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**SFA**



**BILL ANALYSIS**

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House Bill 5118 (Substitute S-4 as reported by the Committee of the Whole)

Sponsor: Representative Scott Shackleton

House Committee: Conservation and Outdoor Recreation

Senate Committee: Natural Resources and Environmental Affairs

Date Completed: 2-13-02

## **RATIONALE**

The issue of drilling for oil and gas beneath the Great Lakes is not new, but has come under recent scrutiny. Because the land and minerals under the lakes belong to the State, a person must obtain both a lease from the Michigan Department of Natural Resources (DNR) for the oil and gas rights, and a permit from the Michigan Department of Environmental Quality (DEQ), in order to drill for and extract resources from below the Great Lakes bottomlands. Although the State has not entered into any new leases or issued new drilling permits for bottomlands oil and gas since 1997, approximately a year ago State officials began discussing the possibility of issuing new leases. This led to several responses at the State and Federal levels, including the enactment of a Federal moratorium on new Great Lakes drilling until September 2003. Since Michigan law continues to authorize the DNR and the DEQ to issue leases and permits, it has been suggested that the State also should enact a ban on new drilling beneath the Great Lakes. (Please see **BACKGROUND** for more information.)

## **CONTENT**

The bill would amend the Natural Resources and Environmental Protection Act to prohibit the Department of Natural Resources from entering into a contract that would allow drilling operations beneath the bottomlands of the Great Lakes, the connected bays or harbors of the Great Lakes, or the connecting waterways as defined in Section 32301, for the exploration or production of oil or gas. (Section 32301 defines "connecting waterway" as the St. Mary's River, Detroit River, St. Clair River, or Lake St. Clair.) Also, the DNR could not enter into a lease or deed that would allow

drilling operations beneath unpatented lands for the exploration or production of oil or gas. (Currently, the DNR may enter into a contract that allows drilling operations beneath the Great Lakes bottomlands, connected bays or harbors, or connecting waterways, if all drilling operations originate from locations above and inland of the ordinary high-water mark. Under the same condition, the DNR may enter into a lease of unpatented land that permits drilling operations or drilling for exploration.)

The bill also would prohibit a person from conducting drilling operations beneath the lake bottomlands of the Great Lakes for the exploration or production of oil or gas unless either or both of the following conditions were met:

- The drilling operations began before the bill's effective date.
- The person held a lease that 1) was in effect before the bill's effective date and 2) allowed the drilling operations.

(Currently, a person may not conduct drilling operations for the removal of oil and gas, or exploration for oil and gas, from under the beds of the Great Lakes, or connecting or connected bays, harbors, or waterways, unless all drilling operations originate from locations above and inland of the high water mark.)

In addition, notwithstanding any other provision of Part 615 (Supervisor of Wells) or the rules promulgated under it, the bill would prohibit the Department of Environmental Quality, beginning on the bill's effective date, from issuing a permit for drilling, or authorizing the drilling of, a well beneath the lake bottomlands of the Great Lakes for the



exploration or production of oil or gas. The DEQ could issue a permit, however, if the applicant held a lease that 1) was in effect before the bill's effective date and 2) allowed the well to be drilled.

The bill includes the following statement: "The Great Lakes are a binational public treasure and are held in trust by the Great Lakes states and provinces. Management of the water resources of the Great Lakes and the Great Lakes basin is subject to the jurisdiction, rights, and responsibilities of the Great Lakes states and provinces. Effective management of the water resources of the Great Lakes requires the in-basin exercise of such jurisdiction, rights, and responsibilities in the interest of all the people of the Great Lakes basin."

Currently, if a person removes minerals or earth, or conducts drilling operations for oil or gas, from under the beds of the Great Lakes or connected bays and harbors in violation of the Act, the person is liable to the State for triple the value of the materials taken plus the cost of restoring the "waters, beds, bottomlands, adjacent uplands, or any natural resource of the Great Lakes or connecting or connected bays, harbors, or waterways that is damaged as a result of the violation". The bill would refer to the cost of restoring the "waters, lake, bottomlands, adjacent uplands, or any natural resource of the Great Lakes, the connected bays or harbors of the Great Lakes, or the connecting waterways as defined in section 32301" damaged as a result of the violation.

MCL 324.502 et al.

