Stormwater Pollution Prevention Plan for:

Proposed Joint Commissary & Navy Exchange Shopping Center
Kinkaid Road
Naval Support Activity (NSA) Annapolis, Maryland

Facility Operators:

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Estimated Project Construction Dates:

Start of Construction: September 2012
Completion of Construction: June 2014

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: NSA Annapolis Proposed Joint Commissary & Navy Exchange

Project Street/Location: Kinkaid Road

City: Annapolis State: Maryland Zip Code: 21402

County or Similar Subdivision: Anne Arundel County

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude:

1. 38º 59' 43" N (degrees, minutes, seconds)

Longitude:

1. 76º 28' 11" W (degrees, minutes, seconds)

Method for determining latitude/longitude:

☐ USGS topographic map (specify scale: _____) ☒ EPA Web site ☐ GPS

☐ Other (please specify):

Is the project located in Indian country? ☐ Yes ☒ No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." __N/A___

Is this project considered a federal facility? ☒ Yes ☐ No

SPDES project or permit tracking number: (to be assigned)

(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate SPDES construction general permit.)

1.2 Contact Information/ Responsible Parties

Project Information:

Operators:

Defense Commissary Agency
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Project Manager or Site Supervisor:
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1.3 Nature and Sequence of Construction Activity

The proposed construction will consist of two adjoining, single-story buildings totaling approximately 139,000 square feet. The proposed Joint Commissary and Exchange are located on a site approximately 15.2 acres in size contained completely within the confines of NSA Annapolis in Anne Arundel County, Maryland. The project site is bounded to the north by Greenbury Point Road, to the south by Kinkaid Road, to the west by a lodge for naval officers, and to the east by the Naval Academy Golf Course.

The soil disturbing activity associated with this project will include clearing and grubbing, topsoil stripping, tree removal, minor pavement and sidewalk demolition, installing stabilized construction entrances, installing erosion and sediment control measures, the construction of the Commissary and Exchange buildings, a large parking lots, access roads, a truck loading area, site grading, excavation for utilities, and installation of permanent BMP's. In general, the mass grading to be completed will involve cutting and filling, construction of the building pad, and parking lot and roadway base courses. After completion of these items, permanent landscape restoration will be installed on all remaining areas which were disturbed during construction.

What is the function of the construction activity?

☐ Residential ☒ Commercial ☐ Industrial ☐ Road Construction

☐ Linear Utility

☐ Other (please specify):_____

Estimated Project Start Date: **September 2012**
Estimated Project Completion Date: **June 2014**

Construction must be sequenced to minimize the exposure time of cleared surface areas and prevent exposing excess bare earth during construction. The Contractor is to coordinate the phased work and interface the pollution prevention plan to maintain continuous pollution prevention. Areas of one phase should be stabilized before other phases are initiated. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rain fall impacts and runoff.

Reference the plans for the intended scheduling/sequencing of construction.

Estimated Beneficial Occupancy Date: June 2014

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type:

The soil borings performed in August 2009 by Schnabel Engineering, LLC indicate subsurface conditions consist of a layer of asphalt, gravel subbase, and/or topsoil up to 4 inches in depth, underlain by Stratum A, a layer of fill soils 2 to 5.5 feet in depth consisting of gray and brown clayey sand containing various amounts of gravel. Below the existing fill soils of Stratum A, Pleistocene soils of the Talbot Formation were encountered to depths of 12 to 22 feet consisting of tan, orange, brown, pink and white sand, clay and silt with various amounts of gravel of generally medium to high plasticity. Soils from Stratum B have densities ranging from very loose to very dense and consistencies of soft to hard. Underlying the Pleistocene soils of Stratum B, loose to medium dense granular Eocene soils of the Aquia Formation were encountered to depths of 41 feet below the ground surface. The test borings were generally dry with exception to one boring in which water was observed at a depth of 7.2 feet below the ground surface. It is believed the water encountered in this boring is perched and not representative of the static groundwater levels at the site.

Slopes:

The existing overall topography of the site is gently rolling and generally slopes from the center of the site to the south, northeast, and northwest. Ground elevations range from 86.0 feet at the highest point behind a tee box for the adjacent golf course at the east boundary of the site to 64.1 feet at the lowest point – the invert of an 18” corrugated metal pipe that currently receives storm

water from approximately 10 acres of the site and carries it under Kinkaid Road to a ravine southwest of the site that is tributary to the Chesapeake Bay.

Drainage Patterns:

The proposed Commissary/Exchange site is the highest localized elevation; therefore the site drains to three separate outfalls which require examination for stormwater impacts. The site primarily drains to the south via sheet flow from the two earth berms at the center of the site. Stormwater is detained in a small pond (approximately 0.4 acre-feet in volume), before entering an enclosed storm system that daylights to a depression at the south limit of the site before entering another storm sewer that directs the flow under Kinkaid Road to the ravine southwest of the site, tributary to the Severn River. Stormwater also drains northeast and northwest at the northern portion of the site. Stormwater runoff conveyed via sheet flow from the northwest section enters a grass swale behind the Navy Lodge and flows to a separate ravine north of the site tributary to Mill Creek. Stormwater runoff conveyed from the northeast section enters an existing 18” storm sewer that runs east parallel to Greenbury Point Road through the Naval Academy Golf course to a pond within the golf course, then to Carr Creek.

Vegetation:

At the time of construction, it is anticipated almost the entire site will be pervious and covered with native vegetation that has dense coverage. The remainder of the site that is impervious consists of sidewalk and the small portion of the boundary roads (Kinkaid, Greenbury Point) that will occur within the construction limits.

Upon completion of the project, the remaining pervious areas will be covered with dense grass, trees, and shrubs as indicated on the Landscape Plan.

Other:

N/A

1.5 Construction Site Estimates

The following are estimates of the project site characteristics before and after construction:

Construction Site Area to be disturbed:	14.3 acres
Total Project Area:	15.2 acres
Percentage impervious area before construction:	1%
SCS Runoff Curve Number before construction:	61
Percentage impervious area after construction:	68%
SCS Runoff Curve Number after construction:	86

1.6 Receiving Waters

Description of receiving waters:

The state of Maryland is divided into 12 major watershed basins. NSA Annapolis is located entirely within the Lower Western Shore watershed. The new Commissary and Navy Exchange site is located in the Severn River watershed within the Lower Western Shore. The site currently drains directly to the Severn River, as well as Mill Creek to the north and Carr Creek to the east, both tributaries to the Severn River.

Description of storm sewer systems:

The proposed drainage facilities for the new Commissary and Navy Exchange have been designed to retain and infiltrate stormwater from up to a 2-year storm. A series of micro-bioretention areas, subsurface infiltration layers, and a bioretention basin will be incorporated within and adjacent to the parking area to treat and reduce runoff from the increase in impervious area.

Storm water from the building roofs will enter an enclosed storm sewer that will be spread to a 2-foot thick stone layer underneath the parking lot pavement that will gradually infiltrate into the natural soils below the pavement Any overflow from this system will enter a bioretention basin east of the main parking lot. The parking lot drains to ten separate micro-bioretention areas within the parking area for treatment and infiltration, and any overflow will also enter the enclosed storm sewer and daylight to the aforementioned bioretention basin. Storage has been provided in the micro-bioretention areas and bioretention basin that allows for the controlled release of a 10-year storm via an 18” sewer south toward the existing storm sewer system that releases south of Kinkaid Road. The 100-year emergency safe overflow path for the building and parking lot area will overflow the bioretention basin and be conveyed to the east through the adjacent golf course topography.

Storm water runoff from the driveway to Greenbury Point Road, the Exchange Garden Center, and the western portion truck dock will enter five separate micro-bioretention areas at the northwest and southwest corner of the Navy Exchange, as well as the

parkway along the south side of Greenbury Point Road. Any overflow from these facilities will be conveyed to the existing grass swale behind the Navy Lodge.

Storm water runoff from the east portion of the rear truck dock will enter four micro-bioretention areas along the south side of Greenbury Point Road. Any potential overflow from these areas will enter the existing 18" storm sewer along the south side of Greenbury Point Road.

Description of impaired waters or waters subject to TMDLs:

Based on information provided by the Environmental Protection Agency (EPA), a Total Maximum Daily Load (TMDL) for the E. coli pollutant has been established for the Severn River on April 10th, 2008. The EPA TMDL identification number for this report is 34352.

1.7 Site Features and Sensitive Areas to be Protected

Description of unique features and measures to protect them:

The Commissary/Navy Exchange site is immediately west of the Naval Academy Golf Course. A tee box for the course is directly adjacent to the east boundary of the site which must remain undisturbed. Due to significant grade difference between the tee box and new building, a retaining wall will be required behind the existing tee box vegetation.

There also is an NCAA Cross Country Course that has recently been realigned along the south side of Greenbury Point Road and the north side of Kinkaid Road through the site limits. Construction of the new Commissary and Navy Exchange will be sequenced so that the course will be diverted around construction while the proposed course re-alignment can be built and stabilized. Once the proposed course re-alignment is complete, the remaining construction can be completed. The temporary course diversion will be delineated with parallel runs of snow fence a minimum of 10' wide. A detailed construction sequence and the locations of the temporary cross country course diversion are included in the Erosion Control Plans in Appendix B.

There are trees located within and on the eastern perimeter of the site that will be preserved. The locations of these trees and a detail for tree protection fencing have been provided in the Erosion Control Plans and Details in Appendix B.

1.8 Potential Sources of Pollution

Potentials sources of sediment to stormwater runoff:

- Potential sources of sediment include clearing and grubbing operations, grading and site excavation operations, vehicle tracking, topsoil stripping and stockpiling, and landscaping operations.

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined staging area including fueling activities, major equipment maintenance, sanitary facilities, and hazardous waste storage.
- Materials storage area including general building materials, solvents, adhesives, paving materials, paints, aggregates, trash.
- Construction activity including paving, curb/gutter installation, concrete pouring/mortar/stucco, building construction.
- Concrete washout areas.

1.9 Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes ☒ No

- Describe how this determination was made:

  A Finding of No Significant Impact (FONSI) for the new Commissary concluded that there is no potential for impacts to threatened or endangered species because the project area does not support any protected species and lacks suitable habitat. The FONSI is located in Appendix L.

