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**Economic Analysis of Mining Impacts: Flaws and Inadequacies**

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**Ten Great Mistakes about the Economics of the Florida Rock Mining Industry:**

**True or False, Explain Your Answer**

- 1. The biggest single buyer of limestone rock in the state is the Florida Department of Transportation (FDOT).**

**False!** FDOT buys nothing directly, but its contractors do. But my research finds that the road-building sector is the fourth, NOT the first major sector that buys limestone quarry rock. The first three sectors are Ready-mix concrete, New single-family residences and the Cement sector. (See my Table 1. These data are from IMPLAN -- Impact Analysis for Planning, data base for Miami-Dade County.)

Further questions: If rock is in such short supply, why aren't the other "users" of rock also lobbying to open up new mines and increase supply? Could the public interest be compromised by the close connection between rock mining (private enterprise) and FDOT (public), with the latter acting as a publicly-funded lobby for the private sector?

- 2. If rock mining is curtailed in South Florida, as the Federal Judge Hoeverler ordered in August 2007, the entire construction industry of the state will soon collapse and massive unemployment will spread.**

**False!** Twenty percent of the Everglades mines have been shut since last August, and there has been no "massive employment" anywhere. On the contrary, the national recession has hit Florida construction hard. A recent Dodge Construction Potentials Bulletin (Oct. 2007) shows the value of residential construction fell by 47%, road and

bridge construction rose by 36%, but the value of total construction is down by 19.3%. (See accompanying Table 2, line 4, cols. 7-8.)

Further questions: If the rise in road-building has not fully compensated for the decline in home construction, how could there be a shortage of rock? Am I missing something?

3. **The shut down of the Everglades rock mines has caused shortages of rock and increase in price.**

**False!** The tax payments by the Lake Belt mines to the State indicate a decline in sales of rock beginning in January 2007, seven and a half months before the Judge's ruling! Sales, which had been steady at 4.5 million tons per month, fell to an average of 3.5 million tons per month since Jan. 2007. This voluntary cut-back has created a "shortage" and has kept prices high despite falling overall demand for rock. (See accompanying Chart 1.)

Furthermore, quarterly employment data for each mine in the state given by the Mining Health and Safety Administration (MHSA), shows no cut in employment by the mining companies until November 2007 despite a decline in sales beginning in January 2007! This suggests that the companies did NOT cut production; that is, they maintained production, cut sales, and stockpiled the inventories to keep prices high. Then, following the Court Ruling in August, high prices and market shortages are blamed on the Judge!

4. **The increase in rock prices has caused the road-building costs to sky-rocket.**

**False!** FDOT Chief Engineer Anath Prasad has written that the rising road prices are due more to increasing cost of structural steel and to the skyrocketing price of oil, which affects all energy costs and especially the cost of asphalt. (See "Rising Construction Costs –The Florida Story" Sept. 11, 2007). Furthermore, our IMPLAN data base shows that the total contribution of value of rock in road building (and also in house construction, by the way) is a very small component of total costs, less than 5% of total costs. So, why is the "blame" for highway shortages laid to rock mining and not to other components which are more significant, such as oil or steel?

**5. The solution to rising rock costs is to permit more mines and open more mines quickly.**

**False!** There may be considerable over-permitting already. There is no single inventory of State-wide permits, their area, depth, and mineral availability. A master file should be composed from DEP and Water Management District permits.

What's the rush to stream-lining the permit process in order to "get more rock" when there might already be a surplus? One motivation of the traditional companies may be to pre-empt other competitors from getting the rock first and thus counter the new "outside" companies that are in the process of creating a new "Lake Belt" in Palm Beach County which excludes the traditional major players?

Many mines are not working at capacity. Florida Rock's giant Ft. Myers Quarry is working only one shift, and by going to two, it admits that this increase alone could make up for the loss due to the Everglades shutdown. On my recent tour of the Everglades mines, I saw only one --the very largest rig—working on Sunday; all the other mines were closed. This means that another 17% increase is available by working seven rather than six days, if rock were indeed in short supply.

Three new large mines have just been permitted in Palm Beach County. What will their impact be on total supply? In Miami-Dade, a single, relatively small mine has just been permitted to the County on the site of the old Opa Locka Airport (West), outside the Lake Belt. It may be a "small" mine, but its total reserves are the equivalent of Florida's total supply for a single year. In short, before crying, "Shortage! Help!" the State should first compute the total rock permitted and why it is or is not being mined.

