

**APPLICATION FORM
STORMWATER MANAGEMENT PERMIT**

To: The Rowley Conservation Commission, Town Hall Annex, Room #4, 39 Central Street or P. O. Box 24, Rowley, MA 01969

The undersigned hereby applies for a Stormwater Management Permit and herewith submits ten (10) copies of a completed application package for a Stormwater Management Permit (SMP) for review and approval.

A. General Information

Applicant's Name: Robert Nixon - Bitterroot LLC
Mailing Address: 357 North Street, Georgetown, MA 01833
Phone Number: (978) 302-5644
Email Address: rob.bitterroot60@yahoo.com

Property Owner's Name(s) Edward Moore, Trustee - 510 Newburyport Realty Trust
Mailing Address: 8 Doaks Lane, Marblehead, MA 01945
Phone Number: (781) 639-1113
Email Address:

Representative's Firm: Norse Environmental Services, Inc.
Contact Person: Maureen Herald
Mailing Address: 92 Middlesex Road, Suite 4, Tyngsboro, MA 01879
Phone Number: (978) 649-9932
Email: mail@norseenv.com

The project/activity involves property where owner's title to the land is derived under deed from E.S.R.D., dated 12-31-03 and recorded in the Essex south Registry of Deeds, Book 22248, Page 517 or Land Court Certificate of Title No. __, Registered in __ District, Book _____, Page _____.

The project is located on the parcel shown on Assessors Map 19 Parcel 8 Lot 4A.

Project street address 510 Newburyport Turnpike (Route 1).

General Project Description:

Osprey Landing is a (6)-lot residential subdivision consisting of a roadway, roadway crossing, wetland alteration, wetland replication, drainage, grading and associated utilities. The subdivision shall be serviced by municipal water and private sewage.

It is currently used as undeveloped wood parcel.

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The changes proposed are for a (6)-lot residential subdivision called Osprey Landing.

Planned start date: upon receipts of all permits Planned completion date: 2024

Total area to be disturbed? 164,159 s.f. square feet.

Total area of the site (lot): 33.4 acres

Will there be disturbance of any slope greater than 15%? Yes Yes No
If yes, give the area of the slope disturbance. _____ square feet.

Please list other narratives and plans (graphics) submitted with this application.

1. Summary Letter Notice of Intent (NOI) - Roadway, prepared by ASB Design Goup dated 9-27-22
2. Stormwater Management Plan for Osprey Landing, prepared by Norse Environmental Services, Inc, dated October 2022.
3. _____
4. _____
5. _____
6. _____

B. Certification

I, the undersigned, hereby certify that I have read and understand the requirements and conditions of the Town of Rowley Stormwater Management and Erosion Control Bylaw. I hereby certify under the penalties of perjury that the foregoing Stormwater Management Permit Application and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this application in a local newspaper at the expense of the applicant in accordance with the Town of Rowley Stormwater Management and Erosion Control Bylaw and accompanying Regulations as amended.

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of Stormwater Management and Erosion Control Bylaw. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

(sign and print name and date)

Owner Signature: Edward Moore Date: 10/8/22

Name: Edward Moore, Trustee (please print)

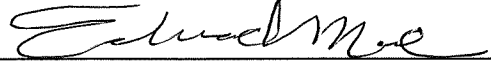
Applicant Signature: Robert Nixon Date: 10/9/22

Name : Robert Nixon (please print)

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C. Permission to Enter

I, Edward Moore, Trustee, hereby grant the Rowley Conservation Commission and its
(NAME OF PROPERTY OWNER)
officials permission to enter upon my property at 510 Newburyport Turnpike - (Route 1) to
(STREET ADDRESS AND ASSESSOR'S MAP, BLOCK, LOT)
review the filed Stormwater Management Permit Application and future site conditions for compliance
with the issued Stormwater Management Permit. The sole purpose of this document is to allow
Commissioners and their officials to perform their duties under the Town of Rowley Stormwater
Management and Erosion Control Bylaw and accompanying Regulations as amended.

