

Attachment 1

Manufactured Treatment Device (MTD) Registration

- 1. Manufactured Treatment Device Name:** [Downstream Defender®](#)
- 2. Company Name:** [Hydro International](#)
Mailing Address: [94 Hutchins Drive](#)
City: [Portland](#)
State: [Maine](#) Zip: [04102](#)
- 3. Contact Name** (to whom questions should be addressed): [Lisa Lemont, CPSWQ](#)
Mailing Address: [94 Hutchins Drive](#)
City: [Portland](#)
State: [Maine](#) Zip: [04102](#)
Phone number: [207 756 6200](#)
Fax number: [207 756 6212](#)
E-mail address: llemont@hydro-int.com
Web address: www.hydro-int.com
- 4. Technology**
Specific size/capacity of MTD assessed (include units):

Table 1 - Available Downstream Defender® Model Sizes

DOWNSTREAM DEFENDER MODEL SIZE	4-FT	6-FT	8-FT	10-FT	12-FT
80% TSS FLOW RATE	1.56 cfs	4.30 cfs	8.82 cfs	15.42 cfs	24.32 cfs
PEAK RECOMMENDED ONLINE FLOW RATE	3.0 cfs	8.0 cfs	15.0 cfs	25.0 cfs	38.0 cfs

Range of drainage areas served by MTD (acres):

The Downstream Defender treatment performance is dependent upon flow rate. Therefore, when sized appropriately there is no upper limit on the drainage area served by the Downstream Defender as long as the water quality runoff rate from the drainage area is within the 80% TSS Flow Rate shown in the table above.

Include sizing chart or describe sizing criteria:

The Downstream Defender is a vortex separator that operates on the combined principles of Stokes Law and Centrifugal Force (refer to the enclosed [HX Guide to the Downstream Defender](#) technical brochure for a more in-depth explanation).

Because the viscosity of stormwater runoff is effectively constant, sizing criteria is primarily based on settling velocity as determined by the Water Quality Flow Rate and Particle Size and Particle Density.

In real world applications, sizing criteria is also influenced by drainage pipe size. For example, if a 4-ft Downstream Defender is a suitable model for a site with a water quality design flow rate of 1.1 cfs, a 6-ft Downstream Defender may need to be used if the project requires the drainage

pipe to be larger than the 4-ft model’s maximum pipe size of 12 inches. Refer to Table 2 below for maximum pipe sizes for each Downstream Defender model size.

Table 2 – Downstream Defender® Models and Maximum Pipe Sizes

DOWNSTREAM DEFENDER MODEL SIZE	4-FT	6-FT	8-FT	10-FT	12-FT
80% TSS FLOW RATE (D50 = 106 MICRON)	1.56 cfs	4.30 cfs	8.82 cfs	15.42 cfs	24.32 cfs
PEAK RECOMMENDED ONLINE FLOW RATE	3.0 cfs	8.0 cfs	15.0 cfs	25.0 cfs	38.0 cfs
MAX. ONLINE INLET PIPE SIZE	12 in	18 in	24 in	30 in	36 in

Intended application: on-line or offline:

Both. The Downstream Defender has been designed specifically to prevent scour and washout of previously captured pollutants. Because the Downstream Defender has been independently tested for washout, it is one of the few hydrodynamic separators **approved for Online Use** by the New Jersey Department of Environmental Protection.

More information about how the Downstream Defender design has been proven to prevent washout is included on pages 12 through 15 of the enclosed **HX Guide to the Downstream Defender** technical brochure.

