

The Maryland-National Capital Park and Planning Commission  
 Prince George's County Planning Department  
 Development Review Division  
 301-952-3530



*Note: Staff reports can be accessed at [www.mncppc.org/pgco/planning/plan.htm](http://www.mncppc.org/pgco/planning/plan.htm).*

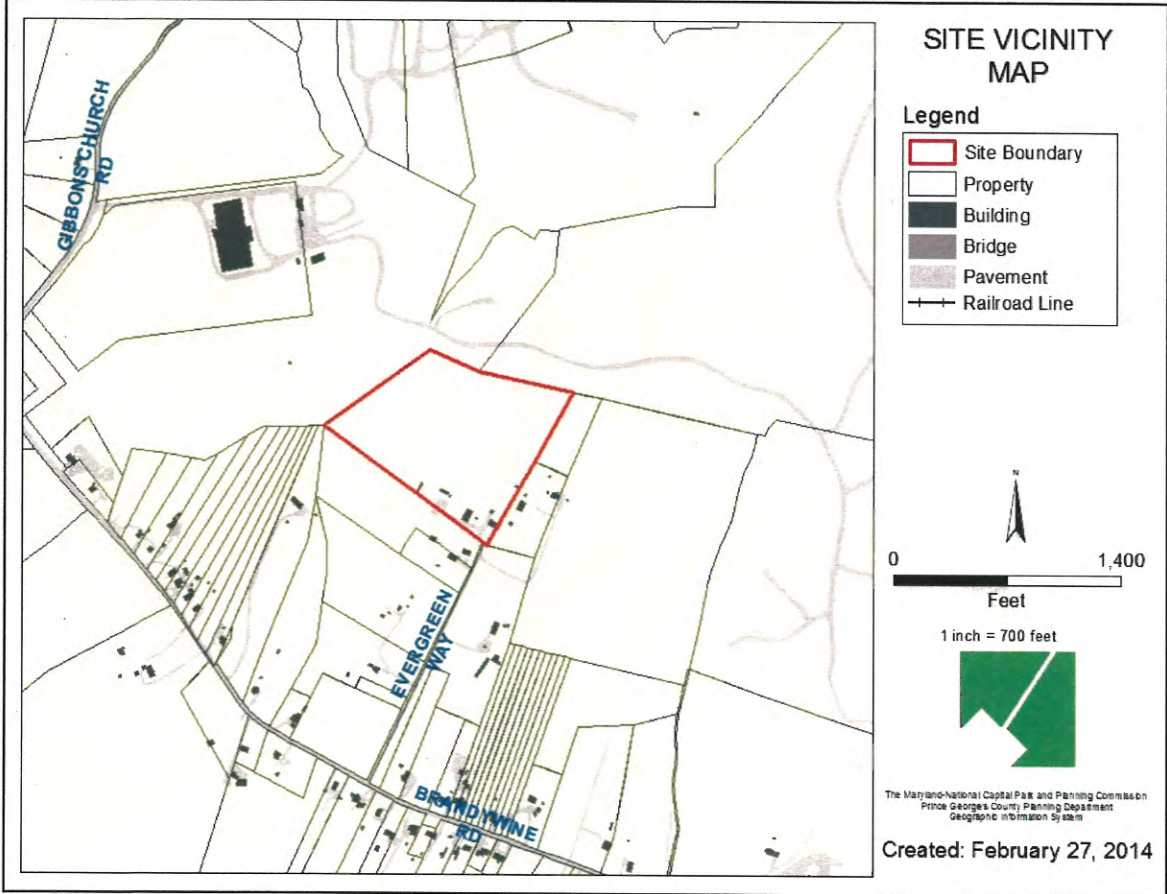
## Special Exception

## SE-4646

Application	General Data	
<b>Project Name:</b> Anthony George Project  <b>Location:</b> North of intersection of Evergreen Way and Brandywine Road (MD 381); approximately 3,748 feet south of intersection of Brandywine Road and Gibbons Church Road  <b>Applicant/Address:</b> Rock Hill Sand and Gravel P.O. Box 220112 Chantilly, Virginia 20153  <b>Property Owner:</b> Anthony George 15544 Brandywine Road Brandywine, Maryland 20613	Planning Board Hearing Date:	03/13/14
	Staff Report Date:	02/28/14
	Date Accepted:	07/22/09
	Planning Board Action Limit:	N/A
	Plan Acreage:	23.03
	Zone:	O-S
	Gross Floor Area:	N/A
	Lots:	N/A
	Parcels:	N/A
	Planning Area:	86B
	Tier:	Rural
	Council District:	09
	Election District	11
	Municipality:	N/A
200-Scale Base Map:	219SE10	

Purpose of Application	Notice Dates	
Special Exception for surface mining in the O-S Zone.	Informational Mailing	01/05/09
	Acceptance Mailing:	06/25/09
	Sign Posting Deadline:	N/A

Staff Recommendation		Staff Reviewer: Tom Lockard	
APPROVAL	APPROVAL WITH CONDITIONS	DISAPPROVAL	DISCUSSION
	X		



THE MARYLAND-NATIONAL CAPITAL  
PARK AND PLANNING COMMISSION

PRINCE GEORGE'S COUNTY PLANNING BOARD

**TECHNICAL STAFF REPORT:**

TO: The Prince George's County Planning Board  
The Prince George's County District Council

VIA: Jimi Jones, Zoning Supervisor, Development Review Division

FROM: Tom Lockard, Planner Coordinator, Zoning Section, Development Review Division

SUBJECT: **Special Exception Application No. SE-4646**  
**Anthony George Project**

REQUEST: **Surface mining of sand and gravel in the O-S Zone**

RECOMMENDATION: **APPROVAL with conditions**

---

NOTE:

The Planning Board has scheduled this application to be reviewed on the agenda date of March 13, 2014. If the Planning Board decides to hear the application, it will be placed on a future agenda.

Any person may request the Planning Board to schedule a public hearing. The request may be made in writing prior to the agenda date or in person on the agenda date. All requests must specify the reasons for the public hearing. All parties will be notified of the Planning Board's decision.

You are encouraged to become a person of record in this application. The request must be made in writing and addressed to the Prince George's County Office of the Zoning Hearing Examiner, County Administration Building, Room 2184, 14741 Governor Oden Bowie Drive, Upper Marlboro, MD 20772. Questions about becoming a person of record should be directed to the Hearing Examiner at 301-952-3644. All other questions should be directed to the Development Review Division at 301-952-3530.

---

FINDINGS:

A. **Location and Field Inspection:** The subject property is a large, irregularly-shaped tract of land, approximately 23 acres in area in the Open Space (O-S) Zone. It comprises a single parcel (Parcel 17) on Tax Map 156, Grid D-2. The site is located on the north side of Brandywine Road (MD 381) on Evergreen Way, 3,500 feet east of Gibbons Church Road. The site is partially wooded, although substantial portions of the site were cleared for pastures and agriculture. There is one residence in the southeast corner of the site, accessed from Evergreen Way from the south. There are several other structures (barns, sheds and other outbuildings) scattered across the site. These scattered buildings are shown to be removed, however, a cluster of four buildings (including the residence) in the southeast corner will be retained. The property drains into the Rock Creek watershed, in the Spice Creek drainage basin of the Patuxent River. The property contains two unnamed regulated stream systems including wetlands and 100-year floodplain.

B. **Development Data Summary:**

	EXISTING	PROPOSED
Zone(s)	O-S	O-S
Use(s)	Pasture, Woodlands, Agriculture	Sand and Gravel Mine
Acreage	23.03	23.03
Parcels	1	1

C. **History:** The property was retained in the Open Space (O-S) Zone in the 2013 *Approved Subregion 6 Master Plan and Sectional Map Amendment* (SMA), which was approved via District Council Resolution CR-83-2013.

D. **Master Plan Recommendation:** The 2002 *Prince George's County Approved General Plan* places the area of this property to be mined in the Rural Tier. The vision for the Rural Tier is protection of large amounts of land for woodland, wildlife habitat, recreation and agricultural pursuits, and preservation of the rural character and vistas that now exist.

The property is in Planning Area 86B (Baden Area) which was studied as part of the *Approved Subregion 6 Master Plan and Sectional Map Amendment* which was approved on July 24, 2013. The applicant used the 1993 *Subregion VI Study Area Master Plan and* (SMA) (area master plan) in their special exception application. The applicant's statement of justification references policies from the 1993 SMA, several of which have changed. The 2013 *Approved Subregion 6 SMA* continues to recognize the economic importance of the sand and gravel industry to the county.

This subject property was retained in the O-S Zone and the vision for the development of the area around the property has largely not changed since 1993. New policies, which are relevant to the applicant's proposal, are enumerated in the *Approved Subregion 6 area master plan*, along with Prince George's County Planning Board Resolution No 13-70 (PGCPB Resolution No. 13-70) and the Council Resolutions CR-82-2013 and CR-83-2013 DR-2 and should be applied to the application.

In reference to PGCPB Resolution No 13-70 (page 10), Policy 12, Strategy 2 of the 2013 *Approved Subregion 6 Master Plan and Sectional Map Amendment* (SMA), states to "involve community members in reviewing new and expanding projects, and in developing requirements for identifying post-reclamation uses as part of an amended special exception process. This work should be done in conjunction with the sand and gravel industry, landowners, government

officials, etc. so that post-reclamation land use activities are established in the PPA (Priority Preservation Area) and all other land where septic systems will be the only means of sewage disposal.”

The applicant indicates on page 4 of their Statement of Justification that “the Reclamation Plan shows that the site will be restored as pasture for horses after the mining operations are completed. This action will restore the site and make it suitable for potential future development, if deemed warranted.”

Reclaiming the site for pasture would be consistent with the future land use envisioned for the site. Similarly, low-density development which would not detract from the character of planned parks and trails, would also be consistent with this vision. Residential development is contingent upon the successful provision of well and septic on site, as the subject property is outside of the public water and sewer envelope.

- E. **Request:** The applicant is proposing a sand and gravel mining operation. They propose operations between the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, and 7:00 a.m. to 4:00 p.m. on Saturdays, excluding federal holidays. There will be no operations on Sundays. Environmentally sensitive portions of the property including floodplain, tree conservation areas, wetlands, steep slopes, and bufferyards will be preserved. Mining is shown to take place in two phases, beginning in the northern section of the site and progressing in a counter-clockwise direction. The area proposed to be mined is 15.91 acres of the total 23.03 acres. No structures scale or scale house are proposed. The material is proposed to be transported directly to an adjoining wash plant to the northwest without traversing off-site on public roads. From there, the material will be dispersed to job sites throughout the region.

The applicant estimates a five-year timeframe for mining. If the operation does extend beyond the statutory maximum five-year approval, a new special exception will be required for the use to continue.

- F. **Neighborhood and Surrounding Uses:** The neighborhood is generally defined by the following boundaries:

<b>North</b> —	North Keys Road
<b>East</b> —	Rock Creek
<b>South</b> —	Brandywine Road (MD 381)
<b>West</b> —	PEPCO right-of-way

The neighborhood is predominantly undeveloped and wooded. The surrounding properties are also zoned O-S, with the exception of the Guldesky sand and gravel processing facility located to the northwest, which is zoned I-2. A mix of woodlands and cleared areas, undeveloped land and light farming surround the property as well as scattered single-family detached homes and an existing sand and gravel mine (SE-4517) to the northeast.

- G. **Specific Special Exception Requirements for a Sand and Gravel Mine:** Section 27-410(a) of the Zoning Ordinance permits a sand and gravel mine in the Open Space (O-S) Zone, subject to the following:

- (a) **The surface mining of natural materials or deposits (including sand, gravel, or clay pits; rock or stone quarries; and the removal of earth or topsoil) may be permitted, subject to the following:**

- (1) **Heavy machinery may be used for the extraction of natural material or deposits from the site. Except in the I-2 Zone, heavy machinery may not be used for washing, refining, or other processing, unless a Special Exception is granted for sand and gravel wet-processing under the provisions of Section 27-405;**

The subject site is zoned O-S. Heavy machinery will only be utilized for the extraction and removal of sand and gravel from the subject site. A wash plant, also known as "wet-processing," is not proposed on-site; the materials are to be transported directly to the property located to the northwest for further processing.

- (2) **The use shall not be noxious, offensive, or otherwise objectionable by reason of dust, smoke, or vibration;**

Air quality issues have been addressed and are discussed in the associated Environmental Impact Report (EIR) and further in the Environmental Review Section below.

- (3) **The land areas exposed by the extraction and removal of natural materials or deposits shall be left suitable for development. A grading plan shall be submitted (along with the site plan) showing the existing and proposed ground elevations of the site, adjacent land, and all abutting streets. The exposed land area shall have a slope not greater than three-to-one (3:1), except where any portion of the site is developed for port or harbor facilities;**

A mining plan showing the proposed grading and a reclamation plan showing the final grades have been submitted. None of the proposed grades are greater than 3:1.

- (4) **The Special Exception shall be valid for not longer than five (5) years, except where the use is located:**
  - (A) **In an R-R Zone which is predominantly undeveloped for a radius of one (1) mile from the operation; or**
  - (B) **In an I-2 Zone;**

It is recommended that the special exception be conditioned to be valid for no more than five years.

- (5) **In addition to the requirements of Section 27-296(c), the site plan shall show an estimate of the time required for the removal of the material;**

It is recommended that the special exception be conditioned to be valid for no more than five years.

- (6) **At least sixty (60) calendar days prior to the hearing before the Zoning Hearing Examiner, the applicant shall file a traffic analysis**

**with the Zoning Hearing Examiner for inclusion in the record, and shall send a copy to the Planning Board. The traffic analysis shall include the volume of traffic expected to be generated by the operation, and shall identify the streets to be used between the site and the nearest street (to be used) that has a minimum paved width of twenty-four (24) feet for the predominant length of the street;**

A traffic report prepared by Lenhart Traffic Consulting, Inc. dated July 25, 2013, was submitted with the application. No off-site hauling is proposed for the subject application because the raw material is proposed to be transported directly to the existing processing facility located on the abutting property to the northwest.

- (7) Driveways or access points shall be identified on the site plan, and shall be located so as not to endanger pedestrians or create traffic hazards. The surface material to be used on the driveways shall be identified on the site plan. Any access driveway shall be at least twenty-two (22) feet wide, and shall be paved for a distance of at least two hundred (200) feet from the boundary line of the Special Exception.**

No off-site hauling is proposed as part of the mining operation, therefore, dump trucks are not proposed to enter the surrounding roadways. All traffic associated with the mining operation is proposed to enter the site via the proposed haul road to the north, which goes directly to a wash plant on adjoining property to the northwest.

- (8) The Technical Staff Report prepared in response to the application shall include a current, Countywide inventory of the locations, dates of approval, and conditions of approval concerning haul routes and estimated loads per day for all approved and pending Special Exceptions for sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining, as indicated by the record in the case. The inventory shall also include the locations of all nonconforming sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining operations throughout the County that were certified after September 6, 1974.**

This information has been provided in the EIR.

- (b) In the I-3 Zone, the use shall be staged in conformance with the required Conceptual Site Plan. The District Council may require (as a condition of approval) that this use be terminated prior to a Detailed Site Plan being approved for another use included on the Conceptual Site Plan.**

The subject site is zoned O-S.

- (c) In the M-A-C, L-A-C, E-I-A, R-U, R-M, and R-S Zones, no surface mining operation may be permitted after a Specific Design Plan for the subject property has been approved. An application for this Special Exception may only be accepted,**

**and the Special Exception granted, if no Specific Design Plan has yet been filed for the subject property.**

The subject site is zoned O-S.

- (d) In reviewing the application, the District Council shall consider the use of techniques which provide for noise attenuation.**

Noise issues have been addressed and are discussed in the EIR and in the recommended conditions provided in the Environmental Review section below.

- (e) On land which is located within a Chesapeake Bay Critical Area Overlay Zone, development is subject to Subtitle 5B.**

The subject site is not located in the Chesapeake Bay Critical Area Overlay Zone (CBCA).

- (f) In reviewing the application for compliance with the required findings set forth in Sections 27-317(a)(4) and 27-317(a)(5), the District Council shall consider the inventory required in Section 27-410(a)(8).**

The proposed mining site is located in a section of the county which has long been mined for sand and gravel. An updated inventory is attached to this report for the District Council's consideration. The inventory identifies one active mine in direct proximity to the subject property to the west and south, and there are other mining sites within the planning area that contribute truck trips to Robert Crain Highway (US 301). There are several other applications for mining activity currently pending in the neighborhood.

H. **Additional requirements for a surface mining facility:** Section 27-445.02 of the Zoning Ordinance contains the following additional requirements for a surface mining facility:

- (a) In order for any surface mining or sand and gravel wet-processing operation to continue, the requirements of this Section shall be met.**
- (b) The purposes of this Section are to prevent or control the detrimental effects of surface mining and sand and gravel wet-processing operations upon neighboring properties, and existing and proposed land uses in the general area.**
- (c) All surface mining and sand and gravel wet-processing operations shall meet the following requirements:**
- (1) The uses shall be operated in full compliance with applicable extraction and surface mining or sand and gravel wet-processing regulations;**

The applicant will obtain all necessary permits from the State of Maryland for the operation of a surface mine, subsequent to the approval of the special exception. The applicant intends to operate the surface mine in accordance with all permits.



- (2) **For the safety of residents and property, the operator of the facility shall take effective measures to control the speed of trucks utilizing his facility and neighboring streets;**

The State of Maryland, through their permitting process, and staff through recommended conditions address truck speed, monitoring, maintenance, and ownership. The conditions of approval will ensure this finding is met.

- (3) **The operator shall avoid depositing any debris upon any existing streets; and**

Proposed conditions require the applicant to use a water truck and sweeper truck as needed on its property, to minimize dust and to keep the public roads clear of debris. These conditions of approval will ensure this finding is met.

- (4) **The owner of the subject property shall be required to post and maintain a permanent, durable sign identifying the use as a surface mining or sand and gravel wet-processing operation, in accordance with the requirements of Section 27-629.**

The applicant will post the required signage in compliance with the appropriate regulations.

- (d) **On land which is located within a Chesapeake Bay Critical Area Overlay Zone, surface mining, sand and gravel wet-processing, or wash plants, including ponds, spoil sites, and equipment, are prohibited within the Buffer, as defined in the Conservation Manual. In addition, no surface mining or sand and gravel wet processing shall be located within:**

- (1) **Designated habitat protection areas, as described in the Conservation Manual;**
- (2) **The Buffer area, as defined in the Conservation Manual;**
- (3) **Any area where the use would result in the substantial loss of long-range (twenty-five (25) years or more) productivity of forest and agriculture, or result in a degrading of water quality; or**
- (4) **An area containing highly erodible soils.**

The subject property is not within a Chesapeake Bay Critical Area. No mining operations or equipment are located in any area prohibited by this provision.

- I. **Environmental Impact Report:** In addition to the required findings of the Zoning Ordinance, under Maryland State Law (Article 28 of the Maryland Annotated Code, Maryland-National Capital Park and Planning Commission, Section 8-110), an environmental impact report (EIR) must be prepared by The Maryland-National Capital Park and Planning Commission (M-NCPPC) whenever a request is made for a special exception to the Zoning Ordinance for the mining of sand and gravel in Prince George's County. The law requires that the report evaluate such a zoning request comprehensively by determining the impact of the proposed mining activities on:

1. Noise
2. Watershed and Water Quality
3. Airshed and Air Quality
4. Traffic and Traffic Safety
5. Biological Resources including wetlands, woodlands, and tree conservation
6. Any other environmental factors relating to the health, safety, and welfare of the residents of the affected area

The Environmental Planning Section prepared an EIR for this application (EIR-4646). It is attached to this report and contains a much more detailed analysis of potential impacts from this proposed use.

### **Background**

The EIR was prepared by the Environmental Planning Section and the Transportation Planning Section using information from previous EIRs, PGAtlas, information submitted by the applicant and other in-house references. All of the information submitted for the application can be found in the Planning Department's official file for Special Exception SE-4646.

### **Natural Resources Inventory**

An approved Natural Resource Inventory, NRI-017-10, was submitted with the application. There is a Primary Management Area (PMA) comprised of streams, stream buffers, wetlands, wetland buffers, 100-year floodplain, and steep slopes.

The 100-year floodplain shown on the plans is from a County approved study (FPS#201007). The Forest Stand Delineation (FSD) indicates the presence of two forest stands totaling 10.26 acres. Stand A is a young mixed hardwood stand and Stand B is a mature riparian hardwood stand. There are seven (7) specimen trees shown on the plan; however, trees 3 and 5 are located off-site.

The county issued a violation (NOV 29517-2011) for clearing that was previously done without a permit. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

The TCP2 and the Special Exception Mining Site Plan are in general conformance with the approved NRI. No revisions are required for conformance to the NRI. No revisions are required for conformance to the NRI.

### **Woodland Conservation**

This property is subject to the provisions of the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance because the gross tract area is greater than 40,000 square feet in size and there are more than 10,000 square feet of existing woodlands. A Type 2 Tree Conservation Plan (TCP2-047-09) was submitted.

The project is not grandfathered with respect to the Woodland and Wildlife Habitat Conservation Ordinance effective September 1, 2010 because there are no previous approvals for the site. The property is subject to woodland conservation violation notice (NOV 29517-2011) for clearing that was done without a permit prior to the submission of the current mining application. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

The Woodland Conservation Threshold (WCT) for this 23.03-acre property in the O-S zone is 50 percent of the net tract area, or 10.96 acres. The total woodland conservation requirement based on the amount of existing woodlands prior to the violation, the amount of clearing done under the violation, and the clearing proposed with the current mining application is 15.86 acres. The requirement is based on staff's calculations.

This woodland conservation requirement is proposed to be met with 6.44 acres of preservation, 5.15 acres of reforestation, and 0.48 acres of off-site credits; however, the proposal would only meet 12.07 acres of the 15.86 acre requirement. Additional woodland conservation must be provided to meet the entire requirement.

The plan indicates that there were 17.07 acres of net tract woodland on the site prior to the violation. Under the violation, 6.81 acres were cleared, leaving 10.26 acres of woodland. The current application proposes to clear an additional 2.68 acres, leaving 7.58 acres of undisturbed woodland on-site. Of the 7.58 acres of woodland that is proposed to remain undisturbed, only 6.44 acres is proposed to be preserved. It is not clear on the plan where the additional 1.14 acres of woodland preserved, but not counted toward the requirement, is located. It appears that the areas used for calculation purposes may have been based on gross tract areas, instead of the required net tract areas.

The worksheet shown on the TCP as submitted is not the standard Prince George's County worksheet and does not appear to account for the required reduction of wooded floodplain from the gross tract for net tract calculation purposes. The worksheet shall be revised to reflect the standard worksheet found in the Environmental Technical Manual (ETM). The calculations shall be revised to reflect the reduction of wooded floodplain from the gross tract woodland for the site. The entire woodland conservation requirement shall be met-on site to the extent practicable and, at a minimum, the site's woodland conservation threshold of 10.96 acres shall be met on-site. A copy of staff's calculations using the standard format is attached. Prior to certification of the TCP, the worksheet on the plan shall be revised to reflect the standard format and to reflect the correct areas of woodland conservation as shown on the plan. The plan shows two phases of mining; the standard phased worksheet must be used to reflect the woodland conservation requirements for each phase of mining and to reflect the requirements of the violation.

The plan requires technical revisions to be in conformance with the Woodland and Wildlife Habitat Conservation Ordinance. The TCP2 plan set consists of four (4) sheets labeled as follows: cover sheet, existing conditions sheet, on-site reforestation sheet, and on-site reforestation detail sheet. The approved NRI established all existing and environmental features located on the property. A sheet depicting only these features is not necessary for the TCP. The existing conditions plan sheet shall be removed from the TCP2 plan set. The plan sheet labeled as the on-site reforestation sheet shall be revised as the TCP2 plan sheet. This sheet must show all existing regulated environmental features as approved on the NRI (wetlands, wetland buffers, streams, stream buffers, 100-year floodplain, and primary management area) as well as the existing treeline and all proposed features per the TCP2 checklist. These features must be shown with the standard symbols per the ETM. All erroneous hatching shall be removed from the plan for clarity. The floodplain cannot be counted toward the woodland conservation requirement and must be removed from the graphic hatch pattern used to reflect the preservation area and all area labels shall be updated accordingly.

The plan notes and details conform to the standards of the ETM; however, several minor revisions are needed. Standard TCP2 note number 1 needs to be revised to refer to the purpose of the plan as not only meeting the requirements of the Special Exception, but also to meet the requirements of NOV 29517-2011. Note 1 also needs to be revised to remove the second sentence

in its entirety. The management plan notes need to be revised to reflect the standard 4-year management notes per the ETM. Because split rail fence is not required, the detail should be removed. The standard details for combined silt fence and tree protection fence (ETM detail 8) and the detail for combined earth dike and tree protection fence (ETM detail 7) must be added to the plan. Planting details must be added to the plan, including the standard detail for handling seedlings in the field (ETM detail 15) and/ or for larger caliper/ tublings as proposed. The reclamation note indicates that post mining planting will be determined by a landscape architect in conjunction with the property owner. This note must be revised to reflect the proposed planting information that is required to be shown on the plan. The proposed reforestation areas have been shown on the plan as required and planting charts have been provided; however, the charts need to be revised reflect the planting areas and requirements in acres, rounded to the nearest 1/100<sup>th</sup> of an acre, and must match the reforestation acreage shown on the plan and in the worksheet. The reforestation tables also reflect the use of several shrub species. While the planting of shrubs is acceptable for reforestation purposes, the credits given for shrubs are less than for trees. The reforestation tables must be revised to account for credits associated with the proposed planting. Because mining sites remove topsoil, planting conditions on reclaimed sites are often poor. Soil amendments are likely to be necessary prior to planting. The standard notes regarding soil testing and soil amendments for mining sites are attached and must be added to the plan.

A woodland conservation summary table has been provided on more than one sheet in the plan set and the areas reflected in these tables are not consistent across the sheets. The plan needs to be revised to provide a single woodland conservation summary table that is consistent with the woodland conservation area labels on the plan and with the areas used for calculation purposes in the woodland conservation worksheet.

There are several symbols shown on the plan that are not reflected in the legend, making it difficult to determine if all required information has been provided. The legend labels several existing features as proposed, such as the stream buffer and wetland buffer. These are existing features that should be labeled as such. Other required features are shown in the legend but not on the plan, such as the PMA. Other required features are shown on the plan but not in the legend, such as the reforestation areas and the phase line. Because the TCP is for a mining site, additional information is required to be shown on the TCP beyond the standard TCP information. This includes the grading and location of the noise mitigation berms. The plan must be revised to ensure that all required information is shown on the plan and accurately reflected in the legend using the standard symbols found in the ETM.

After all revisions have been made, the qualified professional who prepared the plan needs to sign and date it and update the revision box with a summary of the revisions made.

Additionally, it should be noted that woodland conservation areas are required to be protected via a conservation easement per Section 25-122(d)(1)(B) of the County Code. A condition is recommended below to address the recordation of a conservation easement for areas of woodland conservation.

### **Specimen Trees**

Effective October 1, 2009, the State Forest Conservation Act was amended to include a requirement for a variance if a specimen, champion, or historic tree is proposed to be removed. This state requirement was incorporated in the adopted County Code effective on September 1, 2010.

There are seven (7) specimen trees shown on the plan; however, trees 3 and 5 are located off-site. No specimen trees are proposed to be removed as part of the current mining application, thus, no

variance is necessary.

### **Tree Canopy Coverage**

The project is exempt from the minimum tree canopy coverage requirements of Subtitle 25, Division 3, the Tree Canopy Coverage Ordinance, because the site is zoned O-S.

### **Stormwater Management and Sediment Control**

All grading, erosion and sediment control plans are reviewed by the Prince George's County Soil Conservation District for conformance with the current Maryland Standards and Specifications for Soil Erosion and Sediment Control as well as the current Prince George's Soil Conservation District Soil Erosion and Sediment Control-Pond Safety Manual. Sediment and erosion control devices must function for both existing and proposed drainage areas and elevations. All outfalls must be designed to ensure non-erosive conditions.

A Water Quality Certification (COMAR 26.08.02.10) is required for any activity which may result in any discharge to navigable waters unless the applicant provides a certification from the state that the activity does not violate state water quality standards or limitations. Discharges permitted by the state under the National Pollutant Discharge Elimination System (NPDES) are certified by MDE.

An unapproved Sediment and Erosion Control Plan was submitted with the subject application; however, the plan only addresses basic control methods with labels on the plan pointing to the general location of where sediment control devices are to be installed.

A copy of the conceptual, site development, or final sediment erosion control plan is needed for review purposes prior to certification of the special exception to verify that the limits of disturbance shown on the TCP2 are in general conformance with the technical sediment erosion control plan and that sediment control methods and tree protection methods are coordinated.

### **Need for Grading Permit**

The Maryland Department of the Environment (MDE) issues a mining permit for sand and gravel mines in Maryland. Through this permit, MDE only has control over the actual mining operation itself and does not enforce the conditions of the special exception or the requirements for landscaping or woodland conservation. The issuance of a county permit in conformance with Subtitle 32 will allow the county inspectors to inspect and enforce the site development elements that are controlled at the county level and the proposed conditions of the special exception application.

The Zoning Ordinance provides the opportunity to address issues raised during the review of a special exception through the imposition of conditions of approval:

#### **Section 27-318. Conditional approval.**

**When a Special Exception is approved, any requirements or conditions deemed necessary to protect adjacent properties and the general neighborhood may be added to those of this Subtitle.**

Because oversight of the proper implementation of the special exception conditions, landscaping, and woodland conservation requirements at the county level is not possible without the issuance of a local permit, a special permit should be a requirement of approval of the special exception for mining.

The issuance of a county permit will also allow the posting of a bond for reforestation as part of the proposed TCP2. Without a permit, there is no method at the local level to post this bond or inspect and approve the proposed reforestation areas.

### **Groundwater and Hydrologic Impacts**

A Hydrologic Evaluation report prepared by Environmental Resources Management (ERM) dated February 24, 2009, stamped as received July 23, 2009, a supplemental report dated January 12, 2010, stamped as received by the Environmental Planning Section (EPS) on January 19, 2010, and a final supplemental report dated July 24, 2013, stamped as received August 30, 2013, have been reviewed. The reports include a domestic well search area plan and an evaluation of the potential for groundwater disturbance including a conceptual cross section that show the groundwater depth in relation to the proposed depth of mining.

The report states that based on test pits, the depth to groundwater ranges from approximately 170 to 185 feet above mean sea level, or about 25 feet below the surface in the upland area of the site. The water table slopes northwest on the western portion of the site and east on the eastern portion of the site as a subdued reflection of topography. The cross section provided in the report illustrates a 'worst case' scenario because it is close to the creek and the test pit data showed that the product thickness was greatest in this area. The cross section indicates that the depth of mining ranges in elevation from approximately 195 feet to about 185 feet. The interception, pumping, and storage of groundwater, or dewatering, is not proposed; therefore, the water table should not be negatively impacted.

The domestic well search area plan included in the report shows the location of all identified wells within a quarter (1/4) mile radius of the boundary of the site. Wells located at 15204, 15300, and 15526 Brandywine Road have been identified within the quarter mile radius. The MDE well permit database indicates that these wells are at a depth greater than 408 feet, within deep aquifers, and well below the proposed depth of mining. The MDE records further indicate that the majority of residential wells in the area are at depths in deeper aquifers. These deeper aquifers occur at depths over 370 feet. The hydrogeologic conditions that underlie the site vicinity include a confining layer that acts as a hydraulic barrier between the surficial water table aquifer in the upland deposits, and the deeper aquifers that supply groundwater to wells in the area.