Signed: 
(PROPERTY OWNER)

10/8/22
(DATE)

INSTRUCTIONS

An applicant for a stormwater management and erosion control permit review must file with the Conservation Commission a completed application package, in accordance with the requirements of the Stormwater Management and Erosion Control Bylaw and accompanying regulations. Timelines concerning the review process will not begin until the Conservation Commission has determined that the application is complete.

1. Ten (10) copies of a completed Application Form with signatures of all property owners and the signature of the applicant if different;
2. Ten (10) copies each of a list of abutters within 100 feet with accompanying parcel map, certified by the Assessors Office; (abutters at their mailing addresses shown on the most recent applicable tax list of the assessors, including owners of land directly opposite on any public or private street or way, and abutters to the abutters within 100 feet of the property line of the applicant, including any in another municipality or across a body of water);
3. Ten (10) copies each of the Erosion and Sediment Control Plan, Stormwater Management Plan, and Operation and Maintenance Plan as specified in PARTS II, III, and IV of these regulations adopted under the Bylaw, and a descriptive project narrative;
4. Payment of the application fee and professional review fee, which may include the creation of an escrow account in accordance with Section 7 B of the Bylaw;

Abutter Notification Form

Notification to Abutters

Under the Town of Rowley Stormwater Management and Erosion Control Bylaw

In accordance with the Town of Rowley Stormwater Management and Erosion Control Bylaw you are hereby notified of the following:

- A.** The name of the applicant is Bitterroot LLC.
- B.** The applicant has filed an application for a Stormwater Management Permit with the Rowley Conservation Commission seeking permission to conduct activities that result in a land disturbance of greater than 20,000 square feet or a land disturbance that will alter an area of 10,000 square feet or more on existing or proposed slopes steeper than 15%.
- C.** The address of the lot where the activity is proposed is 510 Newburyport Turnpike (Route 1).
Map 19 , Parcel 8 , Lot 4A.
Description of Project: Osprey Landing is a (6)-lot residential subdivision consisting of a roadway, roadway crossing, wetland alteration, wetland replication, drainage, grading and associated utilities.
The subdivision shall be serviced by municipal water and private sewage.
- D.** Copies of the application may be examined or obtained at the Rowley Conservation Commission office between the hours of 9:00 A.M. and 12:30 P.M. on Mon. Tues. Wed. Thur . For more information please call (978) 948-2330.
- E.** Copies of the application may also be examined or obtained from either the applicant, or the **applicant's representative**, by calling this telephone number (978) 649-9932 between the hours of 8:00 a.m. and 6:00 p.m. Monday-Thursday and until noontime on Friday.

Circle One: This is the applicant, **representative, or other (specify): _____*

**Information regarding the date, time, and place of the public hearing may be obtained from the Rowley Conservation Commission by calling this number (978) 948-2330.*

Note: Notice of the public hearing, including its date, time, and place, will be published at least seven (7) days in advance in a newspaper of general circulation in Rowley.

Note: Notice of the public hearing, including its date, time, and place, will be posted in the Town Hall not less than forty-eight (48) hours in advance.

CERTIFIED ABUTTERS' LIST

Parcel ID	Location	Owner Name/Address
019-008-04-A	510 NEWBURYPORT TNPK	TRS 510 NEWBURYPORT REALTY TRUST MOORE EDWARD T TRUSTEE 8 DOAKS LN MARBLEHEAD, MA 01945

A B U T T E R S
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019-001-A	HILLSIDE ST	TOWN OF ROWLEY CONSERVATION COMMISSION PO BOX 24 ROWLEY, MA 01969
019-001-B	HILLSIDE ST	TOWN OF ROWLEY CONSERVATION COMMISSION PO BOX 24 ROWLEY, MA 01969
019-003	331 WETHERSFIELD ST	ARTHURS ALEXANDRA 331 WETHERSFIELD ST ROWLEY, MA 01969
019-007	502 NEWBURYPORT TNPK	CIDER MILL HOLDINGS LLC 41 RAILROAD AVE ROWLEY, MA 01969
019-008-01-A	504 NEWBURYPORT TNPK	BELL VERNON J III PO BOX 93 ROWLEY, MA 01969
019-008-02-A	506 NEWBURYPORT TNPK	BELL VERNON J III PO BOX 93 ROWLEY, MA 01969
019-008-03-A	516 NEWBURYPORT TNPK	TOWN OF ROWLEY TAX TAKING PO BOX 347 ROWLEY, MA 01969
019-008-14	355 WETHERSFIELD ST	TOWN OF ROWLEY CONSERVATION COMMISSION PO BOX 24 ROWLEY, MA 01969
019-008-15	351 WETHERSFIELD ST	TOWN OF ROWLEY CONSERVATION COMMISSION PO BOX 24 ROWLEY, MA 01969

