



James City County Water Quality Impact Assessment (WQIA) Guidelines

A. Purpose and Intent

The purpose of a Water Quality Impact Assessment (WQIA) is to:

1. Identify the impacts of proposed land disturbance, development or redevelopment on water quality and lands in Resource Protection Areas (RPA) and other environmentally sensitive lands;
2. Ensure that where land disturbance, development or redevelopment must occur within RPA and other sensitive lands, it will occur on those portions of a site in a manner that will be least disruptive to the natural functions of RPA and other sensitive lands;
3. Protect individuals from investing funds for improvements proposed for location on lands unsuited for such development because of high ground water, accelerated erosion, or vulnerability to flood and storm damage;
4. Provide for administrative relief from terms of the Chesapeake Bay Preservation Ordinance (Ordinance) when warranted and in accordance with the requirements contained herein; and
5. Specify mitigation which will address water quality protection.

B. Applicability

A Water Quality Impact Assessment (WQIA) shall be required for:

1. Any proposed land disturbance, development or redevelopment activity, including exempted uses and uses permitted by right, within a RPA;
2. Any buffer modification or encroachment pursuant to Section 23-7(c)(1) and (2) of the Ordinance;
3. Any other development in RMA as deemed necessary by the Manager due to unique onsite or offsite site characteristics, intensity of the proposed development or redevelopment, or potential impact on water quality or RPAs.

There shall be two levels of WQIA: a minor assessment (MiWQIA) and a major assessment (MaWQIA).

Single-family applications shall use the most current version of the *James City County, Chesapeake Bay Preservation Ordinance, Sensitive Area Activity Application* form. This is a simplified application form, created specific to single-family type applications, and shall serve as the WQIA for single-family related requests.

C. Minor Water Quality Impact Assessment

A MiWQIA pertains only to land disturbance, development or redevelopment activity within a Chesapeake Bay Preservation Area (CBPA) which causes no more than **5,000** square feet of land disturbance and/or which proposes to modify or encroach into the landward 50 feet of the 100-foot buffer area as permitted under Section 23-7(c)(1) and (2) of the Ordinance.

A minor assessment must demonstrate that the undisturbed buffer area, enhanced vegetative plantings and any required best management practices (BMPs) will result in the removal of no less than 75 percent of sediments and 40 percent of nutrients from post-development stormwater runoff and that will retard runoff, prevent accelerated erosion, promote infiltration, and filter nonpoint source pollution the equivalent of the full undisturbed 100-foot buffer area. A minor assessment shall include a scaled site drawing which shows the following:

1. Location of the components of the RPA, including the 100-foot buffer area;
2. Location and nature of the proposed encroachment into the buffer area, including type of paving or other surfacing material; limits of clearing or grading; location of any structures, drives, or other impervious cover; location of erosion control measures; location of 25 percent and steeper slopes; and sewage disposal systems or reserve drainfield sites;
3. Type, location of, and maintenance plan for any proposed best management practices (BMPs) necessary to mitigate for the proposed encroachment;
4. Location of existing vegetation onsite, including the number and type of trees and other vegetation to be removed from the buffer, to accommodate the encroachment or modification;
5. A re-vegetation (buffer modification) plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion control, infiltration, and filtering of runoff.

A list of required permits from all applicable agencies necessary to develop the project.

D. Major Water Quality Impact Assessment (MaWQIA)

A MaWQIA shall be required for any development which:

1. Exceeds **5,000** square feet of land disturbance within the CBPA and proposes to modify or encroach into the landward 50 feet of the 100-foot buffer area;
2. Proposes to disturb any portion of the seaward 50 feet of the 100-foot buffer area or any other component of a RPA; or
3. Is located solely in the Resource Management Area (RMA) when deemed necessary by the Manager.

The information required in this section shall be considered a minimum, unless the Manager determines that some of the elements are unnecessary due to the scope and nature of the proposed use and development of land.

The following elements shall be included in the preparation and submission of a MaWQIA:

1. All of the information required in a MiWQIA, as specified in Section C of this document;
2. A hydrogeological element that:
 - a. Describes the existing topography, soils, and hydrology of the site and adjacent lands.
 - b. Describes the impacts of the proposed development on topography, soils, hydrology, and geology on the site and adjacent lands.
 - c. Indicates the following:
 - 1) Disturbance or removal of wetlands and justification for such action;
 - 2) Disruptions or reductions in the supply of water to wetland, streams, lakes, rivers or other water bodies;
 - 3) Disruptions to existing hydrology including wetland and stream circulation patterns;
 - 4) Source, location of, and description of proposed fill material;
 - 5) Location of dredging and location of dumping area for such dredged material;
 - 6) Estimation of percent increase in impervious surface on site, type(s) of surfacing material to be used;
 - 7) Percent of site to be cleared for project;
 - 8) Anticipated sequence of construction.
 - d. Describes the proposed mitigation measures for the potential hydrogeological impacts. Potential mitigative measures include:
 - 1) Additional proposed erosion and sediment control concepts beyond those normally required under Section 23-9(b)(4) and (5) of the Ordinance; these additional concepts may include the following:
 - a) Perimeter controls;
 - b) Reduction of runoff velocities;
 - c) Measures to stabilize disturbed areas;
 - d) Specialized seed mixtures and plants;
 - e) Schedule and personnel for maintenance;
 - 2) Proposed stormwater management system for nonpoint source quality and quantity control;
 - 3) A vegetative element that:
 - a) Identifies and delineates the location of all woody plant material on site, including all trees on site that are two inches or greater in diameter at breast height or, where there are groups of trees, said stands may be outlined.
 - b) Describes the impacts the development or use will have on the existing vegetation. Information should include:
 - Limits of clearing, based on all anticipated improvements, including buildings, access drives and utilities;
 - Clear delineation of all trees and other woody vegetation which will be removed;
 - Description of all plant species to be disturbed or removed.
 - c) Describes the proposed measures for mitigation. Possible mitigation measures include:
 - Proposed design plan and replanting schedule for trees and other woody vegetation removed for construction, including a list of proposed native plants and trees to be used;