Residences along Evergreen Way are also located within the quarter mile radius, including 15510 and 15512 Brandywine Road (properties along Evergreen Way have addresses along Brandywine Road). The properties located along Evergreen Way have wells that predate the MDE well permit database, so their depth is unknown.

It is understood that the property owner, Mr. Anthony George, plans to continue to occupy the on-site residence during the proposed mining operation, and will continue to use the on-site residential well. MDE has no data available for the on-site well; however, the ERM report states that Mr. George believes the well to be at a depth over 300 feet. The on-site well, and the wells located on Evergreen Way, are located in the hydraulically upgradient direction of the proposed mining and are not anticipated to be negatively affected, even if mining were to occur below the water table.

The report summarizes that the mining operation will not have a negative impact on the quantity and quality of groundwater flowing into residential wells because (1) the mining is not proposed to occur below the water table (2) the groundwater flows northwest and northeast, away from the surrounding residences (3) the identified wells are all located to the south, and (4) most wells are in deeper aquifers. The structures located within a quarter mile of the subject site that do not have

available well data are all located to the south of the subject site and in the hydraulically upgradient direction of the proposed mining.

Although no impacts to surrounding wells are anticipated, the applicant may need to provide new wells for any property owner within a quarter mile whose well is negatively affected by the mining operation. A condition is recommended to address this situation should it arise.

### **Impacts to Regulated Environmental Features**

This site contains regulated environmental features that are required to be preserved and/or restored to the fullest extent possible under Section 27-317(a)(7) of the Zoning Ordinance. The on-site regulated environmental features include streams, stream buffers, wetlands, wetland buffers, 100-year floodplain, and steep slopes.

Section 27-296(c)(1)(L) of the Zoning Ordinance requires the submittal of: "A statement of justification describing how the proposed design preserves and restores the regulated environmental features to the fullest extent possible."

Impacts to the regulated environmental features should be limited to those that are necessary for the development of the property. Necessary impacts are those that are directly attributable to infrastructure required for the reasonable use and orderly and efficient development of the subject property or are those that are required by County Code for reasons of health, safety, or welfare. Necessary impacts include, but are not limited to, adequate sanitary sewerage lines and water lines, road crossings for required street connections, and outfalls for stormwater management facilities. Road crossings of streams and/or wetlands may be appropriate if placed at the location of an existing crossing or at the point of least impact to the regulated environmental features. Stormwater management outfalls may also be considered necessary impacts if the site has been designed to place the outfall at a point of least impact. The types of impacts that can be avoided include those for site grading, building placement, parking, stormwater management facilities (not including outfalls), and road crossings where reasonable alternatives exist. The cumulative impacts for the development of a property should be the fewest necessary and sufficient to reasonably develop the site in conformance with County Code.

A statement of justification was stamped as received by the Environmental Planning Section on August 30, 2013. The special exception proposes a single impact to the primary management area (PMA) for the installation of a sediment control outfall. This impact totals 561 square feet.

Staff supports the request for installation of the sediment control outfall because it has been located in an area with minimal impacts to the PMA and woodlands.

Areas of PMA that are not currently forested are shown to be afforested on the Type 2 tree conservation plan (TCP2).

### **Noise**

A noise study prepared by Scantek, Inc., dated February 25, 2009, and a revised report dated April 12, 2010, was reviewed by the Environmental Planning Section. A final report dated August 26, 2013, was prepared by the same author as the previous reports; however, as of the writing of the final report, the individual who prepared it was employed with Engineers for Change, Inc. As each subsequent study was submitted comments were provided. The final report was stamped as received August 30, 2013.

Noise impacts are evaluated with respect to how the predicted noise levels compare with state noise standards and regulations (COMAR 26.02.03). The state noise standards apply to noise

receptors and are established based on the adjacent land use categories (industrial, commercial, and residential). The maximum allowable noise levels for receiving residential uses is 65 dBA during the daytime. It should be noted that the mining operation will have only daytime hours of operation and that the noise generated from mining operations is instantaneous noise, not the 24-hour day/night average (Ldn) standard used in Prince George's County with respect to traffic noise. Instantaneous noise levels are more restrictive, defined by COMAR, and used for the evaluation of noise emanating from mining sites. Traffic generated noise is regulated using the average 24-hour level or Ldn because traffic noise occurs both day and night. The hours of operation proposed for the mining operation do not include nighttime hours.

The noise environment in the project area will be affected by noise from two types of sources: point and non-point. Point source noise emanates from the various excavation equipment used on-site. Non-point source noise emanates from the flow of vehicular traffic along a roadway or haul road. The main source of vehicular related noise in relation to mining operations comes from the dump trucks moving around on the site, entering the empty site, and full trucks hauling material away. However, the current application does not propose to haul material off-site, rather the proposal includes a direct connection to the property to the north/ northeast where an existing processing facility is located.

The noise analysis was performed using the hauler and the excavator, assumed working simultaneously at maximum capacity, for a conservative/ worst case scenario. The analysis was done using ISO 9613-2 compliant software. The software is based on stationary noise source propagation of point, line, and area sources. The propagation is based on wave divergence, ground absorption, moderate wind conditions, and berms reducing the noise. The berms are described in the report. Berm 1 is to be a minimum of 4.5 meters (14 feet) in height, and Berm 2 is to be a minimum of four meters (13 feet) in height.

The report prepared by Scantek, Inc. and the supplemental/ final report prepared by Engineers for Change, Inc. indicates that with the installation of berms, sound levels will be at or below 65 dBA at the property line, and that no adjacent residences will be affected by noise above the 65 dBA state standard for residences.

There is one residential building located on-site in which the property owner, Mr. Anthony George, intends to continue to reside during the proposed mining operations. It is understood that Mr. George intends to execute an easement agreement with the applicant to waive his right to any buffering from noise levels exceeding 65 dBA. Additional typical restrictions are recommended to further reduce noise impacts in the surrounding area.

### **Visual Impacts**

The property is located at the terminus of Evergreen Way, which runs approximately 1,600 feet in length from Brandywine Road (MD 381) north to the subject site, and is the main access point onto the property.

Brandywine Road is a Master Plan designated collector and is a scenic and historic road which requires evaluation of the visual aesthetics as part of the special exception review; however, the materials are proposed to be transported directly to the abutting wash plant to the north and no traffic associated with the mining operation is anticipated to access the site from Evergreen Way.

The significant distance of the site from Brandywine Road, and the berms proposed along portions of the site boundary will provide adequate visual mitigation to the scenic and historic road and to the adjacent properties.



**Additional Issues Addressed in the Environmental Impact Report (EIR)**

Additional environmental issues were discussed in the EIR for the subject property including air quality, transportation, and archeology. While transportation and archeological issues were discussed in the EIR, they have been evaluated in separate referral memos provided by the Transportation Planning Section and the Historic Preservation Section, respectively.

The Transportation Planning Section agrees that because the traffic will not be leaving the site via public streets, the proposed surface mining application would have a “de minimus” impact upon roadways in the area of the site. It is noted for the record that the term “de minimus” is not defined within the County Code, but a project having that characteristic is defined as “a development that generates five or fewer peak-hour trips” within the Prince George’s County Planning Board’s “Transportation Review Guidelines, Part 1.”

The Historic Preservation Section has concluded that the proposal will have no effect on identified historic sites, resources, or districts. However, the staff archeologist is recommending a Phase I archeological investigation for the site. Based on the examination of historic maps and aerial photographs, the project area has high probability of containing historic archeological sites. Staff acknowledges that no local law requires archeological investigations as part of approval of a special exception. However, such investigations are important and, therefore, staff recommends it be done.

The EIR notes that all of the air quality standards are currently met in the vicinity of the proposed mine except the ozone standard for which the Metropolitan Washington, D.C. area is in a nonattainment status. Adding the predicted increases in air pollutants from the mining operation showed that the operation will not raise pollutant levels above the established standards; however, measures are recommended to reduce the amount of particulate matter that is present during the mining operation. A condition is recommended to address the minimization of particulate matter entering the air and the reduction of sulfur pollution through the use of low sulfur fuels.

- J. **Prince George’s County Landscape Manual Requirements:** The application is exempt from the landscaping, buffering and screening requirements of the 2010 *Prince George’s County Landscape Manual* in accordance with Section 27-328.02 of the Zoning Ordinance. Substantial buffers, in the way of berms and the retention of trees along the periphery will serve to screen this temporary use from adjacent properties.
- K. **Sign Regulations:** Other than the required sign identifying the mine operator, no signage is shown on the site plan, and the statement of justification indicates no signs are proposed with this application.
- L. **Zone Standards:** This proposal is in compliance with the standards set forth in the County Code for the O-S Zone.
- M. **Required Findings:**

Section 27-317(a) of the Zoning Ordinance provides that a special exception may be approved if:

- (1) **The proposed use and site plan are in harmony with the purposes of this Subtitle.**

The proposed use and site plan are in harmony with the purposes of the Zoning Ordinance. The purposes of the Zoning Ordinance, as provided in Section 27-102(a), seek generally to protect and promote the health, safety, and welfare of county inhabitants and promote compatible land use relationships. The operations are required to be conducted in conformance with applicable state

and county standards meant to protect adjacent property owners and the surrounding area from adverse impacts. Staff is recommending conditions which will ensure any impacts are minimized and, if necessary, ameliorated.

- (2) The proposed use is in conformance with all the applicable requirements and regulations of this Subtitle.**

With the conditions of approval contained at the end of this application in place, the proposed use is in conformance with the requirements and regulations of the Zoning Ordinance. No other departures or waivers are required to implement the special exception.

- (3) The proposed use will not substantially impair the integrity of any validly approved Master Plan or Functional Master Plan, or, in the absence of a Master Plan or Functional Master Plan, the General Plan;**

The proposed use will not substantially impair the integrity of the Subregion 6 Master Plan. The proposed special exception is in conformance with the recommendations and environmental provisions of the General Plan, the area master plan, and the 2005 *Approved Countywide Green Infrastructure Plan* as noted herein. The proposed use is in conformance with the master plan because the proposed mining operation is in keeping with the sand and gravel section of the Subregion 6 Master Plan.

- (4) The proposed use will not adversely affect the health, safety, or welfare of residents or workers in the area;**

The proposed use is subject to county and state regulations related to environmental management and safety that will protect the health, safety, and welfare of residents nearby and workers on-site. A detailed analysis of the potential impacts is provided in the Environmental Impact Report (EIR-4646). Recommended conditions are proposed herein to address potential impacts and will ensure that such impacts are minimal.

- (5) The proposed use will not be detrimental to the use or development of adjacent properties or the general neighborhood;**

The potential effects of the proposed use have been identified in the EIR and are addressed in more detail in the Environmental Review Section above. With the recommended conditions in place, the proposed use will not be detrimental to adjacent properties or the neighborhood.

- (6) The proposed site plan is in conformance with an approved Type 2 Tree Conservation Plan; and**

A Type 2 Tree Conservation Plan (TCP2-047-09) was submitted for review concurrently with the special exception site plan. Minor revisions to the TCP2 are required for conformance with the Woodland Conservation Ordinance, as described in the Environmental Review Section above.

**(7) The proposed site plan demonstrates the preservation and/or restoration of the regulated environmental features in a natural state to the fullest extent possible.**

The regulated environmental features on the subject property have been preserved and/or restored to the fullest extent possible based on the limits of disturbance shown on the tree conservation plan submitted for review. The impacts approved are for the installation of a single sediment control outfall.

## CONCLUSION

Based on the preceding analysis and findings, staff is recommending that Special Exception Application No. SE-4647 be APPROVED, subject to the following conditions:

1. A conservation easement shall be recorded in the land records in accordance with Section 25-122(d)(1)(B). The easement shall describe, by bearings and distances, the areas of woodland conservation shown on the Type 2 tree conservation plan (TCP2) as approved. The easement shall be reviewed by the Environmental Planning Section prior to recordation.
2. The applicant shall notify the Maryland National Capital Park and Planning Commission (M-NCPPC), Environmental Planning Section, prior to the start of reforestation for each phase of this mining operation and schedule a meeting to address reforestation and woodland conservation issues.
3. Prior to the start of work, the limits of disturbance shall be marked in the field. The applicant or their representative shall walk the limits of disturbance (LOD) with a representative of the MDE Minerals, Oil and Gas Division, prior to the installation of sediment/ erosion control measures and tree protective devices. The applicant or their representative shall notify the M-NCPPC, Environmental Planning Section, as to the date and time this walk will occur, and they will be afforded the opportunity to participate.
4. Prior to certification of the Special Exception, the Type 2 Tree Conservation Plan shall be revised as follows:
  - a. Provide a phased woodland conservation worksheet in accordance with the Environmental Technical Manual (ETM). A column shall be provided to account for the violation and a column for each proposed phase of mining.
  - b. Account for the required reduction of wooded floodplain from the gross tract woodland for calculation purposes.
  - c. Provide the entire woodland conservation requirement on-site to the extent practicable. At a minimum, the site's woodland conservation threshold shall be met on-site.
  - d. Revise the plan set to remove the plan sheet currently labeled as "Existing Conditions."
  - e. Revise the plan to show all existing environmental features, the treeline, and all existing conditions as shown on the approved NRI. The plan shall also be revised to show all proposed information including but not limited to grading, noise berms, and all tree conservation measures per the TCP2 checklist. All symbols shall be in accordance with the ETM to extent practicable. All erroneous hatching shall be removed.
  - f. Revise the plan to remove the hatching from the wooded floodplain and update the

preservation label.

- g. Revise the notes and details as follows:
    - (1) Revise the standard TCP2 Note 1 to refer to the purpose of the TCP as not only meeting the requirements of the Special Exception, but also to meet the requirements of NOV 29517-2011. Note 1 shall also be revised to remove the entire second sentence.
    - (2) Revise the management plan notes to reflect the standard four-year management notes.
    - (3) Remove the split-rail fence detail.
    - (4) Add the standard details for combined silt fence and tree protection (ETM detail 8), the standard detail for combined earth dike and tree protection (ETM detail 7), and all applicable planting details such as the standard seedling detail (ETM detail 15).
    - (5) Revise the reclamation notes to reflect the proposed planting information shown on the plan and to remove any reference to determination of planting at a later date.
    - (6) Revise the reforestation planting tables to reflect the planting areas in acreage, rounded to the nearest 1/100<sup>th</sup> of an acre and to match the areas shown on the plan. The reforestation tables shall also be revised to account for the correct credit ratio for the proposed shrub planting.
    - (7) Provide the standard soil testing and amendment notes.
  - h. Provide a single-woodland conservation summary table consistent with the areas shown on the plan and in the worksheet.
  - i. Ensure that all required information is shown on the plan and accurately reflected in the legend using the standard symbols found in the ETM, or equivalent.
  - j. Have the qualified professional who prepared the plan sign and date it and update the revision box with a summary of the revisions made.
- 5. Prior to certification of the special exception, a copy of the approved sediment and erosion control plan shall be submitted to M-NCPPC.
  - 6. Prior to commencement of the mining operation, a special permit shall be obtained from the appropriate agency of Prince George's County Government to ensure compliance with the grading plan, the TCP2, and the Landscape plan approved with this Special Exception. The permit shall require the applicant to post a bond acceptable to the County Attorney to secure its obligations pertaining to reforestation and landscaping as required by this Special Exception.
  - 7. The area to be mined shall be reclaimed in accordance with the Reclamation Plan by filling with acceptable materials as described in Prince George's County Building Code.

8. A conservation easement shall be recorded in the land records that describes the primary management area (PMA) by bearings and distances. The conservation easement shall contain the entirety of the PMA as shown on the approved natural resource inventory except for the areas of approved impacts as shown on the approved TCP2. The conservation easement shall be reviewed by the Environmental Planning Section prior to recordation. The recorded easement document shall include the following text:

“These conservation easements are areas where the installation of structures and roads and the removal of vegetation are prohibited without prior written consent from the M-NCPPC Planning Director or designee. The removal of hazardous trees, limbs, branches, or trunks is allowed.”

9. Noise mitigation shall be provided on-site by implementation of the following:
  - a. Mining operations on the site are restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, and 7:00 a.m. to 4:00 p.m. on Saturdays, excluding federal holidays. There will be no operations on Sundays. Trucks are not permitted to arrive at the site prior to 7:00 a.m.
  - b. The noise mitigation berms shall be located as shown on the plans submitted to protect nearby residential buildings and properties. Berm 1 shall be a minimum of 4.5 meters (14 feet) in height, and Berm 2 shall be a minimum of four meters (13 feet) in height.
  - c. Trucks shall not use compression or “Jake” brakes both on-site and on the haul road.
  - d. Speeds on-site shall be restricted to 15 mph for all heavy vehicles.
  - e. All machinery shall be kept in good working order, especially mufflers to insure quiet operation.
  - f. The volume of backup warning devices shall be minimized while still meeting OSHA (Occupational Safety and Health Administration) standards.
  - g. The property will be mined at a maximum rate of 200 truck trips per day.
10. Mitigation of particulate matter emissions shall be accomplished by implementation of the following:
  - a. The haul road shall be maintained with a water truck or other approved dust control methods.
  - b. The application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
  - c. Open-bodied vehicles transporting materials shall be covered at all times when in motion, in accordance with COMAR regulations.
  - d. The site shall have a 15 mph speed limit to reduce dust generation from travel on the unpaved haul road.
  - e. All mobile equipment to be used on-site shall use ultra-low sulfur diesel fuel. The fuel

supplier certification of the sulfur content of each fuel delivery shall be kept on-site for the duration of the special exception approval period.

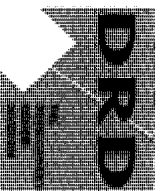
11. Equipment fueling on-site shall be done in accordance with NFPA 30 (National Fire Protection Association), Flammable and Combustible Liquids Code, Chapters 2 and 3. The mobile fueling trucks shall be operated by trained personnel holding valid oil vehicle operator's certificates as required by COMAR 26.10.01.17. Care shall be taken to minimize spillage. Refueling shall take place as far from streams and wetlands as possible.
12. If the operation of the subject sand and gravel mine negatively impacts the water level in any wells within a quarter-mile radius of the subject mining site as verified by the Maryland Department of the Environment (MDE), or the Prince George's County Department of Environmental Resources (DER), corrective action shall be immediately taken by the applicant, including but not limited to, the drilling of a new well to replace the adversely affected well.
13. The subject property may not be utilized as a Sanitary Landfill, a Rubblefill or a Class III Fill.
14. Prior to approval of this special exception, Phase I (Identification) archeological investigations, according to the Planning Board's *Guidelines for Archeological Review* (May 2005), are recommended on the above-referenced property to determine if any cultural resources are present. Areas of the property that possess a high potential to contain archeological resources should be surveyed for archeological sites. The applicant should submit a Phase I research plan for approval by the staff archeologist prior to commencing Phase I work. Evidence of Maryland-National Capital Park and Planning Commission (M-NCPPC) concurrence with the final Phase I report and recommendations is required prior to approval.
15. Upon receipt of the report by the Prince George's County Planning Department, if it is determined that potentially significant archeological resources exist in the project area, prior to review by the Zoning Hearing Examiner, the applicant shall provide a plan for:
  - a. Evaluating the resource at the Phase II level, or
  - b. Avoiding and preserving the resource in place.
16. If a Phase II and/or Phase III archeological evaluation or mitigation is necessary, the applicant shall provide a final report detailing the Phase II and/or Phase III investigations and ensure that all artifacts are curated in a proper manner, prior to any ground disturbance or the approval of any grading permits.
17. All extracted materials will be transported off-site by means of a private gravel roadway connecting the subject site to the adjacent Gudelsky wash plant site.
18. Traffic to and from the site by employees and visitors will be directed through the Gudelsky wash plant site utilizing the private gravel roadway connecting the subject property to the Gudelsky property.