## **BACKGROUND**

The discussion of drilling for oil and gas beneath the Great Lakes involves "directional drilling" from an on-shore site, rather than drilling on the lakes themselves. Off-shore drilling for oil on the Great Lakes is prohibited by international agreement, and only Ontario allows off-shore drilling for gas. Each state or province may choose to permit directional drilling for oil or gas; only Michigan and Ontario have done so to date. Also called slant drilling, directional drilling refers to the intentional drilling of a nonvertical well. This is done by initially drilling a vertical well and then angling it at a depth that depends on the

relative position of the target. In order to reach oil or gas under the Great Lakes, therefore, a well is drilled on the shore and then angled to reach the resources.

The State of Michigan owns all of the bottomlands along its Great Lakes shoreline and does not lease them. The DNR, however, may issue a nondevelopment lease if it is needed to "complete" an upland drilling unit. Since 1945, Michigan has issued at least 70 nondevelopment leases (primarily for bottomlands oil or gas that has "drained" inland). Since directional drilling became technically feasible in the 1970s, more than 2,000 oil and gas wells have been directionally drilled in the State. These include 13 wells directionally drilled beneath Great Lakes bottomlands under a DEQ permit. Of these 13 wells, seven (one oil and six gas) are presently producing.

In August 1997, Governor Engler requested the Michigan Environmental Science Board (MESB) to evaluate the safety of directional drilling under the Great Lakes. In particular, the Board was asked to do the following: 1) evaluate the risk of directional drilling causing contamination of the waters (through release of hydrocarbons from the subsurface to the lake bottom) and shorelines of the Great Lakes; 2) evaluate the potential impacts of directionally drilled wells on competing uses of the Great Lakes waters and shoreline areas; and 3) review existing and potential permit conditions for adequacy in protecting the shoreline environment from adverse impacts.

The MESB issued its report in October 1997. In regard to its first directive, the Board concluded, "...there is little or no risk of contamination to the Great Lakes bottom or waters through releases directly above the bottom hole portion of directionally drilled wells... There is, however, a small risk of contamination at the well head." Regarding the second directive, the MESB found, "...there exists a greater risk for potential impacts to the shoreline environments where the well head and its associated infrastructure are located than to the aquatic environment of the Great Lakes", but ecological risks could be minimized by identifying and prohibiting oil and gas development in highly sensitive or unique areas, using advanced but proven technology, and applying rigorous permit requirements. In response to its third

directive, the Board found that, while the State's oil and gas regulatory rules, policy, and lease agreements "...taken together provide considerable protection to the Great Lakes' aquatic and shoreline environments, most of the environmental conflicts could be more readily resolved and the... environments better protected if the lease agreement required an aggressive environmental impact assessment and stakeholder participation prior to the lease sale."

The Board's report also contained specific recommendations to enhance the level of protection. These included streamlining the leasing and permitting process; compiling comprehensive coastal zone environmental inventories for Lake Michigan and Lake Huron; prohibiting the construction of new infrastructures and limiting oil and gas development to areas where existing infrastructures are available to minimize intrusions into virgin or undisturbed areas and prevent further intrusions into minimally disturbed areas; and storing residuals (e.g., brine and mud) only above ground and for short periods of time.

In response, the DEQ and DNR took steps to implement many of the MESB's recommendations. In particular, the DEQ issued Supervisor of Wells Instruction 2-97, which requires a 1,500-foot setback from the shoreline for oil or gas wells directionally drilled beneath the Great Lakes, and for new storage and treatment equipment and access roads; requires wells and production equipment to be screened from view; prohibits wells, equipment, and access roads in sensitive coastal environments; and prohibits the use of excavated pits for the disposal of drill cuttings.

Early in 2001, DNR officials began discussing the possibility of issuing new leases for bottomlands oil and gas. This led to several proposals in the Michigan Legislature and U.S. Congress. In June, the Michigan Senate proposed language in the DEQ and DNR budgets to allow directional drilling under specific conditions; this language was removed in the House of Representatives. At approximately the same time, U.S. Senator Stabenow introduced a proposal to prohibit additional wells under the Great Lakes until the Environmental Protection Agency or the National Academy of Sciences conducted a

study and determined that directional drilling was environmentally safe. In addition, the U.S. House of Representatives passed a measure that would have prohibited the Army Corps of Engineers from issuing new permits for Great Lakes drilling (although such permits had not been issued for the existing wells in Michigan).

In September 2001, Michigan's Natural Resources Commission lifted its suspension of directional drilling under the Great Lakes. In October, the Michigan Senate passed Senate Resolution 112, urging the DNR not to approve any leases until the Senate Great Lakes Conservation Task Force, chaired by Senator Sikkema, completed its goals and objectives. In its final report of January 2002, the Task Force makes several recommendations regarding directional drilling, including a recommendation that the State enact all of the MESB recommendations.