- Demonstration that the re-vegetation plan supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion and runoff control;
- Demonstration that the design of the plan will preserve to the greatest extent possible, any significant trees and vegetation on the site and will provide maximum erosion control and overload flow benefits from such vegetation;
- Demonstration that indigenous plants are to be used to greatest extent possible.
- Any other acceptable emerging technology than can demonstrate proper mitigation. List example projects of case studies.
- Contribution into the County's Chesapeake Bay Donation Trust (Mitigation) Fund. (Note: This option can only be used in whole or part if mitigation opportunities on a given piece of property are completely exhausted or cannot be performed due to unusual or specific site constraints. Specific approval is required by the Manager for this option. All applicable County protocol or regulations apply.)

E. Submission and Review Requirements

Major and minor WQIAs shall be prepared and submitted in an organized and orderly fashion with appropriate cover sheets and table of contents outlining documents as prepared for review and approval. All WQIAs must be submitted directly to the Environmental Division. More detailed information regarding submittal requirements is as follows:

1. Two (2) copies of all site drawings and other applicable information as required by Sections C and D above shall be submitted to the Manager for review unless the assessment must be reviewed by the Chesapeake Bay Board (Board) through a formal exception (public hearing) process. If the WQIA must be reviewed by the Board, ten (10) copies must be submitted.
2. All information required in this section shall be certified as complete and accurate by an appropriate professional who specializes in the preparation of such plans. This includes all applicable narratives, drawings, plans, sketches, and specifications. The professional may be required to substantiate experience, education, and knowledge of subject matter.
3. A Minor WQIA shall be prepared and submitted to be reviewed by the Manager or the Board in conjunction with Section 23-10 of the Ordinance, Plan of development.
4. A Major WQIA shall be prepared and submitted to be reviewed by the Manager or the Board in conjunction with Section 23-10 of the Ordinance or as deemed necessary by the Manager.
5. Upon receipt of a Major WQIA, the Manager may request the Chesapeake Bay Local Assistance (CBLA) review the assessment and response with written comments. Any comments by CBLA will be incorporated into the final review provided that such comments are provided by CBLA within 90 days of the request.

F. Evaluation Procedure

1. Upon completed review of a Minor WQIA, the Manager or Board will determine that any proposed modification or encroachment into the buffer area is consistent with the provisions of the Ordinance and make a finding based upon the following criteria:
 - a. The necessity of the proposed encroachment and the ability to place improvements elsewhere on the site to avoid disturbance of the buffer area;
 - b. Impervious surface is minimized;
 - c. Proposed mitigation measures, including the re-vegetation plan and site design, result in minimal disturbance to all components of the RPA, including the 100-foot buffer area;
 - d. Proposed mitigation measures will work to retain all buffer area functions: pollutant removal, accelerated erosion control, and infiltration and filtering runoff;
 - e. Proposed best management practices, where required, achieve the requisite reductions in pollutant loadings;
 - f. The development, as proposed, is consistent with the spirit and intent of the Ordinance;
 - g. The cumulative impact of the proposed development, when considered in relation to other development in the vicinity, both existing and proposed, will not result in a significant degradation of water quality.
 - h. Proper long-term maintenance is ensured for all BMPs and plantings.

2. Upon the completed review of a Major WQIA, the Manager or Board will determine whether or not the proposed development is consistent with the spirit and intent of the Ordinance and make a finding based upon the following criteria:
 - a. Within any RPA, the proposed development is water-dependent or redevelopment;
 - b. The percentage of existing wetlands disturbed by the development and the number or square feet or acres to be disturbed.
 - c. The development will not result in significant disruption of the hydrology of the site;
 - d. The development will not result in unnecessary destruction of plant materials on site;
 - e. Proposed erosion and sediment control concepts are adequate to achieve the reductions in runoff and prevent off-site sedimentation;
 - f. Proposed stormwater management concepts are adequate to control the stormwater runoff to achieve "no net increase" in pollutant loadings;
 - g. Proposed re-vegetation of disturbed areas will provide optimum erosion and sediment control benefits, as well as runoff control and pollutant removal equivalent to the full 100-foot undisturbed buffer area;
 - h. The design and location of any proposed drainfield will be in accordance with the requirements of Section 23-9(b)(7) of the Ordinance;

3. The Manager or Board shall require additional mitigation where potential impacts have not been adequately addressed. Evaluation of mitigation measures will be made by the Manager or Board based on the criteria listed above in subsections (F1) and (F2).

4. The Manager or Board shall find the proposal to be inconsistent with the purpose and intent of the Ordinance when the impacts created by the proposal cannot be mitigated. Evaluation of the impacts will be made by the Manager or Board based on the criteria listed above in subsections (F1) and (F2).

G. Other

All current regulatory and technical guidance documents as issued or published by the Virginia Department of Conservation and Recreation, Chesapeake Bay Local Assistance program apply to the preparation, submission, review, and approval of Water Quality Impact Assessments (WQIAs).