- If yes, describe the species and/or critical habitat: N/A

- If yes, describe or refer to documentation which determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are present on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. Please contact a state or tribal official for concerns related to state or tribal listing of species.): N/A

1.10 Historic Preservation

Are there any historic sites on or near the construction site?

☐ Yes ☒ No

- Describe how this determination was made:

  A Finding of No Significant Impact (FONSI) for the new Commissary concluded the project would have no adverse effect on historic properties. The FONSI is located in Appendix L.

- If yes, describe or refer to documentation which determines the likelihood of an impact on this historic site and the steps taken to address that impact. : N/A

1.11 Maps

<u>These maps include:</u>

- ☒ Direction(s) of stormwater flow and approximate slopes before and after major grading activities
- ☒ Areas and timing of soil disturbance and areas that will not be disturbed
- ☒ Natural features to be preserved
- ☒ Locations of major structural and non-structural BMPs identified in the SWPPP
- ☒ Locations and timing of stabilization measures (see sequence of construction above)
- ☒ Locations of off-site material, waste, borrow, or equipment storage areas
- ☒ Locations of all waters of the U.S., including wetlands
- ☒ Locations where stormwater discharges to a surface water
- ☒ Locations of storm drain inlets
- ☒ Areas where final stabilization has been accomplished

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

1. Grading and Stabilization:

Stabilized Construction Entrance

Stabilized construction entrances must be located at all points of construction ingress and egress. See plans for details and construction specifications.

Maintenance
The SCE must be maintained in a condition that minimizes tracking of sediment. This may require adding stone or making other repairs as conditions demand to maintain a clean surface, the mountable berm, and the specified dimensions. All stone or sediment spilled, dropped, or tracked onto the adjacent roadway must be removed immediately by vacuuming, scraping, and/or sweeping. Washing the roadway to remove mud tracked onto pavement is not acceptable unless the wash water is directed to an approved sediment control practice.

Responsible Staff: To Be Determined

Vegetative Stabilization

Applies On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment
Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.

2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in the table below:

Seeding Mixture	Type	lb/ac	lb/ 1000 sf	Time	Mowing
Tall fescue makes up 70 percent or more of cover.	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly or as needed. Fall	Not closer than 3 inches, if occasional mowing is desired.
Birdsfoot Trefoil.	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, thereafter.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil.	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, thereafter.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, thereafter.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20-10-10	250 100	5.8 2.3	September, 30 days later. December, May 20, June 30, if needed.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.

Soil Preparation, Topsoiling, and Soil Amendments

Applies where vegetative stabilization is to be established. Must meet the following criteria:

A. Soil Preparation
   1. Temporary Stabilization
      a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
   2. Permanent Stabilization
      a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
         i. Soil pH between 6.0 and 7.0.
         ii. Soluble salts less than 500 parts per million (ppm).
         iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a

moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

iv. Soil contains 1.5 percent minimum organic matter by weight.

v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

<u>Maintenance</u>

The cut and fill areas will be inspected weekly for erosion. These areas will be stabilized immediately with erosion controls or graded to avoid possible disturbance to the existing drainage ditches or off site areas. Maintenance and inspection procedures for silt fence are described in Section 2, part 2.7.

As noted in the "sequence of construction", the proposed improvements will be phased to prevent exposing more than 5 acres of bare earth at any time. All areas of the work site will be stabilized and/or off site discharge prevented if land disturbance activities are not planned for more than 14 days.

Responsible Staff: To Be Determined

Seeding and Mulching

Applies to the surface of all perimeter controls, slopes, and any disturbed area not under active grading. Must meet the following criteria:

A. Seeding
   1. Specifications
      a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
      b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
      c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
      d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
   2. Application
      a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
         i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
         ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
      b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
         i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
         ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
      c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).

i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
iii. Mix seed and fertilizer on site and seed immediately and without interruption.
iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
1. Mulch Materials (in order of preference)
a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
a. Apply mulch to all seeded areas immediately after seeding.
b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring
    a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
        i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
        ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
        iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited**.
        iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

Responsible Staff: To Be Determined

Temporary Stabilization

Applies to exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required. See plans for tables providing temporary seeding species and mixture information.

Responsible Staff: To Be Determined

Permanent Stabilization

Applies to exposed soils where ground cover is needed for 6 months or more. See plans for tables providing permanent seeding species and mixture information.

A. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).
    1. General Specifications
        a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
        b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.

   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than ⅓ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

Responsible Staff: To Be Determined

Soil Stabilization Matting

Applies on newly seeded surfaces to prevent the applied seed from washing out; in channels and on steep slopes where the flow has erosive velocities or conveys clear water; on temporary swales, earth dikes, and perimeter dike swales as required by the respective design standard; and, on stream banks where moving water is likely to wash out new vegetative plantings. See plans for details and construction specifications.

<u>Maintenance</u>
Vegetation must be established and maintained so that the requirements for Adequate Vegetative Establishment are continuously met in accordance with the Vegetative Stabilization section.

Responsible Staff: To Be Determined

Stockpile Area

Stockpile areas are utilized when it is necessary to salvage and store soil for later use. See plans for recommended stockpile location(s) during construction activities. Stockpile areas must meet the following criteria:

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with the Vegetative Stabilization section. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes.

Responsible Staff: To Be Determined

2. Water Conveyance:

Earth Dike

Applies along the limit of disturbance (LOD) or across disturbed areas. Generally, earth dikes remain in place until the disturbed contributory drainage areas are permanently stabilized. See plans for details and construction specifications.

Maintenance
The line, grade, and cross section must be maintained. Accumulated sediment and debris must be removed and positive drainage maintained. The earth dike and point of discharge must be kept

free of erosion and continuously meet the requirements for Adequate Vegetative Establishment in accordance with the Vegetative Stabilization section.

Responsible Staff: To Be Determined

Perimeter Dike/Swale

Appropriate uses of perimeter dike/swales include the following:

1. To divert sediment-laden runoff from a disturbed area to a sediment trapping practice.
2. To segment drainage areas to reduce acreage to sediment control practices.
3. To divert clear water from an undisturbed area to a stabilized outlet at non-erosive velocity.

See plans for details and construction specifications.

Maintenance
The line, grade, and cross section must be maintained. Accumulated sediment and debris must be removed and positive drainage maintained. The perimeter dike/swale and point of discharge must be kept free of erosion and continuously meet the requirements for Adequate Vegetative Establishment in accordance with the Vegetative Stabilization section.

Responsible Staff: To Be Determined

3. Erosion Control:

Gabion Inflow Protection

Applies where the slope of the inflow channel is 4:1 or steeper. Runoff may be directed to the inflow channel by means of dikes or swales. See plans for details and construction specifications.

Maintenance
The line, grade, and cross section must be maintained. Accumulated sediment and debris must be removed. The points of inflow and outflow must be kept free of erosion.

Responsible Staff: To Be Determined

Rock Outflow Protection

Applies where discharge velocities and energy at outlets are sufficient to erode the next downstream reach. This applies to outlets of all types such as sediment basins, stormwater management ponds, and road culverts. Rock outlet protection may be temporary or permanent. See plans for details and construction specifications

Maintenance
Maintenance needs are generally low on rock outlet protection. The line, grade, and cross section must be maintained, and the outlet must be kept free of erosion. After high flows inspect for

scour and dislodged riprap. Repairs must be made immediately. Accumulated sediment and debris must be removed.

Responsible Staff: To Be Determined

4. Filtering:

Silt Fence

Silt fence is limited to intercepting sheet flow runoff from small disturbed areas. The use of silt fence is based on slope length and steepness of the contributing drainage area. See plans for details and construction specifications.

Maintenance
Accumulated sediment and debris must be removed when bulges develop in the silt fence or when sediment reaches 25 percent of the fence height. The geotextile must be replaced if torn. If undermining occurs, reinstall fence.

Responsible Staff: To Be Determined

Super Silt Fence

Applies where the slope steepness or slope length criterion for silt fence cannot be met or where additional protection is warranted such as adjacent to wetlands, streams, or other sensitive areas. The use of super silt fence is based on the slope length and steepness of the contributing drainage area. See plans for details and construction specifications.

Maintenance
Accumulated sediment and debris must be removed when bulges develop in the fence or when sediment reaches 25 percent of the fence height. The geotextile must be replaced if torn. If undermining occurs, reinstall chain link fencing and geotextile.

Responsible Staff: To Be Determined

Filter Log

Filter logs are an alternative to silt fence and can be used in hard to reach areas, on frozen ground and pavement, and near tree roots. Note: fiber rolls are not interchangeable with filter logs. Although similar in appearance, fiber rolls are filled with rice or wheat straw, flax, coconut fiber, or wood excelsior, and are used when stabilizing and revegetating slopes because they slow and spread overland flow, thereby minimizing erosion, rills, and gullies. See plans for details and construction specifications.

Maintenance
Sediment and debris must be removed and mulch replaced when sediment has accumulated to a depth of one half the exposed height of the log. The filter log must be replaced if clogged or torn.

The filter log needs to be reinstalled if undermined or dislodged. For permanent applications, vegetation must be established and maintained so that the requirements for Adequate Vegetative Establishment are met in accordance with the Vegetative Stabilization section.

Responsible Staff: To Be Determined

Temporary Stone Outlet Structure

Temporary stone outlet structures are installed at points where flow concentrates, typically in combination with earth dikes, and are used where there is a need to discharge runoff through a protected outlet. The drainage area for this practice is limited to ½ acre. For larger drainage areas, temporary gabion structures are used. See plans for details and construction specifications.

Maintenance
Remove sediment when it has accumulated to within six inches of the weir crest. Replace the geotextile and stone facing when the structure ceases to drain. The line, grade, and cross section must be maintained.

Responsible Staff: To Be Determined

Storm Drain Inlet Protection

Applies when sediment-laden flow is directed to an inlet and it is not possible to temporarily divert the storm drain outfall into a sediment trapping practice, or when watertight blocking of inlets is not advisable. Both Standard Inlet Protection (SIP) and Gabion Inlet Protection (GIP) are proposed for this construction. See plans for details and construction specifications.

Maintenance
Storm drain inlet protection requires frequent maintenance. To maintain function and avoid premature clogging, accumulated sediment needs to be removed after each rain event. If the inlet protection does not completely drain within 24 hours after a storm event, it is clogged. When this occurs, remove accumulated sediment and clean, or replace the geotextile and stone.