In November 2001, President Bush signed a Federal water and energy spending bill that prohibits the Federal government and states from issuing a permit or lease for new oil or gas drilling in or under the Great Lakes until September 2003. The legislation also requires the Army Corps of Engineers to study the environmental impact of oil and gas drilling activity in the Great Lakes.

## **ARGUMENTS**

*(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)*

### **Supporting Argument**

The Great Lakes and the Great Lakes shoreline are among Michigan's most valuable assets. Unlike petroleum products, which can be obtained from many other sources, the Great Lakes are unique and irreplaceable. Although the bottom of a well may be thousands of feet below the floor of a lake, the wellhead itself is above ground, not far from the shore. Any leakage could easily contaminate both the land and the lake, tainting drinking water, poisoning wildlife, and killing vegetation. Leaks and spills are not uncommon. According to an article in the *Detroit News* (11-18-01), DNR records showed that the State's inland wells leaked oil or gas at least 89 times in 2000.

Any increase in the number of wells simply will increase the potential risks to the public health and the environment. In addition, any threats to the Great Lakes and the shore jeopardize a vital component of the State and local economy: tourism and outdoor recreation. This industry is highly dependent on clean water, beaches, and parks, healthy wildlife, and even the perception of environmental safety. The impact of shoreline drilling on social and aesthetic concerns should not be discounted. Regardless of the actual leakage, presumably few tourists enjoy the idea of sharing the beach with oil or gas wells.

The U.S. Congress and President Bush have recognized the potential harm of Great Lakes drilling by enacting a two-year moratorium on new bottomlands drilling. House Bill 5118 (S-4) would ensure that new drilling was not allowed when the Federal moratorium expires--or in the meantime, if the DNR and DEQ do not comply with the Federal law.

#### **Supporting Argument**

The Great Lakes hold 20% of the world's, and 90% of the nation's fresh water. On the other hand, the existing well that takes oil from below the bottomlands reportedly produced only 26,000 barrels of oil in 2000, compared with the 7 billion barrels used nationwide. Also, from 1979 through 2000, directional drilling under the Great Lakes in Michigan produced a total of 439,000 barrels of oil and 17.9 billion cubic feet of natural gas: enough to supply the State with oil for 18.5 hours and gas for 7.1 days, at 1999 rates of consumption, according to DEQ and U.S. Department of Energy data cited by PIRGIM. While this is valuable energy, the amount simply does not justify the potential risks to the lakes from directional drilling. Rather than spending enormous sums of money to drill beneath the Great Lakes, perhaps the oil and gas industry should invest in the development of alternative sources of energy.

**Response:** According to a *Detroit News* article (11-18-01), Federal scientists have attempted to survey Lake Michigan and loosely estimated the existence of 30 million to 50 million barrels of oil. Until this society changes its energy-dependent habits, the resources that are available should be used.

#### **Supporting Argument**

The bill would prevent a repeat of the Nordhouse Dunes case, which resulted in the

State's paying \$59.5 million to private parties under a 1995 settlement agreement. In 1987, the DNR Director designated a 4,500-acre area of Federal land in Mason County as the Nordhouse Dunes Area, and determined that no oil or gas exploration or development would be allowed in the area. The plaintiffs, commonly called the "Miller Brothers", were the owners of oil and gas rights in the area or developers who had leased oil and gas rights from the owners, and who had been preparing to develop the area's oil and gas potential. The plaintiffs filed inverse condemnation actions against the State, claiming that the DNR Director's action effectively took their property from them, and that they were constitutionally entitled to just compensation. The trial court agreed with the plaintiffs and the Michigan Court of Appeals affirmed in 1994 (*Miller Brothers v Department of Natural Resources*, 203 Mich App 674). As the Court of Appeals explained, "In a regulatory context, a compensable taking occurs when the government uses its power to so restrict the use of property that its owner has been deprived of all economically viable use." The plaintiffs' mineral interests had only one economically viable use: the extraction of any oil and gas that might be found under the land. The plaintiffs needed a well to extract oil and gas, and needed a permit to drill a well. Since the DNR Director's administrative action made it clear that no permits would be issued for drilling in the protected area, "...the government had so restricted the use of plaintiffs' property rights that plaintiffs had been deprived of all economically viable use." Although the Court of Appeals agreed with the trial court on the "takings" issue, it returned the case to the trial court for a redetermination of the amount of damages, which ultimately led to the \$59.5 million settlement.

