

**The Florida Senate**  
**BILL ANALYSIS AND FISCAL IMPACT STATEMENT**

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

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Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

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BILL: SB 1618

INTRODUCER: Senator Diaz

SUBJECT: Construction Materials Mining Activities

DATE: January 24, 2020

REVISED: \_\_\_\_\_

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Anderson	Rogers	EN	<b>Favorable</b>
2.			BI	
3.			RC	

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**I. Summary:**

SB 1618 creates a pilot program in the Division of the State Fire Marshal (Division) within the Department of Financial Services for the monitoring and reporting of each blast resulting from the use of explosives for construction materials mining activities in Miami-Dade County. The bill requires the State Fire Marshal to hire or contract with seismologists to monitor and report, at minimum, the ground vibration, frequency, intensity, air blast, and time and date of the blast. The bill prohibits the seismologists from certain conflicts of interest or dishonest practices. The bill requires the State Fire Marshal to post the report on the Division’s website and to adopt rules to implement and enforce the act.

The bill requires a person who engages in construction materials mining activities to provide written notice to the State Fire Marshal of the use of an explosive for such activities in Miami-Dade County before the detonation of the explosive.

The bill appropriates, for the fiscal year 2020-2021, \$600,000 in recurring funds and \$440,000 in nonrecurring funds from the General Revenue Fund to the Division for the purpose of implementing the monitoring and reporting pilot program created under the bill.

**II. Present Situation:**

**State Fire Marshal**

The Chief Financial Officer of Florida is designated as the State Fire Marshal.<sup>1</sup> The State Fire Marshal has the authority to set standards, limits, and regulations regarding the use of explosives for construction materials mining activities.<sup>2</sup> This authority includes, directly or indirectly, the operation, handling, licensure, or permitting of explosives, and setting standards or limits,

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<sup>1</sup> Section 633.104, F.S.

<sup>2</sup> Section 552.30(1), F.S.

including, but not limited to, ground vibration, frequency, intensity, blast pattern, air blast, and time, date, occurrence, and notice restrictions.<sup>3</sup>

### **Construction Materials Mining Activities**

It is common practice for mining companies to use explosives as they extract sand and limestone from Florida soil.<sup>4</sup> These materials are used to make construction components such as aggregates, sand, cement, and roadbase materials.<sup>5</sup> The use of explosives is governed by federal, state, and local government laws.<sup>6</sup>

At the federal level, Title 30 of the U.S. Code and its various implementing regulations establish basic safety, health, certification, reporting, and environmental requirements for the use of explosives in mining operations. At the state level, ch. 552, F.S., governs the requirements and enforcement for the manufacture, distribution, and use of explosives.

As of 2000, state law preempts local regulations imposing standards, limits, or other regulations regarding the use of explosives for construction materials mining activities.<sup>7</sup> However, the State Fire Marshal may use his or her discretion to delegate the monitoring of and enforcement of regulations governing the use of explosives by construction materials mining activities, including the assessment and collection of reasonable fees, to the applicable municipality or county.<sup>8</sup> This must be accomplished by a written agreement with the local government.<sup>9</sup>

### ***Ground Vibration Limits***

Pursuant to Florida law, the State Fire Marshal must establish statewide ground vibration limits for construction materials mining activities in conformance with federal limits.<sup>10</sup> The legal limit in Florida is 0.5 inches per second peak particle velocity when using explosives within two miles of an urban development due to the potential damage to plaster-on-lath construction.<sup>11</sup>

### ***Permits***

To use explosives, a company must have a permit issued by the Regulatory Licensing Section in the Division of State Fire Marshal (“Division”) under the Department of Financial Services (DFS).<sup>12</sup> All blasting activities must be monitored by a seismologist. There are restrictions on the use of explosives, including limiting activity to daylight hours between 8 a.m. and 5 p.m.,

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<sup>3</sup> *Id.*

<sup>4</sup> DFS, Division of State Fire Marshal, *Mine Blasting Information*, [https://www.myfloridacfo.com/Division/SFM/BFP/mine\\_blasting.htm](https://www.myfloridacfo.com/Division/SFM/BFP/mine_blasting.htm) (last visited Jan. 22, 2020).

