

**ATLANTIC COASTAL BAYS
CRITICAL AREA**

BUFFER MANAGEMENT AREAS

**DESCRIPTIONS
AND
REGULATIONS**

**Adopted by the
Worcester County Commissioners
as approved by the
State of Maryland Critical Area Commission
Chesapeake and Atlantic Coastal Bays
March 18, 2003**

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REGULATIONS PERTAINING TO
DESIGNATED BUFFER MANAGEMENT AREAS
IN THE ATLANTIC COASTAL BAYS CRITICAL AREA

I. Introduction

- A. The State's Atlantic Coastal Bays Protection Act generally requires the establishment of a 100-foot, undisturbed, naturally vegetated or planted Buffer landward from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams. The purpose of establishing this Buffer is to fulfill the following functions:
- (1) Filter sediments, nutrients and potentially harmful or toxic substances from entering the Atlantic Coastal Bays or their tributaries;
 - (2) Minimize disturbance to wetlands, shorelines, stream banks, tidal waters, and aquatic resources from human activities;
 - (3) Maintain an area of transitional habitat between aquatic and upland communities;
 - (4) Maintain the natural environment of streams; and
 - (5) Protect riparian wildlife habitat.

II. Purpose of Buffer Management Areas

- A. The State's Atlantic Coastal Bays Protection Act allows the local jurisdiction to designate "Buffer Management Areas" where it can be sufficiently demonstrated that existing patterns of residential, recreational, commercial, and industrial development prevent the Buffer from fulfilling the functions listed above. In Buffer Management Areas (BMAs), certain types of development are permitted without a variance and the establishment of an undisturbed naturally vegetated or planted Buffer is not required. However, alternate measures for achieving the water quality and habitat protection functions of the Buffer must be provided.
- B. Many of the shoreline areas along tidal waters in Worcester County were developed or platted a number of years ago and thus fulfill few, if any, of the listed Buffer functions. Because of the number, density and size of platted lots or dwelling units or the intensity of existing uses, these developed areas are designated as Buffer Management Areas and alternate water quality and habitat protection measures as described herein are permitted.

III. Buffer Management Area Mapping Criteria

- A. Buffer Management Areas were designated after review of aerial photography and field visitation, in conjunction with the Department's extensive knowledge of local development patterns. The criteria used to determine whether an area qualified as a Buffer Management Area included the following:
- (1) Existing pattern of subdivision into relatively small lots;
 - (2) Preponderance of structures within the 100-foot Buffer;
 - (3) Extensive area of lots having an average lot depth of 100 feet or less; and
 - (4) Significant number of lots with lot depths of greater than 100 feet but limited by location of septic disposal areas.

IV. Requirements for Buffer Management Areas

- A. The Worcester County Atlantic Coastal Bays Critical Area Program and these Buffer Management Area regulations require that new development or redevelopment activities, including structures, roads, parking areas and other impervious surfaces, or septic systems on parcels or lots created prior to June 1, 2002, will not be permitted in the Buffer unless the applicant can demonstrate that there is no feasible alternative. Accessory structures, including but not limited to pools, garages, sheds, gazebos, etc., may not be located waterward of the principal structure except as provided herein. For the purposes of these regulations attached decks and porches are considered to be part of the principal structure. New development in Buffer Management Areas must minimize the extent to which impervious surfaces extend toward open water or wetlands, taking into consideration the existing County yard setback requirements of the underlying zoning classification and other such factors. Buffer Management Areas are also subject to impervious surface and forest and developed woodland clearing limitations as stipulated by the Worcester County Atlantic Coastal Bays Critical Area program.
- B. Impacts to the Buffer within Buffer Management Areas must be addressed through offsets or other mitigation requirements. As the preferred method, all offsets and mitigation shall be accomplished within the Buffer onsite. Any required mitigation may include typical landscaping. If it is not feasible to do so, offsets or mitigation shall be performed outside of the Buffer but still onsite or, as the least preferred alternative, payments in lieu may be paid as described in Section IX, Subsection D.

V. Permitted Uses in the Buffer Management Area

A. The following structures and impervious surfaces are permitted in the 100-foot Buffer on properties located within a Buffer Management Area, provided they meet the criteria established in Section V, Subsection B below:

- (1) New and rebuilt single-family dwellings, two-family dwellings, multi-family dwellings, townhouses, recreational buildings, commercial buildings, institutional buildings, and industrial buildings;
- (2) Additions to dwellings and buildings, including porches and sunrooms;
- (3) Garages and carports (attached and detached);
- (4) Pervious and impervious decks (attached and detached);
- (5) Sheds and storage buildings;
- (6) Other buildings, structures and use areas accessory to a recreational, commercial, institutional, agricultural, or industrial use;
- (7) Swimming pools (above-ground and inground), hot tubs, and spas;
- (8) Pavilions and gazebos;
- (9) Patios and sidewalks;
- (10) Driveways and parking pads; and
- (11) Water-dependent structures.

B. The above referenced structures and impervious surfaces are permitted provided that they meet the following criteria, setbacks standards herein and the minimum setback requirements set forth for each specific Buffer Management Area group in the appendices:

- (1) Allowable impervious surface and forest and developed woodland clearing limits for the property are not exceeded by construction of the structures or impervious surfaces;
- (2) Existing natural or planted vegetation within the Buffer is retained except the minimum required to be removed for the proposed construction;

- (3) Any natural or planted vegetation removed within the Buffer is replaced onsite on an equal basis consisting primarily of native vegetation and shall be in addition to any trees required as mitigation for creation of impervious surface;
- (4) Adverse water quality impacts will not result from the proposed structure due to construction impacts, the type of materials used in construction, or the location of the structure relative to the water;
- (5) Mitigation is provided by the applicant;
- (6) Development may not impact any Habitat Protection Areas (HPAs) other than the Buffer, other State and Federal permits notwithstanding; and
- (7) Buffer Management Area designation shall not be used to facilitate the filling of tidal wetlands that are contiguous to the Buffer to create additional buildable land for new development or redevelopment.