Responsible Staff: To Be Determined

5. Sediment Trapping:

Sediment Traps

Sediment traps are necessary to intercept sediment-laden runoff and retain sediment in order to protect drainage ways, properties, and rightsof-way downstream of the sediment trap from sedimentation. They are located during construction at points of concentrated discharge from disturbed areas. Pipe Outlet Sediment Traps and Stone/Riprap Outlet Sediment Traps are being proposed for this construction. See plans for details and construction specifications.

Maintenance

Sediment and debris must be removed and the trap restored to its original dimensions when sediment accumulates to the cleanout elevation (50% of the wet storage depth for ST-I and ST-II). Removed sediment must be deposited in an approved area in such a manner that it will not erode. The points of inflow and outflow as well as the interior of the trap must be cleared of any accumulated debris and kept free of erosion. The embankments must continuously meet the requirements for Adequate Vegetative Establishment in accordance with the Vegetative Stabilization section. Any trees, brush, or other woody vegetation growing on the embankment or near the principal spillway must be removed. The line, grade, and cross section must be maintained. Water tight connections must be maintained for ST-I. **If the dry storage volume in a ST-I does not draw down within 10 hours, the geotextile around the perforated riser must be replaced.**

Responsible Staff: To Be Determined

SECTION 3: GOOD HOUSEKEEPING BMPS

3.1 Good Housekeeping BMPs (from EPA Website)

1. Material Handling and Waste Management:

Waste Materials:

All waste materials will be collected and disposed of into three metal waste dumpsters in the materials storage area. Dumpsters will have a secure tight lid, be placed away from storm water drains and structures, and will meet all federal, state, county, and local regulations. Only trash and construction debris will be placed in the dumpsters. Construction materials will not be buried on site. All personal will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these practices are followed.

Installation Schedule: Trash dumpsters will be installed when the materials storage area has been established.

Maintenance and Inspection: The dumpsters will be inspected weekly and immediately after storm events. The dumpster will be emptied weekly, or more frequently if needed, and taken to the appropriate landfill.

Hazardous Waste Materials:

BMP Description: All hazardous waste materials including oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed shipping containers, within the hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be disposed of in accordance with federal, state, county, and local regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed, during tailgate training sessions, regarding proper procedures for hazardous waste disposal. Notices that state these procedures will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Installation Schedule: Shipping containers used to store hazardous waste materials will be installed once the site materials storage area has been installed.

Maintenance and Inspection: The hazardous waste materials area will be inspected weekly and after storm events. The storage area will be kept clean, well organized and equipped with ample cleanup supplies as appropriate for the materials being stored. Material safety datasheets, material inventory, and emergency contact numbers will be maintained in the office trailer.

Responsible staff: To Be Determined

Sanitary Waste:

BMP Description: Two portable toilets, located in the staging area, will be provided at the site throughout the construction phase. The toilets will be anchored as approved by the stormwater inspector and located away from concentrated drainage flow paths and will have collection pans underneath as secondary containment.

Installation schedule: The portable toilets will be set up at the site when the staging area is complete.

Maintenance and Inspection: Sanitary waste will be collected a minimum of three times a week and shall be inspected weekly for evidence of leaking holding tanks.

Responsible staff: To Be Determined

Recycling:

BMP Description: Wood pallets, cardboard boxes, and other recyclable construction scraps will be disposed of in a designated dumpster for recycling. The dumpster will have a secure watertight lid, be placed away from stormwater conveyances and drains and meet all local and state solid-waste management regulations. Only solid recyclable construction scraps from the site will be deposited in the dumpster. All personnel will be instructed, during tailgate training sessions, regarding the correct procedure for disposal of recyclable construction scraps. Notices that state these procedures will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Installation Schedule: Designated recycling dumpsters will be installed once the combined staging area has been established.

Maintenance and Inspection: The recycling dumpster will be inspected weekly. The recycling dumpster will be emptied weekly and taken to an approved recycling center by the contractor. If recyclable construction wastes are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.

Responsible Staff: To Be Determined

2. Establish Proper Building Material Staging Areas:

Materials Storage Area:

BMP Description: Construction equipment and maintenance materials will be stored at the combined staging area and materials storage areas. This area will be located in an existing paved area on the southeast section of the property. Hale Bales shall be installed around the perimeter of the area. A watertight shipping container will be used to store hand tools, small parts, and other construction materials. Non-hazardous building materials such as packaging material (wood, plastic, and glass), and construction scrap material (brick, wood, steel, metal scraps, and pipe cuttings) will be stored in a separate covered storage facility adjacent to the shipping container. All hazardous-waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed containers under cover within the hazardous materials. Very large items, such as framing materials and stockpiled lumber, will be stored in the open in the materials storage area. Such materials will be elevated on wood blocks to minimize contact with runoff.

Installation Schedule: The materials storage area will be installed immediately and before any grading occurs or before any infrastructure is constructed at the site.

Maintenance and Inspection: The storage area will be inspected weekly. The storage area will be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function.

Responsible Staff: To Be Determined

3. Designate Washout Areas:

Concrete Washout

BMP Description: A designated temporary, above-grade concrete washout area will be constructed as detailed on the site map. The temporary concrete washout area will be constructed as shown on the Erosion Control Plan, with a recommended minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The washout area will be lined with plastic sheeting at least 10 mils thick and free of holes or tears. Signs will be posted marking the location of the washout area to ensure that concrete equipment operators use the proper facility.

Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized. For design specifications, see appendix.

Installation Schedule: The washout area will be constructed before concrete pours occur at the site.

Maintenance and Inspection: The washout areas will be inspected weekly and each day of use to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75 percent of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to the appropriate landfill for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.

Responsible Staff: To Be Determined

4. Establish proper equipment/vehicle fueling and maintenance practices:

Vehicle/Equipment Fueling and Maintenance:

BMP Description: Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipments, rollers, trucks and trailers, backhoes, and forklifts. All major equipment/vehicle fueling and maintenance will be performed off-site. A small, 20 gallon pickup bed fuel tank will be kept on-site in the combined staging area. When vehicle fueling must occur on-site, the fueling activity will occur in the staging area. Only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets in accordance with Part 3.1. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight.

Installation Schedule: BMPs implemented for equipment and vehicle maintenance and fueling activities will begin at the start of the project.

Maintenance and Inspection: Inspect equipment/vehicle storage areas and fuel tank weekly. Vehicles and equipment will be inspected on each day of use. Leaks will be repaired immediately, or the problem vehicle(s) or equipment will be removed from the project site. Keep ample supply of spill-cleanup materials on-site and immediately clean up spills and dispose of materials properly.

Responsible Staff: To Be Determined

5. Allowable non-stormwater discharges and control equipment/vehicle washing:

BMP Description: All equipment and vehicle washing will be performed off-site. (See section 3.2 below for additional information related to non-storm water discharges)

6. Spill Prevention and Control Plan:

Spill Prevention and Control Procedures:

BMP Description:

1. Employee Training: All employees will be trained via biweekly tailgate sessions, as detailed in Section 6, Part 6.3.
2. Vehicle Maintenance: Vehicles and equipment will be maintained off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluid will not be allowed on-site. Drip pans will be placed under all vehicles and equipment that are parked overnight.
3. Hazardous Material Storage: Hazardous materials will be stored in accordance with Section 3, Part 1 and federal and municipal regulations.
4. Spill Kits: Spill kits will be stored within the material storage area and concrete washout areas.
5. Spills: All spills will be cleaned up immediately upon discovery. Spent absorbent materials and rags will be hauled off-site immediately after the spill is cleaned up for disposal at the appropriate landfill. Spills large enough to discharge to surface water will be reported to the National Response Center at 1-800-424-8802.
6. Material safety data sheets, a material inventory, and emergency contact information will be maintained at the on-site project trailer.

Installation Schedule: The spill prevention and control procedures will be implemented once construction begins on-site.

Maintenance and Inspection: All personnel will be instructed, during tailgate training sessions, regarding the correct procedures for spill prevention and control. Notices that state these practices will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Responsible Staff: To Be Determined

7. Any Additional BMPs:

N/A

3.2 Allowable Non-Stormwater Discharge Management

Items include: discharges from fire fighting activities, fire hydrant flushing, landscape watering, water used to control dust, wash downs with potable water that does not include detergents. Dewatering of foundation and utility trenches is not anticipated. All erosion control practices shall be followed by the contractor in connection with these activities.

Irrigation waters will be sprayed onto landscape areas only. The sprinklers will have low flow rates and increased watering time. The irrigation area will be inspected regularly for excess watering and if needed, adjustments will be made.

Any changes in construction activities that produce other allowable non-storm water discharges will be identified, and the SWPPP will be amended and the appropriate erosion and sediment control will be implemented.

Responsible staff: To Be Determined

SECTION 4: SELECTING POST-CONSTRUCTION BMPs

1. Bioretention

Micro-bioretention areas:

Several micro-bioretention areas will be installed within and adjacent to the new parking lot to encourage pollutant removal, ground water recharge, and reduce stormwater discharge from the site, in accordance with the Maryland Department of the Environment's (MDE) recent Environmental Site Design (ESD) guidelines. Volume and peak flows will be reduced to return the site hydrology closer to its natural state. The bioretention areas will be located and designed according to the revised Chapter 5 of the Maryland Stormwater Design Manual.

The areas designated for bioretention will be protected with silt fence during construction and remain uncompacted up to excavation within these areas to the final design grade as indicated in the Site Drainage and Grading Plan within Appendix B. Micro-bioretention practices shall meet the following criteria:

Erosion and Sediment Control: Micro-bioretention practices should not be constructed until the contributing drainage area is stabilized. If this is impractical, runoff from distributed areas shall be diverted away and no sediment control practices shall be used near the proposed location.

Soil Compaction: Excavation should be conducted in dry conditions with equipment located outside of the practice to minimize bottom and sidewall compaction. Only lightweight, low ground-contact equipment should be used within micro-bioretention practices and the bottom scarified before installing underdrains and filtering media.

Underdrain Installation: Gravel for the underdrain system should be clean, washed, and free of fines. Underdrain pipes should be checked to ensure that both the material and perforations meet specifications. The upstream ends of the underdrain pipe should be capped prior to installation.