**ITEM:**

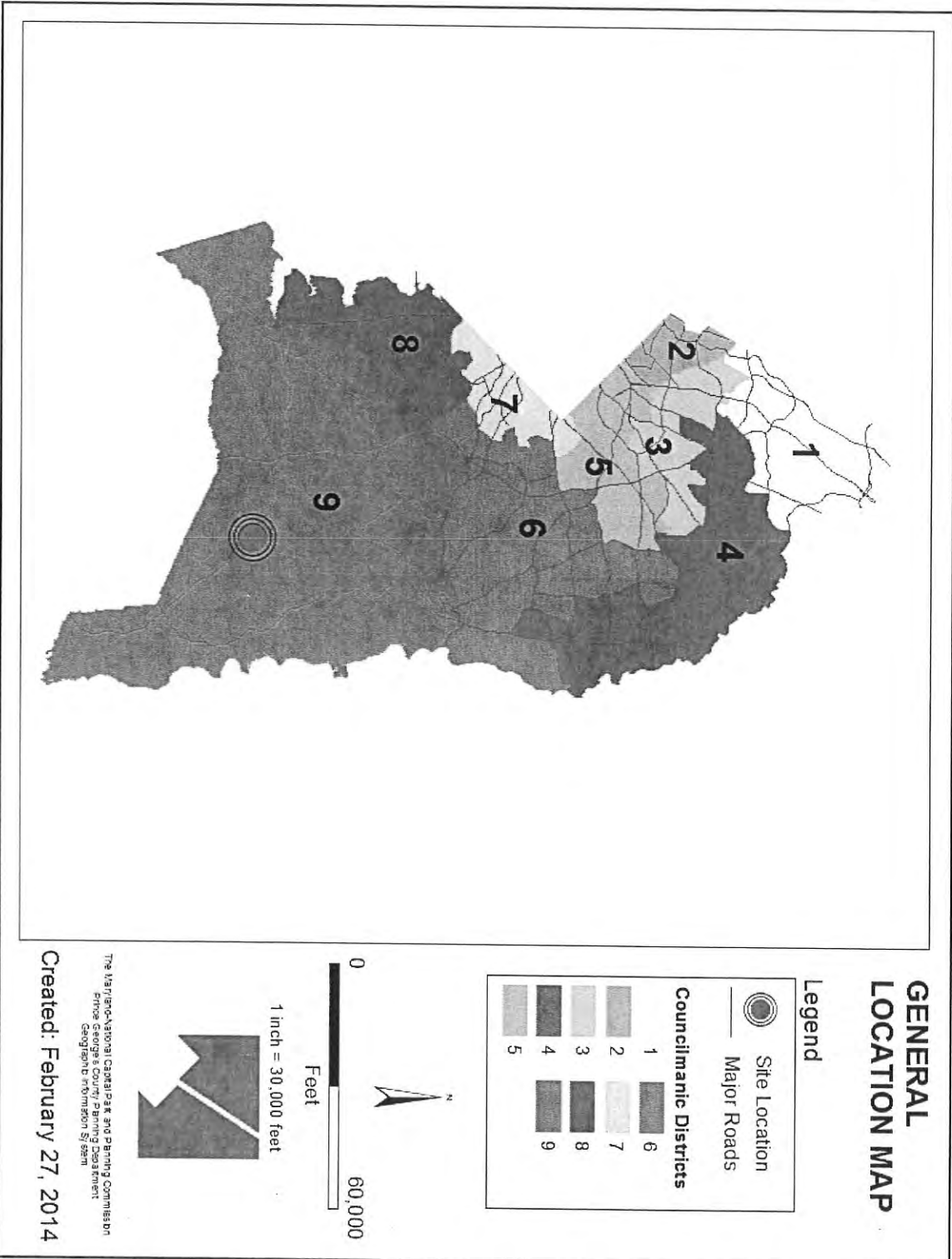
**CASE: SE-4646**

**THE ANTHONY GEORGE PROJECT**

**THE PRINCE GEORGE'S COUNTY PLANNING DEPARTMENT**



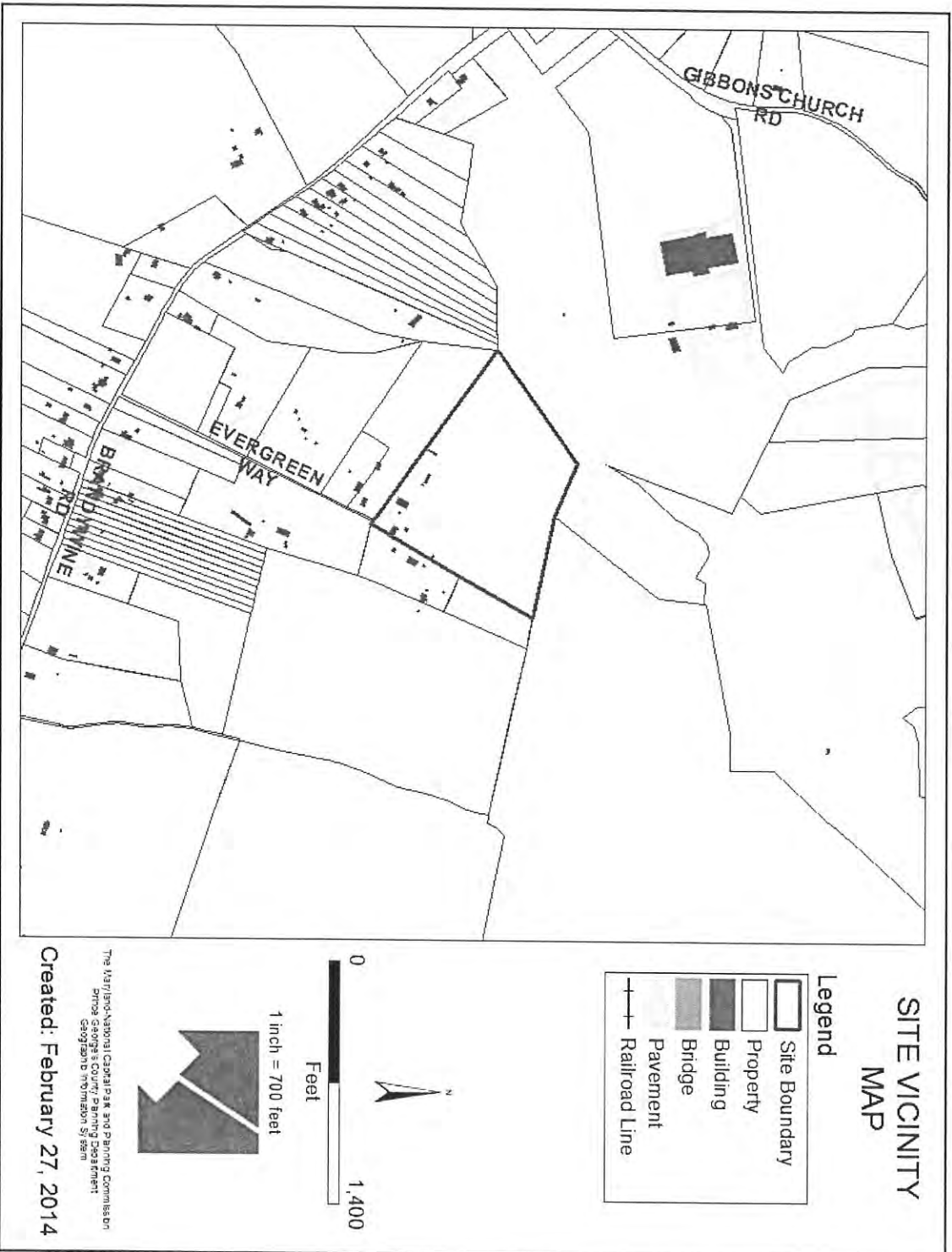
# GENERAL LOCATION MAP





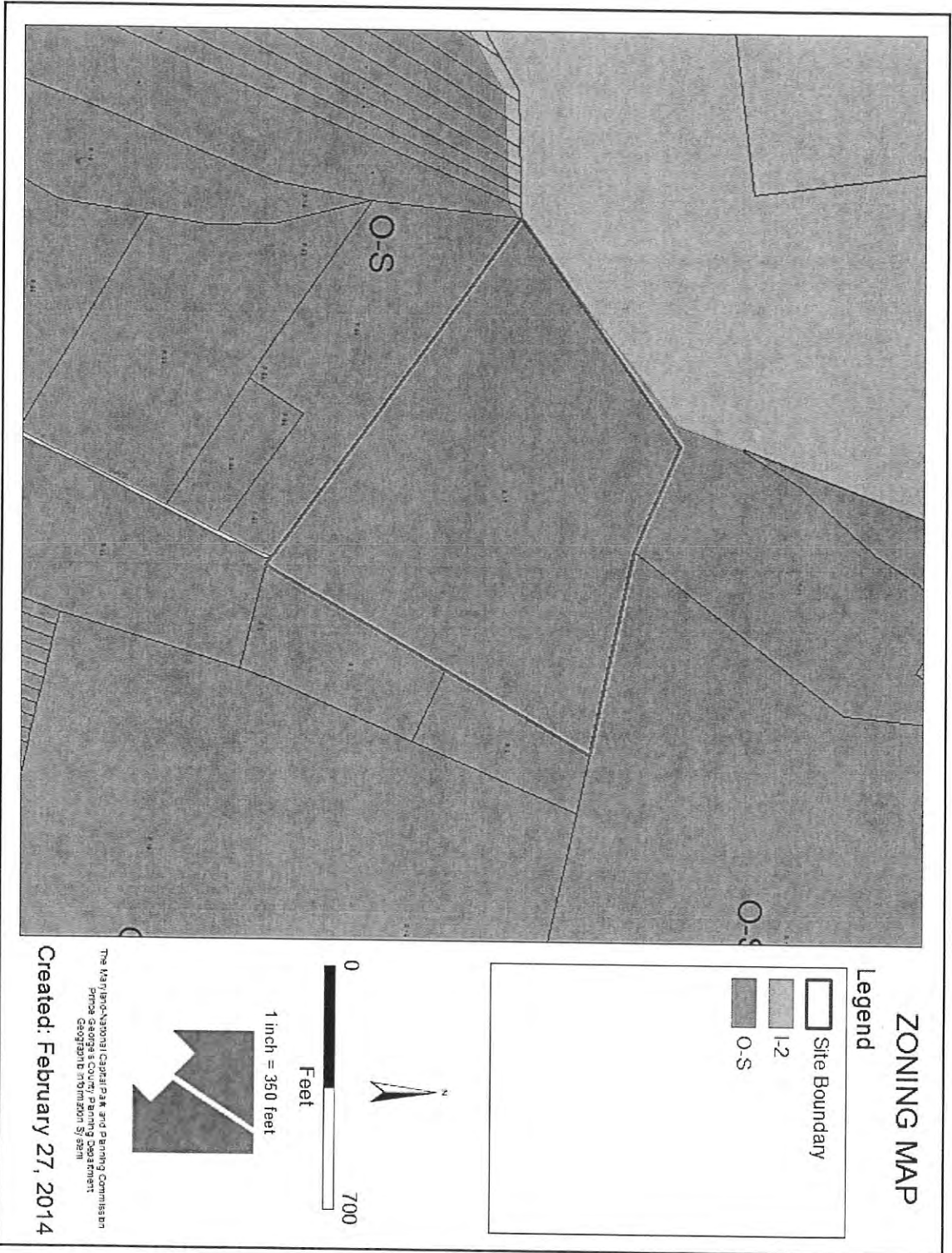
# SITE VICINITY

Case #SE-4646

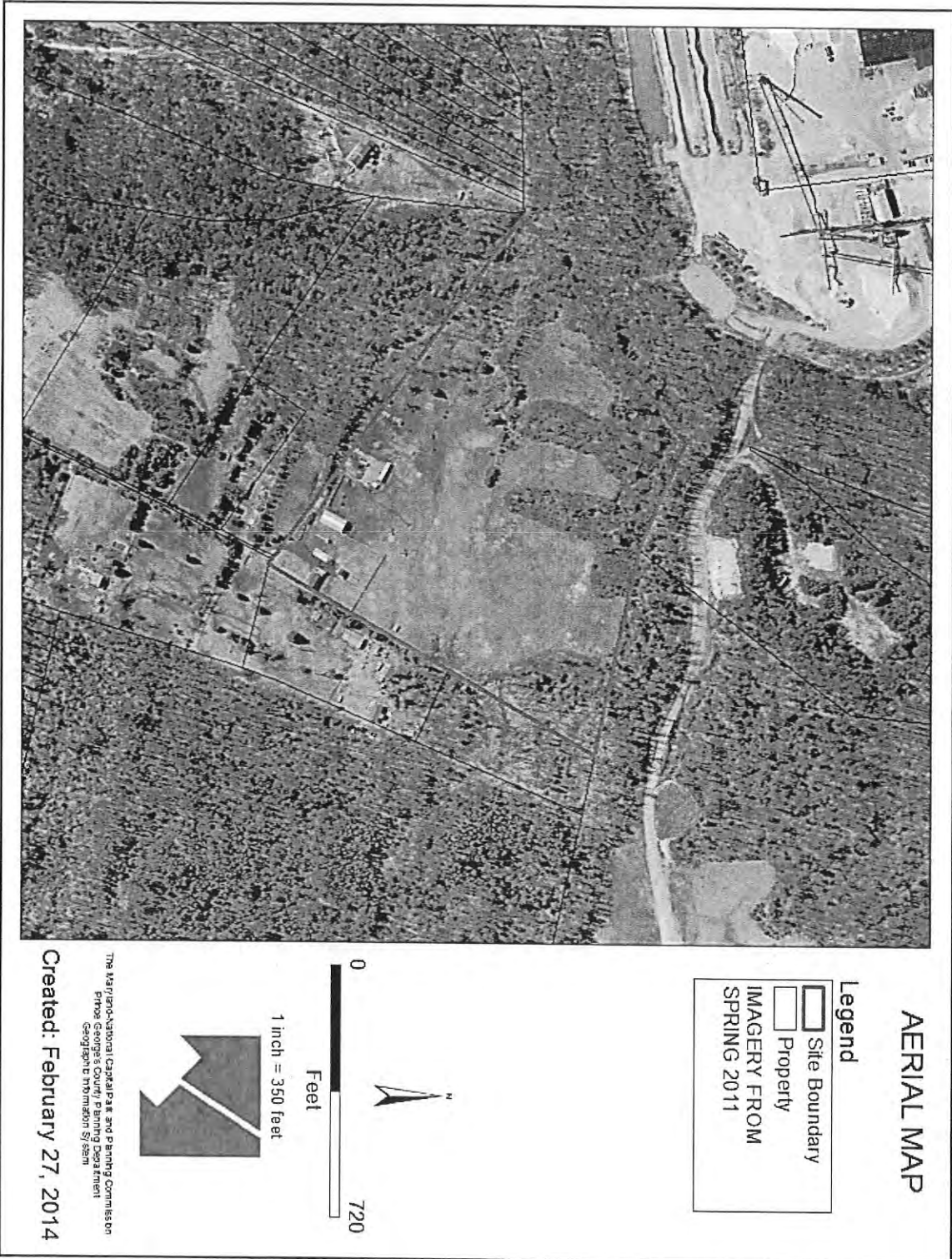


# ZONING MAP

Case #SE-4646

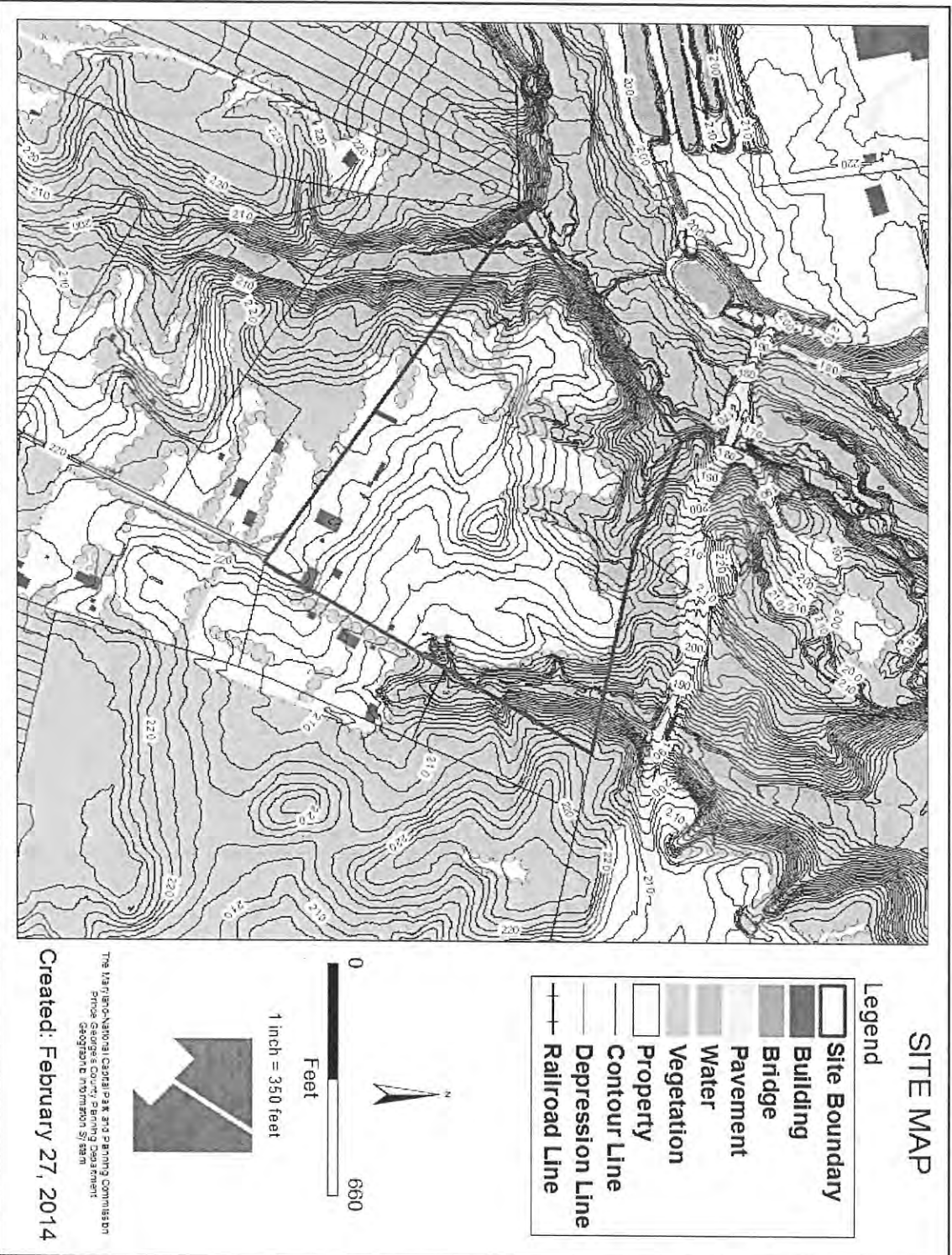


# AERIAL MAP

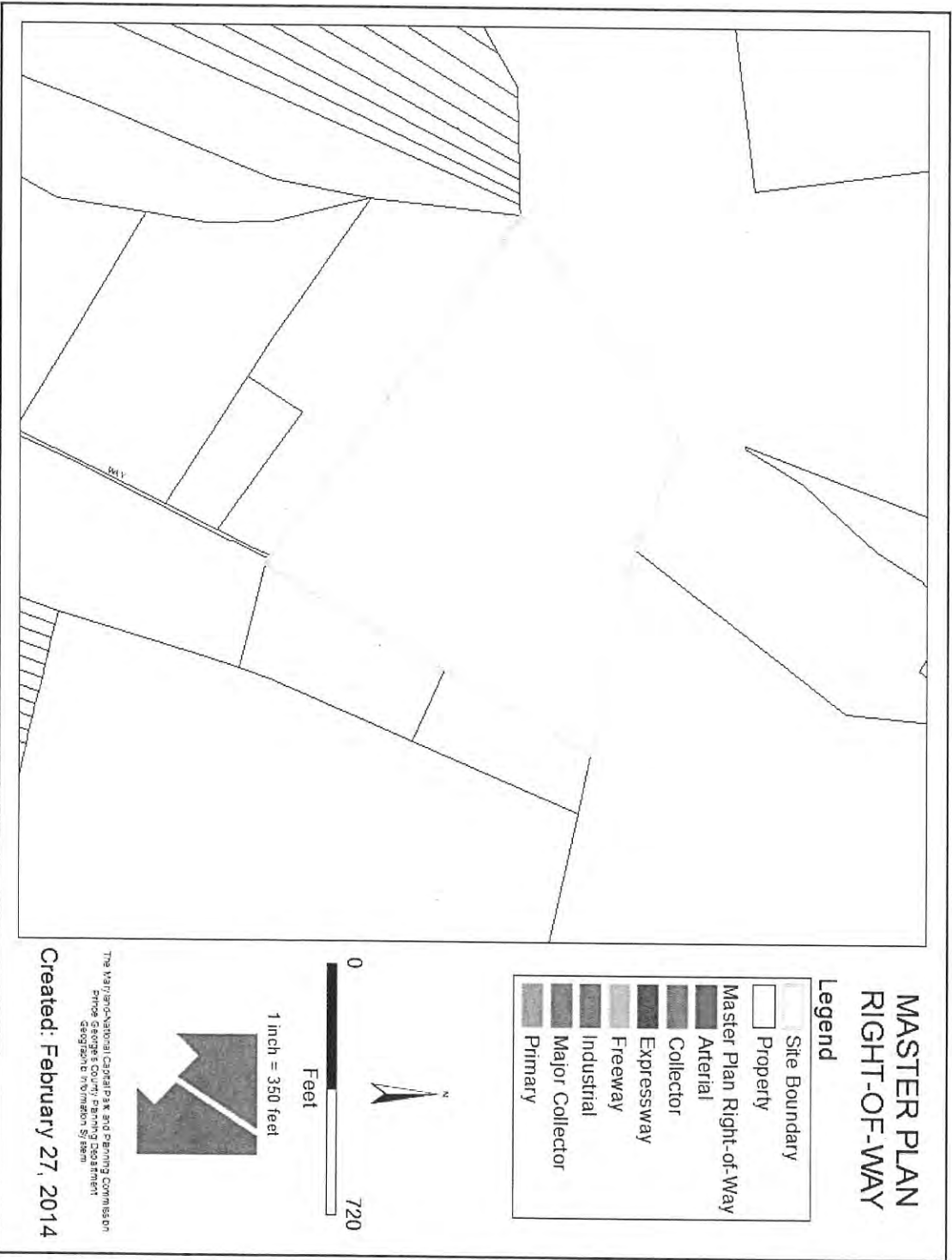


# SITE MAP

Case #SE-4646



# MASTER PLAN RIGHT-OF-WAY MAP





SE-4646

S.E. 4646

STATEMENT OF JUSTIFICATION

ROCK HILL SAND AND GRAVEL CORPORATION

The applicant for this Special Exception is Rock Hill Sand and Gravel Corporation ("Rock Hill" or "Applicant"). Rock Hill is a corporation more than 30 years of experience in sand and gravel mining and processing of sand and gravel both in the State of Maryland and in Prince George's County.

The property which forms the subject matter of this application comprises approximately 22.03 acres which is located at the northern terminus of Evergreen Way. Evergreen Way is a narrow thoroughfare which runs in a northerly direction from the north side of Brandywine Road (MD Route 381). The intersection of Evergreen Way and Brandywine Road is located approximately 3,478 south of the intersection of Brandywine Road and Gibbons Church Road (the "Property"). The Property is designated as Parcel 17 on Tax Map 156, Grid D-2. The Property is also described in a deed recorded among the Land Records of Prince George's County, Maryland in Liber 20156, Folio 640. The Property is currently owned by Mr. Anthony George. Mr. George resides at 15544 Brandywine Road, Brandywine, Maryland 20613. Rock Hill has entered into a lease agreement with Mr. George, pursuant to which Rock Hill will be authorized to engage in the surface mining of sand and gravel from the Property.

The Property is zoned O-S (open space). Presently, the Property is improved with an existing single-family detached dwelling, a barn and some small outbuildings. Much of the Property consists of open pasture and fields which are devoted to use as a horse farm. The perimeter of the site is generally wooded. Some narrow fingers of wooded area are located in the northwest section of the Property. Sensitive natural features are located in the western corner of the Property and along the northwest corner of the Property and at the northeast corner of the Property. These areas are undisturbed.

The Applicant currently operates a business known as the Duley Plant, a sand and gravel wash plant. This wash plant is situated on adjoining property located immediately north and west of the Property on Parcel 11, which is also shown on Tax Map 156.

Rock Hill is requesting the approval of a Special Exception which would allow surface mining activity on the Property. The Applicant is seeking authorization to mine the site from Monday through Friday between the hours of 7:00 a.m. and 5:00 p.m. and on Saturday for the maintenance of equipment between the hours of 7:00 and 12:00 p.m. (noon). The Applicant proposes to mine 100 loads of material per day. Significantly, the Applicant's existing wash

plant (Duley Plant) is located on contiguous property which is situated northwest of the Property. The Applicant proposes to construct an access road to connect to the existing access road leading in to the wash plant. Therefore, while the Applicant proposes to mine 100 truckloads of material per day, none of the mined material will have an impact on existing public roads. Instead, trucks will take the mined material from the Property through the access road directly on to the existing wash plant. The relationship of the two properties is shown on an aerial drawing which has been prepared by the Applicant and filed with this Application.

#### NEIGHBORHOOD

The Applicant submits that the appropriate neighborhood to be considered in this case is bounded on the south and the southwest by Brandywine Road (MD Route 381), on the west by the PEPCO right-of-way boundary, on the north by North Keys Road, and on the northeast and east by Rock Creek. The neighborhood is sparsely developed. Scattered single-family homes located on individual parcels and wooded areas characterize the frontage of Brandywine Road. Similarly, there are scattered single-family homes located along the eastern side of the PEPCO transmission line. The central portion of the neighborhood is characterized by large open parcels which are primarily wooded. As noted above, an existing sand and gravel wash plant is located on Parcel 11, just northwest of the property. Also, to the northeast of the property is a large parcel designated as Parcel 1 and also shown on Tax Map 156. This is the Smith property. It too is currently being mined for sand and gravel under and existing special exception.

#### COMPLIANCE WITH ZONING ORDINANCE PROVISIONS

A surface mining operation of sand and gravel is permitted pursuant to the grant of a special exception as set forth in Section 27-410 of the Zoning Ordinance. That section provides specific criteria which must be met and satisfied in order for the special exception to be granted. In addition, an applicant must prove conformance with the general special exception criteria as set forth in Section 27-317 of the Zoning Ordinance. A point-by-point analysis of how this application complies with each of those criteria follows.

#### Section 27-410

Prince George's County Zoning Ordinance in Section 27-410(a) sets forth the specific requirements applicable to a sand and gravel special exception. It states:



A) The surface mining of natural materials or deposits (including sand, gravel, or clay pits; rock or stone quarries; and the removal of earth or topsoil) may be permitted, subject to the following:

Section 27-410a(1):

Heavy machinery may be used for the extraction of natural material or deposits from the site. Except in the I-2 Zone, heavy machinery may not be used for washing, refining or other processing unless a Special Exception is granted for sand and gravel wet-processing under the provisions of Section 27-405."

The applicant will use heavy machinery for the extraction of sand and gravel from the subject site. All equipment used on the site (one hauler, one bulldozer and one excavator) shall be fitted as appropriate with working mufflers at all times. No wash operation is proposed on the Property.

Section 27-410a(2):

The use shall not be noxious, offensive or otherwise objectionable by reason of dust, noise or vibration.

The applicant notes that the Environmental Impact Report to be prepared by the Maryland National Capital Park and Planning Commission and expert testimony, will provide evidence at the Zoning Hearing Examiner hearing that the proposed use will not be noxious, offensive or otherwise objectionable due to dust, smoke, noise or vibration.

In addition, the location of the proposed mining demonstrates that the proposed Special Exception will cause no objectionable impacts from dust, smoke, noise or vibration. The location of the activity, sufficient buffer areas, berms and the distance between the mining activity and the surrounding uses will serve to minimize any potential objectionable impacts of this type. Furthermore, the likelihood of such potential impacts will be further minimized through compliance with County and State mining permit standards.

As noted earlier, the mining of this site will produce no haul traffic on public roads. All trucks transporting sand and gravel will travel across the property to the wash plant using a private internal road. This will eliminate the dust, noise, smoke and vibration typically generated on public roads from most mining sites. Dust on the haul road will be controlled by watering as necessary.

Section 27-410a(3)

The land areas exposed by the extraction and removal of natural materials or deposits shall be left suitable for development. A grading plan shall be submitted (along with the site plan) showing the existing and proposed ground elevations of the site, adjacent land, and all abutting streets. The exposed land area shall have a slope not greater than three-to-one (3:1), except where any portion of the site is developed for port or harbor facilities;

The Reclamation Plan shows that the site will be restored as a pasture for horses after the mining operations are completed. This action will restore the site and make it suitable for potential future development, if deemed warranted. This is an appropriate low intensity use. The accompanying grading plan will illustrate the applicant's compliance with the grading plan requirements of this section.

Section 27-410a(4)

The Special Exception shall be valid for no longer than five (5) years, except where the use is located:

- (A) In an area which is predominantly undeveloped for a radius of one (1) mile from the proposed operation; or
- (B) In an I-2 zone.

The accompanying site plan includes a mining schedule which delineates a projected five (5) year time frame for mining sand and gravel on the subject property. This projected time frame of five years to mine 22.03 acres is in compliance with the time limitation of this section.

Section 27-410a(5)

The Site Plan shall show an estimate for the time required for the removal of the material.

The accompanying site plan includes a schedule which shows the five (5) year time frame within which the material will be removed from the site.

Section 27-410a(6)

At least (60) days prior to the hearing before the Zoning Hearing Examiner, the applicant shall file a traffic analysis with the Zoning Hearing Examiner for inclusion in the record, and shall send a copy to the Planning Board. The traffic analysis shall include the volume of traffic expected to be generated by the operation, and identify the streets to be used between the site and

*the nearest streets (to be used) that has a minimum paved width of twenty-four (24) feet for the predominant length of the street.*

This requirement is not applicable. The site will not generate any traffic on public roads. The trucks will haul the sand and gravel across the property to a sand and gravel wash plant which already exists on an adjoining property owned by the applicant. The trucks will run on a private internal road to the wash plant. The mining of the sand and gravel on this site will not generate any additional traffic on public roads.

*Section 27-410a(7)*

*Driveways or access points shall be identified on the site plan and shall be located so as not to endanger pedestrians or create traffic hazards. The surface material to be used on the driveways shall be identified on the site plan. Any access driveway shall be at least twenty-two (22) feet wide and shall be paved for a distance of at least two hundred (200) feet from the lot line.*

This requirement is not applicable. The trucks will not be entering or exiting the property with sand and gravel. The trucks will only transport the sand and gravel across the site to a sand and gravel wash plant which already exists on an adjoining site owned by the applicant. The trucks will run on a private internal road to the wash plant.

*Section 27-410a(8)*

*The Technical Staff Report prepared in response to the application shall include a current, Countywide inventory of the locations, dates of approval, and conditions of approval concerns haul routes and estimated loads per day of all approved and pending Special Exceptions for sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining, as indicated by the record in the case. The inventory shall also include the locations of all nonconforming sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining operations throughout the County that were certified after September 6, 1974.*

The Technical Staff Report will presumably address this requirement; although, given the unique circumstances of this case, the applicant submits it is inapplicable.

*b) In the I-3 zone, the use shall be staged in conformance with the required Conceptual Site Plan. The District Council may require (as a condition of approval) that this be terminated prior*

*to a Detailed Site Plan being approved for another use included in the Conceptual Site Plan.*

The subject property is in the O-S zone, not the I-3 zone; the conditions of this subsection are not applicable.

*c) In the M-A-C, L-A-C, E-I-A, R-U, R-M and R-S zones, no surface mining operation may be permitted after a Specific Design Plan for the subject property has been approved. An application for this Special Exception can only be accepted and the Special Exception granted, if no Specific Design Plan has yet been filed for the property.*

The subject property is not in any of these zoning categories; the conditions of this subsection are not applicable.

*d) In reviewing the application, the District Council shall consider the use of techniques which provide for noise attenuation.*

The applicant's attenuation methods will ensure that there is no detrimental impact from noise generated on site. Comar (Code of Maryland) allows a maximum sound level of 65 dBA at the property line in residential areas during the daytime, which is defined as 7:00 a.m. to 10:00 p.m. The applicant has prepared an acoustical analysis which prescribes noise attenuation techniques to allow the applicant to meet all County and State noise standards. The applicant will build a berm between thirteen (13) and fourteen (14) feet high on strategic portions of the eastern and western sides of the property. This berm, along with natural buffers, will ensure compliance with the Comar 65 dBA sound level prescribed by the State of Maryland. The acoustical analysis which has been prepared by Scantek, Inc. has been filed with this application.

*e) On land which is located within a Chesapeake Bay Critical Area Overlay Zone, no surface mining shall be located within:*

- 1) Designated habitat protection areas as described in the Conservation Manual.*
- 2) The buffer area as defined in the Conservation Manual.*
- 3) Any area where the use would result in the substantial loss of long-range (twenty-five (25) years or more) productivity of forest and agriculture, or result in the degrading of water quality.*
- 4) An area containing highly erodible soils.*

The subject property is not within the Chesapeake Bay Critical Area Overlay Zone. Therefore, this section is not applicable.

*f) In reviewing the application for compliance with the required findings set forth in Section 27-317(a)(4) and 27-317(a)(5), the District Council shall consider the inventory required in Section 27-410(a)(8).*

As will be demonstrated in more detail below, the application is in compliance with the required findings of Section 27-317. The applicant understands that the inventory will be prepared by the technical staff and will be considered by the District Council in making its findings under Section 27-317(a)(4) and (a)(5).

IV: Section 27-317a

Applications for sand and gravel mining are granted under the Special Exception Process. The general criteria used by the County Council in Section 27-317a of the Zoning Ordinance sets forth these six (6) general requirements for a Special Exception:

*a) A Special Exception may be approved if:*

Section 27-317a(1)

*The proposed use and site plan are in harmony with the purpose of this subtitle.*

The site is being proposed to be used for sand and gravel extraction which is a use recognized to be permitted through the special exception process in the Prince George's County Zoning Ordinance. There is a legislative presumption that the use can be carried out in harmony with the purpose of this subtitle. The Master Plan for Subregion 6 also acknowledges and emphasizes the importance of sand and gravel extraction to the economic vitality of the County and as a stimulus to the County's growth and development. The site plan meets all applicable requirements of the Zoning Ordinance.

Section 27-317a(2)

*The proposed use is in conformance with all applicable requirements and regulations of this subtitle.*

The Mining Plan and Reclamation Plan submitted with the application are in compliance with all County and State ordinances, statutes and regulations. In addition to the County's Special Exception requirements, a State mining permit and County grading and sediment control/erosion control permit must be approved before

mining can begin. The State mining permit will limit the amount of mining that can occur at any time. Both County and State officials will conduct periodic inspections of the operations during the mining and reclamation processes. The State requires that a bond be posted to cover reclamation. This bond will not be released until reclamation in accordance with the approved reclamation plan has been completed and inspected to the State's satisfaction. All local, State and federal laws regarding wetlands and natural and historic resources will be fully complied with.

It is important to note that the site exceeds the norms and regulations of this Subtitle in one very important aspect, it does not produce any haul traffic on public roads. A sand and gravel wash plant is on an adjoining site which will allow all trucks to travel across the property on a private internal road to deliver the material. This is significant because it will produce no additional impacts on public roads and will substantially diminish the amount of dirt, debris and noise affecting homeowners who live on any potential haul roads.

Section 27-317a(3)

*The proposed use will not substantially impair the integrity of any validly approved Master Plan or Functional Master Plan or the General Plan.*

The applicant's proposed use is in conformance with the Subregion VI Master Plan. The subject property is located within the area covered by the Subregion VI Master Plan approved on May 24, 1994. The Master Plan text encourages development and utilization of all natural resources, including sand and gravel. The Master plan states as a goal for sand and gravel resources, "*to provide for the efficient and sequential extraction of significant mineral deposits and the reclamation and development of the extraction areas, while minimizing impacts on the environment.*"

The Master Plan lists the following objectives in achieving its stated goal for sand and gravel extraction:

- 1) *To identify those properties containing significant deposits of sand and gravel deposits.*
- 2) *To assure an adequate supply of sand and gravel for future development of the metropolitan area.*
- 3) *To phase future development in a manner providing for the orderly extraction of sand and gravel resources and discouraging the premature commitment of these areas to*

*permanent development.*

- 4) *To plan development so that the rehabilitation of previously extracted areas may be accomplished in an orderly manner.*
- 5) *To continue to develop new and refine existing guidelines and criteria for evaluating resource extraction proposals that preclude adverse effects on the natural and human environment and reduce conflicts with the surrounding land uses.*

The Master Plan gives the following background summary of the Country's position on sand and gravel mining.

**BACKGROUND:**

*Sand and gravel constitute the principal mineral resources in the southern part of the County and provide the growing metropolitan area with a readily available supply of construction materials and highway fill. Prince George's County is the most important source of sand and gravel in the State of Maryland. In 1987, for which the latest data are available, 5,818,196 tons of sand and gravel were mined in the County with 1,582,925 tons or 27% coming from the Subregion VI Study Area.*

*The gravel deposits are of vital importance to the area's economy because of their role in private and public construction.*

*Concern for the preservation and extraction of the County's mineral resources spans the preceding decade. In the 1973 Master Plan for Subregion VI the county stated the need "to preserve the upland gravel deposits for future extraction. It is fundamental that natural deposit sites be reserved for future use and not made inaccessible by development."*

*The approved General Plan from 1982 states a need to, "provide a favorable climate for business and industry...by preserving for future use adequate supplies of sand and gravel" and to "protect and effectively utilize natural resources...by staging future development so that the extraction and rehabilitation of mineral areas may be accomplished in an orderly manner. Furthermore in 1982 the Governor issued an Executive Order "to protect, regulate and provide for the recovery of Maryland's mineral resources, including sand and gravel."*

The Master Plan is very clear in describing the economic need for sand and gravel mining in the metropolitan area. It recognizes Prince George's County's position and responsibility as the area's largest supplier of sand and gravel. It advocates for the extraction of sand and gravel in suitable areas to meet the needs of a growing population. The Master Plan is clear in the need to stage development of property that has potential for future mining sites.

The primary issue addressed in the Master Plan is the long term availability to mine sand and gravel in the County.

**ISSUES:**

In the Subregion VI Study Area, sand and gravel deposits are found in parts of two geologic units: (1) Upland Gravel of the Brandywine Formation; and (2) Terrace Deposits along the Patuxent River. The Upland Gravel is the primary source of sand and gravel in Prince George's County in general and in Subregion VI, in particular...52% of the Brandywine Formation is still available... and only 41% of the Terrace Deposits are still available. As mentioned earlier, the Chesapeake Bay Critical Area Law and the Patuxent River Policy Plan further limit the undertaking of sand and gravel operations in the Patuxent River Terrace Deposits. Additionally, the material grade of Terrace Deposits is inferior compared to that from the Brandywine Formation. It is therefore assumed that little, if any, gravel will be extracted from the Terrace Deposits. On the other hand, it is also assumed that all remaining areas of the Brandywine Formation exhibit equally high potential for commercial extraction.

Assuming that 1-acre foot of sand and gravel deposit yields about 2,400 tons and that the average thickness of the Brandywine Formation is about 15 feet, it is estimated that 303,400,000 tons of sand and gravel remain in this Formation.

Assuming that the amount extracted from the Study Area will remain around 1,500,000 tons per year, as shown by the present records, and that all areas with deposits are mined, the resources from the Brandywine Formation will last about 202 years. If the industry relies wholly on the deposits from this Study Area, at a 10-year average County mining rate of 4,300,000 tons per year, then the resource may last for only 70 years or so. Of course, the level of future development which dictates the level of needed materials, application of zoning regulations and other requirements of Federal, State and local ordinances, as well as the



*compositional and thickness of the deposits will all contribute to a decrease in the total amount of resource which is commercially available for the extraction. This reduction can be as much as 50 percent from the above estimates, that is about 101 year if the level of mining is 1,500,000 tons/year or about 35 years or less if the level of mining is at 4,300,000 tons/year or greater. Additional studies may be required to more precisely estimate the potential minable resources in the County in general and in the Subregion VI Study Area in particular.*

*The steadily increasing population has generated a corresponding demand for land available for development. Development...could make some of this land inaccessible... Large areas of the Terrace Deposits along the Patuxent River are preempted by existing parks and open space owned by the M-NCPPC, State of Maryland and the Federal Government and administered by the State. Areas along the Patuxent River and its tributaries are also subject to the Chesapeake Bay Critical Area policies and to special conditions related to the Patuxent River Policy Primary Management Areas, which should further limit both mining and intensive development in these areas.*

*A primary concern of the Master Plan is the availability of suitable land for sand and gravel mining. As the Master Plan points out there are significant variables which effect the amount of sand and gravel available to be mined in Subregion 6. There are two potential mining areas in Subregion 6, the Terrace Deposits and the Brandywine Formation. The Terrace Deposits are encumbered by poor quality materials as well as local, state and federal restrictions on available land. These issues significantly reduce the amount of land which can be used for mining activity in the Terrace Deposit areas.*

*The Brandywine Formation has superior quality sand and gravel deposits but only has about 52% of its total acreage still available for mining. Surging population growth will lead to more development, increasing the demand for sand and gravel. However stronger regulation by zoning ordinances as well as by local, State and Federal agencies will all most likely contribute to reducing the amount of sites available for sand and gravel extraction.*

**RECOMMENDATIONS:**

*Because sand and gravel are economically important to the County, because they are finite, because the County is the leading resource area in Maryland, and because once these sites are developed extraction is permanently precluded, it is recommended*

that sand and gravel extraction be given priority over more permanent land uses for the immediate future.

**GUIDELINES:**

The following guidelines apply to this Plans's Sand and Gravel Resources Recommendations in general or in part.