CERTIFIED ABUTTERS' LIST

Parcel ID	Location	Owner Name/Address
019-008-04-A	510 NEWBURYPORT TNPK	TRS 510 NEWBURYPORT REALTY TRUST MOORE EDWARD T TRUSTEE 8 DOAKS LN MARBLEHEAD, MA 01945

A B U T T E R S

019-008-16	347 WETHERSFIELD ST	TOWN OF ROWLEY TAX TAKING PO BOX 347 ROWLEY, MA 01969
019-008-17	325 WETHERSFIELD ST	BARAIOLO DOMINIC BARAIOLO JENNIFER 325 WETHERSFIELD ST ROWLEY, MA 01969
019-008-18	321 WETHERSFIELD ST	TRS SULLIVAN 2019 TRUST SULLIVAN NEIL F ET AL TRUSTEES 321 WETHERSFIELD ST ROWLEY, MA 01969
019-009	524 NEWBURYPORT TNPK	524 NEWBURYPORT TURNPIKE LLC 22 WHITMAN AVE MELROSE, MA 02176-5620
019-011-01	536 NEWBURYPORT TNPK	JOHNSON COURTNEY AMBER 536 NEWBURYPORT TNPK ROWLEY, MA 01969
022-037	515 NEWBURYPORT TNPK	TRS N & C REALTY TRUST LAGONAKIS NONDAS ET AL TRUSTEES 9 BRIDGE ST SALEM, MA 01970
023-043	511 NEWBURYPORT TNPK	N & C REALTY CORP C/O NONDAS LAGONAKIS 9 BRIDGE ST SALEM, MA 01970
023-044	501 NEWBURYPORT TNPK	WILLIAMS DONALD L 497 NEWBURYPORT TNPK ROWLEY, MA 01969