Filter Media Installation: Bioretention soils may be mixed on-site before placement. However, soils should not be placed under saturated conditions. The filter media should be placed and graded using excavators or backhoes operating adjacent to the practice and be placed in horizontal layers (12 inches per lift maximum). Proper compaction of the media will occur naturally. Spraying or sprinkling water on each lift until saturated may quicken settling times.

Landscape Installation: The optimum planting time is during the Fall. Spring planting is also acceptable but may require watering.

<u>Inspection</u>
Regular inspections shall be made during the following stages of construction:

- During excavation to subgrade and placement and backfill of underdrain systems.
- During placement of filter media.
- During construction of appurtenant conveyance.
- Upon completion of final grading and establishment of permanent stabilization.

Maintenance

The following items should be addressed to ensure proper maintenance and long-term performance of micro-bioretention practices:

- The top few inches of filter media should be removed and replaced when water ponds for more than 48 hours. Silts and sediment should be removed from the surface of the filter bed when accumulation exceeds one inch.
- Where practices are used to treat areas with higher concentrations of heavy metals (e.g., parking lots, roads), mulch should be replaced annually. Otherwise, the top two to three inches should be replaced as necessary.
- Occasional pruning and replacement of dead vegetation is necessary. If specific plants are not surviving, more appropriate species should be used. Watering may be required during prolonged dry periods.

Reference the plans for the intended maintenance schedule of micro-bioretention areas.

Bioretention Basin:

A bioretention basin will also be installed on site to provide additional water quality volume of stormwater runoff that could not be contained within the micro-bioretention areas, as required by the Maryland Stormwater Design Manual.

All on-site disturbed areas should be stabilized prior to allowing runoff to enter the newly constructed bioretention basin. The location of the bioretention basin shall be protected during construction. Surface runoff shall be diverted away from the practice during grading operations. Flow splitters and other conveyance infrastructure shall be blocked.

Bioretention basins shall meet the following criteria:

Materials: See plans for details indicating the allowable materials to be used in the bioretention basin.

Planting Soil: The soil shall meet Maryland State Highway Administration's "Bioretention Soil Mix" (BSM) specification.

Compaction: It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoes to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high

pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure. Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12” to 18”. Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

Plant Material: See plans for proposed plant material for the bioretention basin.

Plant Installation: Mulch shall be placed to a uniform thickness of 3”. Shredded hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Root stock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2” by 2” stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains: Underdrains are to be placed within pea gravel diaphragm of a minimum thickness of 3 inches.
Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

Miscellaneous: The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

Regular inspections shall be made during the following stages of construction:

- During excavation to subgrade and placement and backfill of underdrain systems.
- During placement of filter media.
- During construction of appurtenant conveyance.
- Upon completion of final grading and establishment of permanent stabilization.

Reference the plans for the intended maintenance schedule of bioretention basins.

SECTION 5: INSPECTIONS and MAINTENANCE

5.1 Inspections

1. Inspection Personnel:

- To Be Determined

2. Inspection Schedule and Procedures:

- See Sections 2 and 3.
- See Appendix E for a sample Inspection Report

5.2 Maintenance of Controls

Maintenance Procedures: See Sections 2 and 3.

5.3 Corrective Action Log

Corrective Action Log: See Appendix F for a sample Corrective Action Log

SECTION 6: RECORDKEEPING and TRAINING

6.1 Recordkeeping

The following is a list of records that should be kept at the project site available for inspectors to review:

- Dates of grading, construction activity (and stabilization – see Section 7).
- Copy of the construction general permit (see Appendix C).
- The signed and certified NOI form or permit application form (see Appendix D).
- Inspection reports (see Appendix E).
- Records relating to endangered species and historic preservation (see Appendix M).

Dates when major grading activities occur:

- See construction sequence in Section 1 of this report.

Dates when construction activities temporarily or permanently cease on a portion of the site

- See construction sequence in Section 1 of this report.

See Appendix I for a sample Grading and Stabilization Activites Log

6.2 Log of Changes to the SWPPP

Log of changes and updates to the SWPPP

- See Appendix G for a SWPPP Amendment Log

6.3 Training

- General stormwater and BMP awareness training for staff and subcontractors is described in Section 2 and 3 of this report. Further supporting information can be found in the 2010 Maryland Standards and Specifications for Soil Erosion and Sediment Control, as well as the Maryland Stormwater Design Manual.

- Detailed training for staff and subcontractors with specific stormwater responsibilities is also contained in Section 2 and 3 of this report. Additional information can be found in the National Menu of Stormwater Best Management Practices by the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System: < http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>

Individual(s) Responsible for Training:

- To Be Determined

SECTION 7: FINAL STABILIZATION

Permanent seeding should be applied immediately after the final design grades are achieved at the site but no later than 14 days after construction activities have permanently ceased. After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off site to a licensed landfill facility. Construction debris, trash, and temporary BMP's will also be removed and any areas disturbed during removal will be seeded immediately.

Seedbed Preparation:

1. Topsoil will be spread over final graded areas at a minimum depth of four inches.
2. The seedbed will be free of rocks, woody debris and other objectionable material.
3. Fertilizer will be applied to the seedbed as needed. Fertilizers will be commercial type of uniform composition, free-flowing and conforming to the applicable State and Federal laws. Choose native species that are adapted to local weather and soil conditions wherever possible to reduce water and fertilizer inputs and lower maintenance overall.
4. Topsoil will be loosened by raking, tilling or other suitable methods.

See the Landscaping Plan and Details in Appendix B for designed seed mix. Reference Section B-4-4 – Standards and Specifications for Permanent Stabilization located in the 2010 Maryland Standards and Specifications for Soil Erosion and Sediment Control for additional specifications relating to seeding, fertilizer, mulching, and sodding.

Final stabilization should be installed on portions of the site where construction activities have permanently ceased will be stabilized, as soon as possible but no later than 14 days after construction ceases.

All seeded areas will be inspected weekly during construction activities for failure until a dense cover of vegetation has been established. If failure is noticed on the seeded area, the area will be seeded, fertilized and mulched immediately. After construction is complete at the site permanent stabilization measures will be monitored until final stabilization is reached.

Responsible Staff: To Be Determined (during construction); NSA Annapolis personnel (after construction).

A Notice of Termination (NOT) will be submitted after all cleanup at the site is complete and after all seeding, fertilizing and mulching operations are complete and all plants are installed.

SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A - General Location Map

Appendix B - Site Maps (Erosion Control Plan & Details, Site Plans & Details)

Appendix C - Copy of Construction General Permit

Appendix D - Copy of NOI and acknowledgement letter from EPA/State

Appendix E - Inspection Reports

Appendix F - Corrective Action Log

Appendix G - Log of Changes and Updates to SWPPP

Appendix H - Subcontractor Certifications/Agreements

Appendix I - Grading and Stabilization Activities Log

Appendix J - SWPPP Training Log

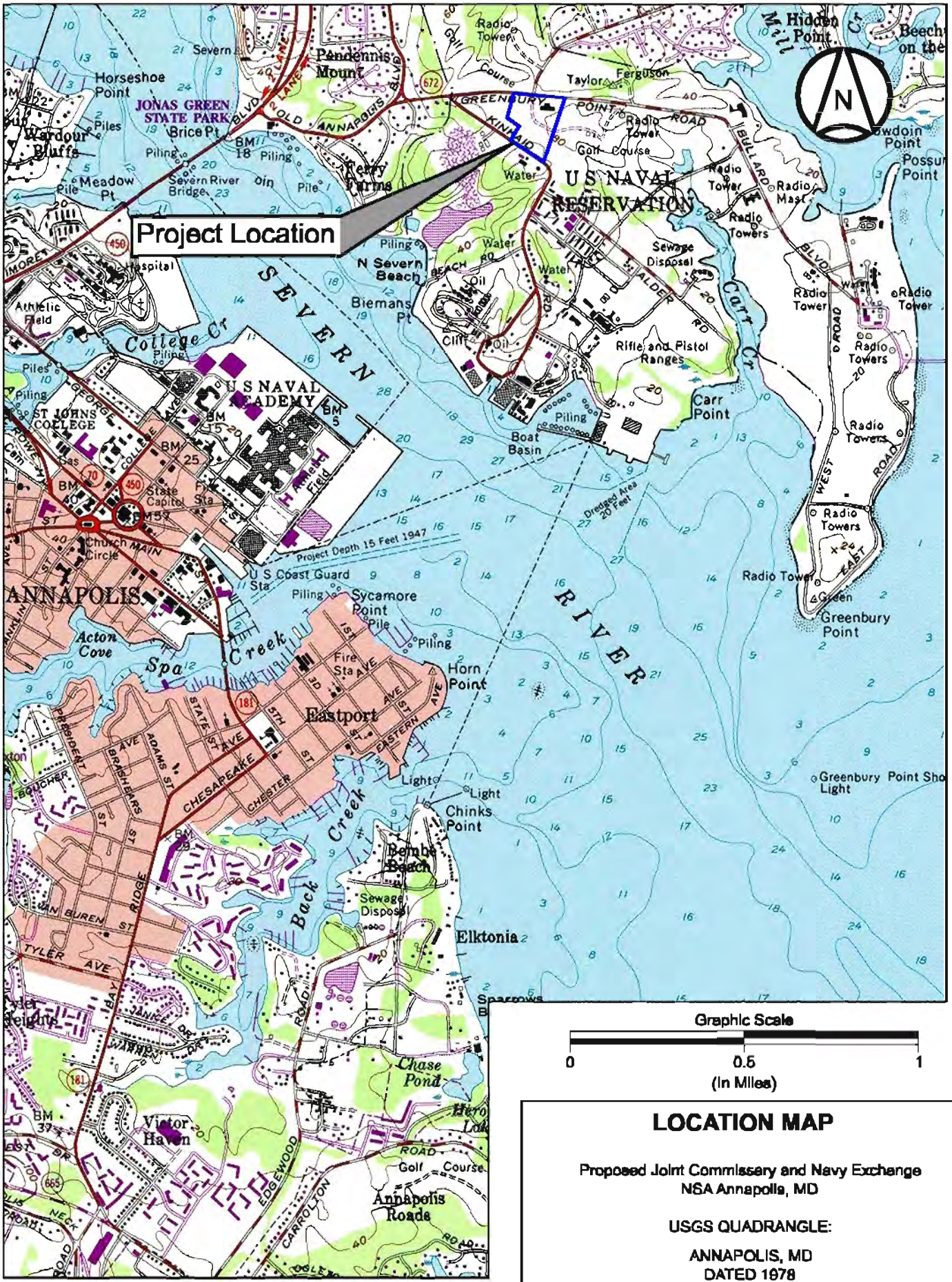
Appendix K - Delegation of Authority Form

