

**STORMWATER OPERATION AND  
MAINTENANCE MANUAL  
THE RESERVE AT FAWN RUN  
CASE #2004-004P-PSUB  
DREAHOOK ROAD  
BLOCK 60, LOT 7  
BRANCBURG TOWNSHIP, SOMERSET COUNTY  
NEW JERSEY**

Prepared By: \_\_\_\_\_

  
Robert J. Templin,  
PE&LS 24GB02513600

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## **1. INTRODUCTION**

This maintenance manual was prepared for the proposed stormwater management features located in the above referenced project in accordance with the Residential Site Improvement Standards (N.J.A.C. 5:21), the New Jersey Stormwater Management Rules (N.J.A.C. 7:8) and the Branchburg Township Land Development Ordinance. The owner-developer during the construction of the project is Perimeter Properties One, LLC, P.O. Box 216, Pluckemin, N.J. 07978. The contact person is Greg Egnatuk at 908-421-3117. It is the responsibility of the owner-developer to properly train the homeowners association in the proper inspection and maintenance of the stormwater facilities in this manual. Upon completion of the project and implementation of the stormwater facilities the responsibility will go to "The Reserve at Fawn Run Homeowners Association" who shall be responsible for the inspection and corrective maintenance of the stormwater management measures. The contact person is \_\_\_\_\_, address \_\_\_\_\_ and contact phone number \_\_\_\_\_.

## **2. STORMWATER MANAGEMENT DEVICES REQUIRING MAINTENANCE**

The project requires the maintenance of all swales, the detention basin, the sand filter in the detention basin, the outlet structure, the gabion aprons, flared end sections at the basin and the scour hole. After completion of the project it will be the responsibility of The Reserve at Fawn Run Homeowners Association to maintain the above stormwater facilities. The maintenance work shall be performed by qualified personnel.

## **3. PREVENTIVE MAINTENANCE**

Preventive maintenance shall be performed on a regular basis by properly trained personnel and is intended to keep the facility operational and attractive at all times. Preventive maintenance shall include the following procedures:

1. Grass Cutting – Mowing and trimming to maintain a 3-6" height shall be performed at least monthly from April through October. Additional mowing and trimming shall be performed if necessary to prevent undesirable growth on the embankment and maintain the 3-6" height. Grass clippings shall be removed.

2. Removal and disposal of trash and debris – Immediately following any storm exceeding 1" of rainfall and at least once every month, all trash and debris shall be removed from the trash racks, spillway, concrete low flow channel and the impoundment area. Trash and debris shall be disposed of properly in accordance with State and Local regulations.

3. Sediment removal and disposal – Accumulated sediment must be removed before it threatens the operation of the facility. Sediment volume should be monitored periodically, and shall be removed, if necessary, at least 4 times annually. Sediment shall be disposed of properly in accordance with Soil Conservation District and N.J.D.E.P. Regulations. Sediment removal shall occur when the facilities are dry.

4. Grass maintenance – An annual program of fertilizing and soil conditioning shall be provided to maintain healthy grass growth and to ensure that no erosion, scour or unwanted tree or growth is occurring. Reseeding shall be performed as necessary to maintain soil stabilizing grass cover. Trees and shrubs shall be maintained in good health and if necessary, replaced if diseased or dead. Vegetative cover shall be maintained to 85 percent in the sand filter and to 95 percent in the grass swales.

5. The "establishing and restoring" vegetation and sand filter shall be inspected biweekly while the while the "established" vegetation shall be inspected twice annually (once during the growing season and once during the non growing season).

6. The structural components shall be inspected for cracking, subsidence, spalling, erosion and deterioration at least once annually.

7. The sand bed shall be inspected twice annually for permeability. The drain time shall be noted in the maintenance manual in order to be used to evaluate performance. If the sand filter fails to drain the water quality design storm within 72 hours replacement shall occur.

#### **4. CORRECTIVE MAINTENANCE**

Corrective maintenance shall be performed as soon as possible after a situation requiring attention is reported. Corrective maintenance includes filling of animal burrows, re-establishment of embankments where sloughing or settlement has occurred, repair of damage resulting from vandalism or natural causes, removal of debris and sediment which impairs the operation of the facility and correction of any defects in structures and/or the stormwater facilities which jeopardize safety or the operation of the facility.

