



**House  
Legislative  
Analysis  
Section**

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## **SAND DUNE MINING**

### **House Bill 4756 (Substitute H-2\*) First Analysis (5-10-94)**

**Sponsor: Rep. Leon Stille  
Committee: Conservation, Environment  
and Great Lakes**

#### ***THE APPARENT PROBLEM:***

In 1976, in response to citizen concerns over the ecological harm being done to sand dunes by mining companies, sand dune mining was regulated under the Sand Dune Protection and Management Act. The legislation embodied concepts from a precedent-setting Berrien County court case, in which a sand mining company was sued by the township for zoning violations. In 1989, in response to concerns over recreational, residential, and commercial development in dune areas, Public Acts 146 and 147 established numerous procedures to extend regulation to non-mining uses. The 1989 acts (known as the "critical dune amendments") amended the Sand Dune Protection and Management Act to prohibit mining in the more than 70,000 acres known as "critical dune areas." The acts ensured that only limited development would occur in these areas (although mining operations that were already in existence were "grandfathered" in). Although most would agree that the 1989 amendments have worked well to accomplish these goals, some feel that current regulations may be too stringent. For example, at present, property owners must obtain a use permit from either the municipality with jurisdiction over the area in question or from the DNR before beginning construction in a regulated area. This provision has been interpreted to mean that a permit must be obtained to remove sand in situations where -- as is common in dune areas -- it has merely blown across a property. Some feel provisions should be made that would allow property owners to remove small amounts of sand.

Under the act, a Progressive Cell-unit Mining and Reclamation Plan must be submitted with each application for a sand dune mining permit (a cell-unit is a subunit -- with an area of up to 10 acres -- of a total project). The plan indicates, among other things, the mining company's provisions for returning the dune site to a stable condition. After 1976, permits for existing operations were limited to

30 acres, and subsequent permits for expansions or new operations were limited to 10 acres. These restrictions were enacted to prevent mining companies from removing too much sand at one time. After mining one cell-unit area, a mining company cannot start mining another cell-unit area until the first cell-unit has been "reclaimed" (until the natural vegetation has been replaced). The Department of Natural Resources established a procedure five years ago whereby some cell-units are placed on "interim," rather than "active," status, in a cell-unit area where all mining and reclamation procedures have been completed, but the vegetation has not gone through one complete growing season. So that companies may continue to mine in other areas of a project while the first area is being reclaimed, legislation has been proposed that would establish this practice in statute, as well as other recommendations.

#### ***THE CONTENT OF THE BILL:***

Currently, under the Sand Dune Protection and Management Act, a permit for sand dune mining, issued by the Department of Natural Resources (DNR), is valid for up to three years. In critical dune areas, however, the DNR may only renew or amend permits issued prior to July 5, 1989, including permits for adjacent land which the operator owned prior to that date. House Bill 4756 would amend the act to rewrite these provisions, among others; to exclude from the current definition of "sand dune mining" the removal of sand from sand dune areas in volumes of less than 3,000 tons under certain conditions; to distinguish between "active" and "interim" cell-unit status; to delete current provisions that allow permits to be issued for mining operations involving more than three 30-acre cell-units; and to clarify the guidelines required on an environmental impact statement. The following summarizes the provisions of the bill:

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**Permits.** Currently, under the Sand Dune Protection and Management Act, a permit for sand dune mining, issued by the Department of Natural Resources (DNR), is valid for up to three years. House Bill 4756 would amend the act to extend the length of validity of a permit to five years. The act also requires that the DNR prepare a list of all sand dune mining applications. The bill would delete the current provision that this list be prepared every four months, and that those requesting copies of the list submit an annual fee of \$5.

The bill would also clarify current conditions under which the DNR may deny a permit to specify that a permit would be denied if the DNR determined that the proposed mining activity was likely to pollute, impair, or destroy the air, water, or other natural resources or the public trust, as provided by the Thomas J. Anderson, Gordon Rockwell Environmental Protection Act.