<sup>5</sup> Section 552.30(1), F.S.

<sup>6</sup> 30 U.S. Code; s. 552.30(2), F.S.; Fla. Admin. Code R. 69A-2.024. For examples of local ordinances, see Miami-Dade County’s Code of Ordinances, §13-4; City of Miramar’s Code of Ordinances, §2-66.

<sup>7</sup> Ch. 2000-266, Laws of Fla.

<sup>8</sup> Section 552.30(2), F.S.

<sup>9</sup> Fla. Admin. Code R. 69A-2.024(9)(a).

<sup>10</sup> *Id.*; see United States Bureau of Mines, *Report of Investigations 8507, Appendix B - Alternative Blasting Level Criteria* (Figure B-1), available at <https://www.osmre.gov/resources/blasting/docs/USBM/RI8507BlastingVibration1989.pdf>.

<sup>11</sup> Fla. Admin. Code R. 69A-2.024(15).

<sup>12</sup> Fla. Admin. Code R. 69A-2.024(3).

Monday through Friday.<sup>13</sup> Blasting is prohibited on weekends and official holidays unless consent is granted by the State Fire Marshal.<sup>14</sup>

A person who is permitted to engage in construction materials mining activity must submit written notification to the county or municipality where the activity is to be conducted after the issuance of a permit and at least 20 days prior to a blast. Such person must also submit subsequent notices following permit renewals and revisions.<sup>15</sup>

### ***Reporting***

Pursuant to DFS rules, each person engaged in construction materials mining activity shall submit to the State Fire Marshal, upon request, the results of ground vibration and air blast measurements, along with specific information including the date and time of the blast and amount of explosives.<sup>16</sup>

### ***Seismologists***

Seismology is the study of earthquakes and related phenomena. A seismologist studies the Earth's structure and other geological events for commercial and other purposes.<sup>17</sup> Seismologists can conduct research, record and analyze data, or apply their knowledge to help detect and monitor explosions.

Ground vibration measurements made pursuant to DFS rule must be made by a seismologist that:

- Has five years of continuous experience measuring and evaluating levels of ground vibration and air overpressure produced by blasting;
- Has demonstrable expertise in the use, location, and operation of seismographic equipment and analysis of seismographic data;
- Has prior experience in monitoring side effects produced by blasting used in construction materials mining activity;
- Has not engaged in dishonest practices relating to the collection or analysis of data or information regarding the use of explosives in construction materials mining; and
- Is not an employee of the mining permit holder, blaster, or user.<sup>18</sup>

A seismologist may not be an employee of a mining permit holder, blaster, or user, or another entity regulated under ch. 552, F.S., to be considered independent.<sup>19</sup> In addition, the seismologist may not have been an expert witness, investigator, or consultant for the mining permit holder, blaster, or user or for an aggrieved party in a legal action where the mining permit holder, blaster, or user is alleged to have caused damages.<sup>20</sup>

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<sup>13</sup> Fla. Admin. Code R. 69A-2.024(6).

<sup>14</sup> *Id.*

<sup>15</sup> Fla. Admin. Code R. 69A-2.024(8).

<sup>16</sup> For full list of requirements, see Fla. Admin. Code R. 69A-2.024(7).

<sup>17</sup> U.S. Bureau of Labor Statistics, *You're a what? Seismologist*, Jan. 2015, <https://www.bls.gov/careeroutlook/2015/youre-a-what/seismologist.htm> (last visited Jan. 22, 2020).

<sup>18</sup> Fla. Admin. Code R. 69A-2.024(4).

<sup>19</sup> Fla. Admin. Code R. 69A-2.024(2).