- 1) *Mining operations should be designed to minimize adverse effects on the environmentally sensitive areas.*  
Wetlands, which are environmentally sensitive areas, are located on the west, northwest and eastern sides of the property. SEE Environmental performed the wetland delineation and the Forest Stand Delineation. On the east and west portions of the site the wetlands will be protected by a 25 foot buffer as well as a 13-14 foot high berm. The wetlands in the northwestern portion of the property will be protected by a 25 foot buffer. The Mining Plan and the Reclamation Plan have been designed not only to minimize environmental impacts but also to protect the quality of the surrounding natural resources. The proposed uses will fully comply with all County and State ordinances, statutes and regulations in ensuring that pollution of natural resources does not occur as a result of the proposed mining activity.
- 2) *Extraction of the area's identified commercially viable sand, gravel and clay deposits should occur in accordance with land use proposals of the Master Plan to provide a readily available supply of these basic construction materials and to prevent preemption of extraction activities by development.*  
The mining plan proposes to use 17.93 acres of the available 22.03 acres for mining. The mining plan will implement the land use proposals put forth by the Master Plan as well as County and State agencies.
- 3) *Extraction and reclamation activities should be designed to minimize the potential adverse effects on adjacent land uses of dust, noise, vibration, traffic and unsightly storage.*  
The applicant proposes extraction and reclamation practices which will minimize adverse effects on adjacent land uses. Noise attenuation techniques, prudent land planning techniques, hydrological testing and natural buffers will all work to minimize adverse effects on adjacent land uses.
- 4) *Mineral storage, processing operations and equipment storage should be screened from direct view along public rights-of-way and from living areas.*

The property fronts on a small road known as Evergreen Way. The mineral storage, processing operations and equipment storage will all take place on a portion of the property which is screened from Evergreen Way.

- 5) *Noise attenuation techniques such as the use of setbacks and earthen berms, the retention of periphery vegetation and woodlands and the construction of acoustical fencing should be utilized to minimize noise intrusion on adjacent uses. Further more, extraction proposals should factually demonstrate that their attenuation measure will ensure that surrounding development will not be subjected to noise which exceeds the State's current maximum allowable levels.*

Noise attenuation techniques to be used include a thirteen (13) to fourteen (14) foot high earthen berm which will be constructed along strategic portions of the eastern and western sides of the property. Additionally, wooded buffers including zoning buffers and existing natural feature buffers will provide noise attenuation. An acoustical analysis, prepared by Scantek Inc, will be included with this application to demonstrate that the site will operate under the allowable Comar level of 65 dBA.

- 6) *Extraction and reclamation activities should be designed to minimize adverse effects on the public transportation network. Access and haul road should not traverse living areas and haul routes should primarily utilize arterial and roadways which are designed to safely accommodate truck traffic.*

This mining activity will not generate any additional traffic on public roads because the trucks will be driving across the property on a private internal road to an adjoining property which operates the sand and gravel wet plant.

- 7) *Extraction and reclamation activities should be designed with clear post mining development plans particularly in low-density zoned areas where the only sewage disposal systems are individual septic tanks.*

The post mining plan is to utilize the site as open pasture for horses. This is an appropriate low intensity use.

- 8) *Reclamation plans should be designed to enhance the environmental features such as ridgelines, drainage areas, steep slopes, woodlands, etc. and to prepare the site for the character and intensity of development as recommended by the Plan.*

The Reclamation Plan will return the site to its approximate natural contours. The center of the site will be the high point with gentle slopes falling to existing, undisturbed low points. The post mining plantings will be determined by a landscape architect in conjunction with the property owner. The trees, under the current plan, will be planted around the perimeter of the horse pasture. The post mining conditions will have a very rural feel and character similar to many other sites in this area of the county. The proposed plan will ensure that the Property will be reclaimed for appropriate low intensity use.

- 9) ***The review of Surface Mining Special Exceptions should include the required evaluation of the cumulative impact of truck traffic with respect to safety, health and the environment.*** This site will not generate any truck traffic onto public roads.

The applicant's proposed use is in conformance with the Subregion VI Master Plan. The applicant's plans demonstrate that their proposed use will not substantially impair the integrity of the Master Plan for Subregion 6. The proposed use will closely follow the guidelines established by the Master Plan. The plan reflects minimal adverse impacts to adjoining properties, neighboring businesses or environmentally sensitive areas. The Reclamation Plan will ensure that the Property will be reclaimed for an appropriate low intensity use.

**Section 27-317a(4)**

***The proposed use will not adversely affect the health, safety or welfare of residents or workers in the area.***

The preparation of this Application and proposed Mining Plan have been based on a detailed review and analysis of the subject property and the surrounding and adjacent neighborhood. All required elements of the Zoning Ordinance have been established within the Plan to protect and mitigate any potential impacts from the proposed mining of the property.

The location of the subject property is well situated and is adjacent to an existing mining operation, currently being conducted on the Smith Property to the northeast. Property to the northwest, owned by the applicant, is currently being used for a sand and gravel wash plant. The subject site's proximity to existing residential homes has been thoughtfully considered with sizable buffers and berming proposed to mitigate any potential impacts from

the proposed operation.

The applicant hired an environmental firm ,ERM, to conduct a hydrologic impact analysis. This study was used to determine if the mining activities would adversely affect the quality of groundwater discharging into the Rock Creek watershed as well as to determine if there would be any adverse affects on the water wells of area residents.

The report issued by ERM concluded that the mining activities would not adversely affect ground water discharging into the Rock Creek watershed or into the water wells of local residents.

The site will not generate any traffic onto public roads. Upon completion of the mining operation, the Property will be fully restored to a horse pasture in accordance with the Reclamation Plan. Based on the proposed Site Plan and Reclamation Plan the Applicant submits that there will be no detrimental impacts to the public health, safety or general welfare from the proposed Special Exception.

**Section 27-317a(5)**

***The proposed use will not be detrimental to the use or development of adjacent properties or the general neighborhood.***

The proposed mining operation has been designed to be consistent with the characteristics of the neighborhood. The subject site currently adjoins property used as a sand and gravel wash plant as well as a property used for sand and gravel mining. The rural environment around the Property and the provision of buffers and berms will ensure that the use will not adversely affect the use or development of adjacent properties or the general neighborhood. The applicant will take all steps necessary to make certain the property is in conformance with the norms and standards dictated by the Zoning Ordinance as well as state and federal guidelines.

**Section 27-317a(6)**

***The proposed site plan is in conformance with an approved Tree Conservation Plan.***

The applicant will submit a Tree Conservation Plan to the Natural Resources Division of M-NCPPC

V: Conformance with the 2002 General Plan: The 2002 General Plan addresses surface mining in its "Environmental Infrastructure" section in which policy 6 states "use existing natural resources wisely" (p.49) Two strategies are listed to meet this policy both

of which have been complied with by the applicant:

- 1) *Prepare a special study to analyze sand and gravel mining operations with regard to sensitive extraction and compatibility with existing communities.*
- 2) *Provide an environmental impact analysis for sand and gravel mining...applications.*

VI: Conformance with the Purposes of the O-S Zone (Section 27-425)

- 1) The purposes of the O-S zone are contained in Section 27-425. The subject request meets the purposes of the zone as follows:
  - a) *To provide for low density and development intensity as indicated on the General or Area Master Plans; and*

Sand and gravel mining activities on this site will meet the development intensity goals as provided in the Master Plan for Subregion VI. The Master Plan places a premium on extracting a site's natural resources (such as sand and gravel). This extraction should occur before other types of development render the possibility of mining a prospective site impossible.

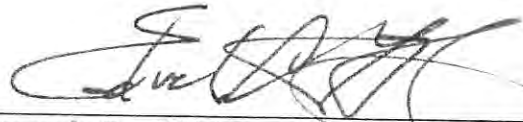
- b) *To provide for areas which are to be devoted to uses which preserve the County's ecological balance and heritage, while providing for the appropriate use and enjoyment of natural resources.*

After the extraction of sand and gravel (defined earlier in the Master Plan as not only an appropriate use but an important economic use) the site will be reclaimed as a pasture for horses. This use is in character with the O-S zone. The applicant will be providing buffers against wetland areas and will replant trees around the perimeter of the horse pasture and will dig a small pond on the northeastern portion of the site. This will allow the property to transition back into its natural state after mining operations are completed. The proposed Reclamation Plan ensures that the Property will be reclaimed for appropriate low intensity use.

VII: Conclusion:

As demonstrated herein and in the accompanying application package, the proposed Special Exception meets the requirements of the Prince George's County Zoning Ordinance and is in conformance with the goals and objectives of the 2002 General Plan and the

Subregion 6 Master Plan. Furthermore, the applicant has demonstrated compliance with the legal standards for approval of a Special Exception as mandated by the State of Maryland and Prince George's County. The Applicant submits that no such adverse impacts above and beyond those inherently associated with a surface mining special exception of more than 10 acres in the O-S zone will be associated with this request. Therefore, based upon the factual representations contained within this report and the testimony that will be presented at the public hearing, the applicant respectfully requests that the proposed Special Exception for the surface mining of sand and gravel be approved.



Edward C. Gibbs, Jr., Esquire

GIBBS AND HALLER  
1300 Caraway Court, Suite 102  
Largo, Maryland 20772  
Phone: (301) 306-0033  
Fax: (301) 306-0037

SE-4646

**ENVIRONMENTAL IMPACT REPORT**

**SAND AND GRAVEL MINING**

**PROPOSAL**

**SE-4646**



**THE ANTHONY GEORGE PROJECT**



**FEBRUARY 2014**

**ENVIRONMENTAL IMPACT REPORT  
SAND AND GRAVEL MINING PROPOSAL**

**(SE-4646)**

**THE ANTHONY GEORGE PROJECT**

**PREPARED BY**

**THE MARYLAND - NATIONAL CAPITAL PARK  
AND PLANNING COMMISSION**

**COUNTYWIDE PLANNING DIVISION  
14741 GOVERNOR ODEN BOWIE DRIVE  
UPPER MARLBORO, MARYLAND 20772**

**Project Study Team**

**Environmental Planning Section**

**Katina Shoulars, M.S.**

**Megan Reiser, M.S.**

**Michael Colgan, M.S.**

**Transportation Planning Section**

**Tom Masog, M.S.**

## Table of Contents

Executive Summary .....	1
1.0 Introduction .....	3
1.1 Background .....	3
1.2 Geology of Sand and Gravel Mining .....	4
1.3 Special Exception Evaluation Criteria and Process .....	4
2.0 Study Purpose and Approach .....	8
3.0 Existing Environment .....	9
3.1 Site Description .....	9
3.2 Community Description .....	9
4.0 Alternatives Analysis .....	11
4.1 The Proposed Mining Activity .....	11
4.2 No-project Alternative .....	16
4.3 Alternative Development Potential .....	16
4.3.1 Land .....	16
4.3.2 Water .....	16
4.3.3 Air .....	16
4.3.4 Biota .....	17
4.3.5 Human-Related .....	17
5.0 Existing Conditions and Predicted Impacts .....	18
5.1 Land .....	18
5.1.1 Geology .....	18
5.1.2 Soils .....	19
5.2 Water .....	21
5.2.1 Drainage, Runoff and Floodplain .....	21
5.2.2 Surface Water .....	21
5.2.3 Groundwater .....	23
5.3 Air .....	25
5.3.1 Climatology .....	25
5.3.2 Air Quality .....	25
5.4 Biota .....	30
5.4.1 Woodlands .....	30
5.4.2 Streams and Wetlands .....	31
5.4.3 Flora and Fauna .....	31
5.4.4 Rare, Threatened, and Endangered Species .....	32
5.5 Human-Related .....	32
5.5.1 Transportation .....	32
5.5.2 Noise .....	34
5.5.3 Visual Aesthetics .....	35
6.0 Mitigation of Adverse Impacts .....	37
6.1 Land .....	37
6.2 Water .....	37
6.3 Air .....	37
6.4 Biota .....	38
6.5 Human-Related .....	38
6.5.1 Transportation .....	38
6.5.2 Noise .....	38
6.5.3 Visual Aesthetics .....	39
Appendices A and B .....	40

## List of Figures

Figure No.	Figure Title	Page No.
1.1	Aerial Photograph of SE-4646 and Vicinity	5
1.2	Known Mining, Landfill, Rubblefill and Wash Plant Sites	6
1.3	Mineral Resources	7
4.1	Mining Plan	13
4.2	Proposed Haul Road	14
4.3	Adjacent Properties Located Within $\frac{1}{4}$ Mile with wells	15

### List of Tables

<b>Table No.</b>	<b>Table Title</b>	<b>Page No.</b>
4.1	Adjacent Properties within ¼ Mile with wells	12
5.1	Soil Types on the Subject Property	19
5.2	Water Quality Ratings	22
5.3	Air Quality Summary Table	29

## Executive Summary

This report presents the findings of an environmental impact evaluation prepared by The Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department (Development Review Division and Countywide Planning Division) for a proposed sand and gravel mining operation located at 15544 Brandywine Road, southeast of its intersection Gibbons Church Road in the southern portion of Prince George's County. The subject property totals 23.03 acres and the proposed mining will result in the clearing and grading of approximately 15.91 acres.

This Environmental Impact Report has been prepared as required by state law (Annotated Code of Maryland: Article 28, Section 8-110). The law requires that the report evaluate such an application comprehensively by determining the impacts of the proposed mining activities on:

1. Noise
2. Watershed and water quality
3. Airshed and air quality
4. Traffic and traffic safety
5. Any other environmental factors relating to the health, safety, and welfare of the residents of the affected area

This report contains a profile of the study area's existing physical, environmental, and human-related elements. The analyses include physical features including land, water, and air, followed by biota, and human-related features including transportation, noise, and visual aesthetics.

Alternatives analyses including the proposed mining activity, a no-project alternative, and alternative development potential are provided in Section 4.0. An in-depth resource impact evaluation of each of the environmental elements with respect to the potential impacts of the sand and gravel mining operation is provided in Section 5.0. Proposed mitigation measures are provided in Section 6.0. Recommended conditions of approval will be provided as part of the special exception review and are not included in this report.

The following is a summary of the anticipated impacts of the proposed mining operation:

1. The mining activity is proposed to include the following tasks for each phase in the order listed: removal of vegetation; removal of topsoil and placement in berms or stockpiles; excavation of materials using excavators; movement of materials on-site using bulldozers and dump trucks; and hauling of materials off-site via a haul road connected directly to the property to the north for processing at an existing facility. A maximum of 200 trips per day (100 trucks in and 100 trucks out) are proposed. No on-road hauling is proposed.
2. The proposed mining will require the approval of an erosion and sediment control plan containing devices (traps/ basins) to control soil erosion and stream sedimentation.
3. The depth of mining is not expected to alter groundwater levels because the mining is not proposed to occur to a depth below the existing water table. No impacts to surrounding wells are anticipated; however, the applicant has committed to providing new wells for any property owner within a quarter mile, whose well is negatively affected by the mining.
4. The proposed mining of sand and gravel from the subject property is not expected to have any adverse impacts on the climatology of the immediate area or of the surrounding area.
5. The particulate matter levels at the site are proposed to be below the National Ambient Air Quality Standards (NAAQS) for both PM<sub>10</sub> (larger "coarse" particles) and PM<sub>2.5</sub> (smaller "fine" particles).
6. Minor impacts to regulated environmental features such as streams or wetlands, and their buffers,

are proposed for sediment control and stormwater outfalls that are necessary to address the regulations of the county and state code.

7. Woodland conservation is required on-site to meet the threshold requirements of the Woodland and Wildlife Habitat Conservation Ordinance.
8. No off-site hauling is proposed. Instead, a direct haul road is proposed to connect the site with the existing processing facility located to the north.
9. Mining operations on the site are restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, excluding federal holidays, and 7:00 a.m. to 12:00 p.m. on Saturdays for activities such as equipment maintenance. There will be no operations on Sundays. Trucks are not permitted to arrive at the site prior to 7:00 a.m.
10. Berms are proposed along portions of the property boundary of the subject site for noise mitigation purposes. Noise levels are expected to meet the Code of Maryland Regulations residential noise limit (65 dBA) at the property boundary.
11. The post-mining reclamation and the installation of landscaping and reforestation will provide long-term water quality benefits and provide habitat value to the site.
12. The rural historic landscape along Brandywine Road as well as the visibility of the mining operation from dwellings or structures within the potential viewshed of the application are not expected to be significantly affected.

## 1.0 Introduction

### 1.1 Background

An application has been filed for a Special Exception to the Zoning Ordinance to surface mine sand and gravel from a 22.03-acre site; Parcel 17, Tax Map 156, known as the Anthony George Property, where a mining area of approximately 15.91 acres is proposed. Figure 1.1 is an aerial photograph plan provided by the applicant dated September 2008 that provides an overview of the subject property and nearby land uses. Figure 1.2 shows the location of all active mining sites, wash plants, municipal landfills, rubble landfills, and the proposed Special Exception (SE-4646).

Pursuant to this application, submitted by Rock Hill Sand & Gravel, under state law, an Environmental Impact Report (EIR) must be prepared by the Maryland-National Capital Park and Planning Commission (Annotated Code of Maryland: Article 28, Section 8-110). The law requires that the report evaluate such an application comprehensively by analyzing the impact of the proposed mining activities on the surrounding area, considering only the following criteria:

1. Noise
2. Watershed and water quality
3. Airshed and air quality
4. Traffic and traffic safety
5. Any other environmental factors relating to the health, safety, and welfare of the residents of the affected area

This EIR was prepared by the Environmental Planning Section and the Transportation Planning Section using information from previous EIRs, PGAtlas, information submitted by the applicant and other in-house references. The applicant submitted the following studies that assisted in the evaluation of future impacts:

1. an approved Natural Resource Inventory Plan, NRI-017-10, approved October 25, 2011, including a letter from the Maryland Department of Natural Resources, Wildlife and Heritage Service regarding the presence or absence of rare, threatened, or endangered species and forest interior dwelling species habitat;
2. a Type 2 Tree Conservation Plan prepared by McCrone, stamped as received August 30, 2013;
3. a Mining Site Plan prepared by McCrone, stamped as received August 30, 2013;
4. an Access Plan, prepared by McCrone, stamped as received August 30, 2013;
5. a Reclamation Plan, prepared by McCrone, stamped as received August 30, 2013;
6. an Aerial Photo Plan, prepared by McCrone, stamped as received August 30, 2013;
7. an approved Floodplain Study (FPS 201007), stamped as received August 30, 2013;
8. an unapproved Sediment and Erosion Control Plan, prepared by McCrone, stamped as received December 1, 2010;
9. a ¼ Mile Radius – Well Location Plan, prepared by McCrone, stamped as received August 30, 2013;
10. Special Exception Statement of Justification, stamped as received July 22, 2009;
11. a Hydrologic Evaluation report prepared by Environmental Resources Management, dated January 12, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013;
12. an Air Quality Report prepared by Environmental Resources Management, dated April 2, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013;
13. an Acoustical Analysis report prepared by Scantek, Inc. dated April 12, 2010 and a supplemental report dated August 26, 2013, stamped as received August 30, 2013;

14. a Statement of Justification for proposed impacts to the Primary Management Area (PMA), stamped as received August 30, 2013; and
15. a Traffic Report prepared by Lenhart Traffic Consulting, Inc. dated July 25, 2013.

## **1.2 Geology of Sand and Gravel Mining**

Prince George's County lies almost wholly within the Atlantic coastal plain physiographic province with extensive sand and gravel deposits present within its geologic formations. Major deposits in the county are found in a geologic formation known as the Patuxent Formation in the northwest portion of the county and in the Brandywine Formation in the south (Figure 1.3). The Patuxent Formation has been considerably depleted in the county while extensive sand and gravel deposits are still present in the Brandywine Formation. This geologic unit occurs as a shallow blanket of coarse sediments, 20 to 40 feet thick, and covers the level plateau-like surface of southern Prince George's County (USDOI, Geological Survey, 1955). The Brandywine Formation has become the major source of sand and gravel in the county as evidenced by the number of active sand and gravel mining sites.

Sand and gravel resources are considered valuable natural resources. Throughout the county, sites that contain these natural resources have been mined and then developed for other uses ranging from residential, commercial, and industrial uses to wetland and woodland preserves. The current application proposes the post mining use of this property as woodland preservation and reforestation to meet a portion of the site's woodland conservation requirement and open pasture space for horses.

## **1.3 Special Exception Evaluation Criteria and Process**

General criteria governing all special exception applications are set forth in Sections 27-317 and 27-410 of the Zoning Ordinance for Prince George's County.

The required findings will be evaluated in the technical staff report that is prepared in conjunction with the special exception case. Additionally, the inventory of active sand and gravel mines required in Section 27-410(a)(8) and provided in Appendix A is considered.

The Zoning Hearing Examiner and District Council use the findings of the EIR and the technical staff report as they deliberate on the merits of a special exception application for surface mining. If a hearing by the Planning Board is requested by any party, the Planning Board provides the Zoning Hearing Examiner with a recommended action that the Zoning Hearing Examiner may accept, deny, or modify. The Zoning Hearing Examiner's decision may then be appealed to the District Council, who may also accept, deny, or modify the Zoning Hearing Examiner's Decision.





**GRAPHIC SCALE**

**DEVELOPER CONTACT**

**OSCAR**  
 OSMAR CONSULTANTS  
 1000 WASHINGTON ROAD  
 SUITE 200  
 ANNAPOLIS, MD 21403  
 PHONE: (410) 271-4444

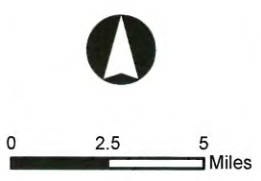
**TABLE OF CONTENTS**

1. PROJECT LOCATION
2. AERIAL PHOTOGRAPH
3. EXISTING AND PROPOSED LOT LAYOUT
4. EXISTING AND PROPOSED LOT LAYOUT
5. EXISTING AND PROPOSED LOT LAYOUT
6. EXISTING AND PROPOSED LOT LAYOUT
7. EXISTING AND PROPOSED LOT LAYOUT
8. EXISTING AND PROPOSED LOT LAYOUT

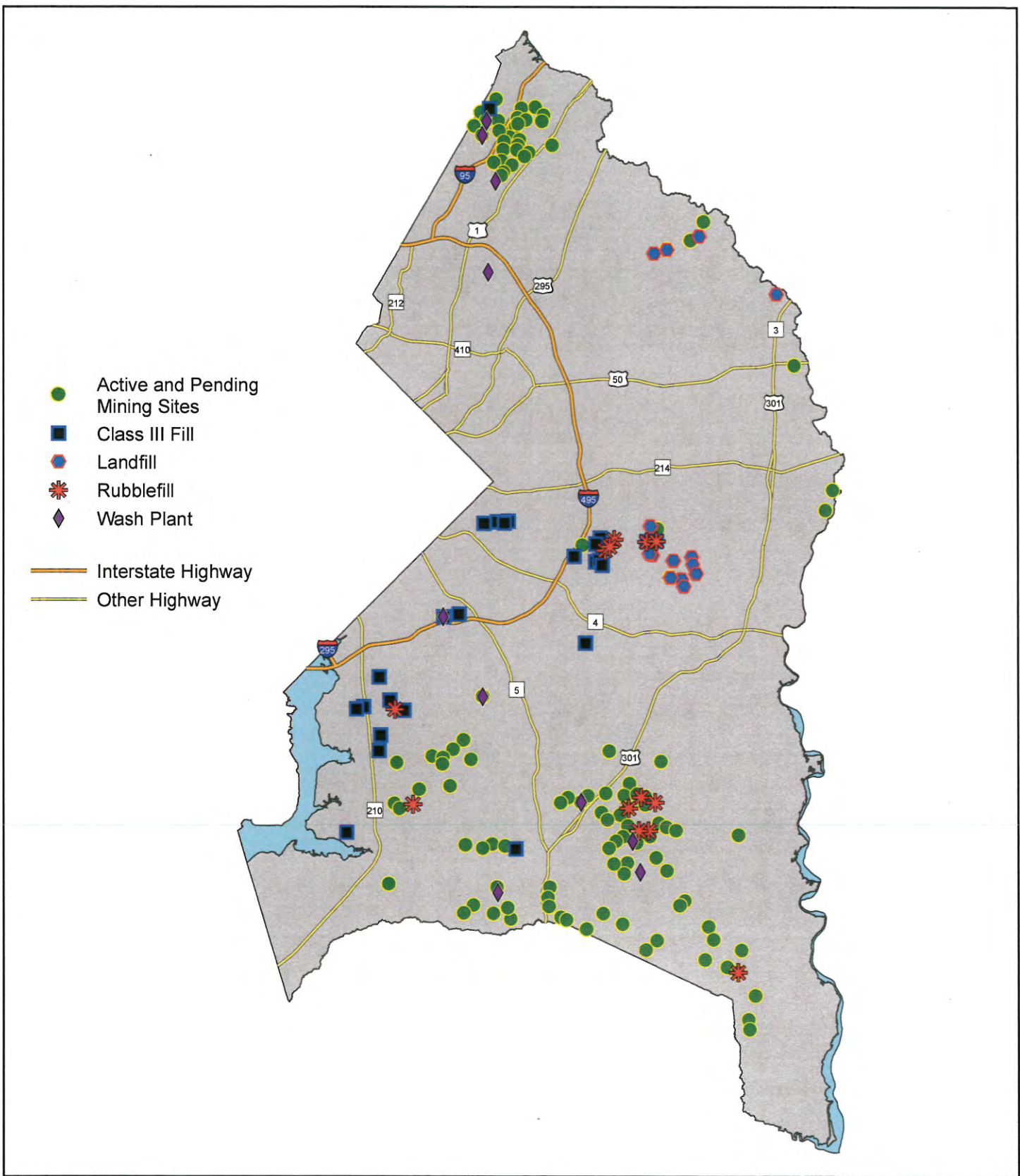
**VICINITY MAP**

<p>DATE: SEPTEMBER 2006          JOB NUMBER: 04100118          SCALE: 1"=40'          DRAWN BY: JDS          DESIGNED BY: JDS          APPROVED BY: JDS          FOLDER REFERENCE: 156C</p>	 <b>McCRONE</b> ENGINEERS & SURVEYORS & PLANNERS ANNANDALE & CENTREVILLE & ELKTON & SALEMSTOWN 10000 WOODBURY AVE ANNAPOLIS, MARYLAND 21403 (410) 271-4444 <small>Copyright © 2003</small>	<p><b>REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV #</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION</td> </tr> <tr> <td>2</td> <td>REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION</td> </tr> <tr> <td>3</td> <td>REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION</td> </tr> <tr> <td>4</td> <td>REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION</td> </tr> <tr> <td>5</td> <td>REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION</td> </tr> </tbody> </table>	REV #	DESCRIPTION	1	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION	2	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION	3	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION	4	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION	5	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION	<p><b>PROFESSIONAL CERTIFICATION</b></p> <p>JAMES L. BROWN, P.E.          PROJECT NUMBER: 04100118          LICENSE NO.: 156C          EXPIRATION DATE: 7/1/15</p>
REV #	DESCRIPTION														
1	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION														
2	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION														
3	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION														
4	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION														
5	REVISED BASED ON COMMENTS FROM MARYLAND DEPT OF TRANSPORTATION														
<p><b>AERIAL</b></p> <p>FOR:  <b>ANTHONY GEORGE PROJECT</b>  <b>ROCK HILL SAND &amp; GRAVEL CORP.</b>          VIA GUDELSKY MATERIALS          ELEVENTH ELECTION DISTRICT,          PRINCE GEORGE'S COUNTY, MARYLAND  <b>TAX MAP - 156, GRID - D2, PARCEL - 17</b>          PREPARED FOR: GUDELSKY MATERIALS</p>															

**Figure 1.1**  
**Aerial Photograph**  
**of SE-4646 and Vicinity**



This map may not be reproduced, stored in a retrieval system, or transmitted in any form, including electronic or by photo reproduction, without the express written permission of The Maryland-National Capital Park and Planning Commission. For More information, contact the Prince George's County Planning Department in Upper Marlboro, Maryland.



**Figure 1.2**  
**Known Mining, Landfill,**  
**Rubblefill and Wash Plant Sites**

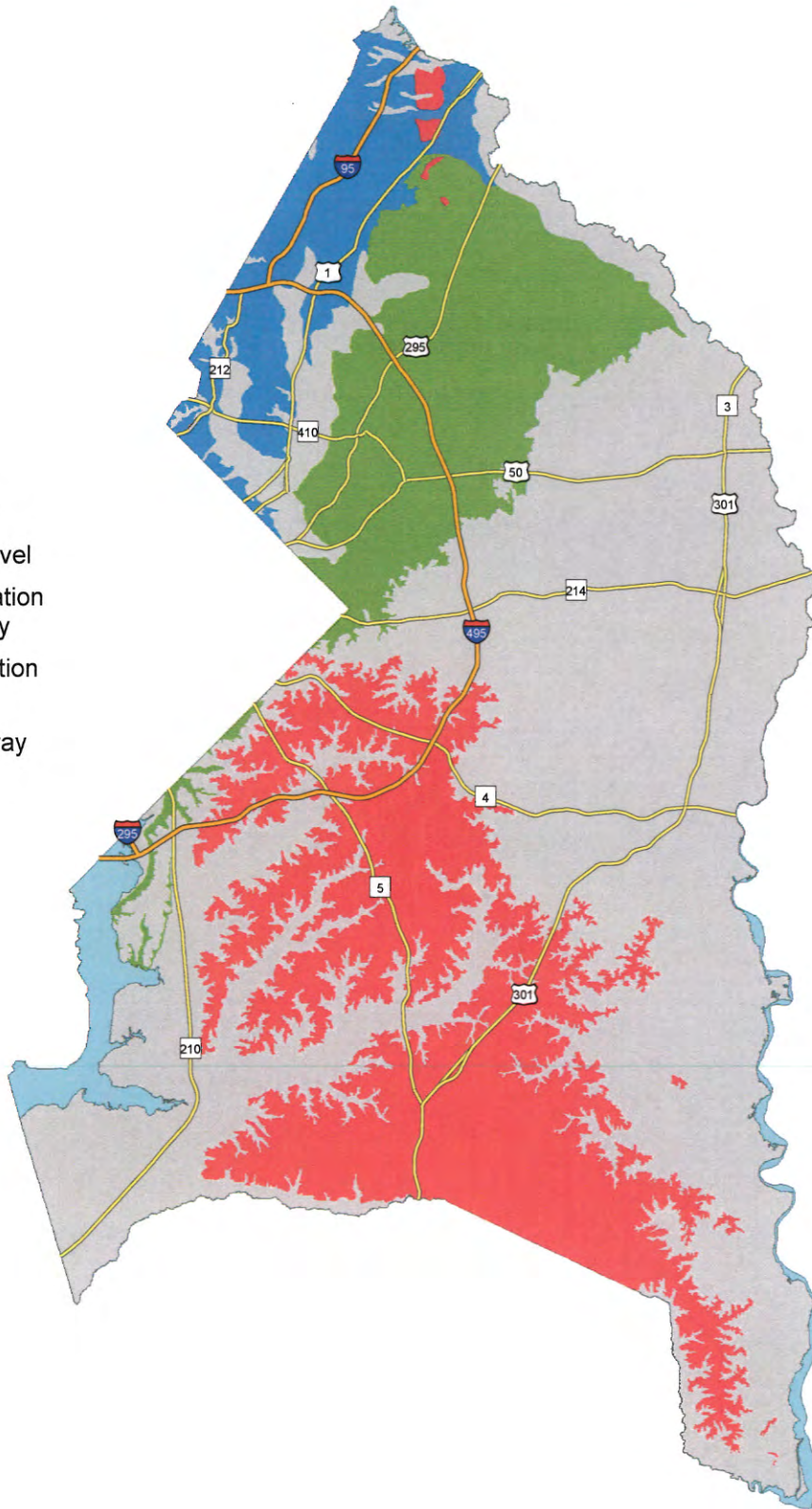


**GIS**  
 2/4/2014

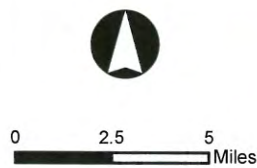
This map may not be reproduced, stored in a retrieval system, or transmitted in any form, including electronic or by photo reproduction, without the express written permission of The Maryland-National Capital Park and Planning Commission. For More information, contact the Prince George's County Planning Department in Upper Marlboro, Maryland.