The bill would prevent a similar scenario by permitting bottomlands drilling if a person began drilling operations before the bill's effective date *or* if the person held a lease that allowed drilling and was in effect before the bill took effect, or if both conditions were met. In addition, the bill would not prohibit the DEQ from issuing a drilling permit if the applicant held a lease that was in effect before the bill's effective date and that allowed drilling. By avoiding future takings claims, the bill would protect the interests of the State's taxpayers.

**Response:** The facts of the *Miller Brothers*

case are not analogous to the situation that the bill would address. The primary difference is that the *Miller Brothers* plaintiffs *owned* the mineral rights, or leased them from the owners. The land in question had been privately owned; when the owners sold it to the Federal government, they retained the mineral rights, including the right to explore and drill for oil and gas. The lawsuit, therefore, was based on the State's taking of privately owned and leased oil and gas rights. The case did not involve a lease that subjected the lessee's interest to future State regulation.

In contrast, the situation contemplated by this bill involves State ownership of mineral rights and a lease with the State. The DNR's standard oil and gas lease contains the following language: "Any operation under this lease shall be subject to all applicable Federal and State laws and rules now or hereafter in force. This Lease is not in itself an authorization to drill, and issuance of drilling permits for specific locations is subject to separate application and approval by the Supervisor of Wells...". Clearly, a person entering into a lease with the DNR knows, and agrees, that the lease does not authorize drilling, a separate drilling permit is necessary, and the lease is subject to current and future laws and rules. Also, since a bottomlands lease is a nondevelopment lease, it does not actually authorize drilling operations. Therefore, since a lease with the State does not convey the right to drill, the State would not be "taking" a property interest by denying a drilling permit.

#### **Opposing Argument**

Prohibiting drilling beneath the Great Lakes bottomlands would ignore both science and experience. According to the recent report of the Great Lakes Conservation Task Force, there have been no reports of any leakage of oil or gas into Great Lakes waters from the existing wells. As the MESB explained in its 1997 report, there are thousands of feet of impermeable rock strata above the oil and gas reservoirs; if any hydrocarbons could leak through these layers, the reservoirs no longer would contain any oil or gas. According to the Board, "In Michigan, no subsurface fluids of any type have ever reached the surface through overlying formations directly above the bottom hole location of a directional well." In regard to the risk of ecological damage at the wellhead, the MESB pointed out that any

such impact can be minimized by identifying and prohibiting development in ecologically sensitive areas, using advanced but proven technology, and employing rigorous permit requirements.

Since the MESB report came out, both the DNR and the DEQ responded with increased protections, including those in Supervisor of Wells Instruction 2-97, which incorporates many of the Board's recommendations. The DNR has modified its leasing policy to provide public notice and a comment period before the Natural Resources Commission reviews a proposed lease of Great Lakes bottomlands; the lease agreement contains a 1,500-foot nondevelopment setback from the shoreline; and the DNR is conducting a coastal inventory. In cooperation with the DEQ, the DNR will review bottomland lease applications to identify sensitive environmental features and determine whether acceptable sites for oil and gas development exist.

#### **Opposing Argument**

Enacting a ban on drilling beneath the Great Lakes would prevent the recovery and use of what could be a significant quantity of available resources. According to representatives of the Michigan Oil and Gas Association, it is estimated that approximately \$1 billion worth of oil and gas exists near the shoreline in Manistee and Mason Counties. In addition, the DNR previously estimated that there are between 22 and 33 potential sites along the Lower Peninsula shoreline where productive wells could be drilled beneath the Great Lakes. These sites represent resources that could be used in Michigan homes, businesses, and factories. Moreover, extracting the oil and gas would produce valuable revenue for the Michigan Natural Resources Trust Fund, which receives rents and royalties from mineral resource exploration and development, and is used to acquire and develop recreational land in the State. In addition, using the Great Lakes bottomlands reserves could reduce the State's dependence on oil and gas imported from other states and countries.

#### **Opposing Argument**

The environmental threat posed by oil and gas drilling is minimal compared with the harm done by many other permissible activities. For example, recreational boating releases a considerable amount of motor oil into the

State's waters. In addition, pipelines under the lakes and freighters hauling oil and gas across them present a much greater danger to the environment than drilling under the bottomlands does.

Legislative Analyst: Suzanne Lowe

### **FISCAL IMPACT**

The bill would have an indeterminate impact on revenues to the Michigan Natural Resources Trust Fund. The extent to which additional lease, bonus, and royalty revenue would be realized in the absence of the provisions of this bill and the Federal ban cannot be determined.

Fiscal Analyst: Pam Graham

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.