Appendix L - Endangered Species and Historic Preservation Documentation

Appendix M - Inspector's Qualifications

Appendix N - Maryland Department of the Environment - Transfer of Authorization Form

APPENDIX A: GENERAL LOCATION MAP



LOCATION MAP

Proposed Joint Commissary and Navy Exchange
NSA Annapolis, MD

USGS QUADRANGLE:

ANNAPOLIS, MD
DATED 1978

APPENDIX B: SITE MAPS

APPENDIX C: COPY OF CONSTRUCTION GENERAL PERMIT

MARYLAND DEPARTMENT OF THE ENVIRONMENT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) APPLICATION FOR INDIVIDUAL OR GENERAL PERMIT TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

STATE OF MARYLAND APPLICATION FORM

MDE USE ONLY	Permit Number:	

Projects that will disturb 150 acres or more and which discharge to a water listed as impaired on Maryland's 303(d) list must apply for an individual permit. All other projects may apply for a general permit. The Maryland Department of the Environment (MDE) may later determine that an individual permit is required for some projects.

Applicant Information	
This application is for (check one):	A General Permit for Stormwater Associated with Construction Activity ☐ An Individual Permit for Stormwater Associated with Construction Activity ☐
Name of site/project:	
Phase (if applicable):	
Name of Owner or Organization Responsible for site/project:	
Street Address of Owner or Organization (not site/project)	Street: City: County: State: Zip Code:
Mailing Address of Owner or Organization (not site/project), if different from street address	Street/P.O. Box: City: County: State: Zip Code:
Required Tax Information	For an organization, Federal Tax Identification Number: For an individual, Social Security Number:

Contact Information for Permit	Principal Contact Person: Title: Telephone No.: Fax No.:
Proof of workers' compensation coverage is required under § 1-202 of the Environment Article. State and Federal agencies have coverage and do not need to provide this information. All other applicants (except individuals) must provide either worker's compensation coverage information or a certificate of compliance. MDE will not begin processing the application until this information is received. If you have a Certificate of Compliance issued by the Maryland Workers' Compensation Commission, you may provide a copy of the Certificate with this application instead of the Workers' Compensation Insurance information above. If you believe you qualify for a Certificate but do not yet have one, contact the Maryland Workers' Compensation Commission Certificate of Compliance Coordinator via telephone, (410) 864-5297, outside Baltimore Metro area toll free (800) 492-0479 selecting extension 5297 when prompted, or via email: COC@wcc.state.md.us.	
Workers' Compensation Coverage Information	Workers' Compensation Insurance Information Workers' Compensation Insurance Policy or Binder Number: Name of Provider: **OR** Certificate of Compliance attached ☐
Site Information	
Location	Street Address: Other Location Description (if no street address is assigned): City: County: State: Zip: Maryland Grid Coordinates: [Use the approximate center of the site. This information may be found on site plans, ADC County Map, or by contacting MDE. Coordinates are based on 1927 origin.] N: E: Latitude and Longitude of Discharge Point: [Refer to ADC county map. Round to the nearest 15 seconds.] Latitude: Longitude:
Location Contact Information (if different from Applicant information)	Site Contact Name: Telephone No: Fax No.:

Site Area	Total site area (in acres): Total disturbed area (in acres):
Project Description	Briefly describe the construction project: Does this project currently have coverage under a General or Individual Permit for Stormwater Associated with Construction Activity? Yes ☐ No ☐ Permit Number (e.g., 07PGxxxx, 08SFxxxx, 09IPxxxx): Other NPDES Number – If this project/site has an NPDES number for a discharge other than for stormwater associated with construction activities, indicate that number and type of discharge: This project is: Check one of the following: Private: ☐ Local Government: ☐ State Government: ☐ Federal Government: ☐ Check one of the following: Residential: ☐ Commercial: ☐ Industrial: ☐ Other: ☐ If Other, describe: Standard Industrial Classification: [Indicate the appropriate SIC number that best represents the eventual use of the facility under construction. For residential and commercial facilities (i.e., non-industrial) use the appropriate construction SIC number. SIC information may be obtained from the U.S. Occupational Safety and Health Administration. As of July 2009, a search function is available on the OSHA website at http://www.osha.gov/pls/imis/sicsearch.html.]
Erosion and Sediment Control Plan Information	NOTE: Apply for this permit only after you have submitted the Erosion and Sediment Control Plan to the appropriate Approval Authority for review. When MDE is ready to issue the permit, you must provide either documentation from the Approval Authority that the plan is approved or, if the Approval Authority does not provide such documentation, complete a certification that the plan is approved. The certification form is available on MDE's website.

	Has Erosion and Sediment Control Plan been submitted to the appropriate Approval Authority for review? Yes ☐ Name of Approval Authority for Erosion and Sediment Control Plan: Identifying Number for Erosion and Sediment Control Plan (if assigned by Approval Authority): Is this a State or Federal project for which MDE has not yet assigned an SF number to the Erosion and Sediment Control Plan? Yes ☐
Discharge Information	The runoff from this site goes to: (select one) 1. A municipal separate storm sewer system. Give name of that system and its receiving waters: 2. Surface waters. Give name of receiving waters (use the closest named waterway): Watershed Basin Code – Eight-digit number that indicates the site's watershed. This information may be obtained at local plan review offices or MDE. Are the receiving waters listed on the current Maryland 303(d) list as impaired? [NOTE: See MDE's website for the 303(d) list and search tools.] Yes ☐ No ☐ What is listed as the cause of the impairment (check all that are applicable)? Total Suspended Solids: ☐ Sedimentation/Siltation: ☐ Other: ☐ If the impaired waters are different than the waters mentioned above, list them here: Date that the preparer of this form compared the eventual receiving waters with the Maryland 303(d) list:
Impervious Surface and Runoff Curves	Runoff Curve Number: Pre-Development: Post-Development: Estimate of Impervious Surface Area in Acres (Post-development, includes rooftops, parking lots, etc.):

Permanent Stormwater Management Facilities (BMPs)	If SWM is waived or exempt, you do not need to complete this section. SWM waived: Yes ☐ No ☐ SWM exempt: Yes ☐ No ☐ Indicate how many of each type of permanent SWM facility will be implemented. Indicate the total drainage area for each type of these facilities. Example: if two extended detention ponds are installed, each draining 10 acres, indicate there are two extended detention ponds (place "2" in the Number column) with a total drainage area of 20 acres (place "20" in the Total Drainage Area column).

BMPs	Number	Total Drainage Area
Infiltration trenches		
Infiltration basins		
Offsite SWM Facility		
Retention Ponds		
Detention Ponds		
Extended Detention Ponds – Wet		
Extended Detention Ponds – Dry		
Vegetated Swales		
Wetland/Shallow Marshes		
Oil/Grit Separators		
Drywells		
Other (specify what)		

Signatory Information

Signatory Authority

Applications for a State Discharge Permit must be signed by a responsible official in accordance with COMAR 26.08.04.01-1B(5): for a proprietorship, by the proprietor; for partnerships, by a general partner; for corporations, by the principal executive officer, or authorized representative; for municipal, state, or other public facility; by principal executive officer, ranking elected official, or other authorized employee. If the facility is owned by one party and leased to another, please identify both parties and have the appropriate representatives of both parties sign this application. Attach additional sheets as needed. If the facility is owned by a business entity, please identify the resident agent and principal executive officer, with their complete addresses, on this application.

Please indicate if the facility is owned by one of the following:

Sole Proprietorship ☐
Partnership ☐
Corporation ☐
Public Facility ☐

RESIDENT AGENT FOR CORPORATION:

Name:

Street Address:

City:

County:

State:

Zip:

I certify under penalty of law that this document was completed under my supervision and that the information contained herein is accurate and truthful to the best of my knowledge. I certify that the information concerning ownership/control of this site/project is accurate. I am responsible for the construction activities of this site/project, for satisfying the requirements of this discharge permit, and any civil or criminal penalties incurred due to violations of this permit, as set forth in Maryland and/or federal laws and regulations.

Print or type name or person signing:

Title:

_____

(Signature of applicant)/(Date signed)

Notices

18 U.S.C. Section 1001 provides that:
Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious, or fraudulent statements or representations; or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both.

Privacy Act Notice: This notice is provided pursuant to the Federal Privacy Act of 1974, U.S.C Section 552a. Disclosure of your organization's Federal Tax Identification number or your personal Social Security number with this application is mandatory pursuant to the Maryland Environment Article, Section 1-203 (2003), which requires MDE to verify that applicants for the renewal of permits or licenses have paid all undisputed taxes and unemployment insurance. This information will not be used for any purposes other than those described in this Notice.

Application Completion Checklist

Complete all portions of the application. In addition, ensure the following are included:

Fee

Enclose a check or money order made payable to MDE for the appropriate application fee based on the total disturbed area (in acres) for your project/site. Local and state government projects are exempt from the fees.

Total disturbed area (in acres)	Fee
1 to less than 10	$100
10 to less than 15	$500
15 to less than 20	$1500
20 or more acres	$2500

Fee enclosed: ☐
Exempt from fee: ☐

Map

Map enclosed: ☐

Workers' Compensation

If the application indicates that a Certificate of Compliance is attached, it is enclosed: ☐

Public Notice Billing Approval Form

If this is an application for an Individual Permit for Stormwater Associated with Construction Activity, a Public Notice Billing Approval Form is attached: ☐
NOTE: For Individual Permits, MDE cannot begin processing the application until the Public Notice Billing Approval Form is received. It is available in the Permit for Stormwater Associated with Construction Activity section of the MDE website.