**Geologic Formation**

-  Brandywine Gravel
-  Patapsco Formation and Arundel Clay
-  Patuxent Formation
-  Interstate Highway
-  Other Highway



**Figure 1.3**  
**Mineral Resources**



This map may not be reproduced, stored in a retrieval system, or transmitted in any form, including electronic or by photo reproduction, without the express written permission of The Maryland-National Capital Park and Planning Commission. For More information, contact the Prince George's County Planning Department in Upper Marlboro, Maryland.

## 2.0 Study Purpose and Approach

The overall purpose of this report is to provide an evaluation of the potential environmental impacts of the proposed mining activity as required by state law.

The principal objective of this report is to provide information to decision-makers in sufficient detail to answer the following questions:

1. Will the proposed use adversely affect the health, safety, and welfare of residents or workers in the area above accepted levels or standards?
2. Will the proposed use be detrimental to the use and/or development of adjacent properties or the general neighborhood, and if so, could the impacts be mitigated?
3. What issues should be addressed in conditions of approval of the application to mitigate the impacts proposed?

The evaluation contained in this report was performed by a team of professionals in The Maryland-National Capital Park and Planning Commission's Prince George's County Planning Department. The description of the existing environmental features was based on information obtained from data collection, site visits, studies provided by the applicant, literature review, and the Letter of Justification submitted with the subject application. The existing physical environmental features such as geology, soils, water (drainage and runoff, water quality, sediment, groundwater), forest cover, noise, and climatology and air quality were examined and are described in this report. Likewise, biological resources of the area (woodlands, streams and wetlands, flora and fauna, and rare, threatened, and endangered species) as well as human-related resources (transportation, noise, and visual aesthetics) were identified. The impacts upon land, water, woodlands, air, noise, biological resources, and aesthetics as a result of the proposed mining activity were determined and quantified where possible by using scientific methodologies, including modeling. The magnitude and significance of the predicted impacts were then identified and discussed. Potential adverse impacts from the mining activity and potential mitigation measures have also been presented.

### **3.0 Existing Environment**

#### **3.1 Site Description**

The subject property is owned by Anthony George and is located at the northern terminus of Evergreen Way, north of Brandywine Road, MD 381. Surrounding properties to the north, east, and south are O-S zoned, and the property itself is typical of the O-S zone which is characterized by low-density residential development lending to the rural character of the area. The properties located to the west are zoned I-2. Parcel 11, abutting the western property boundary, is developed with an existing wash plant that is intended to be the destination for processing of the sand and gravel extracted from the subject site under the proposed mining application.

The proposed mining operation is located in the Rock Creek watershed, in the Spice Creek drainage basin of the Patuxent River, in Master Plan Subregion 6, and in Planning Area 86B. The subject property is located in the Rural Tier as approved in the General Plan and is further identified as Parcel 17 on Tax Map 156.

The subject property is improved with an existing single-family detached dwelling, a barn and several small outbuildings. The perimeter of the property boundary is wooded and a majority of the interior of the site is open pasture and fields. According to mapping research and information submitted, several unnamed tributaries of Rock Creek, as well as a segment of Rock Creek itself, are located on-site. These on-site streams are the headwater tributaries of Spice Creek within the Patuxent River watershed. Fringe wetlands and 100-year floodplain associated with the stream system are also located on-site. The property is located in sewer and water service categories S-6 and W-6 which means it is not planned to receive public water or sewer service. According to information obtained from the Maryland Department of Natural Resources (MD DNR) Natural Heritage Program, there are no rare, threatened, or endangered species found to occur on or in the vicinity of this property. As part of the MD DNR review, the possibility of forest interior dwelling bird species (FIDS) habitat was identified; however, staff has determined upon review of the on-site conditions, no forest interior exists on-site. Brandywine Road is a Master Plan designated collector and is a scenic and historic road; however, the materials are proposed to be transported directly to the abutting wash plant to the north and no traffic associated with the mining operation is anticipated to access the site from Evergreen Way.

There are no designated historic sites on this property or on adjacent properties; however, based on the examination of historic maps and aerial photographs, the project area is likely to contain historic archeological sites. Recommendations for archeological surveys will be addressed as part of the special exception review.

#### **3.2 Community Description**

The subject property is located in the Subregion 6 Master Plan, in Planning Area 86B, and is in the Rural Tier as approved in the 2002 General Plan. The vision for the Rural Tier is protection of large amounts of land for woodland, wildlife habitat, recreation and agricultural pursuits, and preservation of the rural character and vistas that now exist.

The character is to remain rural as it exists today and the preservation of viewsheds and vistas is important. The 2013 Subregion 6 Master Plan designates the subject property for rural land uses. The property is zoned O-S and the mining of sand and gravel is a permitted use in this zone by special exception.

The surrounding properties are also zoned O-S, with the exception of the Guldesky sand and gravel

processing facility located to the northwest, which is zoned I-2. A mix of woodlands and cleared areas, undeveloped land and light farming surround the property as well as scattered single-family detached homes and an existing sand and gravel mine (SE-4517) to the northeast.

## 4.0 Alternatives Analysis

### 4.1 The Proposed Mining Activity

Prince George's County is one of the few counties in the state with extensive sand and gravel deposits. The extraction of such minerals has historically been an important industry in the county. The industry helps to support the local economy by generating jobs as well as providing a much needed resource for the development of the Washington region.

Under Article 66B, a comprehensive plan must incorporate land use policies and recommendations to balance mineral resource extraction with other land uses and prevent the preemption of mineral resources extraction by other uses. The subject property has been analyzed and was found to contain sufficient sand and gravel resources to warrant mining.

Most development activities within the county are also subject to the planning regulations, policies and strategies included in the General Plan and the Countywide Green Infrastructure Plan, as well as being subject to the Woodland and Wildlife Habitat Conservation Ordinance. These regulations, policies, and strategies are in place to ensure that all development within the county, including sand and gravel mining, is performed in an environmentally sound manner.

The subject special exception application proposes the surface mining of sand and gravel on approximately 15.91 acres of a 23.03-acre property as shown in Figure 4.1. The proposal includes the clearing of 2.68 acres of woodlands and the disturbance of 12.93 acres of open area on-site. The property is subject to woodland conservation violation notice (NOV 29517-2011) for clearing that was done without a permit prior to the submission of the current mining application. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

The mining activity is proposed to include the following typical sequence for each phase in the order listed: removal of vegetation; excavation of materials; movement of materials on-site using excavators and dump trucks; and hauling of materials off-site with dump trucks at a maximum of 200 trips per day (100 trucks in and 100 trucks out). The haul is road proposed to connect to the abutting property to the north where there is an existing processing facility, as shown in Figure 4.2.

Portions of approximately 50 lots and/ or parcels are located within a quarter mile of the subject site as shown in Figure 4.3. Of those properties, only three wells were identified from the MDE well permit database. The wells are located at 15204, 15300, and 15526 Brandywine Road, as listed below in Table 4.1 , and have wells that are at a depth greater than 408 feet, within deep aquifers, and well below the proposed depth of mining. The MDE records further indicate that the majority of residential wells in the area are at depths in deeper aquifers. These deeper aquifers occur at depths over 370 feet. The hydrogeologic conditions that underlie the site vicinity include a confining layer that acts as a hydraulic barrier between the surficial water table aquifer in the upland deposits, and the deeper aquifers that supply groundwater to wells in the area.

The effects of the proposed mining on the identified properties are analyzed in this report.

<b>Identifier*</b>	<b>Tax Account</b>	<b>Lot/ Parcel</b>	<b>Address</b>	<b>Owner</b>
3	1177153	Lot 3	15204 Brandywine Road	Jacqueline Proctor
10	1177054	Lot 6	15300 Brandywine Road	Charles & Kerri McKenzie
12	1160316	P. 23	15526 Brandywine Road	Mohammad Doudzai

\*Identifier corresponds to Figure 4.3

The depth of mining is not expected to alter groundwater levels because the mining is not proposed to occur to a depth below the existing water table. No dewatering is proposed. Only mineral extraction is planned and no washing or processing of raw material is proposed on-site.

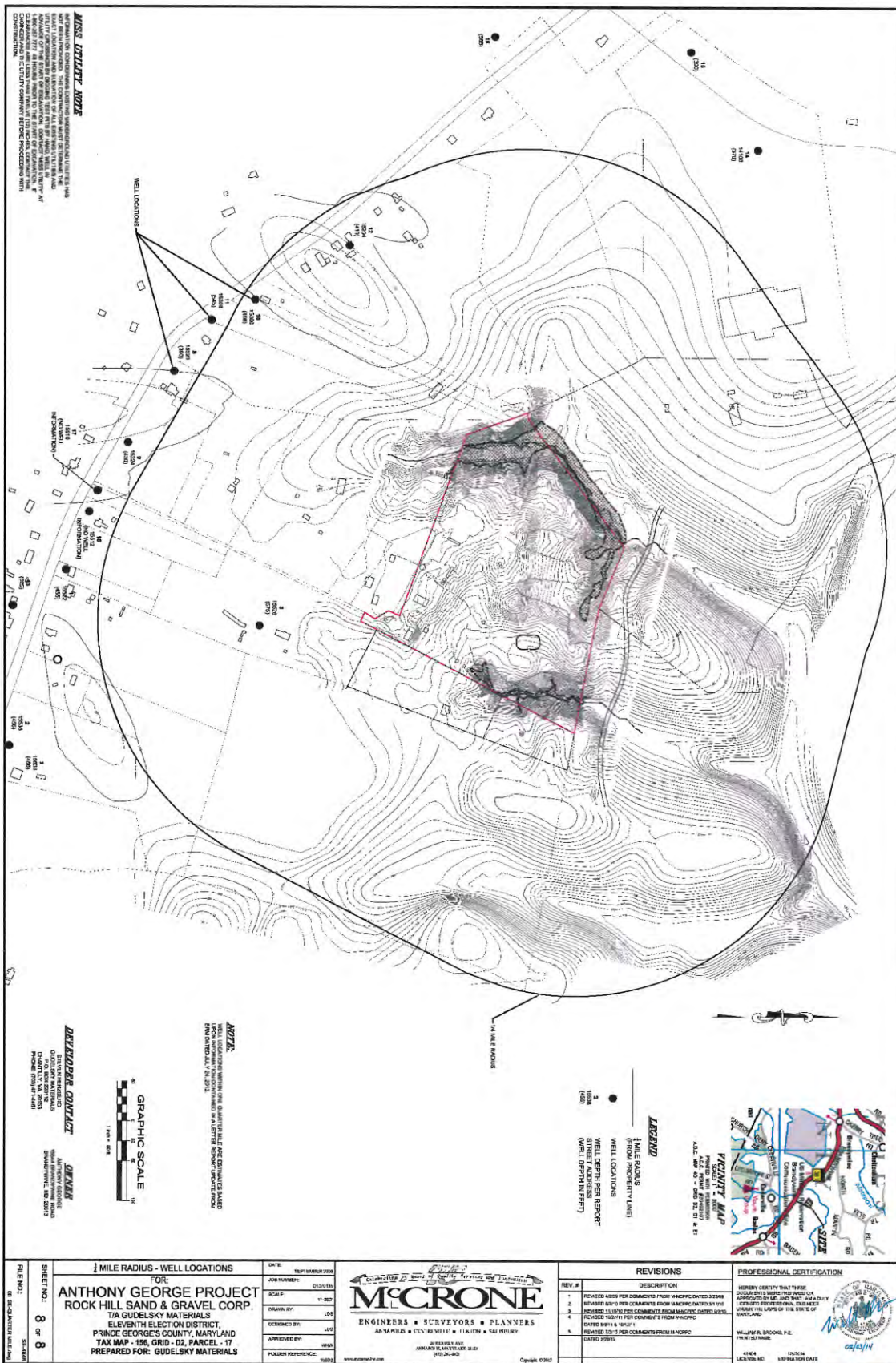
The proposed mining will require the approval of an erosion and sediment control plan containing devices (sediment traps and or basins) to control soil erosion and limit stream sedimentation. Only minor impacts to regulated environmental features such as streams or wetlands are proposed for a sediment control outfall.

Specific resource impacts of the proposed mining activity have been evaluated in Section 5.0 of this report.









1/4 MILE RADIUS - WELL LOCATIONS  
FOR:  
**ANTHONY GEORGE PROJECT**  
ROCK HILL SAND & GRAVEL CORP.  
T/A GUDELSKY MATERIALS  
ELEVENTH ELECTION DISTRICT,  
PRINCE GEORGE'S COUNTY, MARYLAND  
TAX MAP - 156, GRID - D2, PARCEL - 17  
PREPARED FOR: GUDELSKY MATERIALS

DATE: SEPTEMBER 2008  
JOB NUMBER: 01010181  
SCALE: 1"=0.125  
DRAWN BY: JG  
CHECKED BY: JG  
APPROVED BY: JG  
FIELD REFERENCE: NONE

**McCRONE**  
ENGINEERS • SURVEYORS • PLANNERS  
ANAPOLIS • CROFTSVILLE • OAKTON • SHELTON

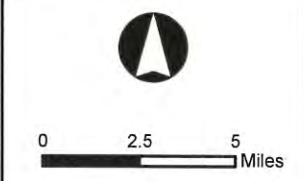
JERRY D. McCRONE, P.E.  
JERRY D. McCRONE, P.E.  
JERRY D. McCRONE, P.E.

REVISIONS	
REV #	DESCRIPTION
1	REVISED 2/08 PER COMMENTS FROM MAPPING DATED 2/08/08
2	REVISED 2/08 PER COMMENTS FROM MAPPING DATED 2/08/08
3	REVISED 11/08 PER COMMENTS FROM MAPPING DATED 11/08/08
4	REVISED 12/01 PER COMMENTS FROM MAPPING
5	REVISED 12/01 PER COMMENTS FROM MAPPING

**PROFESSIONAL CERTIFICATION**

JERRY D. McCRONE, P.E.  
1414  
LACONIA, MD 21074  
12/17/08  
12/17/08

**Figure 4.3**  
**Adjacent Properties Located**  
**Within 1/4 Mile With Wells**



This map may not be reproduced, stored in a retrieval system, or transmitted in any form, including electronic or by photo reproduction, without the express written permission of The Maryland-National Capital Park and Planning Commission. For More information, contact the Prince George's County Planning Department in Upper Marlboro, Maryland.

## **4.2 No-project Alternative**

Sand and gravel are marketable resources which are only available in areas within specific geologic formations. These formations are clustered in the northern and southern portions of the county (Figure 1.3). Alternatives to the proposed mining application are limited due to the location of the resource.

## **4.3 Alternative Development Potential**

The subject property is located in the Rural Tier as designated in the 2002 General Plan and is zoned O-S; a zone that requires a five-acre minimum lot size. The vicinity of the subject property contains many active, abandoned or reclaimed mining sites. The remaining area contains undeveloped wooded parcels, scattered home sites, and a few residential subdivisions.

In the Rural Tier, the master plan recommends low density residential use in the area. The use of the conservation subdivision technique is required in the Rural Tier.

### **4.3.1 Land**

Development activity in this part of the county is limited because it is located in the Rural Tier. A few single-family detached residential developments have been built in the last decade; however, this area generally retains a rural character. If the subject property was developed with single-family residences according to the zoning, disturbance of the soils would not significantly alter the landform of the area. The topography of the site would be subject to natural wind and water erosion; however, impacts would be negligible. In addition, streams, wetlands and floodplains would be protected under Sections 24-129 and 24-130 of the Subdivision Regulations in the same manner in which the resources will be protected under Section 27-317(a)(7) of the Zoning Ordinance. Both regulations require that the streams, wetlands, floodplains and their associated buffers be preserved to the fullest extent possible.

### **4.3.2 Water**

With regard to stormwater runoff and drainage, the potential development of the property with single-family detached dwellings on large lots would not significantly alter the existing runoff patterns. Drainage patterns are generally maintained when stormwater management systems are designed, resulting in ground and surface water re-charge in the vicinity of the rainfall, especially on developments that will maintain, or establish, large forested areas. A slight decrease in the site's capacity to absorb precipitation and recharge the area's groundwater would result from the construction of roads, driveways, and houses, but should not significantly affect the overall infiltration capacity of the site.

### **4.3.3 Air**

The development of the subject property with large lot, single-family detached housing would not cause any significant changes in climate or air quality.

#### 4.3.4 Biota

If developed with a residential use, the construction of single-family detached houses on large lots would have a minimally negative impact on the flora and resident and transient fauna because large lots allow for portions of the existing woodlands to remain undisturbed and also allows for the re-establishment of woodlands. The effect of development on the regulated streams and wetlands on-site would be minimal.

With regard to the Woodland and Wildlife Habitat Conservation Ordinance requirements, the woodland conservation requirement for this site, based on the amount of clearing proposed is 15.86 acres. The tree conservation plan submitted with the mining application proposes a combination of preservation, reforestation and off-site mitigation. It is recommended that, at a minimum, the woodland conservation threshold be met on-site. Large lot subdivisions would be required to meet the woodland conservation in a similar manner.; therefore, the amount of woodlands provided would be essentially the same as a result of either the subject application or a future subdivision.

#### 4.3.5 Human-Related

**Traffic:** The rate of traffic growth is unrelated to the subject application, and would be assumed to occur regardless of the status of the subject application.

**Noise:** The existing noise environment at the proposed mining site can be characterized as typical of a low population rural area. The future environment without the mining activity would remain fairly constant with no adverse noise impacts to the immediate vicinity.

**Scenic Views:** The development of the subject property with single-family detached residences on large lots is not likely to affect the scenic value of the site or the surrounding area. Buffers around the wetlands and streams would remain and reforestation to meet woodland conservation threshold requirements would be necessary. Low-density residential development is consistent with the current land use in the area. Brandywine Road is a Master Plan designated collector and is a scenic and historic road which requires evaluation of the visual aesthetics as part of the residential subdivision review; however, given the long entrance road into the site, Evergreen Way, buffering may not be necessary. Under any development scenario, the project would not be visible from Brandywine Road because the access road is approximately 1,600 feet long and there are considerable blocks of existing woodlands between the road and the proposed mining operation.

## **5.0 Existing Conditions and Predicted Impacts**

In this section, profiles of the property's existing physical, environmental, and natural habitat elements are presented, followed by an evaluation of the predicted impacts of the sand and gravel mining operation.

### **5.1 Land**

#### **5.1.1 Geology**

##### **Existing Conditions**

The site is located in the Atlantic Coastal Plain Physiographic Province and consequently sedimentary layers of clays, silts, sands, and gravel underlie it. The Brandywine Formation geological unit, which consists of gravel, sand, and loam, with gravel occurring in abundance at the deposit base, is the prime formation to be mined (Figure 1.3).

The Brandywine Formation may be divided into two members: an upper loam member and a lower gravel member. The upper loam member grades upward from gravelly loam through sandy to silt loam and has an approximate maximum thickness of 25 feet, but is generally about 15 feet or less in some parts of the area. In large areas of the county it has been completely stripped by erosion. The lower gravelly member is mostly composed of inter-bedded sand and gravel. The maximum thickness of the Brandywine gravel is about 50 feet, but usually it occurs as beds 15 to 25 feet thick. The Brandywine Formation was apparently formed as part of an ancient delta of the Potomac River (Glaser, 1971). The age of the deposits is unknown, with estimates ranging from 100,000 to 8 million years.

The stream valleys are floored with alluvium, which are recent deposits of sediment. In the lower course of the streams, these deposits are often quite thick. The stream banks in the alluvial plain are generally low and sandy or gravelly.

The current application proposes an average depth of mining of approximately 25 feet below the surface. The overburden (topsoil and soil that is not high in sand and gravel content) is proposed to be removed stockpiled for use in the reclamation of the site.

##### **Evaluation of Predicted Impacts**

The mining of the site will temporarily alter the surface contours and drainage patterns and will result in the removal of a majority of the sand and gravel formation on the subject property. The site is proposed to be reclaimed; however, the geology of the area will be altered by the removal of the sand and gravel layer.

## 5.1.2 Soils

### Existing Conditions

The soil types found on the property and the hydrologic soil groups are shown below as accessed September 20, 2010. (Source: Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey)

Symbol	Soil Type	Hydrologic Soil Group	K-Factor
BaB	Beltsville silt loam, 2% to 5% slopes	C	0.37
BaC	Beltsville silt loam, 5% to 10% slopes	C	0.37
CwD	Croom-Marr complex, 10% to 15% slopes	B	0.10
CwE	Croom-Marr complex, 15% to 25% slopes	B	0.10
SOE	Sassafras & Croom, 15% to 25% slopes	B	0.28

The locations of the soils in the area are shown on the Natural Resources Inventory Plan submitted with the application.

Hydrologic soil groups are categories that describe the infiltration capacities of soils. Group A soils have high infiltration rates even when thoroughly wetted. Group B soils have moderate infiltration rates and moderate runoff potential. Group C soils have low infiltration rates due to either a shallow hardpan or fine textured soils that are not rapidly permeable. Group D soils have very low rates of water transmission and very high runoff potential. The classifications on this site range from Group B to Group C.

The K-factor is a measure of erodibility. When the K-factor is greater than 0.35, soils are considered to be highly erodible. Disturbance of highly erodible soils on slopes of 15 percent or greater requires the installation of better than average erosion and sediment control devices. The areas proposed to be disturbed on the subject property are relatively flat.

The following is a brief description of the identified soils.

Beltsville series (BaB, BaC) consists of very deep, moderately well drained soils that are generally located in the coastal plain upland. The parent material consists of silty eolian deposits over loamy fluvio-marine deposits.

Croom-Marr complex (CwD, CwE) consists of deep, well drained soils formed in regolith of unconsolidated, sandy sediments. They are nearly level to very steep soils on the inner Atlantic Coastal Plain. They typically have a fine sandy loam A horizon, over a strongly expressed Bt horizon, underlain by variegated fine sandy loam or loamy fine sand. The parent material consists of gravelly fluvial deposits.

Sassafras & Croom (SOE) consists of well drained soils that are generally located in the fluvio-marine

terraces, ravines, knolls, and interfluves. The parent material is loamy fluviomarine deposits.

### **Evaluation of Predicted Impacts**

Within the limits of disturbance the top layer of soil is proposed to be stripped and stockpiled. Because the areas proposed to be disturbed are relatively flat, standard best management practices for sediment control should be sufficient to meet the state requirements. After mining is complete, the contours will be restored as noted on the reclamation plan and overburden will be redistributed across the site. Because of the disturbance to the soils and the removal of the sand and gravel, the soil properties may change in ways that are not entirely predictable.

Sand and gravel mining impacts the future development potential of the site because the Prince George's County Health Department does not permit the installation of septic fields on land that has been mined and reclaimed. The site is currently located within water and sewer category 6 which is categorized as Individual Systems. Development of the site is not currently being proposed. The manner in which the site is reclaimed will be an important aspect of any future development review to ensure that the soil compaction methods used can support future development. It is possible that if future development of the property is proposed, that the reclaimed areas would need to be excavated and properly filled to support building foundations.



## **5.2 Water**

### **5.2.1 Drainage, Runoff and Floodplain**

#### **Existing Conditions**

The study area is traversed by several small unnamed tributaries to Rock Creek. Rock Creek is a major tributary to Spice Creek which drains into the Patuxent River. The Spice Creek drainage area is approximately 8,151 acres while Rock Creek's drainage area is 4,826 acres. The stream flows in an easterly direction where, downstream of Croom Road, joins Tom Walls Branch (1,826 acre drainage area) before joining the Spice Creek main stem in the Patuxent River Park. The upper reaches of Rock Creek are generally bounded (ridge line) by North Keys Road and Brandywine Road. The other major tributary, School Spring Branch (drainage area 691 acres) joins Rock Creek just north of Letcher Road East.

Current development in the Rock Creek watershed in Prince George's County is limited, with approximately 61 percent of the watershed being wooded and about 26 percent of the basin in agricultural use. The remaining area is predominantly large lot residential areas and pasture land.

Current development within the sub-drainage areas containing the mining site is limited. Using the Runoff Curve Number (RCN) calculation as determined using the Prince George's County Geo-STORM models, approximately 71 percent of the land is wooded, 16 percent is in agricultural use/open space/grassland, and the remaining 13 percent is large-lot residential development. Within the special exception application boundary, a description is given in the Statement of Justification, "... Presently, the Property is improved with an existing single-family detached dwelling, a barn and some small outbuildings. Much of the Property consists of open pasture and fields which are devoted to use as a horse farm. The perimeter of the site is generally wooded."

#### **Evaluation of Predicted Impacts**

Runoff from the mining site would change primarily due to the loss of vegetative covering during the mining operations that reduces interception, transpiration, and infiltration. Also, stripping the topsoil removes the soil layer and ground litter with high organic content allowing for great initial abstraction at the beginning of a storm event. However, once the site is reclaimed, there will be little to no change in the runoff. All mining activities are outside the 100-year floodplain so no impact is anticipated.

Extensive calculations were prepared and modeling conducted to determine the flood elevations and support the conclusions in this section. This information can be obtained from the Prince George's County Department of Environmental Resources (DER) citing the floodplain study, FPS 201007, approved November 4, 2010.

### **5.2.2 Surface Water**

#### **Existing Conditions**

Water quality standards are set by federal and state laws to protect water bodies based on their designated use. A "use" as defined by these laws refers to an intended human and/ or aquatic life objective, use, or goal for a waterway. Standards are set to ensure that waterways are usable for drinking water, swimming, fishing, industrial and agricultural uses. These standards are set for waterways based on the designated use and include quantifiable criteria that are used to measure potential threats to the use of the water body. Where specific numeric criteria are not available, narrative criteria apply.

The on-site tributaries of Rock Creek are classified as Use I waterways (COMAR 26.08.02.08) for water contact recreation, fishing, the growth and propagation of fish (other than trout), other aquatic life, and wildlife, agricultural water supply, and industrial water supply. Use I waters have minimum water quality criteria including bacteriological, dissolved oxygen, temperature, pH, turbidity, color, and toxic substances.

An anti-degradation policy (COMAR 26.08.02.04-1) has also been established to assure that water quality continues to support the designated uses. There are three tiers of protection. Tier I specifies the minimum standard that must be met to support a balance of indigenous populations and to support contact recreation; Tier I is often referred to as “fishable – swimmable.” A Tier II designation protects water that is better than the minimum specified for a designated use. Tier III is for the protection of outstanding resource waters. No Tier III designations are located in Maryland.

The anti-degradation policy states that waters of the state shall be protected and maintained for existing uses and the basic uses of water contact recreation, fishing, protection of aquatic life and wildlife, and agricultural and industrial water supply for Use I waterways. To accomplish the objective of maintaining existing water quality, new and existing point sources are required by the state to achieve the highest applicable statutory and regulatory effluent requirements, and non-point sources are required to implement all cost effective and reasonable best management practices for nonpoint source control. The on-site waters are classified as Tier I under the anti-degradation policy; however, the site is located within a Tier II watershed. The on-site waters comprise the headwaters of Rock Creek which is a designated Tier II waterway downstream of the subject site.

According to water quality monitoring conducted by Prince George’s County and reported in the Countywide Green Infrastructure Plan (Approved June 14, 2005), the current water quality ratings for the Spice Creek watershed are shown in Table 5.2. Of the 42 watersheds in Prince George’s County, there are only four that have been rated “fair” for Benthic Index of Biological Integrity (IBI’s) and seven that have been rated “fair” for habitat. There are no watersheds in the county that have been rated “good” using this rating system. The water quality data reported is based on actual water sampling.

Watershed	Benthic IBI Rating	Habitat Rating
Spice Creek	Fair	Poor

The Water Quality ratings of “poor” may appear to conflict with the Tier II watershed designation; however, the Tier designations are based on human-related uses and the Water Quality ratings measure the suitability for naturally-occurring biota. While these two measures are not completely mutually exclusive they measure different facets of the health of stream systems.

**Evaluation of Predicted Impacts**

The primary pollutant of surface water from sand and gravel mining is sediment. During the operating stage of the mining operation, when sand and gravel is removed from the site, existing drainage patterns will be changed from sheet flow to shallow concentrated flow. At this point sediment will be introduced into the flow, transported, and eventually deposited downstream if not controlled. Because the sediment yields are so much larger for bare ground, sediment control devices must be installed to provide a reduction in the amount of sediment-laden runoff transported to the streams from the mined areas. There is a single sediment control basin proposed for the mining operation. This device is a standard best management practice. Each control device does not remove or trap all sediment, but has efficiency associated with it based on the available capacity of the device and the drainage area.

Increased sediment loads may directly affect the turbidity and color of the receiving stream if not controlled. The remaining water quality criteria including bacteriological, dissolved oxygen, temperature, pH, and toxic substances may be indirectly affected by an increase in sedimentation. Required sediment and erosion control measures are designed to minimize the sediment loads in effluent leaving mining sites. The water quality criteria are not likely to be significantly affected because of the required sediment and erosion control measures as well as the temporary nature of mining operations. Sedimentation should return to pre-mining levels once reclamation has been completed and vegetation has been re-established.

Because this site is located within a Tier II watershed, additional information and/ or mitigation measures may be required by the state to meet the anti-degradation policy requirements of the Water Quality Certification as part of the National Pollutant Discharge Elimination System (NPDES) permit.

All grading, erosion and sediment control plans are reviewed by the Prince George's County Soil Conservation District for conformance with the current Maryland Standards and Specifications for Soil Erosion and Sediment Control as well as the current Prince George's Soil Conservation District Soil Erosion and Sediment Control, Pond Safety Manual. Sediment and erosion control devices must function for both existing and proposed drainage areas and elevations. All outfalls must be designed to ensure non-erosive conditions.

A Water Quality Certification (COMAR 26.08.02.10) is required for any activity which may result in any discharge to navigable waters unless the applicant provides a certification from the state that the activity does not violate state water quality standards or limitations. Discharges permitted by the state under the National Pollutant Discharge Elimination System (NPDES) are certified by MDE.

All proposed impacts to waterways require a permit to ensure that anti-degradation policy and water quality standards are met. This project will be reviewed by MDE and they will issue all necessary permits. Enforcement is also the responsibility of MDE.

### **5.2.3 Groundwater**

#### **Existing Conditions**

Both unconfined (groundwater) and confined (artesian) aquifers are found within the county.

Unconfined aquifers are the major source of base flow to surface streams, as water in the water table generally moves toward and discharges into surface water bodies. The water level in unconfined aquifers normally fluctuates seasonally, with the highest and lowest level being experienced in early spring and early fall, respectively. Unconfined aquifers are also very susceptible to the effects of drought. Wells in unconfined aquifers are usually shallow and are constructed by digging. Wells of this type are sometimes used for private residential water supplies and may also be used for agriculture.

Confined aquifers provide a reliable water source. Though both aquifer types are recharged through precipitation, confined aquifers also exchange water through leaks in the confining layers and those located in the coastal plain generally do not discharge to surface water bodies. There are several aquifers located within the county. In general order of nearness to the surface the aquifers are the Calvert and Nanjemoy; Aquia; Brightseat, Severn and Matawan; Magothy; Patapsco; and Patuxent.

#### **Evaluation of Predicted Impacts**

A Hydrologic Evaluation report prepared by Environmental Resources Management (ERM) dated February 24, 2009, stamped as received July 23, 2009, a supplemental report dated January 12, 2010, stamped as received by EPS on January 19, 2010, and a final supplemental report dated July 24, 2013, stamped as received August 30, 2013, have been reviewed. The reports include a domestic well search area plan and an evaluation of the potential for groundwater disturbance including a conceptual cross section that show the groundwater depth in relation to the proposed depth of mining.