17 parcels listed

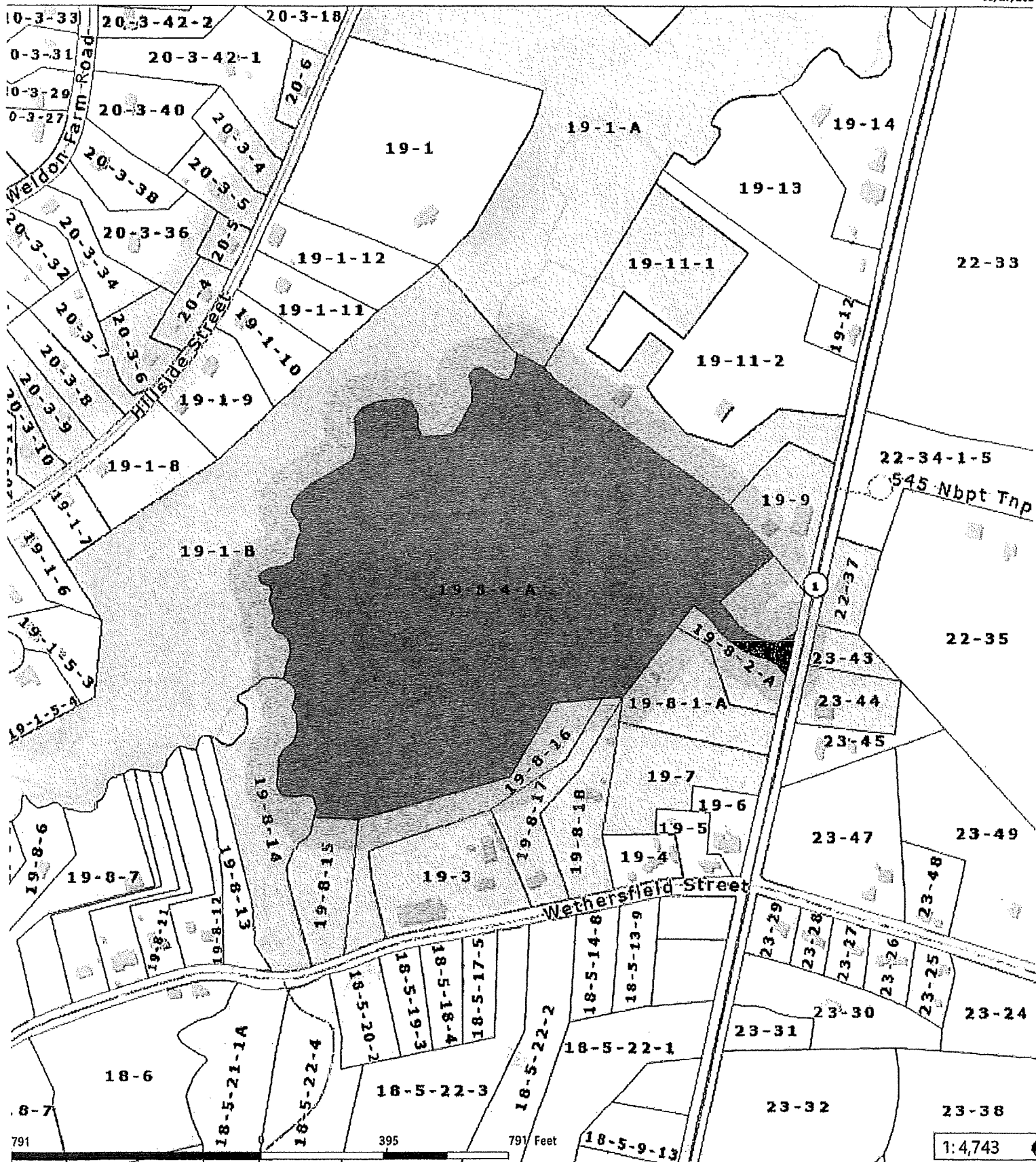


Sean W McFadden
Principal Assessor

KA

Town of Rowley

05/27/202



Data Sources: Produced by Merrimack Valley Planning Commission (MVPC) using data provided by the Town of Rowley & MassGIS/MassGIS.
 MVPC AND THE TOWN OF ROWLEY MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF ROWLEY AND MVPC DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION



- Municipal Boundary
- Parcels
- Parcel Dimensions
- Building Footprints
- Roads
- Hydrographic Features
- Interstate
- Major Road
- Local Road
- Stream

AFFIDAVIT OF SERVICE

Under the
Stormwater Management and Erosion Control Bylaw-Town of Rowley

I, Maureen Herald, on behalf of Bitterroot, LLC, hereby certify under the pains and penalties of perjury that on October 11, 2022, I gave notification to abutters in compliance with the Stormwater Management and Erosion Control Bylaw-Town of Rowley, in connection with the following matter: Osprey Landing a (6)-lot residential subdivision.

A Stormwater Management Permit Application has been filed under the Stormwater Management and Erosion Control Bylaw - Town of Rowley with the Rowley Conservation Commission on October 11, 2022, for the property located at 510 Newburyport Turnpike, Assessor's Map 19, Parcel 8, Lot 4A Rowley, Massachusetts.

The form of the notification and a list of the abutters to whom it was given, and their addresses, are attached to this Affidavit of Service.

Signature

Maureen Herald

Date

10-11-22

Printed Name: Maureen Herald

Title: V.P. Norse Environmental Services, Inc.



NORSE ENVIRONMENTAL SERVICES, INC.

92 Middlesex Road, Unit 4

Tyngsboro, MA 01879

TEL. (978) 649-9932 • FAX (978) 649-7582

Website: www.norseenvironmental.com

Stormwater Management Plan

For

Osprey Landing 510 Newburyport Turnpike – Route 1 Rowley, MA

Prepared By:

Norse Environmental Services, Inc.