House Bill 4756 would exclude from the current definition of "sand dune mining" the removal of sand in volumes of less than 3,000 tons, provided that the removal was a one-time occurrence, and the removal was not for an industrial or commercial use. The removal of such sand would still remain within the provisions of the critical dune protection provisions of the act. The DNR could also authorize in writing the removal of more than 3,000 tons of sand without a permit if the purpose were to protect an occupied dwelling or other structure from property damage related to the migration of sand or the instability of sand. This removal could be for more than one occurrence, but a written authorization from the department would be required for each removal.

**Amended/Renewed Permits.** The bill would require that, when an amendment is sought for an existing sand dune mining permit to include adjacent land in a critical dune area, an operator must have submitted an environmental impact statement, a cell-unit (a sub-unit of a mining project) mining and reclamation plan, and a 15-year mining plan with the original permit application. In addition, the bill would define "adjacent" land as land that was contiguous with the land for which the operator held a sand dune mining permit, with no land or space -- including a highway or road right-of-way -- between that property and the property on which sand dune mining was conducted.

**Environmental Impact Statement.** Currently, the act requires that an environmental impact

statement, when submitted with a mining permit application, include data on the compatibility of the proposed mining operation with adjacent land uses or plans; the impact of the operation on vegetation and wildlife; the economic impact on surrounding areas; the effects on groundwater supply and flow and on adjacent surface resources; and the reason for the choice of the proposed mining site over others. House Bill 4756 would expand the required list to include the following:

**\*\*The effect of the proposed sand dune mining activity on air quality within 1,000 feet of the mining.**

**\*\*Whether the proposed activity was located within 1,000 feet of a residence, 2,000 feet of a school, or 500 feet of a commercial development.**

**\*\*A description of the environment as it existed prior to commencement of sand dune mining activity, including details of areas and environmental elements that would receive a minor impact, as well as those that would receive the major impact from the proposed activity.**

**\*\*An inventory of the physical environmental elements of the proposed site, conducted at a time of the year -- or at different times of the year -- that would provide the most complete information regarding the existing conditions of the area to be affected, directly or indirectly, by the proposed activity.**

**Cell-unit Mining.** At present, cell-unit permits for existing operations (those that were in existence prior to the 1976 act) are limited to 30 acres, and subsequent permits for expansions or new operations are limited to 10 acres. House Bill 4756 would amend this provision. Under the bill, permits would not be issued for operations that were in existence before March 31, 1977 if the progressive cell-unit mining and reclamation plan included more than three 30-acre cell-units; permits would not be issued to cover subsequent or expanded operations that began after that date if the plan included any cell-unit having an area exceeding 10 acres; and no permits would be issued for the expansion of an existing sand dune mining operation if the expansion included any cell-unit with an area in excess of 10 acres.

**Reclamation Plans.** Under the act, a progressive cell-unit mining and reclamation plan must be

submitted with an application for a sand dune mining permit. Under the bill, a progressive cell-unit mining and reclamation plan for permits issued 30 days after the bill's effective date would have to meet the following requirements:

--All upland reclamation grades for sand dune mining operations would be required to have a slope no steeper than a one-foot vertical rise in a three-foot horizontal plane. However, the department could approve plans that allowed steeper reclaimed slopes to provide a smoother transition to undisturbed topographic features or to protect existing environmental features. However, if the sand dune mining operation was located within a critical dune area, any future use of the site after sand dune mining had ceased would be subject to the slope requirements specified under the act's restrictions for critical dune areas.

--All submerged grades established by the excavation of material below the water table and the creation of a water body would be required to have the following underwater slopes: a) for water bodies with a surface area of less than five acres, the submerged grades would have to be one-foot vertical rise in a three-foot horizontal plane, or flatter, to a depth of six feet; b) for water bodies with a surface area of five acres or more, the submerged grades would have to be one-foot vertical rise in a six-foot horizontal plane, or flatter, to a depth of six feet; c) for all water bodies where the plan designated a final use after sand dune mining as public access, the area designated for public access would have to have submerged grades of one-foot vertical rise in a 10-foot horizontal plane, or flatter, to a depth of six feet.

--A 200-foot minimum setback distance from the property line to the cell-unit boundary line would be required on all cell-unit mining and reclamation plans, except that the DNR could approve plans with less than 100 feet if it determined that the mining activity was compatible with adjacent existing land use.