Retain a Copy

The applicant has retained a copy of this application: ☐

Submit one signed original to:

Maryland Department of the Environment
P.O. Box 2057
Baltimore, Maryland 21203-2057

Contact Information for Questions:

DO NOT SUBMIT YOUR APPLICATION TO THIS ADDRESS.
Sending your application by overnight delivery to this address WILL NOT expedite your application.
Maryland Department of the Environment, Compliance Program
1800 Washington Blvd.
Suite 420
Baltimore Maryland 21230
Telephone: (410) 537-3510 Website: http://www.mde.state.md.us

APPENDIX D: COPY OF NOI

This Form Replaces Form 3510-9 (8-98)
Refer to the Following Pages for Instructions

Form Approved OMB Nos. 2040-0188 and 2040-0211

NPDES FORM

United States Environmental Protection Agency
Washington, DC 20460

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

I. Permit Number

II. Operator Information

Name:

IRS Employer Identification Number (EIN): –

Mailing Address:

Street:

City: State: Zip Code: -

Phone: - - Fax (optional): - -

E-mail:

III. Project/Site Information

Project/Site Name:

Project Street/Location:

City: State: Zip Code: -

County or similar government subdivision:

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude
1. __ __° __ __′ __ __″ N (degrees, minutes, seconds)
2. __ __° __ __. __ __′ N (degrees, minutes, decimal)
3. __ __. __ __ __ __° N (degrees decimal)

Longitude
1. __ __ __° __ __′ __ __″ W (degrees, minutes, seconds)
2. __ __ __° __ __. __ __′ W (degrees, minutes, decimal)
3. __ __ __. __ __ __ __° W (degrees decimal)

Method: ☐ U.S.G.S. topographic map ☐ EPA web site ☐ GPS ☐ Other:

If you used a U.S.G.S. topographic map, what was the scale? _____

Project located in Indian Country? ☐ YES ☐ NO

If yes, name of reservation, or if not part of a reservation, put "Not Applicable:" _____

Estimated Project Start Date: / / (Month Day Year)

Estimated Project Completion Date: / / (Month Day Year)

Estimated Area to be Disturbed (to the nearest quarter acre): .

IV. SWPPP Information

Has the SWPPP been prepared in advance of filing this NOI? ☐ YES ☐ NO

Location of SWPP for Viewing: ☐ Address in Section II ☐ Address in Section III ☐ Other
If other:

SWPPP Street:

City: State: Zip Code: -

SWPPP Contact Information (if different than that in Section II):

Name:

Phone: - - Fax (optional): - -

E-mail:

V. Discharge Information

Identify the name(s) of waterbodies to which you discharge. _____

_____

Is this discharge consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s)? ☐ YES ☐ NO

VI. Endangered Species Protection

Under which criterion of the permit have you satisfied your ESA eligibility obligations?

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

If you select criterion F, provide permit tracking number of operator under which you are certifying eligibility:

VII. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name:

Title:

Signature: _____ Date:

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared by:

Organization:

Phone: - - Ext. E-mail:_____

Instructions for Completing EPA Form 3510-9

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

NPDES Form Date | This Form Replaces Form 3510-9 (8/98) | Form Approved OMB Nos. 2040-0188 and 2040-0211

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits storm water discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) Permit. Operator(s) of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an NPDES general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions. If you have questions about whether you need an NPDES storm water permit, or if you need information to determine whether EPA or your state agency is the permitting authority, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755.

Where to File NOI Form

See the applicable CGP for information on where to send your completed NOI form.

Completing the Form

Obtain and read a copy of the appropriate EPA Storm Water Construction General Permit for your area. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink . do not send a photocopied signature.

Section I. Permit Number

Provide the number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible permit numbers).

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application. An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS), also commonly referred to as your taxpayer ID. If the applicant does not have an EIN enter “NA” in the space provided. Also provide the operator’s mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

Section III. Project/Site Information

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

The applicant must also provide the latitude and longitude of the facility either in degrees, minutes, seconds; degrees, minutes, decimal; or decimal format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and EPA’s web-based siting tools, among others. Refer to *www.epa.gov/npdes/stormwater/cgp* for further guidance on the use of these methodologies. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used.

Indicate whether the project is in Indian country, and if so, provide the name of the Reservation. If the project is in Indian Country Lands that are not part of a Reservation, indicate “not applicable” in the space provided.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/1998). Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest quarter acre. Note: 1 acre = 43,560 sq. ft.

Section IV. SWPPP Information

Indicate whether or not the SWPPP was prepared in advance of filing the NOI form. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

Section V. Discharge Information

Enter the name(s) of receiving waterbodies to which the project’s storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one waterbody, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your

site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving waterbody. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. Waters of the U.S. do not include man-made structures created solely for the purpose of wastewater treatment. U.S. Geological Survey topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s). To answer this question, refer to *www.epa.gov/npdes/stormwater/cgp* for state- and regional-specific TMDL information related to the construction general permit. You may also have to contact your EPA regional office or state agency. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

Section VI. Endangered Species Information

Indicate for which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of federally listed endangered and threatened species, and designated critical habitat. See Part 1.3.C.6 and Appendix C of the permit. If you select criterion F, provide the permit tracking number of the operator under which you are certifying eligibility. The permit tracking number is the number assigned to the operator by the Storm Water Notice Processing Center after EPA acceptance of a complete NOI.

Section VII. Certification Information

All applications, including NOIs, must be signed as follows: *For a corporation:* By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, phone number and email address of the NOI preparer.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S. Environmental Protection, Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address. **Visit this website for mailing instructions:** *www.epa.gov/npdes/stormwater/mail*.

APPENDIX E: INSPECTION REPORTS

APPENDIX E: Stormwater Construction Site Inspection Report

General Information			
Project Name	NSA Annapolis Proposed Joint Commissary & Navy Exchange		
Permittee			
NOI #		**Date of Inspection**	
Start Time		**End Time**	
Inspector's Name(s)			
Green Card Certification #			
Inspector's Contact Information			
Describe present phase of construction	☐ Clearing/Grubbing ☐ Rough Grading ☐ Infrastructure ☐ Demolition ☐ Building Construction ☐ Final Grading ☐ Final Stabilization Notes:		

Type of Inspection:
☐ Weekly routine ☐ Pre-storm event ☐ During storm event ☐ Post-storm event ☐ Due to a discharge of significant amounts of sediment

Has there been a storm event since the last inspection? ☐ Yes ☐ No
If yes, provide:
Storm Start Date & Time:
Storm Duration (hrs):
Approximate Amount of Precipitation (in):

Permit Coverage and Plans				
	Subject	**Status**	**Corrective Action Needed and Notes**	**Date Corrected**
1	Was an NOI submitted for all disturbed acres?	❑Yes ❑No		
2	Is the permittee listed above still in control of permitted activities at the site? (If no, submit a Transfer of Authorization form to MDE)	❑Yes ❑No		
3	Do the approved plans reflect current site conditions?	❑Yes ❑No		
4	Are the approved E&S and SWM plans maintained at the site?	❑Yes ❑No		
5	Have the E&S or SWM plan approvals expired?	❑Yes ❑No		
5	Are all inspection reports and enforcement actions on file at the site?	❑Yes ❑No		
6	Is the site permanently stabilized, temporary erosion and sediment controls are removed or set to be removed, and stormwater discharges from construction activity are eliminated?	❑Yes ❑No		

Permit Coverage and Plans				
	Subject	**Status**	**Corrective Action Needed and Notes**	**Date Corrected**
7	If #6 is Yes, has a Notice of Termination been submitted to MDE?	❑Yes ❑No		
8	Are all discharges composed entirely of stormwater or as authorized by the permit?	❑Yes ❑No		

Discharge of significant amounts of sediment			
Subject		**Status**	**Notes**
Is there evidence of the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters?		❑Yes ❑No	
A discharge of significant amounts of sediment may be indicated by (but is not limited to) observations of the following. Note whether any are observed during this inspection:			
1	Earth slides or mud flows	❑Yes ❑No	
2	Concentrated flows of stormwater such as rills, rivulets or channels that cause erosion when such flows are not filtered, settled or otherwise treated to remove sediment	❑Yes ❑No	
3	Turbid flows of stormwater that are not filtered, settled or otherwise treated to reduce turbidity	❑Yes ❑No	
4	Deposits of sediment at the construction site in areas that drain to unprotected stormwater inlets or catch basins that discharge directly to surface waters	❑Yes ❑No	
5	Deposits of sediment from the construction site on public or private streets outside of the permitted construction activity	❑Yes ❑No	
6	Deposits of sediment from the construction site on any adjacent property outside of the permitted construction activity	❑Yes ❑No	
7	Discharges from the construction site to municipal conveyances, curbs and gutters, or streams running through or along the site where visual observations show that the discharges differ from ambient conditions in terms of turbidity so as to indicate significant amounts of sediment present in them	❑Yes ❑No	

BMPs						
	BMP/activity (some recommended items to check included below)	**Installed /Imple-mented?**	**Maintenance Required?**	**Location**	**Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)**	**Date Correction Completed**
1	Temporary stabilization - within 7 or 14 days in accordance with 26.17.01.07(B)(3)(e)(iv)	❑Yes ❑No	❑Yes ❑No			
2	Permanent stabilization - within 7 or 14 days in accordance with 26.17.01.07(B)(3)(e)(iv)	❑Yes ❑No	❑Yes ❑No			
3	Stockpile protection - check for stabilization, silt fence or other controls	❑Yes ❑No	❑Yes ❑No			
4	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	❑Yes ❑No	❑Yes ❑No			
5	Silt fence - check for proper installation including toeing in, stakes and supports, gaps and tears, and sediment buildup	❑Yes ❑No	❑Yes ❑No			
6	Check dams, dikes, and diversion ditches	❑Yes ❑No	❑Yes ❑No			

BMPs						
	BMP/activity (some recommended items to check included below)	**Installed /Imple-mented?**	**Maintenance Required?**	**Location**	**Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)**	**Date Correction Completed**
7	Storm drain inlet protection - check for gaps, tears, sediment buildup	❑Yes ❑No	❑Yes ❑No			
8	Construction entrance - check for trackout, soil buildup on entrance	❑Yes ❑No	❑Yes ❑No			
9	Sediment basins/traps - check for sediment buildup, erosion, proper outlet structures	❑Yes ❑No	❑Yes ❑No			
10	Outfall protection - check for erosion, sediment	❑Yes ❑No	❑Yes ❑No			
11	Is trash/litter from work areas collected and placed in covered dumpsters?	❑Yes ❑No	❑Yes ❑No			
12	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	❑Yes ❑No	❑Yes ❑No			
13	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	❑Yes ❑No	❑Yes ❑No			

