

## WATER QUALITY IMPACT ASSESSMENT

### WATER QUALITY IMPACT ASSESSMENT (WQIA)

The purpose of the water quality impact assessment is to: (i) identify the potentially adverse impacts of proposed development on water quality and lands within the Chesapeake Bay Preservation Areas; (ii) ensure that, where use, development or redevelopment takes place within the Chesapeake Bay Preservation Areas (CBPA) it will be located on those portions of a site and in a manner that will be least disruptive to the natural functions of the Resource Protection Areas (RPA) and other sensitive lands; and (iii) specify means to avoid, minimize or mitigate the impacts of development for water quality protection [City Code, Appendix F, Sec. 107 (C)].

### VARIANCE REQUEST TYPE IN THE RPA

Tree Removal    Small Project in the RPA    Single Family Site Plan    Commercial Site Plan    Subdivision

### CURRENT PROPERTY OWNER

Name: \_\_\_\_\_

Email: \_\_\_\_\_ Phone Number: (   ) \_\_\_\_\_

### CONTRACT PURCHASER (If different from current property owner)

Name: \_\_\_\_\_

Email: \_\_\_\_\_ Phone Number: (   ) \_\_\_\_\_

### APPLICANT'S AGENT or CONSULTANT

Name: \_\_\_\_\_

Email: \_\_\_\_\_ Phone Number: (   ) \_\_\_\_\_

### PARCEL INFORMATION

Property Address: \_\_\_\_\_ Voting District: \_\_\_\_\_

Legal description of property: \_\_\_\_\_ GPIN: \_\_\_\_\_

When was the property or lot recorded?

- Prior to October 1, 1989
- Between October 1, 1989 and January 1, 2004
- After January 1, 2004

### HISTORY & COMPLIANCE

Is the applicant seeking or obtaining approvals or permits from other local, State or Federal agencies?

- Wetlands Board or Joint Permit Application \_\_\_\_\_
- Board of Zoning Appeals \_\_\_\_\_
- Historical Review Board \_\_\_\_\_
- Planning Commission and City Council \_\_\_\_\_

Has there been a prior Chesapeake Bay Preservation Area (CBPA) Board variance granted for this parcel or lot?

- Unknown    No    Yes
- If yes, please provide date of prior variance(s) \_\_\_\_\_
- Were the improvements granted by the prior variance constructed/implemented?    No    Yes

Is this request identified with an issue of noncompliance to the provisions of the CBPA Ordinance?

- No    Yes
- If yes, please provide the date the Stop Work Order was issued. \_\_\_\_\_

WQIA (continued)

**PROJECT REQUEST** (briefly describe all demolition, proposed improvements, and mitigation measures if applicable)

### IMPERVIOUS COVER CALCULATIONS

Existing impervious cover of site \_\_\_\_\_ square feet  
(not required for Small Projects in the RPA or Tree Removal in the RPA)

Proposed impervious cover of site \_\_\_\_\_ square feet

Redevelopment of impervious cover in RPA \_\_\_\_\_ square feet

Proposed impervious cover in RPA \_\_\_\_\_ square feet

Does the request provide an overall reduction in impervious cover in the RPA?  Yes  No

Location of proposed impervious cover?

- Resource Protection Area (RPA)
  - Seaward 50 foot portion of the RPA
  - Landward 50 foot portion of the RPA
  - Variable Width Buffer
- Resource Management Area (RMA)

Does the request provide an overall retreat in encroachment of impervious cover in the RPA?  Yes  No

Please provide reasoning for encroaching into the Resource Protection Area (RPA) and the means taken to avoid or minimize impacts of development for water quality protection.

### EROSION and SEDIMENTATION CONTROL

Amount of land disturbance associated with the proposed improvements?

- Less than 2,500 square feet
- Greater than 2,500 square feet

Proposed methods to minimize land disturbance and prevent potential adverse impacts of proposed development from causing or contributing to a degradation of water quality:

- Improvements minimizes encroachment in RPA
- Erosion control matting on graded slopes
- Silt fence
- Tree and root zone protection barrier
- Single construction entrance
- Designated vehicle/contractor parking area
- Hard surface for stockpile/staging area
- Limit construction activity to flat areas of site
- Wood construction matting within construction site
- Dust control plan
- Limited grading/use of retaining walls
- Defined limits of construction
  - 10 feet outboard of improvements
  - 15 feet outboard of improvements
  - Above top of bank feature
- Special operating precautions near sensitive areas

WQIA (continued):

### RAINWATER INFILTRATION and STORMWATER RUN-OFF

*“Nonpoint source pollution generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification. Nonpoint pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.*

*Nonpoint source pollution can include excess fertilizers, herbicides and insecticides; oil, grease and chemicals from urban runoff; sediment from improperly managed construction sites and eroding shorelines; pet waste and faulty septic systems; and atmospheric deposition [US Environmental Protection Agency. (2016). Polluted runoff: nonpoint source pollution].”*

