

WAKE COUNTY, NC 163
LAURA M RIDDICK
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Stormwater Operations & Maintenance Manual
Holly Glen Recreation Site - Pool Expansion
Holly Springs, N.C.

February 10, 2011

THIS DOCUMENT REPLACES THE PREVIOUS RECORDED O&M MANUAL AS FOUND IN
BOOK 014237 PAGES 01439 - 01450

Owner: /Return to:
Holly Glen Homeowner's Association
Current President Cheri Lee
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Raleigh, NC 27624
Phone 919-878-8787
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www.talismanagementgroup.com

Prepared by:
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THIS DOCUMENT IS A TRUE AND ACCURATE COPY OF THE HOLLY GLEN STORMWATER BMP OPERATIONS AND MAINTENANCE MANUAL AS PREPARED BY THOMPSON AND ASSOCIATES FOR THE HOLLY GLEN RECREATION SITE OWNED BY THE HOLLY GLEN HOA

Randall L. Miller
RANDALL L. MILLER, PE – THOMPSON AND ASSOCIATES, PA
19793
2/10/11
DATE

I CERTIFY THAT RANDALL L. MILLER, PE OF THOMPSON AND ASSOCIATES, PA PERSONALLY APPEARED BEFORE THIS DAY, ACKNOWLEDGING TO ME THAT HE VOLUNTARILY SIGNED THE FOREGOING DOCUMENT FOR THE PURPOSE STATED THERIN AND CAPACITY INDICATED:

DATE: 2/10/2011
Theresa Lewis

PRINTED NAME: Theresa Lewis, NOTARY PUBLIC

MY COMMISSION EXPIRES: 5/20/2015



**Stormwater BMP
Operations & Maintenance
Manual**

**Holly Glen Recreation Site
Pool Expansion
Holly Springs, N.C.**

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Date Information Completed:	February 10, 2011
Date DRAFT Approval by the Town of Holly Springs:	February
Date of Approval by the Town of Holly Springs:	February

OPERATIONS AND MAINTENANCE MANUAL

PROJECT NAME: HOLLY GLEN RECREATION SITE – POOL EXPANSION

INFORMATION: The bio-retention BMP located at the west end of the northern parking lot of the Holly Glen Recreation site at 201 Hollymont Drive in Holly Springs, North Carolina will be constructed and maintained by the Holly Glen Homeowner’s Association. The Holly Glen HOA is managed by Talis Management. The contact information for Talis Management is as follows:

Holly Glen Homeowner’s Association
Current President Cheri Lee
C/O Talis Management
PO Box 99149
Raleigh, NC 27624
Phone 919-878-8787
Fax 919-376-8800
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The bio-retention area is located on property owned by the Holly Glen Homeowner’s Association as per DB 11972 PG 2116 as recorded in the Wake County Courthouse. A stormwater maintenance surety of \$9,000 (which is 150% of the replacement cost of the BMP) has been approved and given to the Town of Holly Springs.

This Operations and Maintenance Agreement may be assigned only upon the following conditions: N/A

Date Constructed: August 23, 2010
Location: 201 Hollymont Drive Holly Springs, NC 27540
Receiving Watercourse: UT Norris Branch - Cape Fear Basin

Contractor: Primo Design

Bio-retention facility with 6” CPP under drains, CPP clean outs, yard inlet, soil media, geo-textile fabric, mulched top surface, and landscape plantings.

PROJECT NAME: HOLLY GLEN RECREATION SITE – POOL EXPANSION

TYPE OF BMP: BIO-RETENTION AREA

This manual establishes procedures for maintenance and operation of the Stormwater Control Measures for Holly Glen Recreation Site- Pool Expansion in accordance with the Town of Holly Springs rules and regulations as set forth in the Town of Holly Springs Engineering Standards and Specifications Section 8 and the Town of Holly Springs Stormwater Ordinance.

I. MAINTENANCE

I.A. Location of Bio-retention Area

Bio-retention area is located at the west end of the northern parking area of the site in a private drainage easement.

I.B. Maintenance of Bio-retention Area

I.B.1 Trash and Debris

Trash acts as a barrier to stormwater treatment and attracts unwanted pests. The bio-retention area shall be kept clear of debris such as leaves, stones, large branches, loose bottles, cans, food containers and other forms of rubbish. Also, debris can gather immediately down slope of the outlet pipes causing localized damming. The pipes should be inspected after a 1” or more rainfall event over a 24-hour time period and cleared of debris immediately, but no less than four times a year.

I.B.2 Sedimentation and Dredging

Since the bio-retention area will be constructed after the entire site is stabilized with a stable vegetative ground cover and/or pavement, there will be little to no sedimentation. However, the bio-retention area should be inspected after a 1” or more rainfall event over a 24-hour time period and any sediment accumulation shall be removed to maintain proper function. In addition, any left over sedimentation in outlet pipes that was not flushed out must be swept from the pipe. The removed material shall be hauled offsite to a suitable landfill site or mounded somewhere on site and stabilized with a ground cover sufficient to restrain erosion. The yard inlets can be accessed manually in order to flush out the entire pipe.