Media used (if applicable): N/A

5. Warranty Information (describe, or provide web address):

Hydro International warrants all of its products to be free from defects in materials and workmanship; and will replace, repair, or reimburse at its discretion any part or parts which, after Hydro’s examination, Hydro shall have determined to have failed under normal use and service by the original user within two years following initial installation. Such repair or replacement shall be free of charge for all items except for (i) those items that are consumable and normally replaced during maintenance, (ii) labor costs incurred by Hydro to obtain access to the part or unit for repair or replacement, (iii) any costs to repair or replace any surface treatment / cover after repair or replacement or (iv) other charges that Hydro may incur incident to such repair or replacement. Repair or replacement of such consumable items shall be subject to assessment of a pro-rated charge based upon Hydro International’s estimate of the percentage of normal service life realized by the item. Hydro International’s obligation under this Warranty is conditioned upon (a) its receiving prompt notice of claimed defects which shall in no event be later than thirty (30) days following expiration of the above warranty period and (b) owner of the product properly operating, inspecting, maintaining and caring for the product and is limited to repair or replacement as aforesaid. Purchaser agrees that the foregoing warranty is Purchaser’s sole remedy under any legal theory whether pleaded in contract, tort, or otherwise.

6. Treatment Type

Hydrodynamic Structure

Filtering Structure

- Manufactured Bioretention System
Provide Infiltration Rate (in/hr):
- Other (describe):

7. Water Quality Treatment Mechanisms (check all that apply)

X Sedimentation/settling

- Infiltration
- Filtration with media
- Adsorption/cation exchange
- Chelating/precipitation
- Chemical treatment
- Biological uptake
- Other (describe):

8. Performance Testing and Certification (check all that apply):

Performance Claim (include removal efficiencies for treated pollutants, flow criteria, drainage area):

- The Downstream Defender will remove at least 20% Total Phosphorus when sized to capture 80% of Total Suspended Solids with a particle size of 106 micron from stormwater runoff:

Table 3 - Downstream Defender® Treatment Flow Rates

DOWNSTREAM DEFENDER MODEL SIZE	4-FT	6-FT	8-FT	10-FT	12-FT
80% TSS FLOW RATE (D50=106 MICRON)	1.56 cfs	4.30 cfs	8.82 cfs	15.42 cfs	24.32 cfs
PEAK RECOMMENDED ONLINE FLOW RATE	3.0 cfs	8.0 cfs	15.0 cfs	25.0 cfs	38.0 cfs

Specific size/Capacity of MTD assessed:

A 4-ft Downstream Defender model has been tested numerous times. Three of these independent reports are enclosed with this submission:

- 1) 4-ft Downstream Defender laboratory testing for TARP Tier I Certification (also known as Interim Certification) for use as a 50% TSS Stormwater Treatment Device by NJDEP
- 2) 4-ft Downstream Defender laboratory testing for approval to be used as a 60% TSS Stormwater Treatment Device by Maine Department of Environmental Protection
- 3) A 4-ft Downstream Defender model was also tested in 2002 at a field installation along the East Seneca Turnpike as part of the Onondaga Lake nonpoint Source Environmental Benefit Project. The Downstream Defender was evaluated primarily for TSS but it was also evaluated for Total Phosphorus removal. This report is included with the submission simply because it was the most recent instance of the Downstream Defender being field monitored for TP removal. The monitoring program, however, was conducted in the infancy of emerging MTD field testing protocols and therefore the data collected and presented in the report does not offer the useful level of detail that present day regulatory reviewers would find especially helpful.

Has the MTD been "approved" by an established granting agency, e.g. New Jersey Department of Environmental Protection (NJDEP) , Washington State Department of Ecology, etc.

No

Yes;

For each approval, indicate (1) the granting agency, (2) use level if awarded (3) the protocol version under which performance testing occurred (if applicable), and (4) the date of award, and attach award letter.

The Downstream Defender has been reviewed and approved by more than 50 city, county and state regulators across the US and Canada. The list below contains examples of Downstream Defender approvals by some of the more well-known approval clearinghouses in the United States:

1) Granting Agency - NJCAT/NJDEP

- a. Use Level Awarded - TARP Tier I (Interim) Certification for use as a 50% TSS Removal Device
- b. Protocol Under Which Performance Testing Occurred – The Downstream Defender was tested under a modified version of the NJDEP Tier I Laboratory Protocol
- c. Date of the Award – the Downstream Defender was first awarded Interim Certification in 2005. The certification letter has since been updated to reflect additional testing conducted in 2011 to achieve Online Use Designation by NJDEP.