BMPs						
	BMP/activity (some recommended items to check included below)	**Installed /Imple-mented?**	**Maintenance Required?**	**Location**	**Corrective Action Needed and Notes (note any BMPs required by plans but not yet installed)**	**Date Correction Completed**
14	Are materials that are potential stormwater contaminants stored inside or under cover?	❑Yes ❑No	❑Yes ❑No			
15	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	❑Yes ❑No	❑Yes ❑No			
16	(Other)	❑Yes ❑No	❑Yes ❑No			

Non-Compliance

Describe any incidents of non-compliance not described above:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature:_____ **Date:**_____

APPENDIX F: CORRECTIVE ACTION LOG

APPENDIX F: Corrective Action Log

Project Name: **NSA Annapolis Proposed Joint & Navy Exchange**
SWPPP Contact:

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible Person

APPENDIX G: LOG OF CHANGES AND UPDATES TO SWPPP

APPENDIX G: SWPPP Amendment Log

Project Name: **NSA Annapolis Proposed Joint & Navy Exchange**
SWPPP Contact:

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

APPENDIX H: SUBCONTRACTOR CERTIFICATIONS/AGREEMENTS

APPENDIX H: Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advice each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

APPENDIX I: GRADING AND STABILIZATION ACTIVITIES LOG

APPENDIX I: Grading and Stabilization Activities Log

Project Name: **NSA Annapolis Proposed Joint & Navy Exchange**
SWPPP Contact:

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location

APPENDIX J: SWPPP TRAINING LOG

APPENDIX J: SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

Erosion Control BMPs

Sediment Control BMPs

Non-Stormwater BMPs

Emergency Procedures

Good Housekeeping BMPs

Specific Training objective: _____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

APPENDIX K: DELEGATION OF AUTHORITY FORM

APPENDIX K: Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the **NSA Annapolis Proposed Joint Commissary & Navy Exchange** construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, 1confirm that I meet the requirements to make such a designation as set forth in Appendix G, Subsection 1l.A of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix G, Subsection 11.B (1-3).

1certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

APPENDIX L: ENDANGERED SPECIES AND HISTORIC PRESERVATION DOCUMENTATION

ENVIRONMENTAL ASSESSMENT

Navy Exchange, Commissary, Health Clinic
At
Naval Support Activity Annapolis
Annapolis, Maryland

United States Navy

June 2011

Prepared for
Department of the Navy
Naval Support Activity Annapolis and
Naval Facilities Engineering Command, Washington

In accordance with
Chief of Naval Operations Instruction 5090.1C

Pursuant to
National Environmental
Policy Act Section 102(2)(c)

Environmental Assessment

Navy Exchange, Commissary, Health Clinic
At
Naval Support Activity Annapolis
Annapolis, Maryland

June 2011

Please contact the following person
with comments and questions:

Jeffrey Gardner
Phone: (202) 685-3064
Email: jeffrey.a.gardner2@navy.mil
NAVFAC Washington
Washington Navy Yard, Building 212 (mailroom)
1314 Harwood St., SE
Washington, DC 20374-5018

EXECUTIVE SUMMARY

This environmental assessment (EA) evaluates the potential environmental impacts from the proposed construction and operation of four new facilities at Naval Support Activity (NSA) Annapolis, Maryland. Those facilities include a new Navy Exchange (NEX), Commissary, Naval Health Clinic, and associated parking.

The new NEX and Commissary would replace the existing facilities at North Severn. The new Health Clinic would be built at North Severn replacing the current Naval Health Clinic located at the U.S. Naval Academy. The existing NEX and Commissary facility would be reused by other base tenants, possibly requiring reconfiguration, and the adjacent parking reused for overflow parking.

The EA has been prepared pursuant to Section 102(2) (c) of the National Environmental Policy Act (NEPA), (42 USC 4331 et seq.), the regulations of the Council on Environmental Quality (CEQ) that implement NEPA procedures (40 CFR 1500-1508), the Navy's NEPA procedures contained in 32 CFR 775, and the Navy’s Environmental and Natural Resources Program Manual, Chief of Naval Operations Instructions (OPNAVINST) 5090.1C. The information presented within this document will serve as the basis for deciding whether the implementation of the proposed action would result in a significant impact to the environment, requiring the preparation of an Environmental Impact Statement (EIS), or that no significant impacts would occur, and therefore a Finding of No Significant Impact (FONSI) would be appropriate.

PURPOSE AND NEED

The purpose of the proposed action is to construct and operate four new facilities at the North Severn Area of NSA Annapolis: a new NEX, Commissary, Health Clinic, and associated parking.

Construction of the new facilities is needed because the existing facilities no longer adequately meet the needs of the military population at NSA Annapolis and in the surrounding Annapolis area. Military exchange, commissary and health clinic facilities provide a critical quality of life mission and non-pay benefits to Service Members by providing essential retail goods/services, groceries and healthcare at a savings to them and their dependents. Ensuring that adequate facilities exist for the military population at NSA Annapolis and the surrounding Annapolis Area is a crucial part of quality of life, retention, and ultimately mission accomplishment for military personnel.

Construction and operation of the new NEX and Commissary would provide increased retail space for both the NEX and Commissary within modern new facilities.

The existing Naval Health Clinic's scope of services include primary care, mental health, dental, occupational health, preventative medicine, industrial hygiene, and specialty care, along with ancillary services including pharmacy, radiology, and laboratory. The purpose of constructing and operating a new Naval Health Clinic is to provide a facility with modern medical technologies and improved accessibility for patients with mobility issues in order to ensure adequate medical services for the active and retired military population.

PROPOSED ACTION AND ALTERNATIVES

The Navy Exchange Service Command (NEXCOM), and the Defense Commissary Agency (DECA) are proposing to construct and operate a NEX/Commissary complex that would provide a NEX with approximately 88,000 square feet (SF) (8,175 square meters (m^2)) and a 51,500 SF (4,784 m^2) Commissary, replacing the existing NEX and Commissary, which have 37,200 SF (3,456 m^2) and 25,800 SF (2,397 m^2) respectively. The new NEX/Commissary complex would also incorporate the minimart/package store that is currently separated from the existing NEX to improve patron access and reduce internal traffic on Base. The Navy Federal Credit Union (NFCU) would also be incorporated into the new NEX.

The Bureau of Medicine and Surgery (BUMED) is proposing to construct and operate a new health clinic at North Severn, co-locating the new clinic with the NEX/Commissary complex. The new clinic is currently planned to have approximately 105,500 SF (9,800 m^2) in three stories - two above ground and one below ground (basement) with 35,000 SF per level. The new construction would provide adequate space for all clinic departments, including primary care, special care, and ancillary services to serve active-duty, retired military, and their dependents.

The new facilities, like all new facilities constructed at NSA Annapolis, would achieve, at a minimum, Leadership in Energy and Environmental Design (LEED) Silver certification.

In addition to the construction and operation of the NEX, Commissary, and Health Clinic, the proposed action would also include the following elements:

- Parking area with approximately 550 standard and handicap spaces for the use of patrons, patients, and employees.
- Adequate access roads and circulation to ensure patron and patient accessibility and reduce traffic congestion.
- Modern, efficient electrical/mechanical systems to reduce energy consumption and encourage resource conservation.

- Continuing provision of essential NEX and Commissary services and medical care until the new facilities are operational.

- Reuse of the existing NEX and Commissary facility for other Base tenant functions.

- Reuse of the existing NEX/Commissary parking lot across Kinkaid Road for overflow staff and patron/patient parking.

The site selection process led to the selection of one site, the Midshipmen Store Warehouse site, to construct the new NEX/Commissary complex and Health Clinic. The Midshipmen Store Warehouse site is the Preferred Alternative to implement the proposed action. The site provides adequate land for the proposed buildings and required support facilities. It is located adjacent to Buildings NA347 (the Navy Lodge) and NA342 (the Fire Station). This location has good road access and is situated so that service access can be separated from patron parking; service access would be from Greenbury Point Road and patron access from both Greenbury Point Road and Kinkaid Road.

This EA also analyzes the No Action Alternative, which would be maintaining the status quo. Under the No Action Alternative, the proposed NEX/Commissary complex, Health Clinic, and their support facilities would not be constructed. The No Action Alternative performs the important function of acting as an environmental baseline against which the environmental consequences of the other alternatives are measured, and is required by NEPA. However, under the No Action Alternative, the current facilities would remain insufficient to satisfy demand for services and products, as well as inadequate to provide improved healthcare services to patients.

ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS

The proposed construction of the NEX/Commissary complex and Health Clinic adds an estimated 13 acres of impervious surface to an area currently consisting of maintained lawns/grassland and landscape trees. The resulting potential for increased rainfall runoff carrying pollutants brings a potential for downstream erosion and pollution to receiving surface and ground waters. There would also be the potential for erosion and sedimentation during construction from an estimated 19 acres that would be disturbed. The potential soil erosion and surface water impacts will be managed using best management practices (BMPs) that adhere to very stringent laws, regulations, and Navy policies directed at erosion and sedimentation control and both water quantity and quality controls to ensure impacts would not be significant. These requirements and BMPs are discussed in more detail in the next section.

Additional impacts include the disruption to wildlife that could inhabit the grassland vegetation, but with the abundance of similar or more valuable habitat on Greenbury Point, these are not considered

significant for the area's wildlife. The proposed action is compatible with designated land use outlined in the *North Severn Land Use Controls and Development Plan*. Likewise, although the increased size of the NEX/Commissary complex potentially increases the demand for utilities, the new facilities replace more inefficient ones serving the retail and health functions being replaced, and the Navy's determination to achieve LEED Silver certification ensures that the utility demands would not be large and would avoid major upgrades to the wastewater treatment plant or other facilities. There would also be potential short-term construction impacts that include noise and traffic that would cause an occasional inconvenience to those nearby or using the roads typical of any development project. No historic properties are located in the Area of Potential Effect (APE), nor does the site meet National Register of Historic Places (NRHP) criteria of significance. No effect on NRHP-eligible cultural resources is expected. The socioeconomic effects are positive resulting from the addition of construction jobs and income to the region. Impacts to air quality are well below *de minimis* levels prescribed by the Environmental Protection Agency (EPA) that denote an issue, and no impacts to human health or safety are expected.