Provide the best management practices (BMP’s) proposed as a means to prevent the variance request from contributing to an increase in nonpoint source pollution load:

- |  |   |
|--|---|
| <input type="checkbox"/> Rooftop disconnection                             | <input type="checkbox"/> Dry swale                                |
| <input type="checkbox"/> At grade gravel drip intercept for rooftop runoff | <input type="checkbox"/> Constructed wetland                      |
| <input type="checkbox"/> Gravel downspout intercept                        | <input type="checkbox"/> Wet pond                                 |
| <input type="checkbox"/> Grass channel                                     | <input type="checkbox"/> Extended detention pond                  |
| <input type="checkbox"/> Soil amendments                                   | <input type="checkbox"/> Living shoreline                         |
| <input type="checkbox"/> Vegetative roof                                   | <input type="checkbox"/> Managed tree limb removal at shoreline   |
| <input type="checkbox"/> Rainwater harvesting                              | <input type="checkbox"/> Sand and gravel underdeck treatment      |
| <input type="checkbox"/> Permeable pavers                                  | <input type="checkbox"/> Structural/Manufactured BMP              |
| <input type="checkbox"/> Infiltration bed                                  | Type: _____   |
| <input type="checkbox"/> Bioretention bed                                  | <input type="checkbox"/> Preservation of existing riparian buffer |

Are there any existing BMP’s associated with prior CBPA variances for this site?  Yes  No  Unknown

If yes, are the existing BMP’s present and functioning as intended?

Are there any point source pollution conveyances (drainage pipes, channels, or ditches) on site?  No  Yes

If yes, describe disconnect or mitigation measures proposed to address the existing point source pollution:

Will the project require any excavation, filling or grading?

Such development activities should be limited to minimize disturbance of existing vegetation and contours so as to effectively maintain the integrity of the buffer area. Provide the extent of excavation, filling or grading if applicable.

- |   |                    |       |             |
|---|--------------------|-------|-------------|
| <input type="checkbox"/> Excavation     | Approximate amount | _____ | cubic yards |
| <input type="checkbox"/> Grading        | Approximate amount | _____ | cubic yards |
| <input type="checkbox"/> Fill material  | Approximate amount | _____ | square feet |
| <input type="checkbox"/> Retaining wall | Approximate length | _____ | linear feet |
| Retaining wall height                   |                    | _____ | feet        |

WQIA (continued)

### RIPARIAN BUFFER

Describe the condition of the riparian buffer:

- |  |  |
|--|--|
| <input type="checkbox"/> Heavily wooded/mature canopy  | <input type="checkbox"/> Leaves/needles/forest floor                               |
| <input type="checkbox"/> Sparsely wooded/mature canopy | <input type="checkbox"/> Turf  |
| <input type="checkbox"/> No canopy cover present       | <input type="checkbox"/> Bare soil   |
| <input type="checkbox"/> Understory/brush              | <input type="checkbox"/> Buffer restoration associated with previous CBPA variance |

Provide the impacts on existing vegetation associated with this request:

Number of canopy trees requested to be removed \_\_\_\_\_  
Number of understory trees requested to be removed \_\_\_\_\_  
Number of dead, diseased or dying trees to be removed \_\_\_\_\_  
Approximate linear footage of shoreline to be managed \_\_\_\_\_

Buffer restoration measures: *(Buffer restoration is required equal to 2 times the proposed impervious cover)*

Amount required: \_\_\_\_\_ square feet      Amount proposed: \_\_\_\_\_ square feet

Note: For every buffer restoration unit (400 square feet) a full complement of vegetation consisting of 1 canopy tree, 2 understory trees, and 3 shrubs, grasses and groundcovers shall be provided.

Provide the number of canopy trees, understory trees, and shrubs proposed with this request:

Canopy trees \_\_\_\_\_ Understory trees \_\_\_\_\_ Large shrubs \_\_\_\_\_ Small shrubs \_\_\_\_\_

### REQUIRED FINDINGS

Please provide a thorough response to the following.

- 1) This variance request does not confer upon the applicant any special privilege or convenience not accorded to other owners of property in the Chesapeake Bay Preservation Areas who are subject to the provisions of this ordinance and are similarly situated because?
- 2) Please explain how this variance request is not based upon conditions or circumstances that are or have been created by the applicant or predecessor in title.
- 3) Please explain how this variance request is the minimum necessary to afford relief.
- 4) Please explain how this variance request is in harmony with the purpose and intent of this ordinance, and not injurious to the neighborhood, and not of substantial detriment to water quality, or otherwise detrimental to the public welfare.
- 5) Please explain the means taken to provide towards a no net increase in nonpoint source pollution load from this variance request.