of government lot 3, northeast 1/4 of southeast 1/4, section 33; northwest 1/4 of northwest 1/4, government lots 1, 2, and 3, section 34, T29N, R14W; entire sections 24, 25, and 36, T29N, R15W; entire section 31; government lot 2, west 1/2 of southwest 1/4, section 32 T30N, R12W; government lots 1, 2, 3, 4, 5, and 6, south 1/2 of northeast 1/4, south 1/2 of northwest 1/4; northeast 1/4 of southwest fractional 1/4, north 1/2 of southeast 1/4, section 31; entire sections 32 and 33, T30N, R13W; government lots 1 and 2, section 36, T30N, R14W; entire fractional section 3; entire section 4; entire fractional sections 5, 6, 7, 8, 9, 10, 11, T30N, R15W; entire fractional sections 26, 27, 28, 29, and 32; entire section 33; entire fractional sections 34 and 35, T31N, R15W; government lot 4, section 3; government lot 1, except west 1,320 feet, government lots 2, 3, and 4, section 10; entire section 15; south 1/2 of southeast 1/4, southwest 1/4, section 16, southwest 1/4 of northeast 1/4, northwest 1/4, northeast 1/4 of southwest 1/4, government lots 1 and 2, southeast 1/4, section 17; entire sections 18, 20, 21, and 22; entire fractional sections 23 and 27; entire section 28, T31N, R14W; government lot 4, west 1/2 of southwest 1/4, section 19; northeast 1/4, west 1/2 of southwest 1/4, section 30; west 1/2 of northwest 1/4, section 31, T32N, R14W; entire fractional sections 24 and 25; east 1/2 of northeast 1/4, government lots 1, 2, and 3, northeast 1/4 of southeast 1/4, section 36, T32N, R15W; Leelanau county.

R 281.412 Leelanau--Leland sand dune area; Leelanau County.

Rule 12. The following described area is designated as a sand dune area under the designation of the Leelanau--Leland sand dune area: Government lot 4, section 18; northwest fractional 1/4, southwest fractional 1/4, fractional section 19; west fractional 1/2 of northwest fractional 1/4, section 30, T31N, R11W; entire fractional section 13; entire sections 24, 25, 26, and 27; government lots 1, 2, 6, and 7, section 34; north 1/2 of northeast 1/4, government lots 1 and 2, section 35; northwest 1/4 of northwest 1/4, section 36, T31N, R12W; government lot 1, section 6; southwest 1/4 of northeast 1/4, east 1/2 of northwest 1/4, government lots 1 and 2, southwest fractional 1/4, west 1/2 of southeast 1/4, southeast 1/4 of southeast 1/4, fractional section 7; northeast 1/4, northwest fractional 1/4, southwest fractional 1/4, northwest 1/4 of southeast 1/4, section 18; northeast 1/4 of northwest 1/4, government lot 1, section 19, T32N, R10W; entire fractional sections 12, 13, 14, 15, and 16; government lot 1, section 21; east 1/2 of northeast 1/4, section 22; northeast 1/4, government lots 1, 2, and 3, southwest 1/4 of northwest 1/4, north 1/2 of southwest 1/4, section 23; government lots 1 and 2, northwest 1/4, northeast 1/4 of southwest fractional 1/4, fractional section 24, T32N, R11W; Leelanau county.

R 281.413 Wawatam--Bliss--Cross Village--Readmond sand dune area; Emmet County.

Rule 13. The following described area is designated as a sand dune area under the designation of the Wawatam--Bliss--Cross Village--Readmond sand dune area: Northwest fractional 1/4 of northwest fractional 1/4 of section 3; northeast fractional 1/4 of northeast fractional 1/4, northwest fractional 1/4 of northeast fractional 1/4, southwest 1/4 of northeast fractional 1/4, northwest fractional 1/4, southwest 1/4, northwest 1/4 of southeast 1/4 of section 4; south 1/2 of northeast 1/4, government lots 1, 2, 3, and 4, southwest 1/4, section 5; north 1/2 of northeast 1/4, government lots 1 and 2, section 8; northwest 1/4 of northwest 1/4, section 9, T37N, R6W; entire fractional sections 13, 23, and 24; government lots 1, 2, and 3, northeast 1/4 of northeast 1/4, northwest 1/4, section 25; entire fractional sections 26, 27, 32, and 33; government lots 1, 2, 3, and 4, southeast 1/4 of northeast 1/4, southwest 1/4, north 1/2 of southeast 1/4, section 34; northeast 1/4, northwest 1/4, northeast 1/4 of southwest 1/4, north 1/2 of southeast 1/4, section 35; northwest 1/4 of northeast 1/4, south 1/2 of northeast 1/4, northwest 1/4, north 1/2 of southwest 1/4, north 1/2 of southeast 1/4, section 36, T38N, R6W; northwest fractional 1/4 of northwest fractional 1/4, southwest 1/4 of northwest fractional 1/4, southwest 1/4, section 3; entire fractional sections 4, 5, and 8; north 1/2 of northwest 1/4, southwest 1/4 of northwest 1/4, section 9; north 1/2 of northwest 1/4, southeast 1/4 of northwest 1/4, section 10; northwest 1/4 of northeast 1/4, northwest 1/4, southwest 1/4, northeast 1/4, of southeast 1/4, section 20; government lots 1 and 2, northwest fractional 1/4, section 30; southwest fractional 1/4 of northwest fractional 1/4, section 31, T38N, R5W; entire section 19; government lots 1, 2, 3, and 4, south 1/2 of southeast 1/4, section 20; entire fractional sections 21 and 23; government lots 2 and 3, section 24; west 1/2 of section 25; northeast 1/4, government lots 1 and 2, southeast 1/4 of northwest 1/4, north 1/2 of southwest 1/4, southeast 1/4, section 26; government lots 1, 2, and 3, except south 1,320 feet, northwest 1/4 of southeast 1/4, section 27; government lot 1, section 28; government lots 1 and 2, southwest 1/4 of southeast 1/4, section 29; entire section 30; northwest 1/4 of northeast 1/4, government lots 1, 2, 3, and 4, section 32; southwest 1/4 of northeast 1/4, southwest 1/4, southeast 1/4, section 33; southwest 1/4 of southwest 1/4, section 34; northeast 1/4, northeast 1/4 of southwest 1/4, north 1/2 of southeast 1/4, section 35; northwest 1/4 and north 1/2 of southwest 1/4, section 36, T39N, R5W; government lot 5, section 15; entire section 22; west 1/2 of northeast 1/4, northwest 1/4, northwest 1/4 of southwest 1/4, government lots 1, 2, and 3, section 23; northwest fractional 1/4, section 26; entire fractional section 27, except southwest 1/4 of southwest 1/4, T39N, R4W; Emmet county.

History: 1979 ACS 5, Eff. Mar. 17, 1981.