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# Chapter 8 Mineral Resources

## I. Vision

Sand and gravel are the only significant mineral deposits in Talbot County. They are principally located east of US 50 and are generally found on major stream corridors in areas where conservation of forests and farmlands are a key issue. Due to adequate safeguards, extraction and closure of the sites does not create environmental damage. The use of abandoned sites as dumping grounds for waste materials is prohibited. Site recovery and conversion to ponds and wooded areas controls runoff, helps maintain ground water tables, beautifies the landscape and creates the opportunity for parks and recreational areas.

## Goal

*Conserve major accessible mineral resource deposits for future extraction while safeguarding the public by minimizing environmental impacts resulting from extraction and transport of resource deposits.*

## II. Introduction

The sand and gravel extraction industry in Talbot County provides basic raw materials for the construction and paving industries and plays an important role in supporting local growth and development. Because geologic conditions dictate the location of economically recoverable mineral deposits, opportunities to meet the future demand of the County construction industry will be controlled by the availability of these deposits and future access to these deposits for construction industry use.

## III. Background Information

The major mineral resources of Talbot County consist primarily of sand and to a lesser extent, gravel. There are no known deposits of coal, building stone, precious ores, or base metals.

Sand and gravel deposits in Talbot are confined principally to two stratigraphic units: the Beaverdam Sand, and the Pensauken. These sand and gravel-bearing units, depending on their locations, can be in excess of 25 feet thick. Map 8-1 shows the general location of these sand and gravel deposits in Talbot. It should be noted that sand and gravel deposits commonly change in thickness and composition over short distances. Therefore, specific site investigations are typically required to estimate reserves on a specific site.

Based on estimates provided by the Minerals, Oil and Gas Division of the Water Management Administration, Maryland Department of the Environment and information provided by various sand and gravel operators, production has been in the range of 200,000 annually for the past several years.

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The contribution of the industry to the local economy is evident in the estimated wholesale value of production which has grown from just over \$500,000 annually during the early 1990's to an average of over \$700,000 annually over the past five years. The value of the local mineral extraction industry cannot be measured in tonnage alone. To be economical, sand and gravel must be mined close to where they will be used. According to industry and regulatory agency sources, transportation costs quickly exceed the on-site cost of these resources, with the price of sand and gravel roughly doubling every 25 to 40 additional miles the material is transported.

## **A. Existing Policies and Regulatory Framework**

Surface mining activities are regulated within the State of Maryland under Subtitle 6A, Natural Resources Article, Annotated Code of Maryland. This law is administered by the Maryland Water Management Administration, Department of the Environment.

In recent years, the County has enacted policies prohibiting mining activities in the Critical Area Buffer and designated habitat protection areas. Proposals for new mining operations are subject to site plan review for compliance with environmental protection regulations.

To insure mining sites are restored to a usable state, appropriate action must be taken. Currently, the licensing process for an extraction permit requires reclamation plans for any site mined. In addition, bonds are posted to insure the availability of funds for reclamation should an operator abandon the site. The restorative guidelines and regulations have been successful in ensuring the restoration of sites where extraction has taken place since the licensing process was established. Reclamation of abandoned extraction sites is also a concern for old mining sites that have not been restored. An initial step toward addressing the reclamation of these sites would require an inventory and evaluation of the site to determine reclamation needs and their potential for other land uses.

Surface mining activities are permitted, by special exception, in the Rural Agricultural Conservation District and Rural Conservation District.

### **Mineral Resource Policies**

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- C08.P. 1. The County should insure that all available measures are taken to protect the natural environment from all sources of pollution resulting from mineral extraction activities.
- C08.P. 2. The County will maintain land use policies and regulations that discourage the pre-emption of mineral extraction from other uses.
- C08.P. 3. The County will require that post-excitation uses for mined sites be consistent with county plans and regulations.
- C08.P. 4. The County will require that any post excavation use as a rubblefill is limited to County generated rubble.
- C08.P. 5. The County will utilize appropriate methods for protecting existing neighborhoods from the impacts of adjacent extraction operations and the transportation of extracted resources.