<sup>20</sup> *Id.*

### ***Complaints***

The State Fire Marshal is required to investigate any alleged violation of ch. 552, F.S.<sup>21</sup> A person who believes that a mining operation is in violation of state law or DFS rules, or that the operation's use of explosives is unsafe or causes damage to the property of others, may file a complaint with the Division.<sup>22</sup> The Division suggests including the following information in a complaint:

- The date and time of the blast;
- Photographs;
- Written statements from witnesses;
- Reports by independent inspectors or experts who have inspected the affected property;
- Samples of damaged material; and
- Other material or information that will support the facts leading to the complaint.<sup>23</sup>

If the Division determines, through investigation, that the complaint is justified and a violation occurred, it has the authority to impose administrative penalties against a mining company that exceeds established blasting limits or violates other laws or rules.<sup>24</sup> These penalties range from a monetary fine to the suspension or revocation of the company's permit.<sup>25</sup>

### **Miami-Dade Blasting Concerns**

The Lake Belt Region in Miami-Dade County provides over half of the limestone that Florida requires, which can only be extracted by blasting.<sup>26</sup> Several communities within Miami-Dade County have concerns about the blasting activities in their area and the effects on their residences. Miami-Dade County enacted an ordinance that requires persons who use explosives and blasting agents, generally, to obtain a county occupational license and/or user permit to perform blasting in the incorporated and unincorporated areas of the county in addition to operating pursuant to statutory requirements.<sup>27</sup>

With regard to regulation of blasting activity, the Town of Miami Lakes has made unsuccessful attempts to limit blasting.<sup>28</sup> The City of Miramar banned all blasting in the city in 1999, but the effects of blasting performed outside of city limits are still felt by residents within the city.<sup>29</sup> The City of Miramar also created an advisory committee in 2017 as an information source and to facilitate communication between the city and its residents who are impacted by mining.<sup>30</sup> The

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<sup>21</sup> Fla. Admin. Code R. 69A-2.024(11).

<sup>22</sup> DFS, Division of State Fire Marshal, *Blasting in Florida, A guide to filing complaints*, available at [https://www.myfloridacfo.com/Division/SFM/BFP/Documents/Blasting\\_in\\_Florida\\_brochure.pdf](https://www.myfloridacfo.com/Division/SFM/BFP/Documents/Blasting_in_Florida_brochure.pdf).

<sup>23</sup> *Id.*

<sup>24</sup> Sections 552.151, 552.161, and 552.171, F.S.; Fla. Admin. Code R. 69A-2.024(11).

<sup>25</sup> *Id.*

<sup>26</sup> DEP, *Limestone, Shell, Dolomite*, <https://floridadep.gov/water/mining-mitigation/content/limestone-shell-dolomite> (last visited Jan. 22, 2020); see also South Florida Water Management District, *Lake Belt Mitigation Committee*, <https://www.sfwmd.gov/our-work/lake-belt-committee> (last visited Jan. 22, 2020).

<sup>27</sup> Miami-Dade County's Code of Ordinances, §13-4.

<sup>28</sup> Town of Miami Lakes, *Blasting Concerns*, [https://www.miamilakes-fl.gov/index.php?option=com\\_content&view=article&id=1482&Itemid=866](https://www.miamilakes-fl.gov/index.php?option=com_content&view=article&id=1482&Itemid=866) (last visited Jan. 22, 2020).

<sup>29</sup> City of Miramar, *Blasting Concerns*, <https://www.miramarfl.gov/388/Blasting-Concerns> (last visited Jan. 22, 2020).

<sup>30</sup> City of Miramar's Code of Ordinances, §2-66.

City of Doral monitors blasting activity and daily blasting records are kept by the quarries or an independent seismologist.<sup>31</sup>

### **2018 Mine Blasting Study**

In 2017, the Florida Legislature appropriated funds to DFS to allow it to contract for a study to review whether the established statewide ground vibrations limits for construction material mining activities were still appropriate and to review any legitimate claims for damages caused by such mining activities. The study was required to include a review of measured amplitudes and frequencies, structure responses, theoretical analyses of material strengths and strains, and assessments of home damages.<sup>32</sup> The SFM's selected vendor, RESPEC, Inc., delivered its final study to DFS at the end of July 2018.<sup>33</sup>

The study concluded that limiting vibrations to 0.5 inches per second was overly restrictive and suggested changing the ruling to address plaster-on-lath and drywall construction. The study also concluded that the two-mile urban development distance requirement from blasting had no scientific justification and recommended eliminating it or replacing it with a requirement with scientific support. Since the study, there have not been any revisions to state law or DFS rule.