VI. Single-Family Residential Development

- A. For replacement of a single-family dwelling, the Department may allow the applicant to locate the dwelling in another location provided that the dwelling extends no closer to the water or tidal wetland than the existing dwelling. Any net increase in impervious area within the Buffer shall comply fully with the requirements for new dwellings set forth in Section VI, Subsection B below.
- B. For new construction of a single-family dwelling on vacant properties or an addition to an existing dwelling, the setback shall be the greater of the following:
 - (1) The minimum setback required by the specific Buffer Management Area in which the property is located; or
 - (2) The minimum zoning setback prescribed by the district regulations contained in the Zoning and Subdivision Control Article for the zoning district in which the property is located; and
 - (3) The Department will require variance approval when the dwelling or any addition thereto is proposed to be placed closer to the mean high water line or edge of tidal marsh than the minimum required setback set forth herein.
- C. The Department may allow the applicant to locate new or replacement accessory structures, additions thereto or impervious surfaces waterward of the existing dwelling. For purposes of implementing these provisions, accessory structures are

defined as a structure that is detached from the principal structure, located on the same lot as and clearly incidental and subordinate to the principal structure or, if there is no principal structure on the lot, a structure that is customarily incidental and subordinate to a principal structure. The Department shall require variance approval when the cumulative total of all new and existing accessory structures within the Buffer exceeds 10 square feet for each foot of Buffer depth or when new accessory structures or impervious surfaces are proposed closer to the mean high water line or edge of tidal wetlands than the minimum required setback set forth herein.

- (1) Notwithstanding the provisions contained in C above, in Colonial Village, a recorded subdivision having architectural controls that prohibit attached garages, any garage constructed as part of the initial development of the lot shall not be subject to the square footage ratio of 10 square feet for each foot of Buffer depth contained in C above.

VII. Commercial, Industrial, Institutional, Recreational, and Multi-Family Residential Development

- A. For replacement of structures or the construction of an addition thereto, the Department may allow the applicant to locate a principal structure, accessory structure or an addition to either a principal structure or an accessory structure on the footprint of an existing structure or impervious surface. The Department may allow the applicant to locate the replacement structure or addition in another location within the Buffer provided that the structure or addition extends no closer to the water or tidal wetland than the existing structure or impervious surface and provided that the structure or impervious surface does not exceed the area of the existing structure or impervious surface. Such replacements or additions to existing structures or impervious surfaces may be permitted in the Buffer by the Department provided that compliance with the minimum zoning setback prescribed by the district regulations contained in the Zoning and Subdivision Control Article for the zoning district in which the property is located is met. Any increase in impervious area within the Buffer shall comply fully with the requirements for new construction set forth in Section VII, Subsection B below.
- B. For new construction of principal or accessory structures on vacant properties or for new construction in an undeveloped area of a developed property, the setback requirements shall be as follows:
 - (1) The minimum setback shall be the greater of either the setback required by the specific Buffer Management Area in which the property is located or the minimum zoning setback prescribed by the district regulations contained in the Zoning and Subdivision Control Article for the zoning

district in which the property is located;

- (2) The minimum setback shall be maintained for all subsequent development or redevelopment of the property; and
- (3) The Department will require variance approval when a structure or any addition thereto is proposed to be placed closer to the mean high water line or edge of tidal marsh than the minimum required setback set forth herein.

C. New construction over existing impervious surfaces may be permitted in the Buffer by the Department provided that compliance with the minimum zoning setback prescribed by the district regulations contained in the Zoning and Subdivision Control Article for the zoning district in which the property is located is met.

VIII. Other Permitted Structures and Activities

A. Pervious steps and walkways are permitted in the 100-foot Buffer within the Buffer Management Area on residential, recreational, commercial, and industrial properties provided that:

- (1) Walkways do not exceed three feet in width and are constructed to allow a single direct access point to the shoreline, except that the Department may approve a walkway up to six feet in width on a property where it is demonstrated that safe access to the shoreline cannot be provided by a walkway of three feet in width or less; and
- (2) A site inspection is conducted by Department staff prior to initiating construction.

B. Minor grading and filling of existing lawn for the purpose of maintaining the lawn in a usable condition is permitted in the 100-foot Buffer within a Buffer Management Area on residential, recreational, commercial, and industrial properties provided that:

- (1) The total disturbed area is less than 5,000 square feet in size and involves less than 100 cubic yards of fill;
- (2) A site inspection is conducted by Department staff prior to initiating the proposed work;
- (3) Lawn or other approved ground cover is immediately reestablished; and

- (4) Any natural or planted vegetation removed within the Buffer is replaced onsite within the Buffer on a three to one basis with native vegetation.
- C. The Department will require an approved variance for any filling or grading in excess of 5,000 square feet in size or involving more than 100 cubic yards of fill.

IX. Mitigation/Offset Requirements

- A. In order to provide an alternate means of achieving water quality and habitat protection functions of the Buffer, the Department will require mitigation or offsets for impacts within Buffer Management Areas.
- B. Onsite mitigation or offset options shall be used in the following order of preference:
 - (1) For commercial, industrial, institutional and multi-family projects, plant vegetation of an area two times the extent of the impervious area created within the Buffer. In those areas where development occurs closer than 25 feet from the water, plant vegetation of an area three times the extent of the impervious surface created closer than 25 feet from the water and an area two times the extent of the impervious surface created between 25 and 100 feet from the water. Plantings shall be done on-site, preferably on the waterward side of the proposed structure, in accordance with the credit system set forth in Table 1. Required plantings shall consist primarily of species native to Worcester County.

Table 1 Mitigation Credits for Plantings* within the Critical Area (square feet)	
Large Trees	200
Small Trees	100
Large Shrubs	75
Small Shrubs	50
Herbaceous Plants	2

* See plant list in the Appendices.

- (2) For the construction of a single-family dwelling or additions thereto, the property owner shall submit a proposed landscaping plan. Said plan shall

indicate the variety, height and caliper of all existing trees, both those to be retained and those to be removed, and proposed planting materials. The Department shall review the landscape plan to ensure that the mitigation, including any applicable fees, is sufficient to offset impacts to habitat and water quality resulting from the development activity. The cost of new planting materials to be utilized shall be equivalent to 1.5% of the cost of construction multiplied by the percentage of the overall project that is located within the Buffer. Planting materials shall not include grass seed or sod, irrigation systems, mulch or the installation of any planting materials. If the dwelling and associated impervious area are wholly located within the Buffer, the minimum expenditure shall be \$3,000.00 (except for additions). If the dwelling and associated impervious area are partially located within the Buffer, the minimum expenditure shall be a percentage of the aforementioned minimum expenditure of \$3,000.00, said percentage to be of an amount equal to that percentage of the dwelling and associated impervious area which are located within the Buffer.