--A 500-foot minimum setback distance from the ordinary high-water mark of the Great Lakes would be provided on all plans.

--All plans would have to include fencing, or other techniques, to minimize trespassing or unauthorized access to the mining activity.

--If the proposed mining activity proposed to mine below the water table, the DNR could require a hydrogeological survey of the surrounding area.

--If threatened or endangered species were identified within the cell-unit boundaries, the cell-unit mining and reclamation plan would have to indicate how the species would be protected, or, if not protected, what mitigation measures would be performed.

--If the proposed mining activity included beneficiation (processing) or treatment of the sand, the application documents would have to 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 would be utilized in the process. The operator would also obtain all applicable state and federal permits prior to beginning the beneficiation process.

Active and Interim Cell-unit Status. The bill would define "interim cell-unit status" as a cell-unit in which all sand dune mining and reclamation within the cell-unit had been completed, except that the vegetation had not sustained itself through one full growing season. Under the bill, each sand dune mining activity would be limited to no more than three cell-units in interim cell-unit status at any one time. The DNR would not be permitted to reclassify a cell-unit from active to interim cell-unit status until the following minimum conditions or requirements for the cell-unit had been met: all permitted sand dune mining activities had been completed; all extraction or processing equipment had been removed except for the maintenance of a road through a cell-unit, which would have to be removed and revegetated under the restoration provisions of the progressive cell-unit mining and reclamation plan; all upland areas that were disturbed by mining had been regraded; all submerged grades established by mining had been regraded; all upland areas disturbed by mining had been revegetated; and the operator had provided proper measures to aid in establishing growth of the planted vegetation until adequate root systems had developed. Under the bill, the DNR could reclassify an active cell-unit to interim cell-unit status upon receipt of a written request by the operator. The department would conduct an on-site inspection within 45 days, determine if the completed reclamation activities were adequate to reclassify the active cell-unit, and notify the operator

within 30 days. If reclamation activities did not meet conditions and requirements for interim cell-unit status, the notification would include the reasons for denial. The operator could not then reapply for reclassification of the same active cell-unit until one year from the previous request. Notification given to an operator upon completion or acceptance by the DNR would constitute the release of the cell-unit from the conformance bond if all mining activities permitted within the cell-unit had been completed, all extraction or processing equipment had been removed, all upland areas and submerged grades had been regraded or revegetated, there were no areas within the revegetated portions of the cell-unit where a ten-foot by ten-foot test plot could be measured with less than 80 percent survival of the planted vegetation, the plant material would have to sustain itself throughout one full growing season, and there were no areas within the revegetated portion of the cell-unit with ongoing erosion, except for some wind erosion that would be permitted if it did not threaten the stability of the regraded slopes or the ability of the plant material to accommodate the accretion of sand.

**Bonds.** Currently, the act requires that the holder of a permit file a surety bond with the DNR prior to disturbing the land. House Bill 4756 would amend this requirement to specify that the bond be a conformance bond, and that it be required to a maximum of three active cell-units and three cell-units in interim cell-unit status within the mining permit; that it be for an amount equal to \$10,000 per cell-unit, or \$1,000 per each acre in the cell-unit, whichever was greater for cell-units bonded prior to the effective date of the bill. For all cell-units bonded after the effective date of the bill, the conformance bond would be in an amount equal to \$20,000 per cell-unit, or \$2,000 per each acre in the cell-units, whichever was greater. The bond for a cell-unit bonded prior to the effective date of the bill would remain in effect until the cell-unit was released from the requirements of the bond, or the cell-unit boundary was revised, as approved by the DNR. If an existing cell-unit boundary was revised, the bond for the cell-unit would be increased to the amounts provided for cell-units bonded after the effective date of the bill. In addition, the bill would specify that a conformance bond would remain in full force until the release of the cell-unit from the conformance bond requirements, including the period of time the cell-unit might have been placed in interim cell-unit status.

MCL 281.652 et al.