**6. Rock is a heavy, low-value material, and high transport costs do not justify carrying rock long distances. Nor can the Florida ports handle increased imports. Therefore, we must find more rock in Florida to meet the increased demand.**

**False!** It is true that rock is heavy and relatively low value per ton. But there has been a revolution in transport costs for ocean and barge shipping and big changes in harbor technologies. All this is making low-cost foreign rock from the Yucatan, the Dominican Republic, Nova Scotia, and the Bahamas, very competitive with higher-price Florida rock.

The Director of the Port of Tampa reported to the Aggregates Task Force in January 2008 that Tampa is building a new aggregate terminal and will increase its imports by a minimum of 8 million tons and possibly to 10 or 12 million tons per year. In 2007, Port Canaveral opened a special facility for aggregate imports. It does appear that the Florida ports, which are competitive, do react to the market need by expanding their capacity to import aggregate. What is the rush to permit even more Florida mines when well-established mines are knocking at our doors?

- 7. We should not import foreign rock, especially from the Yucatan, as it might damage the fragile environment of that underdeveloped region.**

**I don't know about this one!** All of a sudden, the rock miners have become environmentally-sensitive when imports are mentioned! I have no information on the Yucatan mines, but Vulcan/Florida Rock should respond to such inquiries. The new mines in the Dominican Republic that will send rock to Tampa are located in the sparsely-populated desert section near the Dominican-Haitian border. It may be a good idea to insist on an Environmental Impact Statement for imports and to certify them as "green" as they are in the US.

- 8. The new consolidations in the industry -- (a) Vulcan buying Florida Rock, and (b) CEMEX buying Rinker -- will bring greater economies of scale, efficiencies, lower prices, and more supply to Florida.**

**False!** Prior to these mergers, the Anti-Trust Division of the U.S. Justice Department required all the companies to divest themselves of certain concrete plants and quarries in various markets in order that competition NOT be lessened by each merger. However, the Justice Dept. did not examine the potential impacts on the FL market of removing

Vulcan from aggressively invading that market through imports because it now owns a major domestic producer (Florida Rock).

The typical results of a tighter oligopoly are larger firms, lower costs, less competition, higher prices, higher profits, and more less overall output (“monopolistic competition”).

9. **The industry is very competitive. The Strategic Aggregates Study (March 2007) lists 88 producing mines in Florida.**

**False!** The State’s 88 mines are owned by 49 companies, but the largest single one, (Rinker/Cemex), accounts for more than a third of the state’s entire output! The remaining three giants, (Florida Rock/Vulcan; Vecellio & Grogan; and Tarmac/Titan), together account for another third.

The top four companies control 68.2% of Florida production! The next four firms (Limestone Products, Jahna, Dixie Lime and Stone, and Bedrock Resources) control 11.3% of the market, and the remaining forty-one companies have 20.5% of the market.

In summary, the market is a very highly-concentrated oligopoly (few sellers), but with a competitive regional “fringe.” The giant firms may, in effect, “set” a high price by restricting production, and the other firms accept the oligopoly price and share in the higher profits.

Competition could potentially come from imports, unless the foreign mines are also owned by the oligopoly (Vulcan/Florida Rock, in this case).

The barrier to entry which, in effect, keeps out or admits new members to this elite and profitable club is access to a permit which transforms low-value swamp land into mega-dollar reserves, as we have seen in the Everglades Lake Belt and now, in Palm Beach County, all justified as part of water storage and Everglades Restoration.

**10. The public is getting a fair picture of this industry from the Aggregate Task Force Report (2008) and has enough information to make the best possible decisions regarding the public interest.**

**False!** The public should know:

(a) the true demand for rock by all users, not just the outdated projections by the Road Builders which ignore the current recession;

(b) the true supply side -- who is and is not producing;

(c) oligopoly market behavior and how the giant firms affect prices and output. Explain how prices could be rising when demand is falling.

(d) “externalities,” that is, costs incurred but NOT paid by the mining companies, such as costs relating to air, water, and noise pollution, environment degradation, road safety, and traffic congestion; also costs “shifted” to county government such as the cost of enforcing the environmental laws or the monitoring of complicated and dispersed operations.

Hence, the urgency and importance of this Conference on Mining Impacts to the Human and Natural Environments.

(End paper; here follows Tables 1 and 2 and Chart 1)