- (a) In the IDA, existing trees outside of the Buffer retained after construction which are in excess of 15 feet tall and eight inches in caliper at breast height and in excess of the 15% forest cover requirement shall result in a credit of \$250.00 per tree up to a maximum of \$1,500.00 or six trees toward the expenditures required above.
- (3) For accessory structures associated with single-family dwellings as well as pervious decks, walkways, and steps, the property owner shall plant vegetation in an area two times the extent of the footprint of the development activity within the Buffer. In those instances where development occurs closer than 25 feet from the water, the property owner shall plant vegetation in an area three times the extent of the development activity closer than 25 feet from the water and an area two times the extent of the development activity between 25 and 100 feet from the water. Plantings shall be done on-site, preferably on the waterward side of the proposed structure, in accordance with the credit system set forth in Table 1. Required plantings shall consist primarily of species native to Worcester County.
- (4) Remove existing impervious surface from within the 100-foot Buffer on the property at a rate of one square foot for every one square foot of impervious surface placed within the 100-foot Buffer and establish natural or planted vegetation in the area from which impervious surface was removed; or

- (5) Perform shoreline enhancement, such as removal of a failing bulkhead and restabilization of the shoreline with native vegetation or other “soft” shoreline protection methods, or the creation of wetlands on an equal area basis.
- C. Additional mitigation requirements for commercial, industrial, institutional, and multi-family residential projects shall be as follows.
- (1) A forested or landscaped bufferyard, the width of the required setback as specified in the Appendices for each group, shall be established on the development site between the development activity and the water or edge of wetlands.
 - (2) The applicant shall develop a site plan for the Bufferyard showing the location, quantity and species of plantings, and the Bufferyard site plan shall be submitted to the Critical Area Commission for comment and to the County for approval as part of the site development plan for the project.
- D. In any case where complete mitigation or Bufferyard establishment cannot be achieved on any property then the property owner may apply to the Department for an authorization to make a payment in lieu of mitigation. The purpose of the payment shall be to provide funding to the County to ameliorate the impact of the lack of mitigation and shall be used by the County to further the purposes of the Coastal Bays Critical Area Program by performing mitigation activities on other properties.
- (1) An application for payment in lieu may only be made after the applicant has exhausted all reasonable possibilities of mitigation on site. The application shall be in a form approved by the Department. The application shall include such information as may be required by the Department.
 - (2) Upon receipt of the application and payment of the required application fee, the Department shall have a period of sixty days in which to review the application. The Department shall permit payment in lieu in the event the Department affirmatively finds that all of the following criteria have been met:
 - (a) Due to topography or other physical characteristics of the property including but not limited to required easements or rights-of-way, mitigation pursuant to subsection IX hereof cannot be reasonably achieved on site.

- (b) Mitigation on site has been or will be performed to the extent reasonable and feasible.
 - (c) Without payment in lieu, reasonable use of the property would not be permitted.
- (3) Upon finding that the criteria have been met, the Department shall permit the payment in lieu and shall establish the amount of the payment.
 - (a) The amount of payment in lieu shall be equal to 100% of a planting estimate for required mitigation or Bufferyard establishment obtained by the applicant from one or more bonafide commercial nurseries or garden centers. It shall include the cost of a one year guarantee for the installation of the plant material and landscaping necessary for mitigation if it could have been done.
- (4) In the event the above criteria in D.2(a) through (c) above are not met, the application for payment in lieu shall be denied in whole or in part by the Department. Such denial shall be in writing and state the reasons for such denial. Any applicant aggrieved by the decision of the Department may request a review by the Worcester County Board of Zoning Appeals.
 - (a) The review shall not be a formal appeal to the Board of Zoning Appeals and shall not be the subject of a public hearing. It shall be upon forms provided by the Department and shall include such information as the Department requires. The appeal shall be on the record and not *de novo*. The applicant shall have the opportunity to appear before the Board of Zoning Appeals to argue upon the record.
 - (b) The Board of Zoning Appeals shall perform its review and make its decision based upon the criteria herein. In the event the Board of Zoning Appeals reaches a conclusion different from that of the Department, it shall make findings and issue its opinion which shall be binding. The Board of Zoning Appeals may reverse, modify or affirm the decision of the Department. The decision of the Board of Zoning Appeals shall not be appealable to higher authority or to the courts.
- (5) All payments in lieu collected pursuant to this Section shall be kept in a separate account and may only be used for projects within the Atlantic Coastal Bays Critical Area for the benefit of wildlife habitat, water quality

improvement, or environmental education. Fees will be expended in the following hierarchy of location:

- (a) In the community from which the funds were collected;
 - (b) In the same subwatershed in which the funds were collected;
 - (c) In an adjoining subwatershed;
 - (d) Anywhere in the Atlantic Coastal Bays Critical Area.
- (6) The County Commissioners may enter into agreements with conservation organizations, community associations or any other organization or agency they may deem appropriate to facilitate the implementation and maintenance of projects funded by payments in lieu.

X. Other Buffer Management Area Provisions

- A. The Department reserves the right to require variance approval for an activity in or adjacent to a Habitat Protection Area, a wetland, or a stream. The Department also reserves the right to require variance approval or additional mitigative measures when a proposed activity has the potential to adversely impact water quality or fish, plant, or wildlife habitat.

XI. Subdivision within Buffer Management Areas

- A. Subdivision of parcels created prior to June 1, 2002 may be permitted in Buffer Management Areas if the subdivision, consolidation, or reconfiguration of the parcel or parcels will result in an overall environmental benefit.
- B. The subdivision and the subsequent redevelopment shall establish and maintain a setback not less than that required by the specific Buffer Management Area (BMA) in which the property is located.
- C. Mitigation shall be provided in accordance with the provisions of this Plan.
- D. Applications for subdivision in Buffer Management Areas shall be reviewed and approved by the Critical Area Commission.

XII. Financial Guarantees

- A. In accordance with the provisions of § ZS 1-124 of the Worcester County Zoning and Subdivision Control Article, the applicant must provide a bond or other

financial guarantee that all required plantings will be installed and cared for appropriately for two full growing seasons. Plants will be inspected at the time of planting, at a one year interval as a courtesy to identify any potential problems, and at the end of two years. Dead or diseased plants must be replaced, and at least 80 percent of the planting materials must survive for two growing seasons before the County will release the bond or other financial guarantee.

XIII. Impervious Surface Limits

- A. Properties in the Atlantic Coastal Bays Critical Area which are classified as either Limited Development Areas or Resource Conservation Areas are subject to restrictions on impervious surfaces. No limitations on impervious surfaces are applicable to properties classified as Intensely Developed Areas; however, the 10% keystone pollutant reduction requirement for development within Intensely Developed Areas must be met. It is required that all applicants show the dimensions of all existing and proposed manmade impervious and semi-pervious surfaces on a lot and that all calculations be shown in order to assist in the County’s review process. The impervious surface limitations on properties within a Buffer Management Area which are designated as either Limited Development Areas or Resource Conservation Areas are as follows:

LOT/PARCEL SIZE IN SQUARE FEET	IMPERVIOUS SURFACE LIMIT
0 - 8,000	25% of Parcel + 500 Sq. Ft.
8,001 - 21,780	31.25% of Parcel
21,781 - 36,300	5,445 Sq. Ft.
Greater than 36,300	15% of Parcel

XIV. Variances

- A. These requirements are meant to clarify the regulations and to provide consistency to property owners and applicants in Buffer Management Areas. If a property owner wishes to develop outside of these conditions, he or she may seek a variance from the regulations in accordance with the Worcester County Atlantic Coastal Bays Critical Area Law.