Sand infiltration bed performance assessment- The surface sand layer within the detention basin should be evaluated following every storm exceeding one inch of rainfall. Standing water observed more than 72 hours after the end of the storm is an indication of reduced performance and corrective measures shall be taken. Inspections shall be made on a monthly basis and after every storm exceeding one inch of rainfall.

If significant increases or decreases in the normal drain time is observed the sand filter; then the bottom surface, subsoil and both the ground water and tailwater levels need to be evaluated and appropriate measures taken to comply with the design and proper functioning of the basin. Annual tilling by light equipment of the sand bed is recommended to break up clogged surfaces and assist in maintaining its infiltration capacity.

## **5. MAINTENANCE INSPECTION**

An inspection of the facility shall be performed at least every three months to determine the effectiveness of maintenance work and the condition of the facility. In addition, an inspection shall be made whenever a severe storm warning is issued to determine the readiness of the facility.

All structural components including the outlet structure, headwalls, swales, gabion aprons, spalling, erosion and deterioration four times a year and after each storm exceeding one inch of rainfall.

## **6. RECORDS**

The Appendix of this manual contains checklists and logs for the maintenance and inspection of the stormwater facilities to be completed by responsible personnel at the direction of the Homeowners Association. These shall be utilized each time an inspection and/or maintenance is performed, and shall be kept on file by the Homeowners Association. These records may be used to determine the effectiveness of the existing maintenance and inspection schedules, and as a guide to revising the schedules as appropriate.

**TABLE ONE**

**MAINTENANCE LOG**  
**FOR STORMWATER OPERATION AND**  
**MAINTENANCE PLAN AT**  
**THE RERVE AT FAWN RUN**

1. Grass Cutting                      Date Completed                      Comments

A. De-Weed Sand Bed		
B. Embankment		
C. Perimeter Areas		
D. Access areas		

2. Grass Maintenance      Date Completed                      Comments

A. Fertilizing		
B. Reseeding		
C. De-thatching		
D. Pest Control		
E. Aeration		

3. Tree/Shrub Care                      Date Completed                      Comments

A. Fertilizing		
B. Pruning		
C. Pest Control		
D. Replacement		

4. Trash/Debris Removal      Date Completed                      Comments

A. Easements		
B. Embankments		
C. Perimeter Areas		
D. Inlets/Outlets		
E. Trash Racks		
F. Rip-Rap Apron		
G. Sand Filter Bed		

5. Sediment Removal      Date Completed      Comments

A. Sand Filter		
B. Inlets/Outlets		
C. Rip-Rap Apron		

6. Corrective Maintenance      Date Completed      Comments

A. Erosion Repair		
B. Embankment Repair		
C. Inlet Repair		
D. Outlet Repair		
E. Sand Filter Repair		
F. Wall Repair		

\_\_\_\_\_  
Authorized Maintenance Person

\_\_\_\_\_  
Date

**TABLE TWO**

**INSPECTION LOG**  
**FOR**  
**STORMWATER MANAGEMENT FACILITIES**  
**FOOTHILL ESTATES HOMEOWNERS ASSOCIATION**

1. Embankments	Good	O.K.	Comments/Repair
A. Vegetation			
B. Retaining Wall			
C. Erosion			
D. Settlement			
E. Sloughing			
F. Seepage			
G. Aesthetics			
H. Trash/Debris			

2. Sand Filter	Good	O.K.	Comments/Repair
A. Vegetation			
B. Ponding			
C. Erosion			
D. Settlement			
E. Sloughing			
F. Seepage			
G. Aesthetics			
H. Trash/Debris			
I. Permeability			

3. Inlet Structure	Good	O.K.	Comments/Repair
A. General Condition			
B. Trash/Debris			
C. Settlement			
D. Aesthetics			

4. Outlet Structure	Good	O.K.	Comments/Repair
A. General Condition			
B. Trash/Debris			
C. Settlement			
D. Aesthetics			
E. Trash Rack			

5. Emergency Spillway	Good	O.K.	Comments/Repair
A. Vegetation			
B. Erosion			
C. Trash/Debris			
D. Aesthetics			

Good – No evidence of failure or need to repair.

O.K. – Should be monitored as it may need repair in the future.

Comments/Repair – Either a comment as to the status of the facility item or a statement of a necessary repair if Good and O.K. are not checked.

\_\_\_\_\_  
Authorized Maintenance Person

\_\_\_\_\_  
Date