### ***FISCAL IMPLICATIONS:***

According to the Department of Natural Resources, the bill would have no impact on state funds. (5-3-94)

### ***ARGUMENTS:***

#### ***For:***

Under the act regulating sand dune mining, areas that may be mined are divided into cell-unit areas, consisting of ten acres or less, and mining companies are restricted to mining one cell-unit area at a time. After mining a one cell-unit area, a mining company may not start mining another cell-unit area until the first area has been "reclaimed" (until the company has returned the dune to its natural vegetation, such as dune grass). The bond that is required of a mining company may not be transferred to cover mining on another cell-unit area until the first area is stable, and is forfeited for mined cell-units that are not reclaimed before further mining begins. The bill would provide some measure of protection for sand dunes -- and increase the likelihood that mining companies will return sand dunes to their natural vegetation -- by requiring that these companies post bond in an amount equal to twice that currently required; and by requiring that mining operations within the state's critical dune areas be subject to the act's special restrictions on slope requirements specified for those areas. Of special importance, the bill would specify the slope requirements for specific grades that must be established after sand dune areas have been reclaimed. This is of vital importance in dune areas. Sand is not like dirt: dunes contain no topsoil, and therefore a minimum grade must be established to allow vegetation to take root. Otherwise, erosion takes place. At the same time, the bill would make it easier for mining companies to complete projects earlier by allowing the DNR to place some cell-units in "interim" status in situations where the company had completed reclamation improvements but the vegetation on the dune hadn't completed one full year's growing cycle.

#### ***For:***

The bill would continue regulation of critical dune areas, and would place stricter requirements on mining interests to require that dunes be stabilized



and returned as nearly as possible to their original status when mining operations are finished. The beauty of Michigan's sand dunes attracts thousands of visitors annually, and this, of course, affects the environment surrounding them, but the dunes also attract significant interest from industries such as mining and manufacturing that use the sand and other minerals that exist in abundance near them, and from landowners living on or near dune areas who want to build new structures or remodel existing ones. These concerns all pose a continual threat to the dunes' stability. Some of the current provisions of the act that regulate the mining of sand dunes also apply to homeowners, some of whom must now obtain a permit before being allowed to move even one shovelful of sand. The provisions of the bill would ease these restrictions on landowners. Under the bill, in situations where a structure had been damaged due to the migration of sand, the Department of Natural Resources (DNR) could authorize the removal of more than 3,000 tons of sand without a mining permit. Also, a permit would not be required for a one-time removal of sand of less than 3,000 tons if the removal was not for industrial or commercial reasons. These provisions of the bill more accurately reflect the original legislative intent of the 1989 amendments to the act (the "critical dune amendments").

#### ***For:***

At present, a permit for sand dune mining is valid for up to three years. However, it has become obvious that most mining activities are long-term operations, and that the paperwork involved in renewing these permits could be eliminated if permits were valid for a longer period of time. The bill would correct this problem by extending the length of validity of a permit to five years. At the same time, the provisions of the bill specify that a permit is valid for "up to" five years, thus allowing the DNR the option of issuing permits for shorter periods of time for small projects.

#### ***Against:***

Concerns continue to be expressed over mining activities in sand dune areas, and especially in those that are designated critical dune areas. Sand dunes are one of the state's most valuable resources. However, continued mining has led to the virtual disappearance of some dunes, while others have suffered irreparable damage. While dune sand is more easily and cheaply obtained than other types of sand -- since alternative sources require extra

processing, or beneficiation -- some contend that sand from other sources would be less expensive in the long run, when compared to the loss of these irreplaceable, fragile resources that are home to many rare ecological wonders. The 1976 act which established the regulation of sand dune mining also required that a study be conducted to investigate, among other items, "methods for recycling or reusing sand for industrial and commercial purposes, along with alternatives to the use of dune sand and its economic impact." Many believe that these goals are still imperative.

#### ***POSITIONS:***

A representative of the West Michigan Environmental Council testified that the council supports the bill although it would prefer that mining in critical dune areas be phased out entirely. (5-3-94)

The Michigan Environmental Council (MEC) supports the bill. (5-9-94)

The Department of Natural Resources supports the bill. (5-3-94)

Clean Water Action supports the bill. (5-9-94)

The Michigan Industrial Sand Association does not oppose the bill. (5-9-94)

The Michigan United Conservation Clubs (MUCC) has no position on the bill. (5-9-94)