92 Middlesex Road – Suite 4

Tyngsboro, MA 01879

Prepared For:

Bitterroot LLC

357 North Street

Georgetown, MA 01833

October 2022

Erosion and Sedimentation Control Plan

Project Description

The applicant is proposing a limited project roadway crossing, retaining walls, wetland alteration, wetland replication, drainage, grading and associated utilities for the development of (6)-lot subdivision known as Osprey Landing. The drainage systems or constructed wetlands shall intercept or treat the stormwater runoff from the roadway, driveways, roofs and landscape areas. Erosion controls will be set and maintained for the duration of the project.

Erosion Controls – Compostable Filter Sock

The erosion controls shall consist of stacked socks or filter socks filled with a filter media, often consisting of composted wood chips and fibers. The filler material is then stuffed into a netting or tube structure. The composted filler material has proven effective on sites where nutrient and pollutant removal are important considerations. The filter sock shall be a minimum of 9” or 12” in diameter.

The product should be installed along the slope contours and per the approved plan. Because they are much heavier than wattles, compost socks can be installed without staking over frozen ground, near tree roots or on hard surfaces. On non-frozen grounds the socks shall be staked. Adjoining socks shall overlap minimum of 18 inches and securely staked. Termination points should be extended uphill to minimize flow bypassing.

Construction Entrance

A minimum 30 ft. long by 14 ft. wide construction entrance shall be installed at the lots entrance. The construction entrance defines the entrance and exit to the site while minimizing vehicle tracking onto adjacent roadways. Construction entrances shall be graded so runoff does not enter adjacent roadways. The construction entrance shall consist of the installation of filter fabric, 2-3” coarse aggregate stone with a minimum thickness of 6” in depth.

Temporary Sedimentation Basin

Temporary sediment basins are used in areas of concentrated flow or near points of off-site discharge on active construction sites. Site topography must allow for runoff to be directed toward the basin. The basin shall be constructed before the beginning earth disturbing activities upslope. Basin depth shall be a minimum of (5) ft. deep, with a maximum depth of 10 ft. Inlets to the sediment basin must be designed to prevent excessive scouring.

Details of the erosion controls and construction entrance are on plan sheet C-5.

Stormwater Management Plan

During construction, the stormwater shall be intercepted and controlled through the installation of the above Erosion and Sedimentation Control Plan. This plan incorporates erosion controls,

compostable filter sock, construction entrance and sedimentation basin. These erosion controls shall be inspected weekly and after 0.5" rain event to ensure they are functioning properly. If the compostable filter sock is compromised, they should be fixed immediately. If the construction entrance is compromised replace or add stone. If sediment runs onto Route 1 or Newburyport Turnpike immediately repair the construction entrance, sweep the roadway, and remove the sediment.

The grass swales, catch basins, sediment forebays, constructed wetlands and site stabilization are the permanent management and treatment of stormwater.

Grass Swale

Grass swales are an appropriate stormwater management practice for most regions of North America. Swales are efficient at removing sediments, nutrients, and pollutants. They increase stormwater infiltration and add a visually aesthetic component to a site. Grass swales transports stormwater from impervious surfaces, slows velocity and allows infiltration. In northern climates without permafrost, design and maintenance requirements shall be modified with respect to a shorter growing season, management of meltwater and depth of frost in soil. Grass swales are the preferential solution or improvement to the traditional curb and gutter based storm sewer system. The linear structure of swales favors their use in the treatment of runoff from highways, residential roadways and common areas in residential subdivisions, along property boundaries and around parking lots.

Deep Sump Catch Basins

Deep sump catch basins, also known as oil and grease or hooded catch basins, are underground retention systems designed to remove trash, debris, and coarse sediment from stormwater runoff, and serve as temporary spill containment devices for floatables such as oils and greases.

Regular maintenance is essential. Deep sump catch basins remain effective at removing pollutants only if they are cleaned out frequently. Inspect or clean deep sump basins at least four times per year and at the end of the foliage and snow removal seasons. Sediments must also be removed four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin. If handling runoff from land uses with higher potential pollutant loads or discharging runoff near or to a critical area, more frequent cleaning may be necessary.