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- C08.P. 6. The County will provide adequate regulation and monitoring of mineral extraction operations to insure compliance with applicable permitting requirements including those established for reclamation or restoration of mineral sites.
- C08.P. 7. The County will identify and utilize any programs that can support reclamation or reforestation of older or abandoned borrow pits or mined sites not subject to reclamation requirements.
- C08.P. 8. The County will provide opportunities for construction of rubble recycling facilities in conjunction with mineral extraction facilities.

### **Mineral Resource Implementation Strategies**

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**The County should monitor the effectiveness of current zoning provisions which permit mineral resource extraction activities by special exception in the RAC and RC districts.**

Action: The County should monitor mineral resource extraction projects to ensure compliance with the zoning ordinance.

Current ordinance provisions should be monitored to insure they accomplish two purposes.

- Maintain low permitted densities and encourage cluster development on the majority of the land area where recoverable sand and gravel deposits may be located to insure access to these resources is available in future years.
- Do not create a cumbersome permitting process that denies reasonable access by sand and gravel operators to lands with economically recoverable deposits.

**The County should protect the natural environment from all sources of pollution resulting from mineral extraction activities.**

All new mineral extraction sites should provide a 100 foot buffer of natural vegetation between the operation and the edges of streams. Wash plants, including ponds and spoil piles, should not be located and equipment should not be stored within this buffer area.

**The County should require reclamation and post excavation use be identified as part of the application process.**

To insure mining sites are restored to a usable state, appropriate action must be taken before, during, and after extraction. Currently, the licensing process for an extraction permit requires reclamation plans for any site mined. As part of the application process, the post-extraction intended use of the property must be identified. The restoration plan should be consistent with the future land use of the site. The County recommends the following post-extraction uses:

- Recreational land uses: parks and lakes
- Forestry
- Aquaculture
- Residential Development

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- Disposal of non-toxic solid fill material, clean fill material (such as rubble) and disposal of inorganic solid fill material (fly ash). Fill material must be from Talbot County.

**The County should inventory abandoned extraction sites.**

Action: The County should seek the assistance of the Maryland Department of the Environment in conducting such an inventory as a cooperative effort.

Reclamation of abandoned extraction sites is a concern for old (i.e. pre-Natural Resources Law) mining sites that have not been restored and for which no closure bond was required. An initial step toward addressing the reclamation of these abandoned sites would require an inventory and evaluation of all abandoned sites to determine reclamation needs and their potential for other land uses.

Such an inventory could provide a basis for future targeting of reclamation priorities, evaluating funding needs, and assessing opportunities to secure funding assistance for reclamation of priority sites. Options for funding reclamation of abandoned sites include imposing a tax on mineral products, much as the Federal Superfund Program is funded by a tax on certain chemical feedstock. As an alternative, a tax exemption, reduction or rebate, in some amount, could be established for landowners who reclaim sites, thereby providing some incentive for accelerating the reclamation of abandoned sites.

**The County should reduce impacts to infrastructure.**

Action: Identify impact cost to county infrastructure if mining activity increases.

Mining operations in Talbot have been limited in number and have not significantly impacted the County road system. However, if mining activity in the County accelerates consistent with recent trends, the lack of consideration for long-term mining operation needs can cause increased damage to low-capacity roads by haulers' trucks, and disturbance to neighbors or travelers who utilize the same routes. The County should continue to monitor levels of extraction activity and be prepared at some future point, (should the need arise), to seek legislation to allow imposition of a surcharge or tax on mineral products that would generate revenue for a roadway maintenance or improvement fund. Such funding could be derived from a road tax on haulers, or a tax on sales of mineral products. These funds could be directed specifically to roads frequently used to haul mineral products, or pro-actively, to areas where the County wishes to facilitate recovery of mineral deposits.