2) Granting Agency – Washington Department of Ecology

- a. Use Level Awarded – General Use Level Designation (GULD) for Pretreatment
- b. Protocol Under Which Performance Testing Occurred – The Downstream Defender was tested, reviewed and approved during a time window in 2004 – 2005 when separators were first disallowed for use as stand-alone devices and relegated for use as pretreatment devices only. During this brief window, Ecology did not require that the Downstream Defender be field tested according to the TAPE protocol. Instead, the Downstream Defender was tested according to a custom laboratory protocol approved by Ecology, in which the test feed consisted of 100% of material <75 micron and the target performance rate was 80% removal.
- c. Date of the Award – the GULD for pretreatment was first awarded in February 2005.

3) Granting Agency – City of Indianapolis, Indiana

- a. Use Level Awarded – 80% TSS Removal
- b. Protocol Under Which Performance Testing Occurred – The City of Indianapolis accepted the independent laboratory testing as per the Maine Department of Environmental Protection protocol, which used OK-110 grade silica sand as the test pollutant
- c. Date of the Award – the Downstream Defender was first approved by the City of Indianapolis in 2005.

Was an established testing protocol followed?

No.

- a. The field testing in the Onondaga Lake watershed was independently conducted in 2002 when stormwater/phosphorus testing protocols were still emerging. Therefore an “established” protocol was not able to be followed.
- b. The Downstream Defender was tested for NJDEP Interim/Laboratory Certification before the first NJDEP lab protocol was developed. Therefore, the protocol followed deviates from the subsequently developed NJDEP laboratory protocol in a number of ways. Most significantly:
 - a. Hydro calculated %TSS captured via mass balance instead of calculating performance via influent/effluent grab samples. This was recognized to be a more conservative method of performance calculation.
 - b. Because Hydro International was using the more conservative mass balance method to calculate removal efficiency, a coarser grade of sediment was used that specified by the NJDEP protocol at the time.

(1) Provide name of testing protocol followed, (2) list any protocol deviations:

Yes

- a. The Downstream Defender was tested according to the Maine Department of Environmental Protection’s standard protocol for “OK-110 Sand SSC (TSS) Removal Confirmation”. During the testing, there were no deviations from the protocol.

Provide the information below and provide a performance report (attach report):

For lab tests:

- i. Summarize the specific settings for each test run (flow rates, run times, loading rates) and performance for each run:

ME DEP Testing: The 4-ft Downstream Defender, which was found to have an 80% TSS treatment flow rate of 1.56 cfs for this test sediment gradation, was tested at 4 different flow rates: 0.4 cfs, 0.9 cfs, 1.3 cfs, and 2.2 cfs. At least three paired influent and effluent samples were taken for three of the flow rates. The first influent sample was taken four residence times after dosing of the test feed started. The first effluent sample was taken one residence time after the first influent sample. All other influent and effluent sample pairs were subsequently collected at one minute intervals.

Table 4 – Downstream Defender® Performance Results for ME DEP Testing with OK-110 Sand

Test Run	1	2	3	4
Tested Flow Rate (cfs)	0.4 cfs	0.9 cfs	1.3 cfs	2.2 cfs
No. Paired Influent and Effluent Samples	5	5	6	3
Average Influent TSS Concentration (mg/L)	155.8	289.3	235.3	501.47
Average Effluent TSS Concentration (mg/L)	6.3	19.9	26.7	168.75
Average Percent Reduction %	96.0%	93.1%	89%	64.8%

NJDEP Testing: Based on the performance results presented in Table 5 below, the 4-ft Downstream Defender was certified for 50% removal at a water quality flow rate of 1.1 cfs. As shown in the enclosed test report, the test results show a weighted TSS removal efficiency of 70.15% at 1.1 cfs. However, NJDEP certified the device for only 50% removal in order to be conservative given that the Downstream Defender was tested with what was considered a “coarse” sediment having a mean particle size of 120 micron.