Constructed Wetlands

Constructed stormwater wetlands are stormwater wetland systems that maximize the removal of pollutants from stormwater runoff through wetland vegetation uptake, retention and settling. Constructed stormwater wetlands temporarily store runoff in shallow pools that support conditions suitable for the growth of wetland plants. Like extended dry detention basins and wet basins, constructed stormwater wetlands must be used with other BMPs, such as sediment forebays.

The constructed wetlands are important for storing and slowing stormwater runoff from nearby areas, especially areas with asphalt or concrete development. Stormwater runoff flows much faster from these surfaces than naturally occurring areas and needs to be diverted to ensure the runoff occurs at the desired rate. The amount of cleaning and treatment of the water is efficient for soluble pollutants and particulates. The wetlands remove nitrogen, phosphorus, oil and grease. These wetlands enhance the aesthetics of the site and provides excellent wildlife habitat.

Maintenance Considerations – Constructed Wetlands

Unlike conventional wet basin systems, that require large-scale sediment removal at infrequent intervals, constructed stormwater wetlands require small-scale maintenance at regular intervals to evaluate the health and composition of the plant species. Proponents must carefully observe the constructed stormwater wetland system over time. In the first three years after construction, inspect the constructed stormwater wetlands twice a year during both the growing and non-growing seasons. This requirement must be included in the Operation & Maintenance plan. During these inspections, record and map the following information:

- The types and distribution of the dominant wetland plants in the marsh;
- The presence and distribution of planted wetland species;
- The presence and distribution of invasive wetland species (invasives must be removed);
- Indications that other species are replacing the planted wetland species;
- Percentage of standing water that is unvegetated (excluding the deep water cells which are not suitable for emergent plant growth);
- The maximum elevation and the vegetative condition in this zone, if the design elevation of the normal pool is being maintained for wetlands with extended zones;
- Stability of the original depth zones and the micro-topographic features; and
- Accumulation of sediment in the forebay and micropool; and survival rate of plants (cells with dead plants must be replanted).

Maintenance of Sediment Forebay

Another important maintenance activity is regulating the sediment loading into the constructed stormwater wetland. All constructed stormwater wetlands are required to have a sediment forebay. Sediment accumulating in wetlands reduces water depths, changes the growing conditions for emergent plants, and alters the wetland plant community. Most sediment shall be trapped and removed by the forebay or other type of basin before it reaches the wetland. The sediment forebay shall be cleaned once a year.

Site Stabilization

Once the site construction is complete the exposed soils shall be stabilized with loam, seed or sod. Seeding begins the process of healthy vegetation establishment. Ultimately, the most effective erosion and control is achieved by a strong stand of vegetation. Permanent seeding provides a long-term stabilization of exposed soils.

Sod provides immediate vegetation and erosion control. Pinning or staking is often required in concentrated flow areas or slopes. Test the soil that will form the sod bed. Add fertilizer or soil amendments as needed. Proper soil bed preparation is extremely important. Sod should be placed over topsoil that is loosened to a 3" depth and evenly graded. After installation is complete, water thoroughly.

Operation and Maintenance Plan

Erosion Controls – Compostable Filter Sock

Inspect for undercutting and bypass of devices. Remove accumulated sediment after storm events. Many of these products are non-degradable. Particularly in areas where pollutants have been trapped, proper disposal is mandatory. As dictated by jobsite conditions, install additional erosion controls as needed.

Construction Entrance

Construction entrance should be inspected daily for effectiveness. Replace or add aggregate if it becomes clogged with sediment. Top dressing of additional rock will often be required. Conduct street sweeping operations as needed.

Temporary Sedimentation Basin

The temporary sedimentation basin shall be inspected weekly. Sediment shall be removed to retain a minimum (3) ft. depth of the treatment surface area.

Site Stabilization

Inspect the seed for acceptable germination rates and full vegetation establishment. Sod installations should be closely monitored during the month following the installation. Replace sod strips that are damaged, weed infested, dead or displaced.