The report states that based on test pits, the depth to groundwater ranges from approximately 170 to 185 feet above mean sea level, or about 25 feet below the surface in the upland area of the site. The water table slopes northwest on the western portion of the site and east on the eastern portion of the site as a subdued reflection of topography. The cross section provided in the report illustrates a 'worst case' scenario because it is close to the creek and the test pit data showed that the product thickness was greatest in this area. The cross section indicates that the depth of mining ranges in elevation from approximately 195 feet to about 185 feet. The interception, pumping, and storage of groundwater, or dewatering, is not proposed; therefore, the water table should not be negatively impacted.

The domestic well search area plan included in the report shows the location of all identified wells within a quarter (1/4) mile radius of the boundary of the site. Wells located at 15204, 15300, and 15526 Brandywine Road have been identified within the quarter mile radius. The MDE well permit database indicates that these wells are at a depth greater than 408 feet, within deep aquifers, and well below the proposed depth of mining. The MDE records further indicate that the majority of residential wells in the area are at depths in deeper aquifers. These deeper aquifers occur at depths over 370 feet. The hydrogeologic conditions that underlie the site vicinity include a confining layer that acts as a hydraulic barrier between the surficial water table aquifer in the upland deposits, and the deeper aquifers that supply groundwater to wells in the area.

Residences along Evergreen Way are also located within the quarter mile radius, including 15510 and 15512 Brandywine Road (properties along Evergreen Way have addresses along Brandywine Road). The properties located along Evergreen Way have wells that predate the MDE well permit database, so their depth is unknown.

It is understood that the property owner, Mr. Anthony George, plans to continue to occupy the on-site residence during the proposed mining operation, and will continue to use the on-site residential well. MDE has no data available for the on-site well; however, the ERM report states that Mr. George believes the well to be at a depth over 300 feet. The on-site well, and the wells located on Evergreen Way, are located in the hydraulically upgradient direction of the proposed mining and are not anticipated to be negatively affected, even if mining were to occur below the water table.

The report summarizes that the mining operation will not have a negative impact on the quantity and quality of groundwater flowing into residential wells because 1) the mining is not proposed to occur below the water table 2) the groundwater flows northwest and northeast, away from the surrounding residences 3) the identified wells are all located to the south, and 4) most wells are in deeper aquifers. The structures located within a quarter mile of the subject site that do not have available well data are all located to the south of the subject site and in the hydraulically upgradient direction of the proposed mining.

Although no impacts to surrounding wells are anticipated, the applicant may need to provide new wells for any property owner within a quarter mile whose well is negatively affected by the mining operation. A condition of special exception approval is recommended to address this situation should it arise.

## **5.3 Air**

The following information was used as the basis for this analysis: the air quality standards set by the Environmental Protection Agency; climatology, and air quality analyses conducted for previous sand and gravel mining operations; and information submitted with the application.

### **5.3.1 Climatology**

#### **Existing Conditions**

The study area does not have a definable local airshed and as such its climate and air quality are typical of those within the entire county. The site of the proposed mining operation is located in southern Prince George's County in a rural setting. A weather station located at Reagan National Airport, in Arlington Virginia, is approximately 30 miles northwest of the subject site and is in a similar physiographic setting. This weather station data has been collected since 1871 and should approximate weather conditions at the subject site. The average annual precipitation for the area is 39.35 inches and the average annual temperature is 57.5 degrees Fahrenheit.

The warmest part of the year occurs in late July, when temperatures over 100 degrees have been recorded. The average summer temperature is 77.0 degrees Fahrenheit. The coldest period occurs at the end of January, when daily minimum temperatures average 37.5 degrees Fahrenheit. Temperatures of zero degrees Fahrenheit or lower have been recorded.

As provided on the climate page of the Maryland Department of the Environment's web-site, precipitation is distributed fairly evenly throughout the region with an average low of 2.63 inches in February, and an average high of 3.79 inches in September. The greatest precipitation amounts recorded have resulted from tropical storms or hurricanes. The average seasonal snowfall is 15.20 inches. Wind data are not available from the Reagan National Airport weather station; however, the wind direction is predominately from a westerly direction.

#### **Evaluation of Predicted Impacts**

The proposed mining of sand and gravel from the subject property is not expected to have any impacts on the climatology of the immediate area or of the surrounding area. The climatology information is also used in the calculation of air quality because the natural rainfall assists in reducing the particulate impacts from mining.

### **5.3.2 Air Quality**

The federal Clean Air Act (CAA) requires the EPA to set National Ambient Air Quality Standards (NAAQS) for six air pollutants commonly found throughout the United States: carbon monoxide, lead, nitrogen dioxide, ground-level ozone, particulate matter, and sulfur dioxide. These pollutants are called "criteria pollutants" by the EPA and are known to affect human health, harm the environment, and damage property. Examples of effects on human health include eye irritation, headaches, and aggravation of respiratory difficulties. Effects on plants and crops include abnormal growth patterns, leaf discoloration or spotting, and death. Property and materials damages include property devaluation because of odors, deterioration of materials and structures, and discoloration of painted surfaces. The aesthetic effects include reductions in visibility, discoloration of air, and the general nuisance aspects of odors and dust.

Criteria pollutants are regulated based on primary standards for health-based effects and secondary standards for the prevention of environmental and property damage. Geographic areas that remain below

the primary standard are called attainment areas; areas that exceed the primary standard are called nonattainment areas. The national ambient air quality standards and attainment status for each of these pollutants are included in the Air Quality Summary Table (Table 5.3). Prince George's County is included in the Washington Metropolitan region. The region is considered to be in an attainment status for all criteria pollutants except for ground level ozone and particulate matter less than 2.5 microns (PM<sub>2.5</sub>) for which the region is in a nonattainment status.

### **Existing Conditions**

The application package for the subject special exception included an air quality report prepared by Environmental Resources Management (ERM), dated April 2, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013. The air report, in conjunction with local monitoring station data, has been used for the following analysis.

It is important to know the ambient air quality at the site and in the vicinity in order to measure the impact of the proposed use. Air quality in the area of the subject property is mainly impacted by farming operations and other sand and gravel operations.

Particulate matter (PM) is one of the main air emissions associated with sand and gravel mining operations. Particulate matter is comprised of small particles of solid and liquid material that vary in size. Particles less than 2.5 micrometers in diameter are called "fine particles" and come from combustion of fuels and industrial processes. Particles ranging in size from 2.5 to 10 micrometers in diameter are called "coarse particles" and come from crushing or grinding operations, as well as dust from paved and unpaved roads. Coarse particles are generated during the mining process as well as from dust generated by truck traffic on both paved and unpaved roads. Particulate matter is also generated during the vegetation clearing process.

Federal and state guidelines recommend the use of monitoring data from stations that are operated by governmental agencies to determine the ambient air quality. The data from local stations in the region are used to represent the air quality near the site. Whenever data are not available at stations that are closest to the site, it is standard practice in air quality analysis to use data from other stations that are located in an area with similar land use patterns as the site. This procedure has been used over the past several years for air permit applications with the Maryland Department of the Environment (MDE), the U.S. Environmental Protection Agency (EPA), and numerous special exception applications for sand and gravel mining operations in Prince George's County.

Data from local monitoring stations were used to represent the ambient, or background, concentrations for the criteria pollutants in the vicinity of the subject site (Table 5.3). It should be noted that if more than one monitor was present for a given pollutant, the maximum of all monitored values was used to represent the background monitoring values in the air report prepared by ERM and submitted with the subject application. Data was taken from Andrews Air Force Base in Prince George's County for the surface weather data and from Sterling, VA for upper air data.

### **Evaluation of Predicted Impacts on Air Quality**

To evaluate the predicted impacts on air quality, the ambient air quality measurements discussed in the previous section were added to the predicted levels of pollutants that will result from the proposed mining activity to determine whether the combined totals are estimated to be above or below the established NAAQS. This evaluation is based on the information presented in the submitted air quality report

prepared by Environmental Resources Management (ERM), dated April 2, 2010, and a supplemental report dated July 24, 2013.

The report indicates that all emissions sources were considered including the emissions associated with the operation of one bulldozer, one backhoe, and two dump trucks, as well as emissions from traffic on unpaved roads hauling aggregate materials. These sources were considered together as a single volume source to represent the emissions from the site.

Air quality dispersion modeling was performed using the AERMOD model and a comprehensive receptor grid extending up to five kilometers from the site. The maximum predicted impacts over the entire receptor grid were determined and the results of the modeling analysis were compared with the applicable NAAQS for all pollutants of concern. The results of the model are shown in Table 5.3 for cumulative impacts as compared to the existing NAAQS for each criteria pollutant.

All criteria pollutants are predicted to be below the NAAQS with the exception of ozone, which has ambient levels above the NAAQS and is in non-attainment for the Washington Metropolitan area. The small amount of ozone-causing emissions from the mining operation is not likely to have a significant impact on the region's nonattainment status. While Prince George's County is currently designated non-attainment for PM<sub>2.5</sub>, recent air quality measurements have shown that the NAAQs are being attained, and the PM<sub>2.5</sub> impacts from the project are predicted to be below the NAAQs.

#### **Evaluation of Predicted Impacts on Ambient Particulate Matter (PM) Levels**

In addition to the NAAQS, the State of Maryland has nuisance regulations for particulate matter. State regulations (COMAR 26.11.06.03D) state that for particulate matter from materials handling and construction; "A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. These reasonable precautions shall include, but not be limited to, the following when appropriate:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
- (3) Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting of buildings or other similar operations.
- (4) Covering, at all times when in motion, open-bodied vehicles transporting materials likely to create air pollution. Alternate means may be employed to achieve the same results as would covering the vehicles.
- (5) The paving of roadways and their maintenance in clean condition.
- (6) The prompt removal from paved streets of earth or other material which has been transported there by trucks or earth moving equipment or erosion by water."

Particulate matter levels are expected to increase in the vicinity of the site as a result of the mining activities, material transfer to storage piles, truck loading, diesel engine emissions, truck traffic unpaved roads, and wind erosion of storage piles. Truck traffic is typically the main source of particulate matter emissions for mining operations due to the traffic along haul roads and the trucks entering the public roads. The application does not propose any truck trips on public roads.

There are other standard methods that assist in the reduction of airborne particulate matter. The following

additional measures should also be employed on-site to further reduce the nuisance of fugitive dust:

1. A speed limit of 15 mph should be instituted to reduce dust generation from travel on the unpaved portions of the proposed haul road.
2. All mobile equipment to be used on-site should use ultra-low sulfur diesel fuel. The fuel supplier certification of the sulfur content of each fuel delivery must be kept on-site for a period of five (5) years.

The air quality report outlined the estimated emissions for particulate matter based on modeling. Based on the information presented in the air quality report and addendums prepared by ERM, the PM<sub>2.5</sub> and PM<sub>10</sub> emissions from the proposed operation are estimated to be under the NAAQS for these emission factors.

### **Evaluation of Predicted Impacts on Ambient Carbon Monoxide Levels**

Carbon monoxide (CO) emissions are expected from the equipment proposed for use. Emissions from the mobile equipment proposed for use are regulated by the EPA under regulations other than those that pertain specifically to mining operations, such as the Heavy-Duty Highway Diesel Program and the Clean Air Non-Road Diesel Rule.

The application does not propose any truck trips on public roads. The materials are proposed to be transported to the adjacent property to the north, northwest for processing at an existing processing facility. Therefore, the only equipment proposed for use on-site will be that necessary for the removal of materials and transport to the adjacent property.

This relatively small amount of equipment and on-site truck traffic for the proposed operation, compared to the number of vehicles traveling in Prince George's County daily, represents only a minimal impact to the air quality of the county. The use of ultra-low diesel fuel to minimize the air quality impacts of the project should be considered.

### **Evaluation/ Summary of All NAAQS**

The calculated emissions from the proposed mining operation were compared to the NAAQS and evaluated for attainment status (Table 5.3) in the submitted air quality report and subsequent addendums.



**Table 5.3  
Air Quality Summary**

<b>Pollutant</b>	<b>Units</b>	<b>Background Concentration</b>	<b>Additional Pollutants from Mining</b>	<b>Total Air Quality</b>	<b>NAAQS Primary Standard</b>	<b>Attainment Status</b>
Carbon Monoxide (CO)	8-hour Average, ug/m <sup>3</sup>	2,519	23.4	2,542	10,000	A
	1-hour Average, ug/m <sup>3</sup>	3,436	90.7	3,527	40,000	A
Lead (Pb)	Rolling 3-month average, ug/m <sup>3</sup>	0.05	0.0	0.05	0.15	A
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean, ug/m <sup>3</sup>	10.5	1.9	12.4	100	A
	1-hour average, ug/m <sup>3</sup>	52.7	109.9	162.6	188	A
Ozone (O <sub>3</sub> )	8-hour Average, ug/m <sup>3</sup>	171	2.2	173.2	147	N
Particulate Matter (PM <sub>10</sub> )	24-hour Average, ug/m <sup>3</sup>	32.3	46.6	78.9	150	A
Particulate Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean, ug/m <sup>3</sup>	8.8	0.5	9.3	12	N
	24-hour Average, ug/m <sup>3</sup>	21.9	6.2	28.1	35	A
Sulfur Dioxide (SO <sub>2</sub> )	1-hour Average, ug/m <sup>3</sup>	21.7	0.30	22	91	A
	3-hour Average, ug/m <sup>3</sup>	58.7	0.15	58.8	1,300	A

A = Attainment

N = nonattainment

ug/ m<sup>3</sup> = microgram per cubic meter

Based on the ambient air quality and the estimated emissions, the NAAQS standards shown in Table 5.3 will be met for the mining operation with the exception of ozone.

## **5.4 Biota**

### **5.4.1 Woodlands**

The Prince George's County Woodland and Wildlife Habitat Conservation Ordinance requires the approval of a Natural Resource Inventory (NRI) and the approval of a Tree Conservation Plan (TCP) as an integral part of the review process for all land development activities including special exceptions required for sand and gravel mining operations. An NRI (NRI-017-10) and TCP2 (TCP2-047-09) were submitted with the subject application.

#### **Existing Conditions**

The required Forest Stand Delineation (FSD) report was included with the Natural Resource Inventory, NRI-017-10, approved on October 25, 2011. The FSD report dated July 2010, and revised July 2011, prepared by See Environmental Services, Inc., indicates the presence of three forest stands totaling 10.26 acres and seven specimen trees (two of which were determined to be located off-site).

The county issued a violation (NOV 29517-2011) for clearing that was previously done without a permit. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

Stand A (3.45 acres) is characterized as a young mixed hardwood stand dominated by sweetgum, tulip poplar, southern red oak, and Virginia pine. The understory layer is generally dominated by American holly, devils walking stick, and blackberries. This stand has an average diameter of 4 - 12 inches. Stand A is generally located along the edge of the existing treeline. It has been designated as low to medium retention priority.

Stand B (6.81 acres) is characterized as a mature bottomland hardwood stand dominated by American beech, white oak, southern red oak, and chestnut oaks. The understory layer is generally dominated by the canopy saplings and American holly and mountain laurel. This stand has an average diameter of 20 – 33 inches. Stand B contains sensitive environmental features including erodible soils, regulated streams and wetlands, and 100-year floodplain. It has been designated as high retention priority.

The NRI as submitted satisfies the requirements for an NRI in accordance with the Prince George's County Environmental Technical Manual. The FSD report, field data sheets, the summary of the field data, the NRI map, and a narrative were included with the NRI.

#### **Evaluation of the Predicted Impacts**

This property is subject to the provisions of the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance because the gross tract area is greater than 40,000 square feet in size and there are more than 10,000 square feet of existing woodlands. A Type 2 Tree Conservation Plan (TCP2-047-09) was reviewed and was found to generally meet the requirements.

The woodland conservation requirement for a property is determined by a combination of the woodland conservation threshold (WCT), a percentage requirement based on the zoning, and a replacement requirement of ¼:1, 1:1, and/or 2:1 based on the amount and location of woodland clearing proposed. All clearing above the WCT is subject to the ¼:1 replacement requirement, clearing below the WCT is subject to the 2:1 replacement requirement and clearing within the 100-year floodplain is subject to the

1:1 replacement requirement. The TCP2 includes 23.03 acres of land in the O-S zone. To determine the initial requirement, the area of land within the 100-year floodplain is subtracted to determine the net tract area. The net tract area is multiplied by the corresponding percentage for the zoning category. The WCT for the O-S zone is 50 percent of the net tract.

The woodland conservation threshold (WCT) for this project is 10.96 acres. The total woodland conservation requirement based on the amount of existing woodlands prior to the violation, the amount of clearing done under the violation, and the clearing proposed with the current mining application is 15.86 acres. The requirement is based on staff's calculations.

Conditions of approval of the Special Exception have been included in the Staff Report to address the technical requirements of a TCP2 prior to certification. It is recommended that entire woodland conservation requirement shall be met-on site to the extent practicable and, at a minimum, the site's woodland conservation threshold of 10.96 acres shall be met on-site.

With the exception of impacts necessary for stormwater management conveyance/ sediment erosion control measures, the TCP2 shows the preservation of woodlands within the regulated areas of the site (streams and wetlands and their associated buffers). No specimen trees are proposed to be removed.

#### **5.4.2 Streams and Wetlands**

##### **Existing Conditions**

A wetland and stream delineation and the associated report dated November 1, 2010, prepared by See Environmental Services, Inc., was provided as part of the Natural Resource Inventory (NRI) approved on October 25, 2011. The delineation information provided is sufficient for county level review; however, it should be noted that the U.S. Army Corps of Engineers and/ or MDE are the regulating agencies for permitting and enforcement of impacts to waters of the U.S. and waters of the state, including wetlands.

Direct impacts to streams and wetlands are subject to provisions of the Federal Clean Water Act and will require a Section 404 Permit reviewed by the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Maryland Department of the Environment. Impacts to the 25-foot-wide wetland buffers are subject to review by the Maryland Department of the Environment. Review of impacts to regulated environmental features is through the Zoning Ordinance.

The Zoning Ordinance requires a minimum buffer of at least 100 feet measured from each bank of a stream, for properties located in the Rural Tier and a minimum 25-foot buffer measured from the edge of a wetland. These regulated environmental features comprise the PMA. Impacts proposed to the PMA as part of a zoning application require a letter of justification per Section 27-296(c)(1)(L). The letter of justification is required to state how the proposed design ensures the preservation and/or restoration of the regulated environmental features to the fullest extent possible.

##### **Evaluation of Predicted Impacts**

The letter of justification submitted describes one minor impact to the PMA for the installation of an outfall for the proposed sediment basin. The basin is designed for stormwater management and sediment erosion control and is a standard best management practice for water quality and quantity control. The outfall located within the PMA is necessary to safely convey water back to the receiving streams.

#### **5.4.3 Flora and Fauna**

## **Existing Conditions**

A complete inventory of the species of plants, insects, amphibians, reptiles, mammals, and birds on the site was not conducted. The site is approximately 45 percent forested, with open pasture areas located on the upland portions of the property. The majority of the site is in edge habitat, given the open area located centrally on-site. There is 100-year floodplain on the site associated with the on-site regulated streams. Based on the existing site conditions, the known use patterns of the area, and adjacent uses, a complete species inventory was not necessary.

## **Evaluation of Predicted Impacts**

Within the limits of disturbance, animals which cannot flee will likely perish and the existing plants will be destroyed. The structural change of the upland habitat may affect some types of species. Stream and wetland species of plants and animals should experience no significant impact because these habitats are beyond the limit of disturbance. Areas of preservation and reforestation, as proposed on the tree conservation plan, will result in more woodlands in the future than exist today. When the forest matures it will once again support a diversity of species which can migrate from adjacent and connected forest habitats.

### **5.4.4 Rare, Threatened, and Endangered Species**

#### **Existing Conditions**

The Maryland Endangered Species Act requires review of all state permits by the Maryland Department of Natural Resources (MDNR). MDNR must issue a finding of no significant impact before a permit may be released by any state agency. A state permit for the mining activity will be required before mining can commence.

According to a letter dated October 26, 2007, from the Maryland Department of Natural Resources, Natural Heritage Program, there are no records of rare, threatened, or endangered species found to occur on or in the vicinity of this property. The letter identifies forest interior dwelling bird species (FIDS) habitat on-site; however, during the NRI review and approval process, it was determined that the on-site woodland is edge habitat and not FIDS habitat.

#### **Evaluation of Predicted Impacts**

Because no threatened/endangered species have been identified on this site or on adjacent properties, no impacts are anticipated.

## **5.5 Human-Related**

### **5.5.1 Transportation**

The subject property is located south and west of MD 381 (Brandywine Road), approximately one-half mile east of the MD 381/Gibbons Church Road intersection. The subject property proposed for mining consists of 22.03 acres of land in the O-S Zone.

The analysis for this report was conducted by staff associated with the Transportation Planning Section, and is presented in conjunction with a traffic study submitted with the application. The submitted traffic study, dated July 2013, was limited to a statement that the special exception application would have a minimal impact, if any, on public roadways within the area. No analysis was offered except for an

assessment of the trip generation of the site. Copies of the traffic study can be found in the official file for the special exception application.

### **Existing Conditions**

In consideration of the requirements of Section 27-410, no analysis of existing roadway conditions in the vicinity of the site were provided. The requirements for the traffic study are as follow:

The traffic analysis shall include the volume of traffic expected to be generated by the operation, and shall identify the streets to be used between the site and the nearest street (to be used) that has a minimum paved width of twenty-four (24) feet for the predominant length of the street.

The trucks and the excavator to be used as a part of the surface mining operation will remain on the subject site or be stored on the adjacent Gudelsky wash plant site. No trucks will travel beyond these two sites as a part of the surface mining operation. Trucks will travel between the subject site, where the surface mining will occur, and the adjacent Gudelsky wash plant site, where the mined materials will be processed, by means of an existing private gravel access roadway connecting the two properties.

Gibbons Church Road is the access to the Gudelsky wash plant site, and is indirectly the access to the subject site. The wash plant itself is a legal operation, and Gibbons Church Road fully meets the requirements of Subtitle 27 for access to the wash plant use (which is identical to the requirement for the surface mining use).

Because there is little or no impact on any public roadway, there is no analysis of existing traffic or safety conditions along area roadways.

### **Evaluation of Projected Impacts**

The staff analysis of the proposed surface mining application is predicated on two significant operational assumptions. Those assumptions are as follows:

- All extracted materials will be transported on a private on-site gravel roadway to the adjacent Gudelsky wash plant site. The private roadway connects the two sites. No trucks will travel beyond these two sites as a part of the surface mining operation. Aside from the private gravel roadway, there is no haul route for this site.
- Traffic to and from the site will be limited to two employees that operate the dump trucks and one employee that will operate the excavator. Occasionally a bulldozer will be needed to construct berms and assist in the reclamation process. All employees will enter and exit the site via the Gudelsky site.

Therefore, employees would generate three trips in during the AM peak hour and three trips out during the PM peak hour. As noted earlier, Gibbons Church Road is the access to the Gudelsky wash plant site, and is the means by which employees will access the subject site.

Future traffic impacts along Gibbons Church Road are roughly identical with or without the surface mining activity on the subject site.

During the review of the special exception application, conditions of approval may be recommended to restrict access to the property for mining purposes to the proposed haul road connecting the subject site to the adjacent Gudelsky wash plant site.

## 5.5.2 Noise

For the purposes of this report, noise was evaluated by reviewing the submitted noise study and ensuring that the assumptions were correct and that the conclusions were valid. A noise study prepared by Scantek, Inc., dated February 25, 2009, and a revised report dated April 12, 2010, were reviewed by EPS. A final report dated August 26, 2013, was prepared by the same author as the previous reports; however, at the writing of the final report, the individual who prepared it was employed with Engineers for Change, Inc. As each subsequent study was submitted comments were provided. The final report was stamped as received August 30, 2013.

Noise impacts are evaluated with respect to how the predicted noise levels compare with state noise standards and regulations (COMAR 26.02.03). The state noise standards apply to noise receptors and are established based on land use categories (industrial, commercial, and residential). The maximum allowable noise levels for receiving residential uses is 65 dBA during the daytime. It should be noted that the mining operation will have only daytime hours of operation and that the noise generated from mining operations is instantaneous noise, not the level day/ night (Ldn) standard used in Prince George's County with respect to traffic noise. Instantaneous noise levels are more restrictive, defined by COMAR, and used for the evaluation of noise emanating from mining sites. Traffic generated noise is regulated using the level day/ night average.

The noise environment in the project area will be affected by noise from two types of sources: point and non-point. Point source noise emanates from the various excavation equipment used on-site. Non-point source noise emanates from the flow of vehicular traffic along a roadway or haul road. The main source of vehicular related noise in relation to mining operations comes from the dump trucks moving around on the site, entering the site empty, and full trucks hauling material away.

### Existing Conditions

The existing noise environment within the vicinity of the proposed mining is typical of a low-density rural area. The property is located at the terminus of Evergreen Way, which runs approximately 1,600 feet in length from Brandywine Road (MD 381) north to the subject site, and is the main access point onto the property. Brandywine Road is a Master Plan designated collector, which does not generate sufficient traffic to be evaluated for noise purposes. There are residential buildings located along Evergreen Way in the vicinity of the site.

Noise measurements were performed using the FAST meter response method to determine the noise levels produced by the typical operation of surface mining equipment. This was done by taking measurements of existing equipment under maximum working conditions. The equipment measured included an excavator (Cat-245), a hauler (Volvo 25c), and a dozer (Cat-D6). Two dozers (Cat D6) are proposed to be used on-site; however, the noise generated by the dozers was not included in the noise analysis because the dozers are proposed to be used for reclamation purposes only and according to the report are quieter than the mining equipment. The dozer would also not be operated in the vicinity of the excavator because the two pieces of equipment are used in different phases of the mining operation.

### Evaluation of the Predicted Impacts

The noise analysis was performed using the hauler and the excavator, assumed working simultaneously at maximum capacity, for a conservative/ worst case scenario. The analysis was done using ISO 9613-2 compliant software. The software is based on stationary noise source propagation of point, line, and area sources. The propagation is based on wave divergence, ground absorption, moderate wind conditions, and

berms reducing the noise.

The results of the report indicate that with the construction of berms, the locations of which are shown in Figures 2 and 7 of the noise report, sound levels will be at or below 65 dBA at the property line, and that no adjacent residences will be affected by noise above the 65 dBA state standard for residences. The berms are described in the report. Berm 1 is to be a minimum of 4.5 meters (14 feet) in height, and Berm 2 is to be a minimum of 4 meters (13 feet) in height.

There is one residential building located on-site in which the property owner, Mr. Anthony George, intends to continue to reside during the proposed mining operations. It is understood that Mr. George intends to execute an easement agreement with the applicant to waive his right to any buffering from noise levels exceeding 65 dBA.

The following typical restrictions on mining operations should be employed to reduce non-point/equipment generated noise impacts in the surrounding area:

1. Mining operations on the site should be restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, excluding Federal holidays, and 7:00 a.m. to 4:00 p.m. on Saturdays. There will be no operations on Sundays. Trucks should not be permitted to arrive at the site prior to 7:00 a.m.
2. The noise mitigation berms shall be located as shown on the plans submitted to protect nearby residential buildings and properties. Berm 1 is to be a minimum of 4.5 meters (14 feet) in height, and Berm 2 is to be a minimum of 4 meters (13 feet) in height.
3. Trucks should not use compression or “Jake” brakes both on-site and on the haul road.
4. Speeds on-site should be restricted to 15 mph for all heavy vehicles.
5. All machinery should be kept in good working order, especially mufflers to insure quiet operation.
6. The volume of backup warning devices should be minimized while still meeting OSHA (Occupational Safety and Health Administration) standards. OSHA standards require that the backup warning device must “be clearly audible in its operating environment.” This allows the warning device to be turned down as long as it can be clearly heard in its environment.

### **5.5.3 Visual Aesthetics**

The visual impacts of the subject application have been placed in two categories for evaluation purposes. The first type of visual impact is visibility of the mining operation from dwellings or structures within the potential viewshed of the application site. These are site specific and are based on a specific point of viewing, usually a dwelling. Impacts are evaluated by reviewing cross-sections from identified viewing points toward the application site. Evaluation of the sight line then considers the effect of topography, vegetation, and other mitigating factors to determine visibility between the viewpoint and the proposed activity.

The second type of visual impact is to the “rural historic landscape” as seen from the linear travel way of designated historic roads.

### **Existing Conditions**

The property is located at the terminus of Evergreen Way, which runs approximately 1,600 feet in length from Brandywine Road (MD 381) north to the subject site, and is the main access point onto the property. Brandywine Road is a Master Plan designated collector and is a scenic and historic road which requires evaluation of the visual aesthetics as part of the special exception review; however, the materials are

proposed to be transported directly to the abutting wash plant to the north and no traffic associated with the mining operation is anticipated to access the site from Evergreen Way.

### **Evaluation of the Predicted Impacts**

No visual assessment was needed for the subject application based on the significant distance of the site from Brandywine Road, and the berms proposed along portions of the site boundary that will provide adequate visual mitigation to the scenic and historic road and to the adjacent properties.



## **6.0 Mitigation of Adverse Impacts**

### **6.1 Land**

Standard best management practices for sediment control are proposed. After mining is complete, the contours will be completed as noted on the reclamation plan and the overburden will be redistributed across the site. Acceptable fill materials will be used on-site. Upon completion of the restoration process, the area shall be suitable for open space purposes. If future applications propose a use other than open space, the TCPII shall be revised to provide appropriate protection of the reforestation edge.

### **6.2 Water**

The primary pollutant of surface water from sand and gravel mining is sediment. There is a single sediment control basin proposed for the mining operation. All outfalls must be designed to ensure non-erosive conditions (not greater than 10 percent slopes). These devices are standard best management practices. The basin is proposed to be removed at the end of the reclamation of the site; the sediment and erosion control plan show the site to be re-graded back to conditions similar to those that exist today.

A Water Quality Certification (COMAR 26.08.02.10) is required for any activity which may result in any discharge to navigable waters unless the applicant provides a certification from the state that the activity does not violate state water quality standards or limitations. Discharges permitted by the state under the National Pollutant Discharge Elimination System (NPDES) are certified by MDE. Grading, erosion and sediment control plans are required by the Prince George's County Soil Conservation District to ensure local water quality and water quantity standards are met. All proposed impacts to waterways must obtain proper permits to ensure that anti-degradation policy and water quality standards are upheld.

A hydrologic evaluation report was prepared by Environmental Resources Management. The report indicates that the depth of mining is not proposed to reach groundwater levels, therefore, no impacts to surrounding wells are anticipated; however, the applicant has committed to providing new wells for any property owner whose well is affected by the mining. This commitment will be discussed as part of the special exception review process.

### **6.3 Air**

The two main air-related concerns with regard to the subject application are particulate matter and carbon monoxide.

#### **Mitigation for Predicted Impacts on Ambient Particulate Matter (PM) Levels**

The following mitigation measures are recommended with regard to proposed site conditions, equipment, and processes to mitigate particulate matter emissions. They will be addressed as appropriate through the special exception approval process.

1. The haul road shall be maintained with a water truck or other approved dust control methods.
2. Asphalt, oil, water, or suitable chemicals shall be applied on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
3. Open-bodied vehicles transporting materials shall be covered at all times when in motion, in accordance with COMAR regulations.
4. The site shall have a 15 mph speed limit to reduce dust generation from travel on the unpaved haul road.