Table 5 – Downstream Defender® Performance Results for NJDEP Testing with F-95 Sand

RUN NO.	FLOW RATE (GPM)	RUN TIME (SEC)	FEED SAND MASS (LB)	SURFACE LOADING RATE (GPM/FT2)	VOLUMETRIC LOADING RATE (GPM/FT3)	SAND LOADING RATE (MG/L)	MASS CAPTURED IN SUMP (LB)	REMOVAL EFFICIENCY (%)
1	100	1369	4	7.96	3.98	210.1	3.918	97.95
2	200	821	6	15.92	7.96	262.7	5.583	93.05
3	400	527	8	31.83	15.92	272.9	4.221	52.76
4	500	541	8	39.79	19.89	212.7	3.304	41.30
5	600	488	10	47.75	23.87	245.6	3.625	36.52
6	800	606	12	63.66	31.83	178.0	3.382	28.18
7	900	399	14	71.62	35.81	280.3	3.588	25.63
8	1000	425	14	79.58	39.79	236.9	3.450	24.46

- ii. If a synthetic sediment product was used, include information about the particle size distribution of the test material:

ME DEP Testing: OK-110 grade silica sand from U.S. Silica was used as the test sediment. The gradation of OK-110 is shown in Table 6.

Table 6 – OK-110 Silica Sand Particle Size Gradation
OK-110 Particle Size Distribution

Micron	% Finer
212	99.8%
150	98.8%
125	83.8%
105	43.0%
88	18.0%
75	3.0%
53	0.0%

NJDEP Testing: F-95 grade silica sand from U.S. Silica was used as the test sediment. The gradation of F-95 is shown in Table 7.

Table 7 – F-95 Silica Sand Particle Size Gradation
F-95 PARTICLE SIZE DISTRIBUTION

SIEVE #	Particle Sizes (microns)	% Passing	% in range
10			
20	>850		
40	425-850	99.98	0.02
50	300-425	99.30	0.68
70	212-300	93.21	6.08
100	150-212	64.04	29.17
140	106-150	24.53	39.51
200	75-106	5.37	19.17
PAN	<75		5.37

If less than full-scale setup was tested, describe the ratio of that tested to the full-scale MTD:

A full scale commercially available 4-ft Downstream Defender model was used for both the ME DEP testing and the NJDEP testing.

For field tests:

- i. Provide the address, average annual rainfall and characterized rainfall pattern, and the average annual number of storms for the field-test location:

Monitoring Program Name: Onondaga Lake Nonpoint Source Environmental Benefit Project Field Monitoring Program

Downstream Defender installation address: 134 East Seneca Turnpike, Syracuse, NY

Characterized Rainfall Pattern: Syracuse, New York is a Type II rainfall distribution location with an average of 38.47 inches of rainfall per year.

Number of storms tested: 6

- ii. Provide the total contributing drainage area for the test site, percent of impervious area in the drainage area, and percentages of land uses within the drainage area (acres):

Drainage Area: 1.2 acres

Percent Impervious Area: Not specified by reporting agency, although assumed to be 100% due to the watershed area being paved roads, driveways and sidewalks.

Percentage Land Uses within Drainage Area: Not specified by reporting agency.

- iii. Describe pretreatment, bypass conditions, or other special circumstances at the

test site:

Pretreatment at 134 East Seneca Turnpike Site: None

Bypass Conditions: The Downstream Defender installation was “offline”, with an upstream weir set to divert excess flows directly over the weir wall. The effluent monitoring location was situated in the diversion structure downstream of the weir at the junction between the outlet pipe and the diversion manhole. Therefore during bypass conditions, although the grab samplers took care, the effluent samples contained a blended mixture of treated flow from the DD and untreated flow from the bypass weir. This occurred for three of the 6 storms.

Other special circumstances: As mentioned in a previous section, this report is included with the submission simply because it was the most recent instance of the Downstream Defender being field monitored for TP removal. The monitoring program took place long before standard MTD field monitoring protocols for TP were under widespread industry debate and discussion. It is thereby difficult to draw any useful conclusions about the performance of the Downstream Defender with respect to TP removal from the report.

- iv. Provide the number of storms monitored and describe the monitored storm events (amount of precipitation, duration, etc.):

Six storms were monitored. Samples were collected manually. Samples were taken over the 1 hour first flush flow.