## **III. Effect of Proposed Changes:**

### **Legislative Findings**

The bill revises s. 552.30, F.S. The bill provides legislative findings that:

- Construction materials mining activities require the use of explosives to fracture the material before excavation;
- The use of explosives results in physical ground vibrations and air blasts that may affect other property owners in the vicinity of the mining site;
- It is in the best interest of the public to ensure that blasts resulting from the use of explosives for construction materials mining activities are accurately monitored and reported to ensure the blasts do not exceed physical ground vibration and air blast limits; and
- More permits for construction materials mining activities have been issued to entities operating in Miami-Dade County than any other county in the state.

### **Monitoring and Reporting Pilot Program**

The bill creates a pilot program in the Division of the State Fire Marshal (Division) within the Department of Financial Services (DFS) for the monitoring and reporting of each blast resulting from the use of explosives for construction materials mining activities in Miami-Dade County.

The bill requires the State Fire Marshal to hire or contract with seismologists to monitor and report each blast resulting from the use of explosives for construction materials mining activities

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<sup>31</sup> City of Doral, *Blasting/Mining Information*, <https://www.cityofdoral.com/residents/blasting-mining-information/> (last visited Jan. 22, 2020).

<sup>32</sup> Section 552.30(3), F.S.

<sup>33</sup> Respec, *Construction Materials Mining Activities Consultation and Study Preparation Services Final Report*, July 2018, available at <https://www.myfloridacfo.com/Division/SFM/BFP/documents/MineBlastingStudy.pdf>.

in the county, including, at minimum, monitoring and reporting the ground vibration, frequency, intensity, air blast, and time and date of the blast. The State Fire Marshal must post the reports on the Division's website.

The bill prohibits a seismologist that is hired or contracted by the state to conduct the monitoring and reporting required under the bill from:

- Being employed by or under contract with a person who engages in or contracts for construction materials mining activities; or
- Engaging in dishonest practices relating to the collection or analysis of data or information regarding the use of explosives in construction materials mining activities.

### **Notice Requirements**

The bill requires a person who engages in construction materials mining activities to provide written notice to the State Fire Marshal of the use of an explosive for such activities in Miami-Dade County before the detonation of the explosive.

### **Rulemaking**

The bill requires the State Fire Marshal to adopt rules to implement and enforce the bill.

### **Appropriation**

The bill appropriates, for the fiscal year 2020-2021, the recurring sum of \$600,000 and the nonrecurring sum of \$440,000 from the General Revenue Fund to the Division for the purpose of implementing the monitoring and reporting pilot program created under the bill.

### **Effective Date**

The bill provides an effective date of October 1, 2020.

## **IV. Constitutional Issues:**

### **A. Municipality/County Mandates Restrictions:**

None.

### **B. Public Records/Open Meetings Issues:**

None.

### **C. Trust Funds Restrictions:**

None.

### **D. State Tax or Fee Increases:**

None.

E. Other Constitutional Issues:

None.

**V. Fiscal Impact Statement:**

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

There will be a negative fiscal impact to the Division to create the monitoring and reporting pilot program, hire or contract with seismologists, and adopt rules. However, an appropriation has been provided under the bill so the impact may be offset if it covers the costs incurred by the Division.

**VI. Technical Deficiencies:**

None.

**VII. Related Issues:**

None.

**VIII. Statutes Affected:**

This bill substantially amends section 552.30 of the Florida Statutes.

**IX. Additional Information:**

A. Committee Substitute – Statement of Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.