XV. Definitions

- A. As a component of the Atlantic Coastal Bays Critical Area Program, words and terms contained herein shall have the meaning as established by § NR 3-102 of the Code of Public Local Laws of Worcester County, Maryland.

XVI.

APPENDICES

ATLANTIC COASTAL BAYS CRITICAL AREA
Designated Buffer Management Areas

GROUP A

1. Edgewater Acres/Yellowbanks
2. Ocean Pines
3. Cape Isle of Wight
4. Holiday Harbor
5. Frank Savage Subdivision
6. Assateague Point
7. Public Landing
8. Country Club Estates
9. Snug Harbor
10. White Horse Park
11. St. Martins by the Bay
12. Marina on Tax Map 27, Parcel 547 (Water's Edge II)
13. Captain's Knoll

GROUP B

1. Piney Island
2. Piney Point
3. Ocean Reef
4. Hidden Harbor
5. Bayview Estates
6. Captain's Hill
7. Genezer Estates
8. Gum Point Road
9. Mystic Harbour
10. Dredge Spoil Disposal Area on
Tax Map 27, Parcel 547 (Water's Edge II)

GROUP C

1. West Ocean City, south of US Rt. 50
and east of MD Rt. 611 (excluding
the West Ocean City Harbor)

GROUP D

1. West Ocean City Harbor

GROUP A
BUFFER MANAGEMENT AREA

The Buffer Management Area identified as Group A is comprised of several subdivisions or communities sharing certain common characteristics. Each specific area is designated as “Group A BMA” on the Atlantic Coastal Bays Critical Area map shown in parentheses beside the subdivision or community’s name:

1. Edgewater Acres/Yellowbanks (Map 5)
2. Ocean Pines (Maps 16 and 21)
3. Cape Isle of Wight (Map 21)
4. Holiday Harbor (Map 10)
5. Frank Savage Subdivision (Map 10)
6. Assateague Point (Map 33)
7. Public Landing (Maps 65 and 73)
8. Country Club Estates (Maps 50 and 51)
9. Snug Harbor (Map 33)
10. White Horse Park (Map 16)
11. St. Martins by the Bay (Map 16)
12. Marina on Tax Map 27, Parcel 547 (Water’s Edge II)
13. Captain’s Knoll (Map 21)

Each of these areas is characterized by existing residential development, as well as associated amenities in some cases. With the exception of Assateague Point and Edgewater Acres/Yellowbanks, all were platted or otherwise approved for development in the 1970s or earlier. Edgewater Acres/Yellowbanks was granted approval for its current form of development in the mid-1980s while Assateague Point was platted in the late ‘80s. Lot sizes within the single-family subdivisions average approximately 0.11 to 0.48 acre in size. Most of these areas are developed with single-family residences. However, Ocean Pines does have a substantial number of multi-family dwellings and townhouses while Edgewater Acres/Yellow Banks primarily consists of multi-family uses. Assateague Point is a campground subdivision, intended for seasonal use. Units within this development are park trailers of approximately 400 square feet in size which are placed on lots of approximately 3000 square feet. Most of the residential units or their associated accessory structures within the subdivisions or areas included in the Group A BMA are located in very close proximity to the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams. While Edgewater Acres/Yellowbanks, Ocean Pines, Cape Isle of Wight, and Assateague Point have public sewer service (and in some cases, public water as well), the remainder of the areas within the Group A BMA have private septic disposal, that is, an underground septic disposal system is located on each lot. Many of the lots or residential units within these areas have individual piers for water access. Additionally, Ocean Pines has at least two marinas. The marina site located on Parcel 547 on Tax Map 27 currently is

characterized by extensive impervious surfaces and compacted soils within the 100 foot Buffer and up to the limits of the existing bulkheading in the marina basin.

The Group A Buffer Management Area is designated as such because the existing pattern of development prevents the Buffer from fulfilling the functions set forth in the Atlantic Coastal Bays Protection Act due to the following factors:

- 1) The Buffer's ability to provide for removal of sediments, nutrients, and harmful or toxic substances has been compromised because there are many existing structures within the Buffer, due to the small lot sizes which characterize the areas included in Group A. Residences generally are located approximately 15 to 30 feet from the shoreline or edge of tidal wetlands. Existing vegetation is primarily lawn grass and scattered trees and shrubs.
- 2) The Buffer's effectiveness at minimizing the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources is limited because human activities are taking place very close to the shoreline because of the location of existing development. There are minimal areas of natural vegetation within the Buffer and the shoreline is heavily developed and actively used.
- 3) The Buffer does not function optimally as an area of transitional habitat between aquatic and upland communities because this area is developed with structures and is actively used by residents. There is little natural vegetation to provide food or cover for wildlife or to provide water quality protection or enhancement. A significant portion of the shoreline within the Group A BMA has been altered through the installation of bulkheads or other structural erosion control measures.
- 4) The Buffer's capacity for protecting wildlife habitat in these areas is severely limited because the Buffer is developed and actively used as yard areas or for recreation or water access by property owners. Human disturbance to wildlife would be unavoidable because of the intensity of the development in these areas.

For any structure or impervious surface on a property located within the Group A Buffer Management Area, the minimum setback from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams shall be 15 feet except the communities of Holiday Harbor, the Frank Savage subdivision, Country Club Estates, St. Martins by the Bay and Captain's Knoll where the minimum setback from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams shall be 25 feet.