5. All mobile equipment to be used on-site shall use ultra-low sulfur diesel fuel. The fuel supplier certification of the sulfur content of each fuel delivery shall be kept on-site for the duration of the special exception approval period.

### **Mitigation for Predicted Impacts on Ambient Carbon Monoxide Levels**

The use of ultra-low diesel fuel to minimize the air quality impact of the project should be considered.

#### **6.4 Biota**

The TCP2 shows the preservation of woodlands within the regulated areas of the site (streams, wetlands, and floodplain, and their associated buffers). A conservation easement will be recorded in the land records to protect these areas. It is recommended that the on-site planting will meet the site's woodland conservation threshold, at a minimum.

The TCP2 will need to address the proper soil preparations needed for the planting of woodlands on the reclaimed soil that will remain.

#### **6.5 Human-Related**

##### **6.5.1 Transportation**

The analyses of the proposed mining application were predicated on two operational assumptions. These assumptions are as follows:

- All extracted materials will be transported on a private on-site gravel roadway to the adjacent Gudelsky wash plant site. The private roadway connects the two sites. No trucks will travel beyond these two sites as a part of the surface mining operation. Aside from the private gravel roadway, there is no haul route for this site.
- Traffic to and from the site will be limited to two employees that operate the dump trucks and one employee that will operate the excavator. Occasionally a bulldozer will be needed to construct berms and assist in the reclamation process. All employees will enter and exit the site via the Gudelsky site.

No additional traffic mitigation measures are recommended.

##### **6.5.2 Noise**

The following typical restrictions on mining operations should be employed to reduce non-point/ traffic generated noise impacts in the surrounding area

1. Mining operations on the site are restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, excluding federal holidays, and 7:00 a.m. to 12:00 p.m. on Saturdays for activities such as equipment maintenance. There will be no operations on Sundays. Trucks are not permitted to arrive at the site prior to 7:00 a.m.
2. The noise mitigation berms shall be located as shown on the plans submitted to protect nearby residential buildings and properties. Berm 1 shall be a minimum of 4.5 meters (14 feet) in height, and Berm 2 shall be a minimum of 4 meters (13 feet) in height.
3. Trucks shall not use compression or "Jake" brakes both on-site and on the haul road.
4. Speeds on-site shall be restricted to 15 mph for all heavy vehicles.

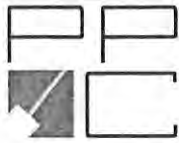
5. All machinery shall be kept in good working order, especially mufflers to insure quiet operation.
6. The volume of backup warning devices shall be minimized while still meeting OSHA (Occupational Safety and Health Administration) standards.

### **6.5.3 Visual Aesthetics**

No impacts to the viewshed are anticipated with this application because the mining area is located a significant distance from Brandywine Road, approximately 1,600 feet, and because the berms proposed along portions of the site boundary will provide adequate visual mitigation to the adjacent properties. No additional mitigation measures are required.

## Appendices A and B

MN  
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION




Countywide Planning Division  
Environmental Planning Section  
301-952-3650

14741 Governor Oden Bowie Drive  
Upper Marlboro, Maryland 20772  
TTY: (301) 952-4366  
www.mncppc.org/pgco

February 7, 2014

MEMORANDUM

TO: Tom Lockard, Planner Coordinator, Zoning Section

VIA: Katina Shoulars, Supervisor, Environmental Planning Section 

FROM: Megan Reiser, Planner Coordinator, Environmental Planning Section MKR

SUBJECT: **Anthony George Property; SE-4646 and TCP2-047-09**

The Environmental Planning Section (EPS) has reviewed the above referenced mining Special Exception, SE-4646, and Type 2 Tree Conservation Plan, TCP2-047-09. The following comments are provided for your consideration.

The information reviewed for the mining Special Exception includes the following:

1. an approved Natural Resource Inventory Plan, NRI-017-10, approved October 25, 2011, including a letter from the Maryland Department of Natural Resources, Wildlife and Heritage Service regarding the presence or absence of rare, threatened, or endangered species and forest interior dwelling species habitat;
2. a Type 2 Tree Conservation Plan prepared by McCrone, stamped as received August 30, 2013;
3. a Mining Site Plan prepared by McCrone, stamped as received August 30, 2013;
4. an Access Plan, prepared by McCrone, stamped as received August 30, 2013;
5. a Reclamation Plan, prepared by McCrone, stamped as received August 30, 2013;
6. an Aerial Photo plan, prepared by McCrone, stamped as received August 30, 2013;
7. an approved Floodplain Study (FPS 201007), stamped as received August 30, 2013;
8. an unapproved Sediment and Erosion Control Plan, prepared by McCrone, stamped as received December 1, 2010;
9. a ¼ Mile Radius – Well Location Plan, prepared by McCrone, stamped as received August 30, 2013;
10. a Special Exception Statement of Justification, stamped as received July 22, 2009;
11. a Hydrologic evaluation report prepared by Environmental Resources Management, dated January 12, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013;
12. an Air Quality Report prepared by Environmental Resources Management, dated April 2, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013;
13. an Acoustical Analysis report prepared by Scantek, Inc. dated April 12, 2010 and a supplemental report dated August 26, 2013, stamped as received August 30, 2013;
14. a Statement of Justification for proposed impacts to the Primary Management Area (PMA), stamped as received August 30, 2013; and

15. a Traffic Report prepared by Lenhart Traffic Consulting, Inc. dated July 25, 2013.

### **Background**

The Environmental Planning Section has not reviewed any previous development applications for the subject property. Staff reviewed and approved a Natural Resource Inventory, NRI-017-10, approved October 25, 2011. The current application requests a special exception for the surface mining of sand and gravel. The proposed mining will result in the clearing and grading of approximately 15.91 acres. The completed EIR and the associated supporting documentation in the official file were used in the preparation of this referral memorandum.

The property is subject to woodland conservation violation notice (NOV 29517-2011) for clearing that was done without a permit prior to the submission of the current mining application

### **Site Description**

This 23.03-acre site is zoned O-S. The site is located on the north side of Brandywine Road on Evergreen Way, which is about 3,500 feet east of Gibbons Church Road. According to mapping research conducted and the information submitted, the property drains into the Spice Creek watershed, in the Patuxent River basin. The property contains two un-named regulated stream systems including wetlands and 100-year floodplain. A review of the available information indicates that steep and severe slopes are located on-site; mainly in the areas surrounding the stream systems. The soils found to occur on-site according to the US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) are in the Beltsville, Croom-Marr, and Sassafras-Croom soil series. According to available mapping information, Marlboro and Christiana clays do not occur on or in the vicinity of this site.

The surrounding area will be affected by noise emanating from the various excavation equipment proposed for use on-site and noise from the flow of vehicular traffic along the haul road. No off-site hauling is proposed as part of the mining operation, therefore dump trucks are not proposed to enter the surrounding roadways. Traffic related noise in the area is from Brandywine Road, a Master Plan designated collector roadway that does not generate sufficient traffic to result in noise levels above the state standard of 65 dBA Ldn. Brandywine Road is a scenic and historic road which requires evaluation of the visual aesthetics as part of the special exception review.

In a letter dated October 26, 2007, from the Maryland Department of Natural Resources (MD DNR), Wildlife and Heritage Service, there are no rare, threatened, or endangered species found to occur in the vicinity of this property. As part of the MD DNR review, the possibility of forest interior dwelling bird species (FIDS) habitat was identified; however, staff has determined upon review of the on-site conditions, no forest interior exists on-site.

The property is located in sewer and water service categories S-6 and W-6, or Individual System. This property is located in the Rural Tier as reflected in the adopted General Plan. The site contains Regulated, Evaluation, and Network Gap areas as identified in the Countywide Green Infrastructure Plan.

### **Conformance with the Master Plan**

The subject property is located in the Subregion 6 Master Plan and Sectional Map Amendment (approved July 24, 2013 via CR-82-2013 and CR-83-20132). The property is located in Planning Area 86B, and is in the Rural Tier as approved in the 2002 General Plan. The vision for the Rural Tier is protection of large amounts of land for woodland preservation, wildlife habitat protection, recreational uses and agricultural pursuits. The character is to remain rural as it exists today and the preservation of viewsheds and vistas is important. The 2013 Subregion 6 Master Plan designates the subject property for rural land uses. The property is zoned O-S and the mining of sand and gravel is a permitted use in this zone by special exception.

The surrounding properties are also zoned O-S, with the exception of the Guldesky sand and gravel processing facility located to the northwest, which is zoned I-2. A mix of woodlands and cleared areas, undeveloped land and light farming surround the property as well as scattered single-family detached homes and an existing sand and gravel mine (SE-4517) to the northeast.

In the Approved Master Plan and Sectional Map Amendment, the section on Development Pattern/ Land Use for Mineral Resources and the section on the Environment are relevant to the current application. The following Master Plan goals, policies and strategies have been determined to be applicable to the current project. The text in **BOLD** is the text from the master plan. The text in plain type are staff comments following each set of master plan policies and strategies. The Special Exception and TCP2 must demonstrate conformance to the Master Plan.

### **Subregion 6 Master Plan and Sectional Map Amendment - Development Pattern/ Land Use for Mineral Resources Section**

**Policy 4: Preserve access to mineral resources where sufficient and economically viable mining potential exists.**

#### **Strategies**

- 1. Develop a mineral overlay zoning district that corresponds to the unexploited sand and gravel deposits avoiding already developed land.**
- 2. Within the overlay district, for parcels 50 acres or larger:**
  - **Require resource surveys of mineral resources prior to development for other uses.**
  - **Guarantee access to mineral resources, if present, prior to development.**
  - **Require mitigation for development projects that proceed without extracting the resource by placing a protective easement on other land in need of protection, or payment of a fee-in-lieu to support the county's land preservation programs**

The Special Exception application shows the proposed mining of sand and gravel from the site prior to re-establishment as woodland conservation and open space for horse pasture.

**Policy 5: Minimize the short- and long-term impacts of mining operations on adjacent properties and communities.**

### Strategies

1. Increase setback requirements on developing residential properties to minimize potential effects of noise and dust from future mining on adjoining unexploited parcels.
2. Evaluate the necessity for additional post-mining reclamation requirements above those already required by law, which would match preservation, community recreation, and environmental needs. Within the PPA these should include consideration of reclamation for agricultural preservation or the establishment of woodlands.
3. Evaluate the need for a mine reclamation study in the county to develop an inventory of reclaimed and abandoned sites, assess compliance with current reclamation requirements, determine the suitability of reclaimed properties for supporting high quality woodland, and identify mechanisms for financing the reclamation of abandoned sites.

The Special Exception application shows the standard setbacks at a minimum. The surrounding properties are mostly wooded and agricultural; however, a single family residence abuts the property on the southeast. The on-site residence is located in close proximity to the shared property boundary. The extent of the buffer in this area is significantly greater than the minimum set-back in this area for the protection of the on-site residence, and protects the adjacent property as well.

The property is not located in a priority preservation area; however, the application proposes the post-reclamation use as a combination of woodland conservation and open space for pasture.

### Subregion 6 Master Plan and Sectional Map Amendment - Environment Section

**Policy 1: Protect, preserve, and restore the identified green infrastructure network and areas of local significance within Subregion 6 in order to protect critical resources and to guide development and mitigation activities.**

### Strategies

1. Protect priority areas that will meet multiple protection objectives such as those related to green infrastructure, the priority preservation area, and the Patuxent River Rural Legacy Program.
2. Protect primary corridors (Patuxent River, Charles Branch, Collington Branch, Piscataway Creek, Mattawoman Creek, and Swanson Creek) during the review of land development proposals to ensure the highest level of preservation and restoration possible, with limited impacts for essential development elements. Protect secondary corridors to restore and enhance environmental features, habitat, and important connections.



3. Preserve and connect habitat areas to the fullest extent possible during the land development process.
4. Preserve or restore regulated areas designated in the green infrastructure network through the development review process for new land development proposals.
5. Protect portions of the green infrastructure network outside the primary and secondary corridors to restore and enhance environmental features, habitat, and important connections.
6. Evaluate land development proposals in the vicinity of SCAs to ensure that the SCAs are not negatively impacted and that green infrastructure connections are either maintained or restored.

No priority areas, primary or secondary corridors, or Special Conservation Areas have been identified on the property. Habitat areas will remain connected by the proposed preservation of the PMA including two unnamed tributaries of Spice Creek, within the Rock Creek watershed of the Patuxent River. The reclamation plan shows propose planting surrounding the PMA to enhance habitat.

**Policy 2: Restore and enhance water quality in degraded areas and preserve water quality in areas not degraded.**

#### Strategies

1. Protect and restore groundwater recharge areas such as wetlands and the headwaters areas of streams and watersheds.
2. Develop an interjurisdictional development and management plan with Charles County for the protection of the Mattawoman watershed.
3. Require retrofitting of locations without stormwater management or with poorly performing facilities as they are identified during the development review process.
4. Define and identify operations and activities that create stormwater management “hotspots” to adjust development and enforcement as necessary for pollution prevention.
5. Require private developers to perform stream corridor assessments where one has not already been conducted when development along stream corridors without completed assessments is proposed. Use the outcome of these assessments to guide restoration requirements upon which development approval will be contingent.
6. Complete stream corridor assessments for all watersheds in the subregion in

support of the countywide watershed restoration efforts.

7. Require environmentally-sensitive site design which includes limiting impervious surfaces and implementing best practices in on-site stormwater management to reduce the impact of development on important water resources.

8. Update the county road code and parking standards to reduce impervious surface requirements, without compromising safety, in watersheds where development pressure is great and impervious surface coverage is, or is projected to reach, more than ten percent of the watershed (e.g. Western Branch, Mattawoman, etc.).

9. Evaluate current right-of-way requirements and opportunities for bioretention and on-site stormwater management in watersheds with ten percent or greater impervious surface.

The Special Exception application is required to be in conformance with all state stormwater management and sediment and erosion control requirements with respect to mining operations.

**Policy 3: Increase planning and informational data collection efforts at the watershed level, raising the profile and awareness about the importance of shared aquifers and other resources to water quality and supply.**

#### **Strategies**

1. Promote agricultural and other resource industry practices which support environmental restoration, particularly as these activities can contribute to healthier waterways and provide wildlife habitat.

2. Centralize and disseminate information to landowners about best practices in land management, as well as financial and other program incentives available to do so.

3. Educate homeowners about alternatives to conventional lawn care to reduce the runoff of nutrients to waterways, including the use of rain gardens to promote bioretention and provide backyard habitat.

4. Require the application of a conglomerate stream buffer, similar to the one that applies in the Patuxent PMA, in all areas of the subregion.

5. Work with the Patuxent River Commission to implement the Patuxent River Policy Plan, a multi-agency effort to protect the river through land management and pollution control practices.

6. Monitor the short- and long-term impact of climate change on the Patuxent River, including increased saltwater intrusion and potential impacts to aquifers and drinking water supplies.

**7. Require the use of low-nitrogen septic systems in the Rural Tier portion of the subregion within 1,000 feet of open water.**

**8. Investigate the status and number of monitoring wells in the county to determine if support for a greater number is required.**

The Special Exception application does not propose mining below the local water table. No impacts to the aquifer are proposed. All required stream buffers have been shown on the plans and only one impact is proposed for the outfall required for a sediment control device.

**Policy 4: Protect, restore, and enhance the Chesapeake Bay Critical Area.**

**Strategies**

**1. Ensure that the primary buffers and secondary buffers are protected and enforced to the fullest extent possible.**

**2. Increase enforcement activities as needed within the critical area.**

The Special Exception application is not located within the Chesapeake Bay Critical Area.

**Policy 5: Promote compact, walkable development patterns in appropriate locations such as the Town of Upper Marlboro, Marlton, and rural centers and communities such as Baden, Aquasco, Eagle Harbor, Cedar Haven, and Croom.**

**Strategies**

**1. Design development and redevelopment projects to minimize the need for motor vehicle trips (see Development Pattern/Land Use and Living Area chapters)**

**2. Provide pedestrian and bicycle facilities (see Transportation System chapter).**

**3. Provide for extremely limited bus service to Marlton.**

The Special Exception application is for mining only and does not propose any development.

**Policy 6: Increase awareness regarding air quality and greenhouse gas (GHG) emissions and the unique role that the Developing and Rural Tiers in Subregion 6 have to play in this effort.**

**Strategies**

**1. Engage citizens, businesses, and public agencies through educational outreach efforts to raise awareness on how they can address air quality and climate change at the subregion level.**

**2. Encourage the use of clean and renewable energy sources such as biomass and solar and wind power.**

The Special Exception application was evaluated for proposed air impacts. This evaluation is provided in the Environmental Impact Report.

The two main concerns with regard to mining operations are particulate matter and carbon monoxide. While lead, nitrogen dioxide, ozone and sulfur dioxide were included in the air report evaluation, the amounts created from the mining operation are minimal.

The air report states that all criteria pollutants are predicted to be below the National Ambient Air Quality Standards (NAAQS) with the exception of ozone, which has existing ambient levels above the NAAQS and is currently in non-attainment for the Washington Metropolitan area. The small amount of ozone-causing emissions from the mining operation is not likely to add to the region's nonattainment status.

**Policy 7: Encourage the use of green building techniques and community designs that reduce resource and energy consumption.**

**Strategies**

**1. Support this subregion plan's policy of redevelopment and infill development in existing and planned development areas rather than "green field" development (See Development Pattern/Land Use chapter).**

**2. Initiate a project that meets the full standards of the LEEDND in the subregion. Consider this for a development/redevelopment project near Upper Marlboro (see Living Areas chapter).**

The Special Exception application is for mining only and does not propose any development.

**Policy 8: Reduce energy usage from lighting, as well as light pollution and intrusion into residential, rural, and environmentally sensitive areas.**

**Strategies**

**1. Encourage the use of alternative and energy-saving lighting technologies for athletic fields, shopping centers, gas stations, and car lots so that light intrusion on adjacent properties is minimized. Limit the amount of light output from these uses.**

**2. Require the use of full cut-off optic light fixtures for all proposed uses to reduce sky glow.**

The Special Exception application is for mining only and does not propose any development.

**Policy 9: Reduce adverse noise impacts to meet acceptable state noise standards.**

### Strategies

- 1. Evaluate development and redevelopment proposals using Phase I noise studies and noise models where noise levels exceed 65 dBA.**
- 2. Provide for adequate setbacks for development exposed to existing and proposed noise generators and roadways of arterial classification or greater.**
- 3. Provide for the use of approved attenuation measures when noise issues are identified.**
- 4. Continue to work with AAFB to promote compatible land development in areas subject to aircraft noise and accident potential.**
- 5. Require development within Ldn 65 dBA and greater noise exposure areas to be properly protected from the transmission of noise through the use of appropriate site designs, the use of barriers that affect sound propagation, and/or the use of soundabsorbing materials in construction.**
- 6. Work with the State Highway Administration to ensure that as state roads such as MD 4 and US 301 are upgraded, appropriate noise reduction measures are incorporated into the roadway design.**

The Special Exception application was evaluated for proposed noise impacts. This evaluation is provided in the Environmental Impact Report.

The report indicates that with the installation of berms, sound levels will be at or below the state standard of 65 dBA at the property line, and that no adjacent residences will be affected by noise above the 65 dBA state standard for residences.

There is one residential building located on-site in which the property owner, Mr. Anthony George, intends to continue to reside during the proposed mining operations. It is understood that Mr. George intends to execute an easement agreement with the applicant to waive his right to any buffering from noise levels exceeding 65 dBA

Staff recommends that the proposed use be found to be in conformance with the 2013 Subregion 6 Master Plan and Sectional Map Amendment because the proposed mining operation is in keeping with the section on Development Pattern/ Land Use for Mineral Resources and the section on the Environment. Any future development of this site should be evaluated for Master Plan conformance as part of a development application.

### **Conformance with the Countywide Green Infrastructure Plan**

The site contains Regulated, Evaluation, and Network Gap areas as identified in the Countywide Green Infrastructure Plan. The Regulated Areas are concentrated along the regulated stream systems located on the northwestern and eastern portions of the site. The Evaluation areas are mapped along the edge of the woodland surrounding the site and include some open space. The Network Gap area is mapped on open

portions of the site. Minimal impacts to the green infrastructure network are proposed and include impacts to the Network Gap and Evaluation areas only. The only impact to the PMA is for an outfall needed to address the regulations regarding erosion and sediment control and stormwater management. A small area of woodland clearing for the proposed haul road connection to the existing wash plant to the north is also proposed; however, this connection has been shown outside of the PMA.

The entire woodland conservation requirement shall be met-on site to the extent practicable and, at a minimum, the site's woodland conservation threshold of 10.96 acres shall be met on-site in conformance with the Woodland and Wildlife Habitat Conservation Ordinance.

It is recommended that the proposed use be found to be in conformance with the Countywide Green Infrastructure Plan because the regulated environmental features are proposed to be preserved, with the exception of one proposed minor impact for sediment control/ stormwater outfalls, and it is recommended that at a minimum the site's woodland conservation threshold shall be met on-site.

### **Conformance with Required Findings for a Special Exception**

The required findings for approval of a Special Exception are given in Section 27-317 of the Zoning Ordinance. The **required findings which are environmental in nature are indicated in bold**, and the comments are provided in regular type.

(a) **A Special Exception may be approved if:**

- (3) **The proposed use will not substantially impair the integrity of any validly approved Master Plan or Functional Master Plan, or, in the absence of a Master Plan or Functional Master Plan, the General Plan;**

**Comment:** The proposed special exception is in conformance with the environmental provisions of the General Plan, the Area Master Plan and the Countywide Green Infrastructure Plan as noted herein.

- (4) **The proposed use will not adversely affect the health, safety, or welfare of residents or workers in the area;**

The proposed use is subject to county and state regulations related to environmental management and safety that will protect the health, safety, and welfare of residents nearby and workers on-site. A detailed analysis of the potential impacts is provided in the Environmental Impact Report (EIR-4646). Recommended conditions are proposed herein to address potential impacts.

- (5) **The proposed use will not be detrimental to the use or development of adjacent properties or the general neighborhood; and**

The potential effects of the proposed use have been identified in the EIR and are addressed in more detail in the Environmental Review section below.

- (6) **The proposed site plan is in conformance with an approved Type 2 Tree Conservation Plan; and**

A Type 2 Tree Conservation Plan (TCP2-047-09) was submitted for review concurrently with the Special Exception Site Plan. Minor revisions to the TCP2 are required for conformance with the Woodland and Wildlife Habitat Conservation Ordinance, as described in the Environmental Review section below.

**(7) The proposed site plan demonstrates the preservation and/or restoration of the regulated environmental features in a natural state to the fullest extent possible.**

The TCP2 shows a single encroachment into the regulated environmental features for the installation of stormwater management and sediment control outfall. A justification statement was submitted as part of the Special Exception. This impact is considered necessary for the orderly development of the subject property and is addressed in more detail in the Environmental Review section below.

Sec. 27-410 of the Zoning Ordinance lists the specific requirements for a Special Exception for Surface Mining. The **environmentally-based requirements are indicated in bold**, and the comments are provided in regular type.

**(a) The surface mining of natural materials or deposits (including sand, gravel, or clay pits; rock or stone quarries; and the removal of earth or topsoil) may be permitted, subject to the following:**

**(1) Heavy machinery may be used for the extraction of natural material or deposits from the site. Except in the I-2 Zone, heavy machinery may not be used for washing, refining, or other processing, unless a Special Exception is granted for sand and gravel wet-processing under the provisions of Section 27-405;**

The subject site is zoned O-S. Heavy machinery will only be utilized for the extraction and removal of sand and gravel from the subject site. A wash plant, also known as “wet-processing”, is not proposed on-site; the materials are to be transported directly to the property located to the northwest for further processing.

**(2) The use shall not be noxious, offensive, or otherwise objectionable by reason of dust, smoke, or vibration;**

Air quality issues have been addressed and are discussed in the associated EIR and further in the Environmental Review section below.

**(3) The land areas exposed by the extraction and removal of natural materials or deposits shall be left suitable for development. A grading plan shall be submitted (along with the site plan) showing the existing and proposed ground elevations of the site, adjacent land, and all abutting streets. The exposed land area shall have a slope not greater than three-to-one (3:1), except where any portion of the site is developed for port or harbor facilities;**

A mining plan showing the proposed grading and a reclamation plan showing the final grades have been submitted. None of the proposed grades are greater than 3:1.

- (4) **The Special Exception shall be valid for not longer than five (5) years, except where the use is located:**
- (A) **In an R-R Zone which is predominantly undeveloped for a radius of one (1) mile from the operation; or**
  - (B) **In an I-2 Zone;**

It is recommended that the special exception be conditioned to be valid for no more than five years.

- (5) **In addition to the requirements of Section 27-296(c), the site plan shall show an estimate of the time required for the removal of the material;**

It is recommended that the special exception be conditioned to be valid for no more than five years.

- (6) **At least sixty (60) calendar days prior to the hearing before the Zoning Hearing Examiner, the applicant shall file a traffic analysis with the Zoning Hearing Examiner for inclusion in the record, and shall send a copy to the Planning Board. The traffic analysis shall include the volume of traffic expected to be generated by the operation, and shall identify the streets to be used between the site and the nearest street (to be used) that has a minimum paved width of twenty-four (24) feet for the predominant length of the street;**

A traffic report prepared by Lenhart Traffic Consulting, Inc. dated July 25, 2013, was submitted with the application. No off-site hauling is proposed for the subject application because the raw material is proposed to be transported directly to the existing processing facility located on the abutting property to the northwest.

- (7) **Driveways or access points shall be identified on the site plan, and shall be located so as not to endanger pedestrians or create traffic hazards. The surface material to be used on the driveways shall be identified on the site plan. Any access driveway shall be at least twenty-two (22) feet wide, and shall be paved for a distance of at least two hundred (200) feet from the boundary line of the Special Exception.**

No off-site hauling is proposed as part of the mining operation, therefore dump trucks are not proposed to enter the surrounding roadways. All traffic associated with the mining operation is proposed to enter the site via the proposed haul road to the north.

- (8) **The Technical Staff Report prepared in response to the application shall include a current, Countywide inventory of the locations, dates of approval, and conditions of approval concerning haul routes and estimated loads per day for all approved and pending Special Exceptions for sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining, as indicated by the record in the case. The inventory shall also include the locations of all nonconforming sand and gravel wet-processing, sanitary landfills and rubble fills, and surface mining operations throughout the County that were certified after September 6, 1974.**



This information has been provided in the EIR.

- (b) **In the I-3 Zone, the use shall be staged in conformance with the required Conceptual Site Plan. The District Council may require (as a condition of approval) that this use be terminated prior to a Detailed Site Plan being approved for another use included on the Conceptual Site Plan.**

The subject site is zoned O-S.

- (c) **In the M-A-C, L-A-C, E-I-A, R-U, R-M, and R-S Zones, no surface mining operation may be permitted after a Specific Design Plan for the subject property has been approved. An application for this Special Exception may only be accepted, and the Special Exception granted, if no Specific Design Plan has yet been filed for the subject property.**

The subject site is zoned O-S.

- (d) **In reviewing the application, the District Council shall consider the use of techniques which provide for noise attenuation.**

Noise issues have been addressed and are discussed in the EIR and in the recommended conditions provided in the Environmental Review section below.

- (e) **On land which is located within a Chesapeake Bay Critical Area Overlay Zone, development is subject to Subtitle 5B.**

The subject site is not located in the Chesapeake Bay Critical Area Overlay Zone.

- (f) **In reviewing the application for compliance with the required findings set forth in Sections 27-317(a)(4) and 27-317(a)(5), the District Council shall consider the inventory required in Section 27-410(a)(8).**

The proposed application is in compliance with the required findings of Section 27-317 as demonstrated above or as conditioned below.

**Recommended Condition:** The subject property may not be utilized as a Sanitary Landfill, a Rubblefill or a Class III Fill.

### **Environmental Review**

1. An approved Natural Resource Inventory, NRI-017-10, was submitted with the application. There is a Primary Management Area (PMA) comprised of streams, stream buffers, wetlands, wetland buffers, 100-year floodplain, and steep slopes.

The 100-year floodplain shown on the plans is from a County approved study (FPS#201007). The Forest Stand Delineation (FSD) indicates the presence of two forest stands totaling 10.26 acres. Stand A is a young mixed hardwood stand and Stand B is a mature riparian hardwood stand.

There are seven (7) specimen trees shown on the plan; however, trees 3 and 5 are located off-site.

The county issued a violation (NOV 29517-2011) for clearing that was previously done without a permit. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

The TCP2 and the Special Exception Mining Site Plan are in general conformance with the approved NRI.

**Comment:** No revisions are required for conformance to the NRI.

2. This property is subject to the provisions of the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance because the gross tract area is greater than 40,000 square feet in size and there are more than 10,000 square feet of existing woodlands. A Type 2 Tree Conservation Plan (TCP2-047-09) was submitted.

The project is not grandfathered with respect to the Woodland and Wildlife Habitat Conservation Ordinance effective September 1, 2010 because there are no previous approvals for the site. The property is subject to woodland conservation violation notice (NOV 29517-2011) for clearing that was done without a permit prior to the submission of the current mining application. Prior to the violation, there were 17.07 acres of existing woodland on-site; 6.81 acres were cleared without a permit, leaving 10.26 acres of existing woodlands on-site. The previous clearing and the proposed clearing is accounted for on the TCP with the subject application.

The Woodland Conservation Threshold (WCT) for this 23.03-acre property in the O-S zone is 50 percent of the net tract area, or 10.96 acres. The total woodland conservation requirement based on the amount of existing woodlands prior to the violation, the amount of clearing done under the violation, and the clearing proposed with the current mining application is 15.86 acres. The requirement is based on staff's calculations.

This woodland conservation requirement is proposed to be met with 6.44 acres of preservation, 5.15 acres of reforestation, and 0.48 acres of off-site credits; however, the proposal would only meet 12.07 acres of the 15.86 acre requirement. Additional woodland conservation must be provided to meet the entire requirement.

The plan indicates that there were 17.07 acres of net tract woodland on the site prior to the violation. Under the violation, 6.81 acres were cleared, leaving 10.26 acres of woodland. The current application proposes to clear an additional 2.68 acres, leaving 7.58 acres of undisturbed woodland on-site. Of the 7.58 acres of woodland that is proposed to remain undisturbed, only 6.44 acres is proposed to be preserved. It is not clear on the plan where the additional 1.14 acres of woodland preserved, but not counted toward the requirement, is located. It appears that the areas used for calculation purposes may have been based on gross tract areas, instead of the required net tract areas.

The worksheet shown on the TCP as submitted is not the standard Prince George's county worksheet and does not appear to account for the required reduction of wooded floodplain from

the gross tract for net tract calculation purposes. The worksheet shall be revised to reflect the standard worksheet found in the Environmental Technical Manual (ETM). The calculations shall be revised to reflect the reduction of wooded floodplain from the gross tract woodland for the site. The entire woodland conservation requirement shall be met on site to the extent practicable and, at a minimum, the site's woodland conservation threshold of 10.96 acres shall be met on-site. A copy of staff's calculations using the standard format is attached. Prior to certification of the TCP, the worksheet on the plan shall be revised to reflect the standard format and to reflect the correct areas of woodland conservation as shown on the plan. The plan shows two phases of mining; the standard phased worksheet must be used to reflect the woodland conservation requirements for each phase of mining and to reflect the requirements of the violation.