Increased traffic from employees and patrons/patients is expected when the new facilities are in full operation in 2014. The analysis presented in Section 3.7 shows that the roads and intersections provide a satisfactory level of service under the Preferred Alternative.

Table ES-1 provides a summary of the findings regarding environmental impacts associated with each resource area for the Preferred and No Action alternatives. The details supporting these findings are found in Chapter 3.0.

BEST MANAGEMENT PRACTICES

There are a number of measures, including BMPs, that would be employed where appropriate, to reduce or minimize potential impacts. The measures discussed below are among those that would be employed to reduce potential impacts.

- Overall disturbance is expected to exceed 5,000 SF, requiring NSA Annapolis to adhere to stormwater management requirements in the technical guidance for Section 438 of the Energy Independence and Security Act of 2007 (EISA), to include the use of the green infrastructure/low impact development (GI/LID) infrastructure tools described in this guidance. NSA Annapolis would also need to obtain a General Permit for Construction Activity, which would include an approved sediment and erosion control plan permitted by the Maryland Department of the Environment (MDE) (consistent with Maryland's Environment Article, Title 4, Subtitle 1 and 2 for erosion and sediment control and stormwater management (COMAR 26.17.01 and 26.17.02)) that includes appropriate site-specific

BMPs for controlling runoff, erosion, and sedimentation during construction and demolition activities. Erosion and sediment control BMPs are currently planned to be established prior to any construction activity as part of the Stormwater Pollution Prevention Plan. They include a stabilized construction entrance, a perimeter silt fence and tree protection, culvert and drop inlet protection, sediment traps, slope protection such as erosion control blankets, a diversion perimeter dike/swale, grass-lined channels, and stone check dams in temporary and permanent swales. After construction, areas disturbed outside of the footprints of the new construction would be aerated and reseeded, replanted, and/or re-sodded, which would decrease the overall erosion potential of the site and improve soil productivity.

- Stormwater control features for the project would be designed to ensure peak runoff flows do not exceed existing peak flows from the site. LID measures will be considered in the design of stormwater management measures and implemented when practical. Stormwater control features will be designed to meet Maryland Department of the Environment (MDE) 2007 standards. All BMPs implemented during construction must be shown on MDE-approved plans and no deviations from plans and sequence of construction are permitted without approved official plan revisions. BMP measures being considered include bio-swales within the parking area and infiltration basins for other flows as well as overflows from the bio-swales (Refer to Section 3.8.2.1 – Stormwater).

- Fugitive dust would be reduced during construction by control methods such as using water for dust control. Current plans call for using a mobile pressure-type distributor truck that would apply potable water as needed to avoid ponding. Dust control would be implemented as needed once site grading has been initiated, and during windy conditions exceeding 20 miles per hour, while site grading is occurring.

- Noise control measures could be required and could include scheduling to avoid sensitive times, sequencing operations to either shorten periods of greatest noise or to avoid higher combinations, and use of alternative construction equipment and methods to reduce the transmission of high noise levels, especially to noise-sensitive areas.

In addition to these BMPs, all activities would be in compliance with Chief of Naval Operations Instructions (OPNAVINST) 5100.23G, the Navy Occupational Safety and Health program manual, and OPNAVINST 5090.1C Navy Environmental and Natural Resources Program Manual, to ensure the safety of all NSA Annapolis personnel.

AGENCY COORDINATION

Coordination with the U.S. Fish and Wildlife Service (USFWS), Maryland Department of Natural Resources (MDNR), Maryland Historical Trust (MHT), and Maryland Department of the Environment (MDE) have been conducted (see correspondences in Appendix A).

The USFWS indicated that except for the occasional transient individuals, no federally proposed or listed endangered or threatened species are known to occur within the project area. Likewise, the MDNR Wildlife and Heritage Service determined that there are no State or Federal records for rare, threatened, or endangered species within the boundaries of the project site as delineated. MDNR further noted, however, that this does not mean that rare, threatened, or endangers species are not in fact presen**t; if appropriate ha**bitat is available, certain species could be present without documentation because adequate surveys have not been conducted. The EA finds that appropriate habitat does not exist at the project site.

The MHT concurred with the Navy that the proposed NEX/Commissary complex and Health Clinic at NSA Annapolis will have “no effect” on historic properties.

A Federal Consistency Determination, stating that the proposed action is consistent with the State Coastal Zone Management Program to the greatest extent possible, was submitted to the MDE for concurrence. NSA Annapolis did not receive a formal response from the MDE regarding its consistency review; therefore, the Navy assumes Maryland’s concurrence that the proposed action would be consistent with the Coastal Zone Management Act.

CONCLUSION

To the extent feasible, BMPS would be employed to ensure that the impacts from the implementation of the NEX/Commissary complex and Health Clinic, as proposed under the Preferred Alternative, are minor are not expected to result in significant impacts to the environment. Therefore, a FONSI is warranted, and an EIS is not required.

Table ES-1: Comparison of the Alternatives

Resource	Preferred Alternative	No Action Alternative
Topography, Geology, and Soils	There is a 15-foot range of elevations on site, which requires leveling and grading; however, limited area of disturbance, approximately 19 acres, and the placement of foundations within the existing range of elevations, would not cause significant changes or effects to the general geologic or topographic character of the site. Erosion and Sediment Control Plan BMPs would ensure minimal erosion and soil sedimentation and the 13 acres of soil productivity lost within impervious surfaces is not a significant loss for Greenbury Point.	No impacts.
Water Resources	Construction could disturb approximately 19 acres of land and add a net increase of approximately 13.0 acres of impervious surface. Mandatory erosion and sediment control and stormwater management plans, and National Pollutant Discharge Elimination System (NPDES) permit would ensure impacts to ground and surface water are not significant. No direct or indirect impacts to wetlands or floodplains would occur. This alternative represents minimal foreseeable effects over coastal uses or resources in the State of Maryland.	No impacts.
Biological Resources	Minor impacts to vegetation and wildlife would occur from conversion of approximately 13.0 acres of lawn area with landscape trees into impervious surfaces. Temporary noise from construction has the potential to impact local wildlife, particularly on nesting birds and whitetail deer in nearby areas. No impacts to threatened and endangered species are expected. Navy consultation with the USFWS and MDNR indicated that except for the occasional transient individuals, there are no records of State or Federally-listed rare, threatened, or endangered species within the project site.	No impacts.
Land Use	Actions are compatible with designated land use in the *North Severn Land Use Controls and Development Plan*. Existing cross country course has been re-routed; no impacts are expected.	No impacts.
Air Quality	Impacts are not significant. Air emissions analysis shows emissions would be well below *de minimis* levels for air conformity.	No impacts.

Resource	Preferred Alternative	No Action Alternative
Noise	Short-term minor impacts from noise during construction would occur. Noise during operations would be negligible; operations inside the new facilities would generate typical noise from a retail and outpatient operation, which would not be audible outside the building. Traffic could increase noise in the vicinity of the fire station and Navy Lodge; however this would not be during the nighttime hours when occupants sleep.	No impacts.
Infrastructure and Utilities	All utility connections are immediately adjacent to proposed facilities. Preferred Alternative would involve a minor increase in demand for electricity, natural gas, water supply, wastewater conveyance, and telecommunications; believed within capacity to provide without major upgrades. Therefore, impacts are not significant. Construction wastes generated would be small and addressed by recycling. Additional operations waste is also not expected to be significant. Stormwater management measures include bio-swales and infiltration basins to meet quantity and quality objectives.	No impacts.
Transportation	All key intersections would have acceptable level of service.	No impacts.
Cultural Resources	No historic properties are located in the APE, nor does the site meet NRHP criteria of significance. No effect on NRHP-eligible cultural resources is expected. The proposed buildings would be sufficiently distant and masked by topography and vegetation from the U.S. Naval Academy National Historic Landmark District and pose no impacts to the viewshed of the Historic District. Navy consultation with the MHT resulted in the MHT determination that the proposed facilities will have “no effect” on historic properties.	No impacts.
Human Health and Safety	Potential use of hazardous materials during construction and transport/disposal of other potentially hazardous waste and medical waste would avoid impacts by following all applicable guidance and regulations. Project elements would be sited to meet relevant surface danger zones ensuring no impacts to human health and safety.	No impacts.

Resource	Preferred Alternative	No Action Alternative
Socioeconomics	Minor positive effects to the economy would result from construction and additional jobs during construction and subsequent operations. No additional demands for public services are expected, as there would be a negligible in-migration to the Region of Influence (ROI). No adverse environmental justice effects are expected. Project provides quality of life benefits for military personnel.	Continuing adverse impacts to quality of life mission and non-pay benefits for service members and dependents.

APPENDIX M: INSPECTOR'S QUALIFICATIONS

APPENDIX N: MARYLAND DEPARTMENT OF THE ENVIRONMENT - TRANSFER OF AUTHORIZATION FORM

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Wasington Blvd ● Baltimore Maryland 21230
(410) 537-3323 ● 1-800-537-6101 ● http://www.mde.state.md.us

TRANSFER OF AUTHORIZATION (TRA) OF COVERAGE UNDER A GENERAL NPDES PERMIT

Wastewater Permits Program, Water Management Administration

I. CURRENT PERMITTEE

NAME

ADDRESS

*CITY*_____ *STATE* _____ *ZIP CODE*

PHONE NO.

II. FACILITY/SITE LOCATION INFORMATION

NAME

ADDRESS

*CITY*_____ *STATE* _____ *ZIP CODE*

EXISTING REGISTRATION NUMBER:

III. FUTURE PERMITTEE

NAME

ADDRESS

*CITY*_____ *STATE* _____ *ZIP CODE*

PHONE NO. _____ *DATE TRANSFER EFFECTIVE:*

IV. CERTIFICATION

"I certify under penalty of law that I am now responsible for this facility/site and will comply with the General Permit for Storm water discharges from Industrial Facilities and the Storm Water Pollution Prevention Plan prepared for this facility. I assume responsibility of the permit fees as of the transfer date cited above. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PRINT NAME _____ *DATE*

SIGNATURE