GROUP B
BUFFER MANAGEMENT AREA

The Buffer Management Area identified as Group B is comprised of several subdivisions sharing certain common characteristics. Each specific area is designated as “Group B BMA” on the Atlantic Coastal Bays Critical Area map shown in parentheses beside the subdivision’s name:

1. Piney Island (Map 15)
2. Piney Point (Map 15)
3. Ocean Reef (Map 27)
4. Hidden Harbor (Map 4)
5. Bayview Estates (Map 4)
6. Captain’s Hill (Maps 22 and 27)
7. Genezer Estates (Map 50)
8. Gum Point Road (Map 21)
9. Mystic Harbour (Map 27)
10. Dredge Spoil Disposal Area on
Tax Map 27, Parcel 547 (Water’s Edge II)

Each of these areas is characterized by existing residential development, all of which is single-family in nature. With the exception of Piney Point and Ocean Reef, all were platted or otherwise approved for development in the 1970s or earlier. Piney Point was granted subdivision approval in the mid-1980s while Ocean Reef was platted in the late ‘90s. Lot sizes within these subdivisions are slightly larger than those in the Group A BMA, averaging approximately 0.46 to one acre in size. These subdivisions are developed with single-family residences and associated accessory uses and structures. Most of the residential units or their associated accessory structures within the subdivisions or areas included in the Group A BMA are located in very close proximity to the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams. The area designated as the existing dredge spoil disposal site at the Water’s Edge II site, located on Parcel 547 of Tax Map 27, begins at the most easterly end of the existing bulkhead located on the southerly side of the existing marina and follows the tidal wetland line in an easterly and southerly direction to the junction with the northerly property line of Parcel 569 on Tax Map 27. Only Ocean Reef and Captain’s Hill have public sewer service; the remainder of the areas within the Group B BMA have private septic disposal, that is, an underground septic disposal system is located on each lot. Many of the lots or residential units within these areas have individual piers for water access.

The Group B Buffer Management Area is designated as such because the existing pattern of development prevents the Buffer from fulfilling the functions set forth in the Atlantic Coastal Bays Protection Act due to the following factors:

- 1) The Buffer's ability to provide for removal of sediments, nutrients, and harmful or toxic substances has been compromised because there are many existing structures within the Buffer, due to the small lot sizes which characterize the areas included in Group B. Residences generally are located approximately 30 to 50 feet from the shoreline or edge of tidal wetlands. Existing vegetation is primarily lawn grass and scattered trees and shrubs.
- 2) The Buffer's effectiveness at minimizing the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources is limited because human activities are taking place very close to the shoreline because of the location of existing development. There are minimal areas of natural vegetation within the Buffer and the shoreline is heavily developed and actively used.
- 3) The Buffer does not function optimally as an area of transitional habitat between aquatic and upland communities because this area is developed with structures and is actively used by residents. There is little natural vegetation to provide food or cover for wildlife or to provide water quality protection or enhancement. A significant portion of the shoreline within the Group B BMA has been altered through the installation of bulkheads or other structural erosion control measures.
- 4) The Buffer's capacity for protecting wildlife habitat in these areas is severely limited because the Buffer is developed and actively used as yard areas or for recreation or water access by property owners. Human disturbance to wildlife would be unavoidable because of the intensity of the development in these areas.

For any structure or impervious surface on a property located within the Group B Buffer Management Area, the minimum setback from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams shall be 50 feet.

GROUP C
BUFFER MANAGEMENT AREA

The Buffer Management Area identified as Group C is comprised of that portion of West Ocean City located along the westerly shore of the Sinepuxent Bay, extending from US Rt. 50 on the north to the canal along the southerly side of the Marsh Harbour project on the south and bound on the west by Golf Course Road, but excluding the properties immediately surrounding the West Ocean City Harbor (as they comprise a separate Buffer Management Area). This portion of West Ocean City displays a variety of land uses but also shares certain common characteristics, first and foremost being that it is an accepted and long established neighborhood which has traditionally been oriented to the water. The area is designated as “Group C BMA” on the Atlantic Coastal Bays Critical Area Map 27

The area is characterized by mixed uses. Commercial uses predominate along US Rt. 50, and along Sunset Avenue. Two large marinas, the Ocean City Fishing Center and Sunset Marina, are prevalent features and cater to large power boats. Residential uses comprise the remainder of Group C Buffer Management Area. Most are single-family residences but a significant portion are two-family or multi-family in nature. The majority of the lots within this BMA were platted or otherwise approved for development in the 1970s or earlier, although some of development has occurred within the recent past. Lot sizes within the areas which have been platted for many years are small, averaging approximately 0.17 acre in size, and generally of shallow depth. Most of the residential units or their associated accessory structures within the subdivisions or areas included in the Group C BMA are located in very close proximity to the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams. The entire area has public sewer service. Waterfront areas are generally bulkheaded or provided with other structural erosion control measures. Most are utilized as marinas or provide other means of water access.

The Group C Buffer Management Area is designated as such because the existing pattern of development prevents the Buffer from fulfilling the functions set forth in the Atlantic Coastal Bays Protection Act due to the following factors:

- 1) The Buffer’s ability to provide for removal of sediments, nutrients, and harmful or toxic substances has been compromised because there are many existing structures within the Buffer, due to the small lot sizes which characterize the areas included in Group C. Residences and commercial uses generally are located approximately 25 feet from the shoreline or edge of tidal wetlands. Existing vegetation is primarily lawn grass and scattered trees and shrubs.
- 2) The Buffer’s effectiveness at minimizing the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources is

limited because human activities are taking place very close to the shoreline because of the location of existing development. There are minimal areas of natural vegetation within the Buffer and the shoreline is heavily developed and actively used.

- 3) The Buffer does not function optimally as an area of transitional habitat between aquatic and upland communities because this area is developed with structures and is actively used by residents and visitors. There is little natural vegetation to provide food or cover for wildlife or to provide water quality protection or enhancement. A significant portion of the shoreline within the Group C BMA has been altered through the installation of bulkheads or other structural erosion control measures.
- 4) The Buffer's capacity for protecting wildlife habitat in this area is severely limited because the Buffer is developed and actively used as yard areas or for recreation or water access by property owners and visitors. Human disturbance to wildlife would be unavoidable because of the intensity of the development in this area.

For any structure or impervious surface on a property located within the Group C Buffer Management Area, the minimum setback from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams shall be 25 feet.

GROUP D
BUFFER MANAGEMENT AREA

The Buffer Management Area identified as Group D is comprised of the properties immediately surrounding the West Ocean City Harbor which are zoned CM Commercial Marine District. This portion of West Ocean City is generally characterized by water dependent uses and is the home base of Worcester County's commercial fishing industry. The Harbor is located directly across from the Ocean City Inlet, allowing the vessels based in the Harbor quick access to the Atlantic Ocean's fishing grounds. Consequently, the land uses abutting the Harbor include docking for the vessels and landing facilities, etc. for their catch. The area is designated as "Group D BMA" on the Atlantic Coastal Bays Critical Area Map 27.