The plan requires technical revisions to be in conformance with the Woodland and Wildlife Habitat Conservation Ordinance. The TCP2 plan set consists of four (4) sheets labeled as follows: cover sheet, existing conditions sheet, on-site reforestation sheet, and on-site reforestation detail sheet. The approved NRI established all existing and environmental features located on the property. A sheet depicting only these features is not necessary for the TCP. The existing conditions plan sheet shall be removed from the TCP2 plan set. The plan sheet labeled as the on-site reforestation sheet shall be revised as the TCP2 plan sheet. This sheet must show all existing regulated environmental features as approved on the NRI (wetlands, wetland buffers, streams, stream buffers, floodplain, and PMA) as well as the existing treeline and all proposed features per the TCP2 checklist. These features must be shown with the standard symbols per the ETM. All erroneous hatching shall be removed from the plan for clarity. The floodplain cannot be counted toward the woodland conservation requirement and must be removed from the graphic hatch pattern used to reflect the preservation area and all area labels shall be updated accordingly.

The plan notes and details conform to the standards of the ETM; however, several minor revisions are needed. Standard TCP2 note number 1 needs to be revised to refer to the purpose of the plan as not only meeting the requirements of the Special Exception, but also to meet the requirements of NOV 29517-2011. Note 1 also needs to be revised to remove the second sentence in its entirety. The management plan notes need to be revised to reflect the standard 4-year management notes per the ETM. Because split rail fence is not required, the detail should be removed. The standard details for combined silt fence and tree protection fence (ETM detail 8) and the detail for combined earth dike and tree protection fence (ETM detail 7) must be added to the plan. Planting details must be added to the plan, including the standard detail for handling seedlings in the field (ETM detail 15) and/ or for larger caliper/ tublings as proposed. The reclamation note indicates that post mining planting will be determined by a landscape architect in conjunction with the property owner. This note must be revised to reflect the proposed planting information that is required to be shown on the plan. The proposed reforestation areas have been shown on the plan as required and planting charts have been provided; however, the charts need to be revised reflect the planting areas and requirements in acres, rounded to the nearest 1/100<sup>th</sup> of an acre, and must match the reforestation acreage shown on the plan and in the worksheet. The reforestation tables also reflect the use of several shrub species. While the planting of shrubs is acceptable for reforestation purposes, the credits given for shrubs is less than for trees. The reforestation tables must be revised to account for credits associated with the proposed planting. Because mining sites remove topsoil, planting conditions on reclaimed sites are often poor. Soil amendments are likely to be necessary prior to planting. The standard notes regarding soil testing and soil amendments for mining sites is attached and must be added to the plan.

A woodland conservation summary table has been provided on more than one sheet in the plan set and the areas reflected in these tables is not consistent across the sheets. The plan needs to be revised to provide a single woodland conservation summary table that is consistent with the woodland conservation area labels on the plan and with the areas used for calculation purposes in the woodland conservation worksheet.

There are several symbols shown on the plan that are not reflected in the legend, making it difficult to determine if all required information has been provided. The legend labels several existing features as proposed, such as the stream buffer and wetland buffer. These are existing features that should be labeled as such. Other required features are shown in the legend but not on the plan, such as the PMA. Other required features are shown on the plan but not in the legend, such as the reforestation areas and the phase line. Because the TCP is for a mining site, additional information is required to be shown on the TCP beyond the standard TCP information. This includes the grading and location of the noise mitigation berms. The plan must be revised to ensure that all required information is shown on the plan and accurately reflected in the legend using the standard symbols found in the ETM.

After all revisions have been made, the qualified professional who prepared the plan needs to sign and date it and update the revision box with a summary of the revisions made.

Additionally, it should be noted that woodland conservation areas are required to be protected via a conservation easement per Section 25-122(d)(1)(B). A condition is recommended below to address the recordation of a conservation easement for areas of woodland conservation.

**Recommended Condition:** A conservation easement shall be recorded in the land records in accordance with Section 25-122(d)(1)(B). The easement shall describe, by bearings and distances, the areas of woodland conservation shown on the TCP2 as approved. The easement shall be reviewed by the Environmental Planning Section prior to recordation.

**Recommended Condition:** The applicant shall notify the Maryland National Capital Park and Planning Commission (M-NCPPC), Environmental Planning Section, prior to the start of reforestation for each phase of this mining operation and schedule a meeting to address reforestation and woodland conservation issues.

**Recommended Condition:** Prior to the start of work, the limits of disturbance shall be marked in the field. The applicant or their representative shall walk the limits of disturbance with a representative of the MDE Minerals, Oil and Gas Division, prior to the installation of sediment/erosion control measures and tree protective devices. The applicant or their representative shall notify the M-NCPPC, Environmental Planning Section, as to the date and time this walk will occur, and they will be afforded the opportunity to participate.

**Recommended Condition:** Prior to certification of the Special Exception, the Type 2 Tree Conservation Plan shall be revised as follows:

- a. Provide a phased woodland conservation worksheet in accordance with the Environmental Technical Manual (ETM). A column shall be provided to account for the violation and a column for each proposed phase of mining.

- b. Account for the required reduction of wooded floodplain from the gross tract woodland for calculation purposes.
  - c. Provide the entire woodland conservation requirement on-site to the extent practicable. At a minimum, the site's woodland conservation threshold shall be met on-site.
  - d. Revise the plan set to remove the plan sheet currently labeled as "Existing Conditions."
  - e. Revise the plan to show all existing environmental features, the treeline, and all existing conditions as shown on the approved NRI. The plan shall also be revised to show all proposed information including but not limited to grading, noise berms, and all tree conservation measures per the TCP2 checklist. All symbols shall be in accordance with the ETM to extent practicable. All erroneous hatching shall be removed.
  - f. Revise the plan to remove the hatching from the wooded floodplain and update the preservation label.
  - g. Revise the notes and details as follows:
    - i. Revise the standard TCP2 note 1 to refer to the purpose of the TCP as not only meeting the requirements of the Special Exception, but also to meet the requirements of NOV 29517-2011. Note 1 shall also be revised to remove the entire second sentence.
    - ii. Revise the management plan notes to reflect the standard 4-year management notes.
    - iii. Remove the split-rail fence detail.
    - iv. Add the standard details for combined silt fence and tree protection (ETM detail 8), the standard detail for combined earth dike and tree protection (ETM detail 7), and all applicable planting details such as the standard seedling detail (ETM detail 15).
    - v. Revise the reclamation notes to reflect the proposed planting information shown on the plan and to remove any reference to determination of planting at a later date.
    - vi. Revise the reforestation planting tables to reflect the planting areas in acreage, rounded to the nearest 1/100<sup>th</sup> of an acre and to match the areas shown on the plan. The reforestation tables shall also be revised to account for the correct credit ratio for the proposed shrub planting.
    - vii. Provide the standard soil testing and amendment notes.
  - h. Provide a single woodland conservation summary table consistent with the areas shown on the plan and in the worksheet.
  - i. Ensure that all required information is shown on the plan and accurately reflected in the legend using the standard symbols found in the ETM, or equivalent.
  - j. Have the qualified professional who prepared the plan sign and date it and update the revision box with a summary of the revisions made.
3. Effective October 1, 2009, the State Forest Conservation Act was amended to include a requirement for a variance if a specimen, champion, or historic tree is proposed to be removed. This state requirement was incorporated in the adopted County Code effective on September 1, 2010.

If after careful consideration has been given to the preservation of the specimen trees there remains a need to remove any of the specimen trees, a variance from Section 25-122(b)(1)(G) is required.

There are seven (7) specimen trees shown on the plan; however, trees 3 and 5 are located off-site. No specimen trees are proposed to be removed as part of the current mining application.

**Recommended Finding:** No variance from Section 25-122(b)(1)(G) is required because no specimen trees are proposed to be removed.

4. The project is exempt from the minimum tree canopy coverage requirements of Subtitle 25, Division 3, the Tree Canopy Coverage Ordinance, because the site is zoned O-S.

No revisions are required for conformance to the Tree Canopy coverage Ordinance.

**Recommended Finding:** The project is exempt from the minimum tree canopy coverage requirements of Subtitle 25, Division 3, the Tree Canopy Coverage Ordinance, because the site is zoned O-S.

5. All grading, erosion and sediment control plans are reviewed by the Prince George's County Soil Conservation District for conformance with the current Maryland Standards and Specifications for Soil Erosion and Sediment Control as well as the current Prince George's Soil Conservation District Soil Erosion and Sediment Control-Pond Safety Manual. Sediment and erosion control devices must function for both existing and proposed drainage areas and elevations. All outfalls must be designed to ensure non-erosive conditions.

A Water Quality Certification (COMAR 26.08.02.10) is required for any activity which may result in any discharge to navigable waters unless the applicant provides a certification from the state that the activity does not violate state water quality standards or limitations. Discharges permitted by the state under the National Pollutant Discharge Elimination System (NPDES) are certified by MDE.

An unapproved Sediment and Erosion Control Plan was submitted with the subject application; however, the plan only addresses basic control methods with labels on the plan pointing to the general location of where sediment control devices are to be installed.

A copy of the conceptual, site development, or final sediment erosion control plan is needed for review purposes prior to certification of the special exception to verify that the limits of disturbance shown on the TCP2 are in general conformance with the technical sediment erosion control plan and that sediment control methods and tree protection methods are coordinated.

**Recommended Condition:** Prior to certification of the special exception, a copy of the approved sediment and erosion control plan shall be submitted to M-NCPPC.

6. The Maryland Department of the Environment (MDE) issues a mining permit for sand and gravel mines in Maryland. Through this permit, MDE only has control over the actual mining operation itself and does not enforce the conditions of the special exception or the requirements for landscaping or woodland conservation. The issuance of a county permit in conformance with Subtitle 32 will allow the county inspectors to inspect and enforce the site development elements that are controlled at the county level and the proposed conditions of the special exception

application.

The Zoning Ordinance provides the opportunity to address issues raised during the review of a special exception through the imposition of conditions of approval:

**“Sec. 27-318. Conditional approval.**

**When a Special Exception is approved, any requirements or conditions deemed necessary to protect adjacent properties and the general neighborhood may be added to those of this Subtitle.”**

Because oversight of the proper implementation of the special exception conditions, landscaping, and woodland conservation requirements at the county level is not possible without the issuance of a local permit, a special permit should be a requirement of approval of the special exception for mining.

The issuance of a county permit will also allow the posting of a bond for reforestation as part of the proposed TCP2. Without a permit, there is no method at the local level to post this bond or inspect and approve the proposed reforestation areas.

**Recommended Finding:** The issuance of a county permit will provide a mechanism for enforcement of the conditions of the mining special exception and is necessary to protect adjacent properties and the surrounding community in accordance with Section 27-318 of the county code.

**Recommended Condition:** Prior to commencement of the mining operation, a special permit shall be obtained from the appropriate agency of Prince George’s County Government to ensure compliance with the grading plan, the TCP2, and the Landscape plan approved with this Special Exception. The permit shall require the applicant to post a bond acceptable to the County Attorney to secure its obligations pertaining to reforestation and landscaping as required by this Special Exception.

**Recommended Condition:** The area to be mined shall be reclaimed in accordance with the Reclamation Plan by filling with acceptable materials as described in Prince George’s County Building Code.

7. This site contains regulated environmental features that are required to be preserved and/or restored to the fullest extent possible under Section 27-317(a)(7) of the Zoning Ordinance. The on-site regulated environmental features include streams, stream buffers, wetlands, wetland buffers, 100-year floodplain, and steep slopes.

Section 27-296(c)(1)(L) of the Zoning Ordinance requires the submittal of: “A statement of justification describing how the proposed design preserves and restores the regulated environmental features to the fullest extent possible.”

Impacts to the regulated environmental features should be limited to those that are necessary for the development of the property. Necessary impacts are those that are directly attributable to infrastructure required for the reasonable use and orderly and efficient development of the subject

property or are those that are required by County Code for reasons of health, safety, or welfare. Necessary impacts include, but are not limited to, adequate sanitary sewerage lines and water lines, road crossings for required street connections, and outfalls for stormwater management facilities. Road crossings of streams and/or wetlands may be appropriate if placed at the location of an existing crossing or at the point of least impact to the regulated environmental features. Stormwater management outfalls may also be considered necessary impacts if the site has been designed to place the outfall at a point of least impact. The types of impacts that can be avoided include those for site grading, building placement, parking, stormwater management facilities (not including outfalls), and road crossings where reasonable alternatives exist. The cumulative impacts for the development of a property should be the fewest necessary and sufficient to reasonably develop the site in conformance with County Code.

A statement of justification was stamped as received by the Environmental Planning Section on August 30, 2013. The special exception proposes a single impact to the PMA for the installation of a sediment control outfall. This impact totals 561 square feet.

Staff supports the request for installation of the sediment control outfall because it has been located in an area with minimal impacts to the PMA and woodlands.

Areas of PMA that are not currently forested are shown to be afforested on the TCP2.

**Recommended Finding:** The regulated environmental features on the subject property have been preserved and/or restored to the fullest extent possible based on the limits of disturbance shown on the tree conservation plan submitted for review. The impacts approved are for the installation of a single sediment control outfall.

**Recommended Condition:** A conservation easement shall be recorded in the land records that describes the primary management area (PMA) by bearings and distances. The conservation easement shall contain the entirety of the PMA as shown on the approved natural resource inventory except for the areas of approved impacts as shown on the approved TCP2. The conservation easement shall be reviewed by the Environmental Planning Section prior to recordation. The recorded easement document shall include the following text:

“These conservation easements are areas where the installation of structures and roads and the removal of vegetation are prohibited without prior written consent from the M-NCPPC Planning Director or designee. The removal of hazardous trees, limbs, branches, or trunks is allowed.”

8. The property is located at the terminus of Evergreen Way, which runs approximately 1,600 feet in length from Brandywine Road (MD 381) north to the subject site, and is the main access point onto the property.

Brandywine Road is a Master Plan designated collector and is a scenic and historic road which requires evaluation of the visual aesthetics as part of the special exception review; however, the materials are proposed to be transported directly to the abutting wash plant to the north and no traffic associated with the mining operation is anticipated to access the site from Evergreen Way.



The significant distance of the site from Brandywine Road, and the berms proposed along portions of the site boundary will provide adequate visual mitigation to the scenic and historic road and to the adjacent properties.

**Recommended Finding:** The rural historic landscape along Brandywine Road as well as the visibility of the mining operation from dwellings or structures within the potential viewshed of the application are not expected to be significantly affected by the subject application based on the information provided.

9. A noise study prepared by Scantek, Inc., dated February 25, 2009, and a revised report dated April 12, 2010, were reviewed by EPS. A final report dated August 26, 2013, was prepared by the same author as the previous reports; however, at the writing of the final report, the individual who prepared it was employed with Engineers for Change, Inc. As each subsequent study was submitted comments were provided. The final report was stamped as received August 30, 2013.

Noise impacts are evaluated with respect to how the predicted noise levels compare with state noise standards and regulations (COMAR 26.02.03). The state noise standards apply to noise receptors and are established based on the adjacent land use categories (industrial, commercial, and residential). The maximum allowable noise levels for receiving residential uses is 65 dBA during the daytime. It should be noted that the mining operation will have only daytime hours of operation and that the noise generated from mining operations is instantaneous noise, not the 24-hour day/night average (Ldn) standard used in Prince George's County with respect to traffic noise. Instantaneous noise levels are more restrictive, defined by COMAR, and used for the evaluation of noise emanating from mining sites. Traffic generated noise is regulated using the average 24-hour level or Ldn because traffic noise occurs both day and night. The hours of operation proposed for the mining operation do not include nighttime hours.

The noise environment in the project area will be affected by noise from two types of sources: point and non-point. Point source noise emanates from the various excavation equipment used on-site. Non-point source noise emanates from the flow of vehicular traffic along a roadway or haul road. The main source of vehicular related noise in relation to mining operations comes from the dump trucks moving around on the site, entering the site empty, and full trucks hauling material away. However, the current application does not propose to haul material off-site, rather the proposal includes a direct connection to the property to the north/ northeast where an existing processing facility is located.

The noise analysis was performed using the hauler and the excavator, assumed working simultaneously at maximum capacity, for a conservative/ worst case scenario. The analysis was done using ISO 9613-2 compliant software. The software is based on stationary noise source propagation of point, line, and area sources. The propagation is based on wave divergence, ground absorption, moderate wind conditions, and berms reducing the noise. The berms are described in the report. Berm 1 is to be a minimum of 4.5 meters (14 feet) in height, and Berm 2 is to be a minimum of 4 meters (13 feet) in height.

The report prepared by Scantek, Inc. and the supplemental/ final report prepared by Engineers for Change, Inc. indicates that with the installation of berms, sound levels will be at or below 65 dBA at the property line, and that no adjacent residences will be affected by noise above the 65 dBA

state standard for residences.

There is one residential building located on-site in which the property owner, Mr. Anthony George, intends to continue to reside during the proposed mining operations. It is understood that Mr. George intends to execute an easement agreement with the applicant to waive his right to any buffering from noise levels exceeding 65 dBA.

Additional typical restrictions as follows are recommended to further reduce noise impacts in the surrounding area.

**Recommended Condition:** Noise mitigation shall be provided on-site by implementation of the following:

Noise mitigation shall be provided on-site by implementation of the following:

- a. Mining operations on the site are restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, and 7:00 a.m. to 4:00 p.m. on Saturdays, excluding federal holidays. There will be no operations on Sundays. Trucks are not permitted to arrive at the site prior to 7:00 a.m.
- b. The noise mitigation berms shall be located as shown on the plans submitted to protect nearby residential buildings and properties. Berm 1 shall be a minimum of 4.5 meters (14 feet) in height, and Berm 2 shall be a minimum of 4 meters (13 feet) in height
- c. Trucks shall not use compression or "Jake" brakes both on-site and on the haul road.
- d. Speeds on-site shall be restricted to 15 mph for all heavy vehicles.
- e. All machinery shall be kept in good working order, especially mufflers to insure quiet operation.
- f. The volume of backup warning devices shall be minimized while still meeting OSHA (Occupational Safety and Health Administration) standards.
- g. The property will be mined at a maximum rate of 200 truck trips per day.

10. The application package for the subject special exception included an air quality report prepared by Environmental Resources Management (ERM), dated April 2, 2010, and a supplemental report dated July 24, 2013, stamped as received August 30, 2013. The air report, in conjunction with local monitoring station data, has been used for the following analysis.

The air report presented an evaluation of the predicted impacts on air quality by providing the ambient (or background) air quality measurements and the predicted levels of pollutants that will result from the proposed mining activity. The combined information was compared to the established air quality standards. The standards are known as the National Ambient Air Quality Standards (NAAQS) which are established for six criteria pollutants: carbon monoxide, lead, nitrogen dioxide, ground-level ozone, particulate matter, and sulfur dioxide.

The two main concerns with regard to mining operations are particulate matter and carbon monoxide. While lead, nitrogen dioxide, ozone and sulfur dioxide were included in the air report evaluation, the amounts created from the mining operation are minimal.

The air report states that all criteria pollutants are predicted to be below the NAAQS with the

exception of ozone, which has existing ambient levels above the NAAQS and is currently in non-attainment for the Washington Metropolitan area. The small amount of ozone-causing emissions from the mining operation is not likely to add to the region's nonattainment status.

**Recommended Condition:** Mitigation of particulate matter emissions shall be accomplished by implementation of the following:

- a. The haul road shall be maintained with a water truck or other approved dust control methods.
- b. The application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
- c. Open-bodied vehicles transporting materials shall be covered at all times when in motion, in accordance with COMAR regulations.
- d. The site shall have a 15 mph speed limit to reduce dust generation from travel on the unpaved haul road.
- e. All mobile equipment to be used on-site shall use ultra-low sulfur diesel fuel. The fuel supplier certification of the sulfur content of each fuel delivery shall be kept on-site for the duration of the special exception approval period.

**Recommended Condition:** Equipment fueling on-site shall be done in accordance with NFPA 30 (National Fire Protection Association), Flammable and Combustible Liquids Code, Chapters 2 and 3. The mobile fueling trucks shall be operated by trained personnel holding valid oil vehicle operator's certificates as required by COMAR 26.10.01.17. Care shall be taken to minimize spillage. Refueling shall take place as far from streams and wetlands as possible.

11. A Hydrologic Evaluation report prepared by Environmental Resources Management (ERM) dated February 24, 2009, stamped as received July 23, 2009, a supplemental report dated January 12, 2010, stamped as received by EPS on January 19, 2010, and a final supplemental report dated July 24, 2013, stamped as received August 30, 2013, have been reviewed. The reports include a domestic well search area plan and an evaluation of the potential for groundwater disturbance including a conceptual cross section that show the groundwater depth in relation to the proposed depth of mining.

The report states that based on test pits, the depth to groundwater ranges from approximately 170 to 185 feet above mean sea level, or about 25 feet below the surface in the upland area of the site. The water table slopes northwest on the western portion of the site and east on the eastern portion of the site as a subdued reflection of topography. The cross section provided in the report illustrates a 'worst case' scenario because it is close to the creek and the test pit data showed that the product thickness was greatest in this area. The cross section indicates that the depth of mining ranges in elevation from approximately 195 feet to about 185 feet. The interception, pumping, and storage of groundwater, or dewatering, is not proposed; therefore, the water table should not be negatively impacted.

The domestic well search area plan included in the report shows the location of all identified wells within a quarter (1/4) mile radius of the boundary of the site. Wells located at 15204, 15300, and 15526 Brandywine Road have been identified within the quarter mile radius. The MDE well permit database indicates that these wells are at a depth greater than 408 feet, within deep aquifers, and well below the proposed depth of mining. The MDE records further indicate

that the majority of residential wells in the area are at depths in deeper aquifers. These deeper aquifers occur at depths over 370 feet. The hydrogeologic conditions that underlie the site vicinity include a confining layer that acts as a hydraulic barrier between the surficial water table aquifer in the upland deposits, and the deeper aquifers that supply groundwater to wells in the area.

Residences along Evergreen Way are also located within the quarter mile radius, including 15510 and 15512 Brandywine Road (properties along Evergreen Way have addresses along Brandywine Road). The properties located along Evergreen Way have wells that predate the MDE well permit database, so their depth is unknown.

It is understood that the property owner, Mr. Anthony George, plans to continue to occupy the on-site residence during the proposed mining operation, and will continue to use the on-site residential well. MDE has no data available for the on-site well; however, the ERM report states that Mr. George believes the well to be at a depth over 300 feet. The on-site well, and the wells located on Evergreen Way, are located in the hydraulically upgradient direction of the proposed mining and are not anticipated to be negatively affected, even if mining were to occur below the water table.

The report summarizes that the mining operation will not have a negative impact on the quantity and quality of groundwater flowing into residential wells because 1) the mining is not proposed to occur below the water table 2) the groundwater flows northwest and northeast, away from the surrounding residences 3) the identified wells are all located to the south, and 4) most wells are in deeper aquifers. The structures located within a quarter mile of the subject site that do not have available well data are all located to the south of the subject site and in the hydraulically upgradient direction of the proposed mining.

Although no impacts to surrounding wells are anticipated, the applicant may need to provide new wells for any property owner within a quarter mile whose well is negatively affected by the mining operation. A condition is recommended to address this situation should it arise.

**Recommended Condition:** If the operation of the subject sand and gravel mine negatively impacts the water level in any wells within a quarter-mile radius of the subject mining site as verified by the Maryland Department of the Environment (MDE), or the Prince George's County Department of Environmental Resources (DER), corrective action shall be immediately taken by the applicant, including but not limited to, the drilling of a new well to replace the adversely affected well.

### Summary of Recommendations

The Environmental Planning Section offers the following findings and conditions for your consideration.

#### Recommended Findings:

1. No variance from Section 25-122(b)(1)(G) is required because no specimen trees are proposed to be removed.
2. The project is exempt from the minimum tree canopy coverage requirements of Subtitle 25, Division 3, the Tree Canopy Coverage Ordinance, because the site is zoned O-S.

3. The issuance of a county permit will provide a mechanism for enforcement of the conditions of the mining special exception and is necessary to protect adjacent properties and the surrounding community in accordance with Section 27-318 of the county code.
4. The regulated environmental features on the subject property have been preserved and/or restored to the fullest extent possible based on the limits of disturbance shown on the tree conservation plan submitted for review. The impacts approved are for the installation of a single sediment control outfall.
5. The rural historic landscape along Brandywine Road as well as the visibility of the mining operation from dwellings or structures within the potential viewshed of the application are not expected to be significantly affected by the subject application based on the information provided.

**Recommended Conditions:**

1. A conservation easement shall be recorded in the land records in accordance with Section 25-122(d)(1)(B). The easement shall describe, by bearings and distances, the areas of woodland conservation shown on the TCP2 as approved. The easement shall be reviewed by the Environmental Planning Section prior to recordation.
2. The applicant shall notify the Maryland National Capital Park and Planning Commission (M-NCPPC), Environmental Planning Section, prior to the start of reforestation for each phase of this mining operation and schedule a meeting to address reforestation and woodland conservation issues.
3. Prior to the start of work, the limits of disturbance shall be marked in the field. The applicant or their representative shall walk the limits of disturbance with a representative of the MDE Minerals, Oil and Gas Division, prior to the installation of sediment/ erosion control measures and tree protective devices. The applicant or their representative shall notify the M-NCPPC, Environmental Planning Section, as to the date and time this walk will occur, and they will be afforded the opportunity to participate.
4. Prior to certification of the Special Exception, the Type 2 Tree Conservation Plan shall be revised as follows:
  - a. Provide a phased woodland conservation worksheet in accordance with the Environmental Technical Manual (ETM). A column shall be provided to account for the violation and a column for each proposed phase of mining.
  - b. Account for the required reduction of wooded floodplain from the gross tract woodland for calculation purposes.
  - c. Provide the entire woodland conservation requirement on-site to the extent practicable. At a minimum, the site's woodland conservation threshold shall be met on-site.
  - d. Revise the plan set to remove the plan sheet currently labeled as "Existing Conditions."
  - e. Revise the plan to show all existing environmental features, the treeline, and all existing conditions as shown on the approved NRI. The plan shall also be revised to show all proposed information including but not limited to grading, noise berms, and all tree conservation measures per the TCP2 checklist. All symbols shall be in accordance with

- the ETM to extent practicable. All erroneous hatching shall be removed.
- f. Revise the plan to remove the hatching from the wooded floodplain and update the preservation label.
  - g. Revise the notes and details as follows:
    - i. Revise the standard TCP2 note 1 to refer to the purpose of the TCP as not only meeting the requirements of the Special Exception, but also to meet the requirements of NOV 29517-2011. Note 1 shall also be revised to remove the entire second sentence.
    - ii. Revise the management plan notes to reflect the standard 4-year management notes.
    - iii. Remove the split-rail fence detail.
    - iv. Add the standard details for combined silt fence and tree protection (ETM detail 8), the standard detail for combined earth dike and tree protection (ETM detail 7), and all applicable planting details such as the standard seedling detail (ETM detail 15).
    - v. Revise the reclamation notes to reflect the proposed planting information shown on the plan and to remove any reference to determination of planting at a later date.
    - vi. Revise the reforestation planting tables to reflect the planting areas in acreage, rounded to the nearest 1/100<sup>th</sup> of an acre and to match the areas shown on the plan. The reforestation tables shall also be revised to account for the correct credit ratio for the proposed shrub planting.
    - vii. Provide the standard soil testing and amendment notes.
  - h. Provide a single woodland conservation summary table consistent with the areas shown on the plan and in the worksheet.
  - i. Ensure that all required information is shown on the plan and accurately reflected in the legend using the standard symbols found in the ETM, or equivalent.
  - j. Have the qualified professional who prepared the plan sign and date it and update the revision box with a summary of the revisions made.
5. Prior to certification of the special exception, a copy of the approved sediment and erosion control plan shall be submitted to M-NCPPC.
6. Prior to commencement of the mining operation, a special permit shall be obtained from the appropriate agency of Prince George's County Government to ensure compliance with the grading plan, the TCP2, and the Landscape plan approved with this Special Exception. The permit shall require the applicant to post a bond acceptable to the County Attorney to secure its obligations pertaining to reforestation and landscaping as required by this Special Exception.
7. The area to be mined shall be reclaimed in accordance with the Reclamation Plan by filling with acceptable materials as described in Prince George's County Building Code.
8. A conservation easement shall be recorded in the land records that describes the primary management area (PMA) by bearings and distances. The conservation easement shall contain the entirety of the PMA as shown on the approved natural resource inventory except for the areas of approved impacts as shown on the approved TCP2. The conservation easement shall be reviewed

by the Environmental Planning Section prior to recordation. The recorded easement document shall include the following text:

“These conservation easements are areas where the installation of structures and roads and the removal of vegetation are prohibited without prior written consent from the M-NCPPC Planning Director or designee. The removal of hazardous trees, limbs, branches, or trunks is allowed.”

9. Noise mitigation shall be provided on-site by implementation of the following:
  - a. Mining operations on the site are restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, and 7:00 a.m. to 4:00 p.m. on Saturdays, excluding federal holidays. There will be no operations on Sundays. Trucks are not permitted to arrive at the site prior to 7:00 a.m.
  - b. The noise mitigation berms shall be located as shown on the plans submitted to protect nearby residential buildings and properties. Berm 1 shall be a minimum of 4.5 meters (14 feet) in height, and Berm 2 shall be a minimum of 4 meters (13 feet) in height
  - c. Trucks shall not use compression or “Jake” brakes both on-site and on the haul road.
  - d. Speeds on-site shall be restricted to 15 mph for all heavy vehicles.
  - e. All machinery shall be kept in good working order, especially mufflers to insure quiet operation.
  - f. The volume of backup warning devices shall be minimized while still meeting OSHA (Occupational Safety and Health Administration) standards.
  - g. The property will be mined at a maximum rate of 200 truck trips per day
10. Mitigation of particulate matter emissions shall be accomplished by implementation of the following:
  - a. The haul road shall be maintained with a water truck or other approved dust control methods.
  - b. The application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can create airborne dusts.
  - c. Open-bodied vehicles transporting materials shall be covered at all times when in motion, in accordance with COMAR regulations.
  - d. The site shall have a 15 mph speed limit to reduce dust generation from travel on the unpaved haul road.
  - e. All mobile equipment to be used on-site shall use ultra-low sulfur diesel fuel. The fuel supplier certification of the sulfur content of each fuel delivery shall be kept on-site for the duration of the special exception approval period.
11. Equipment fueling on-site shall be done in accordance with NFPA 30 (National Fire Protection Association), Flammable and Combustible Liquids Code, Chapters 2 and 3. The mobile fueling trucks shall be operated by trained personnel holding valid oil vehicle operator’s certificates as required by COMAR 26.10.01.17. Care shall be taken to minimize spillage. Refueling shall take place as far from streams and wetlands as possible.
12. If the operation of the subject sand and gravel mine negatively impacts the water level in any wells within a quarter-mile radius of the subject mining site as verified by the Maryland

Department of the Environment (MDE), or the Prince George's County Department of Environmental Resources (DER), corrective action shall be immediately taken by the applicant, including but not limited to, the drilling of a new well to replace the adversely affected well.

13. The subject property may not be utilized as a Sanitary Landfill, a Rubblefill or a Class III Fill.

Attachments: TCP2 worksheet  
TCP2 mining notes

If you have any questions concerning these comments, please contact me at 301-952-3650 or by e-mail at [megan.reiser@ppd.mncppc.org](mailto:megan.reiser@ppd.mncppc.org)

MKR:mkr