I.B.3 Maintenance Schedule

- After area is stabilized, inspections should be made quarterly. Often simple visual inspection is adequate.
- Area to be inspected after the 1” or more storm event over a 24 hour time period.
- At least annually pipes should be flushed out.
- At least annually pipes should be checked for cracks and corrosion.
- Maintain and add mulch such that there is a 2”-4” covering at all times.

II. Operation

II.A Record Keeping

The Town of Holly Springs shall be provided the written inspection reports as specified in this manual for each year ending December 31st by January 15th of the following year. A Professional engineer shall certify the reports. The Town of Holly Springs Engineering Department shall be notified as soon as any deficiencies in the detention structure are recorded. The Town shall be notified of the proposed methods to bring the structure into conformance and furthermore, the Town shall approve of any proposed work to be completed on any part of the structure prior to any work being started. After work has been completed the Town shall inspect and approve the work before it shall be considered complete. After the Town approves the work an as-built drawing shall be completed and provided to the Town.

Operation and records of the bio-retention area shall include recording of the following:

- Annual & Quarterly Inspection Reports: A collection of written inspection reports must be kept on record by Holly Glen Homeowners’ Association. Inspections should be conducted at minimum quarterly and certified by a Professional Engineer annually. Annual inspections are to be performed by a qualified registered North Carolina Professional Engineer. Copies of the annual inspection report must be given to the Town of Holly Springs Engineering Stormwater Section. Attached as Exhibit A (Holly Glen Recreation Site – Pool Expansion Inspection, Operations & Maintenance Log for Bio-retention Area) is the annual inspection report form. Attached, as Exhibit B is a copy of the Certification Statement that must be submitted with the annual report to the Town of Holly Springs Engineering Stormwater Section. The first annual inspection and certification must be completed within one year from the date that the as-built and initial certification for the bio-retention area was first approved by the Town of Holly Springs and each year thereafter on the anniversary date of said approval.
- Observations: All observations must be recorded. Where periodic inspections are performed following the 1” or more rainfall event over a 24-hour time period these inspections must be written down and kept on record by the Homeowners Association. The Homeowners Association must also keep written records of

maintenance and/or repairs on file. See attached exhibit A for the maintenance log forms.

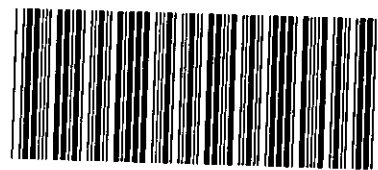
- Maintenance: Written records of maintenance and/or repair shall be recorded on the inspection, operation and maintenance forms attached hereto as Exhibit A.
- Other Operational Procedures: The owner shall maintain a complete and up-to-date set of plans (as-built drawings) and all changes made to the bio-retention area over time shall be recorded on the as-builts. Mylar and digital as-builts shall be provided to the Town each time they are updated. Other operational procedures shall include the following:
 - After area is stabilized, inspections should be made quarterly. Often simple visual inspection is adequate.
 - Area to be inspected after 1" or more storm event over a 24 hour time period.
 - At least annually pipes should be flushed out.

II.B SEDIMENTATION AND DREDGING

Sedimentation from established areas tributary to the BMP may eventually result in the reduction of the storage volume and eventually will have to be removed. The frequency of this sediment removal can be reduced ensuring that the site areas around the structure be stabilized with a vegetated ground cover such that it restrains erosion. This would include a periodic application of fertilizer and other treatments necessary to promote a stabile ground cover and minimize sedimentation to the BMP. The maintenance on the BMP requires that the bio-retention area should be inspected after a 1" or more rainfall event over a 24-hour time period and any sediment accumulation shall be removed to maintain proper function. In addition, any left over sedimentation in outlet pipes that was not flushed out must be swept from the pipe. The removed material shall be hauled offsite to a suitable landfill site or mounded somewhere on site and stabilized with a ground cover sufficient to restrain erosion. The yard inlets can be accessed manually in order to flush out the sediment.

III. INSPECTION, OPERATION & MAINTENANCE LOGS

See attached Exhibits A and B for the required Inspection form and Maintenance Logs for this bio-retention BMP. As per Town of Holly Springs an annual inspection and certification of the BMP measures (bio-retention area) is required and must be performed by a qualified registered Professional Engineer. The report must be filed with the Town of Holly Springs Engineering Department. Any deficiencies noted in the inspection report shall be corrected. See Attachment B. The first annual inspection and certification must be completed within one year from the date that the as-built and initial certification for the bio-retention area was first approved by the Town of Holly Springs and each year thereafter on the anniversary date of said approval.



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Yellow probate sheet is a vital part of your recorded document.
Please retain with original document and submit for rerecording.



Wake County Register of Deeds
Laura M. Riddick
Register of Deeds

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This Document
_____ New Time Stamp
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7
8