Other land uses in this Group D BMA include the County's public boat ramp and associated parking facilities, a marina for large private watercraft, and two restaurants. The majority of the lots within this BMA were platted or otherwise approved for development in the 1960s or earlier. Lot sizes are small, averaging approximately 0.14 acre in size, and generally of shallow depth. Because of their water dependent nature, most of the structures and uses within on the properties included in the Group D BMA are located in very close proximity to the mean high water line of tidal waters. The West Ocean City Harbor is bulkheaded and all of the properties included within this BMA are provided with public sewer service.

The Group D Buffer Management Area is designated as such because the existing pattern of development prevents the Buffer from fulfilling the functions set forth in the Atlantic Coastal Bays Protection Act due to the following factors:

- 1) The Buffer's ability to provide for removal of sediments, nutrients, and harmful or toxic substances has been compromised because there are many existing structures within the Buffer, due to the small lot sizes which characterize the areas included in Group D and because the uses are water-oriented. The area is developed primarily with commercial, marine industrial and maritime uses. The Buffer is almost completely developed with structures, use areas and parking lots and is essentially impervious. Commercial uses generally are located immediately adjacent to the shoreline. Vegetation is virtually nonexistent.
- 2) The Buffer's effectiveness at minimizing the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources is limited because intense human activities are taking place very close to the shoreline because of the location of existing development. There are essentially no areas of natural vegetation within the Buffer and the shoreline is heavily developed and actively used.

- 3) The Buffer does not function optimally as an area of transitional habitat between aquatic and upland communities because this area is developed with structures and is actively used by a variety of commercial, marine industrial, and maritime activities. There is virtually no natural vegetation to provide food or cover for wildlife or to provide water quality protection or enhancement. The shoreline within the Group D BMA has been altered through the installation of bulkheads or other structural erosion control measures.
- 4) The Buffer's capacity for protecting wildlife habitat in this area is severely limited because the Buffer is developed and actively used for the base facilities for the County's commercial fishing fleet or for recreation or water access by visitors. Human disturbance to wildlife would be unavoidable because of the intensity of the development in this area.

For any structure or impervious surface on a property located within the Group D Buffer Management Area, the minimum setback from the mean high water line of tidal waters or from the edge of tidal wetlands or tributary streams shall be 25 feet.

**MITIGATION CREDIT
FOR
SPECIES PLANTED IN THE CRITICAL AREA**

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
LARGE TREES		
ACER PALMATUM	RED MAPLE "BLOODGOOD"	200
ACER PALMATUM DISSECTUM	RED MAPLE VARIOUS VARIETIES	200
ACER RUBRUM	RED MAPLE	200
ACER SACCHARINUM	SILVER MAPLE	200
ASIMINA TRILOBA	PAWPAW	200
BETULA NIGRA	RIVER BIRCH	200
CARPINUS CAROLINIANA	HORNBEAM, AMERICAN/IRONWOOD	200
CARYA CORDIFORMIS	BITTERNUT HICKORY	200
CARYA OVATA	SHAGBARK HICKORY	200
CELTIS OCCIDENTALIS	COMMON HACKBERRY	200
CHAMAECYPARIS THYOIDES	ATLANTIC WHITE CEDAR	200
CRATAEGUS	HAWTHORNE	200
FAGUS GRANDIFOLIA	AMERICAN BEECH	200
FRAXINUS AMERICANA	WHITE ASH	200
FRAXINUS PENNSYLVANICA	GREEN ASH	200
HAMAMELIS VIRGININA	WITCH HAZEL	200
JUGLANS NIGRA	BLACK WALNUT	200
JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	200
LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	200
LIRIODENDRON TULIPIFERA	TULIP POPLAR	200
MAGNOLIA GRANDIFLORA	MAGNOLIA	200
MAGNOLIA VIRGINIANA	SWEET BAY MAGNOLIA	200
MALUS AUGISTIFOLIA	CRAB APPLE, SOUTHERN	200
METASEQUOIA GLYPTOSTROBOIDES	DAWN REDWOOD	200
NYSSA SYLVATICA	BLACK GUM	200
PINUS ECHINATA	SHORTLEAF PINE	200
PINUS SEROTINA	POND PINE	200
PINUS STROBUS	EASTERN WHITE PINE	200
PINUS TAEDA	LOBLOLLY PINE	200
PINUS THUNBERGIANA	JAPANESE BLACK PINE	200
PINUS VIRGINIANA	VIRGINIA PINE	200
PLATANUS OCCIDENTALIS	SYCAMORE	200
POPULUS HETEROPHYLLA	SWAMP POPLAR	200
PRUNUS CAMPANULATA	ORNAMENTAL CHERRY	200
PRUNUS CERASIFERA	ORNAMENTAL PLUM	200
PRUNUS SEROTINA	BLACK CHERRY	200
PRUNUS SERRULATA	ORNAMENTAL CHERRY	200
PRUNUS SUBHIRTELLA	ORNAMENTAL CHERRY	200
PRUNUS X YEDOENSIS	YOSHINO CHERRY	200
QUERCUS ALBA	WHITE OAK	200
QUERCUS FALCATA	RED OAK, SOUTHERN	200
QUERCUS LYRATA	OVERCUP OAK	200
QUERCUS MARILANDICA	BLACKJACK OAK	200

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
QUERCUS MICHAUXII	BASKET OAK	200
QUERCUS NIGRA	BLACK OAK	200
QUERCUS PALUSTRIS	PIN OAK	200
QUERCUS PHELLOS	WILLOW OAK	200
QUERCUS RUBRA	RED OAK, NORTHERN	200
QUERCUS STELLATA	POST OAK	200
SALIX ALBA	WEeping WILLOW	200
SALIX MATSUDANA	CURLY WILLOW	200
SALIX NIGRA	BLACK WILLOW	200
SASSAFRAS ALBIDUM	SASSAFRAS	200
TAXODIUM DISTICHUM	BALD CYPRESS	200
TILIA AMERICANA	AMERICAN BASSWOOD	200
TILIA CORDATA	GREENSPIRE LINDEN	200
ZELKOVA SERRATA (VAR)	JAPANESE ZELKOVA	

SMALL TREES

ALNUS MARITIMA	SEASIDE ALDER	100
AMELANCHIER CANADENSIS	SERVICEBERRY	100
CERCIS CANADENSIS	EASTERN REDBUD	100
CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	100
CORNUS FLORIDA	FLOWERING DOGWOOD	100
CRATAEGUS PRUINOSA	FROSTED HAWTHORN	100
CRATAEGUS CRUSGALLI	COCKSPUR HAWTHORN	100
DIOSPYROS VIRGINIANA	PERSIMMON	100
ILEX OPACA	AMERICAN HOLLY	100
KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	100
LAGERSTROEMIA (VAR)	CREPE MYRTLE	100
MALUS (VAR)	CRAB APPLE	100

LARGE SHRUBS

ALNUS SERRULATA	SMOOTH ALDER	75
ARALIA SPINOSA	DEVILS WALKING STICK	75
ARONIA ARBUTIFOLIA	RED CHOKEBERRY	75
AUCUBA JAPONICA (VAR)	AUCUBA (VARIETIES)	75
BACCHARIS HALIMIFOLIA	GROUNDSEL BUSH	75
CLETHRA ALNIFOLIA (VAR)	SWEET PEPPERBUSH	75
CLEYERA JAPONICA	JAPANESE CLEYERA	75
CORNUS AMOMUM	SILKY DOGWOOD	75
CORNUS SANGUINEA	BLOODTWIG DOGWOOD	75
CORNUS STOLONIFERA	RED OSIER DOGWOOD	75
COTONEASTER DAMMERI (VAR)	COTONEASTER	75
ELAEAGNUS X EBBINGI	EBBINGI ELAEAGNUS	75
ELAEAGNUS PUNGENS	THORNY ELAEAGNUS	75
EUONYMUS AMERICANUS	STRAWBERRY BUSH	75
EUONYMUS KIAUTSCHOVICA	MANHATTAN EUONYMUS	75
FORSYTHIA	FORSYTHIA	75
HAMAMELIS VIRGINIANA	WITCHAZEL	75
HIBISCUS SYRIACUS	ROSE OF SHARON, ALTHEA	75
HYDRANGEA (VAR)	HYDRANGEA	75

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
ILEX X (VAR) ¹	HOLLY (VARIETIES)	75
ILEX X AQUIFOLIUM SIBERIA	SIBERIA HOLLY, ENGLISH HOLLY	75
ILEX X AQUIPERNYI DRAGON LADY	DRAGON LADY HOLLY	75
ILEX X ATTENUATTA FOSTERI	FOSTERI HOLLY	75
ILEX X MESERVEAE (VAR) ²	HOLLY (VARIETIES)	75
ILEX GLABRA	INKBERRY	75
ILEX CORNUTA ³	HOLLY (VARIETIES)	75
ILEX VERTICILLATA	WINTERBERRY	75
IVA FRUTESCENS	HIGH TIDE BUSH	75
JUNIPERUS CHINENSIS ⁴	JUNIPER	75
JUNIPERUS SCOPULORUM	MOONGLOW JUNIPER	75
JUNIPERUS SCOPULORUM	WICHITA BLUE JUNIPER	75
KALMIA LATIFOLIA	MOUNTAIN LAUREL	75
LEUCOTHE RACEMOSA	FETTERBUSH	75
LIGUSTRUM LUCIDUM	WAXLEAF LIGUSTRUM	75
LIGUSTRUM RECURVIFOLIA	CURLY LEAF LIGUSTRUM	75
LINDERA BENZOIN	SPICEBUSH	75
LOROPETALUM	CHINESE RUBRUM	75
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	75
MYRICA PENNSYLVANICA	BAYBERRY	75
MYRICA CERIFERA	WAX MYRTLE	75
PRUNUS MARITIMA	BEACH PLUM	75
PRUNUS SCHIPKAENSIS	SCHIP LAUREL	75
PYRACANTHA	PYRACANTHA	75
RHODODENDRON SP.	NATIVE & SWAMP AZALEAS	75
RHODODENDRON MAXIMUM	ROSEBAY RHODODENDRON	75
RHODODENDRON NUDIFLORUM	PINXTER FLOWER	75

¹ Cardinal, Centennial Girl, China Boy, China Girl, Festive Red, Little Red Red, Mary Nell, Nellie Stevens, Oakleaf Red, Robin Red.

² Blue Angel, Blue Maid, Blue Prince, Blue Princess.

³ Dwarf Burford, Dwarf Chinese, Carissa, Needlepoint, Chesapeake Upright, Hetzi, Nigra Upright, Roundleaf, Sky Pencil, Steed's Upright.

⁴ Blue Pfitzer, Blue Point, Gold Lace, Gold Tip, Hetzi Blue, Robusta Green, Sea Green, Spartan, Torulosa, Blue Pacific, Bar Harbor.

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
RHUS COPALLINUM	SHINING SUMAC	75
RHUS GLABRA	SMOOTH SUMAC	75
RHUS TYPHINA	STAGHORN SUMAC	75
ROSA CAROLINA	PASTURE ROSE	75
ROSA PALUSTRIS	SWAMP ROSE	75
SAMBUCUS CANADENSIS	ELDERBERRY, AMERICAN ELDER	75
THUJA X	GREEN GIANT ARBORVITAE	75
VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	75
VIBURNUM AWABUKI	JAPANESE VIBURNUM	75
VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	75
VIBURNUM NUDUM	WITHEROD	75
VIBURNUM PLICATUM TOMENTOSUM (VAR)	VIBURNUM	75
VIBURNUM TINUS	COMPACT TINUS VIBURNUM	75
VIBURNUM TRILOBITUM	AMERICAN CRANBERRY BUSH	75
VITEX AGNUS - CASTUS	CHASTE TREE	75

SMALL SHRUBS AND LARGE GRASSES

ABELIA X (VAR)	ABELIA	50
ARONIA MELANOCARPA	BLACK CHOKEBERRY	50
ASPIDISTRA ELIATOR	CAST IRON PLANT	50
BUXUS (VAR)	BOXWOOD	50
CALAMAGROSTIS	FEATHER REED GRASS	50
CALLICARPA AMERICANA	BEAUTY BERRY	50
CARYOPTERIS X	BLUEBEARD	50
CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	50
CORTADERIA SELLOANA (VAR)	PAMPAS GRASS	50
COTONEASTER APICULATA	CRANBERRY COTONEASTER	50
COTONEASTER HORIZONTALIS	ROCKSPRAY COTONEASTER	50
COTONEASTER SALICIFOLIUS	COTONEASTER	50
DAPHNE ODORA	WINTER DAPHNE	50
ELYMUS ARENARIUS GLAUCCOUS	BLUE DUNE GRASS	50
EUONYMUS FORTUNEI (VAR)	EUONYMUS (VARIETIES)	50
GARDENIA JASMINOIDES	DAISY GARDENIA	50
HIBISCUS X (VAR)	HARDY HIBISCUS	50
HYPERICUM ANDROSAEMUM	ST. JOHN'S WORT (PURPLE)	50
HYPERICUM CALYGINUM	ST. JOHN'S WORT	50
HYPERICUM PROLIFICUM	ST. JOHN'S WORT, SHRUBBY	50
ILEX CORNUTA (VAR) ⁵	HOLLY (VARIETIES)	50
ILEX GLABRA "SHAMROCK"	SHAMROCK COMPACT INKBERRY	50
ILEX VERTICILLATA (RED SPRITE)	RED SPRITE WINTERBERRY	50
ILEX VOMITORIA NANA (VAR)	DWARF YAUPON HOLLY	50
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	50
JUNIPERUS CHINENSIS ⁶	JUNIPER	50

⁵ Carissa, Dwarf Chinese, Bennett's Compactum, Cannon Compactum, Green Luster, Helli, Hoogendorn, Schwoebel Compacta, Soft Touch, White's Compactum.

⁶ Sargent, Old Gold, Nick's Compact, Compact Andorra.

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
JUNIPERUS HORIZONTALIS	BLUE RUG JUNIPER	50
JUNIPERUS PROCUMBENS ⁷	JUNIPER	50
JUNIPERUS SQUAMATA "PARSONI"	PARSONI JUNIPER	50
MUHLENBERGIA CAPILLARIS	PINK HAIR GRASS, MUHLY GRASS	50
NANDINA DOMESTICA (VAR)	HEAVENLY BAMBOO	50
PANICUM AMERICUM AMARULUM	ATLANTIC COASTAL PANIC GRASS	50
PANICUM VIRGATUM	SWITCH GRASS	50
PATULA "MISS KIM"	LILAC	50

⁷ Nana, Variegata.

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
PENNISETUM ALOPECUROIDES ⁸	FOUNTAIN GRASS	50
PRUNUS GLANDULOSA (SINESIS)	PINK FLOWERING ALMOND	50
PRUNUS LAUROCERASUS	LAUREL	50
RUBUS ARGUTUS	HIGHBUSH BLACKBERRY	50
RUBUS ODORATUS	FLOWERING RASPBERRY	50
SPIRAEA BUMALDA	SPIRAEA	50
SYRINGA "MEYERI"	DWARF KOREAN LILAC	50
VACCINUM VACILLANS	LOWBUSH BLUEBERRY	50
VIBURNUM DAVIDII	DAVIDI VIBURNUM	50
VIBURNUM LENTAGO	NANNYBERRY	50
VIBURNUM PRUNIFOLIUM	BLACKHAW	50
YUCCA FILAMENTOSA	YUCCA	50
YUCCA RECURVIFOLIA	PENDULA YUCCA	50
HERBACEOUS PLANTS AND SMALL GRASSES		
ACHILLEA MILLEFOLIUM (VAR)	YARROW	2
AJANIA	CHRYSANTHEMUM	2
ALCHEMILLA	LADY'S MANTLE	2
ANEMONE	WINDFLOWER	2
AQUILEGIA	COLUMBINE	2
AQUILEGIA CANDENSIS	WILD COLUMBINE	2
ARMERIA	COMMON THRIFT	2
ARTEMISIA	WORMWOOD	2
ASCLEPIAS	BUTTERFLY FLOWER	2
ASCLEPIUS SYRACIA	COMMON MILKWEED	2
ASCLEPIUS TUBEROSA	BUTTERFLYWEED	2
ASTER DUMOSUS (VAR)	ASTER (VARIETIES)	2
ASTER GRANDIFLORUS	GREAT ASTER	2
ASTER LAEVIS	SMOOTH ASTER	2
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	2
ASTER SPECTABILIS	SHOWY ASTER	2
AUBRIETA	ROCK CRESS	2
BAPTISIA AUSTRALIS	WILD BLUE INDIGO	2
HETEROTHECA MARIANA	MARYLAND GOLDENASTER	2
CAMPANULA	BELL FLOWER	2
CARYOPTERIS	BLUEBEARD	2
COREOPSIS LANCEOLATA	LANCE-LEAVED COREOPSIS	2
COREOPSIS TINCTORIA	TICKSEED	2
COREOPSIS VERTICILLATA	WHORLED COREOPSIS	2
CORONILLA VARIA	CROWN VETCH	2
DELOSPERMA	ICE PLANT	2
DELOSPERMA NUBIGENUM	ICE PLANT	2
ECHINEA PURPUREA	PURPLE CORNFLOWER	2
ECHINOPS	GLOBE THISTLE	2
FESTUCA GLAUCA	BLUE FESCUE	2
GAILLARDIA GRANDIFLORA	BLANKET FLOWER	2

⁸ Not including dwarf varieties.

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>CREDIT (SQUARE FEET)</u>
HELENIUM FLEXUOSUM	SNEEZEWEED	2
HELILANTHEMUM NUMMULARIUM	ROCK ROSE	2
HELIANTHUS ANGUSTIFOLIUS	NARROW LEAVED SUNFLOWER	2
HELIANTHUS ANNUUS	COMMON SUNFLOWER	2
HOSTA	HOSTA (VARIETIES)	2
IMPERATA RUBRA	JAPANESE BLOOD GRASS	2
KNIPHOFIA	RED HOT POKER	2
LAMIUM MACULATUM	SPOTTED DEAD NETTLE	2
LIATRIS SPICATA	BLAZING STAR	2
LIRIOPE MUSCARI	LIRIOPE	2
LIRIOPE SPICATA	SILVER LIRIOPE	2
LOBELIA PUBERULA	DOWNY LOBELIA	2
MALEPHORA CROCEA	RED ICE PLANT	2
MIMULUS ALATUS	MONKEY FLOWER	2
MONARDA DIDYMA	BEE BALM	2
MONARDA FISTULOSA	WILD BERGAMONT	2
PENNISETUM ALOPECUROIDES	FOUNTAIN GRASS (DWARF VARIETIES)	2
PENNISETUM SETACEUM	PURPLE FOUNTAIN GRASS	2
PENSTEMON LAEVIGATUS	BEARDTONGUE	2
PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2
PHLOX PANICULATA	FALL PHLOX	2
PHLOX SUBULATA	CREEPING PHLOX	2
RUDBECKIA HIRTA	BLACK-EYED SUSAN	2
RUDBECKIA LANCINIATA	GREEN CONEFLOWER	2
RUDBECKIA TRILOBA	THREE-LOBED CONEFLOWER	2
SEDUM KAMTSCHATICUM	SEDUM	2
SEDUM SIEBOLDII	BLUE SEDUM	2
SEDUM SPECTIBILE	STONECROP, SEDUM	2
SEDUM SPURIUM	TRICOLOR SEDUM	2
SOLIDAGO RUGOSA	ROUGH GOLDENROD	2
STACHYS	LAMB'S EAR	2
TRADESCANTIA ANDERSONIANA	SPIDERWORT	2