Table 8 – Summary of storms sampled in Onondaga watershed monitoring program

STORM EVENT	STORM DATE	STORM DURATION (hr)	MAXIMUM RAINFALL INTENSITY (in/hr)	STORM VOLUME (gal)
1	24 July 2001	1	0.3	227,899
2	28 August 2001	2	0.75	95,757
3	13 September 2001	1	0.15	184,998
4	24 September 2001	7	1.6	7,965
5	14 December 2001	10	0.45	53,219
6	25 April 2002	5	0.6	167,802

- v. Describe whether or not monitoring examined seasonal variation in MTD performance:
It did not. It is specified in the report that the low Total Phosphorus loading was likely due to the monitoring being conducted in the summer as opposed to the fall when leaf litter loads are higher.

The reported association of Total Phosphorus with sump sediment was 210 mg TP per kilogram of sump sediment. Unfortunately, the reporting agency did not subdivide the sump sediment into different particle size ranges to see whether there was a higher association of TP with certain sediment size bands. The reported 210 TP mg/kg measurement is very low compared to what Hydro International has seen during our more recent field studies (on filtration products) and in published industry literature. We will discuss this further in this document in **Section 11 – Comments**.

- vi. If particle size distribution was determined for monitored runoff and/or sediment collected by the MTD, provide this information:

The particle size of the material in the Downstream Defender sump was evaluated (reported to range from 75 micron to 4750 micron). The d50 was greater than 500 micron. While the particle size distribution of the sump material is interesting, it is not particularly useful without a particle size distribution of the influent and effluent samples.

9. MTD History:

How long has this specific model/design been on the market?

The Downstream Defender has been on the market in the US since 1997. The first units were hand-fabricated. The rotationally molded units that are sold now have been available since 2001-2002.

List no more than three locations where the assessed model size(s) has/have been installed in Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:

- 1) Rappahannock High School, Warsaw, VA. Permitter Unknown. Lat/Long. Unknown.
- 2) Tabb Elementary School, Yorktown, VA. Permitter Unknown. Lat/Long. Unknown.
- 3) BMW of Sterling, Sterling, VA. Permitter Unknown. Lat/Long. Unknown.

List no more than three locations where the assessed model size(s) has/have been installed outside of Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:

- 1) Evergreen Park at Wildewood, city of California, Maryland. Permitter and Lat/Long. Unknown.
- 2) CVS #970 West Orange, West Orange, NJ. Permitted by NJDEP. Lat/Long Unknown.
- 3) Chehalis First Baptist Church, Chehalis, WA. Permitted by the Washington Department of Ecology. Lat/Long. Unknown.

10. Maintenance:

What is the generic inspection and maintenance plan/procedure? (attach necessary documents):

The generic inspection procedures include:

- Lifting the manhole lid(s) to inspect for visual damage and gauge floatable trash accumulation rate
- Measuring pollutant accumulation rate in the sediment storage sump using a Sludge-Judge® or similar sludge measuring device

The generic maintenance procedures include:

- Either vactoring out floatable trash or skimming out floatable trash with a skimming net and pole
- Vactoring sediment from the sump
- Disposing of removed pollutants as required per local ordinance

Refer to the enclosed Downstream Defender Operation & Maintenance Manual for additional details and step-by-step instructions.

An instructional inspection and maintenance video for the Downstream Defender can be viewed at <https://www.youtube.com/watch?v=WRCp05WxHu0>.

Is there a maintenance track record/history that can be documented?

No, no track record.

Yes, track record exists; (provide maintenance track record, location, and sizing of three to five MTDs installed in Virginia [preferred] or elsewhere):

NOTE: Unlike Hydro International's Up-Flo Filter stormwater treatment device, the Downstream Defender requires no spare or replacement parts to be purchased from Hydro International for maintenance. Hydro International currently does not offer maintenance contracts. Therefore, maintenance on Downstream Defender devices in Virginia is contracted by the owner to a local partner without involvement from Hydro International. For that reason, no track record of Downstream Defender maintenance in Virginia exists.

Recognizing that maintenance is an integral function of the MTD, provide the following: amount of runoff treated, the water quality of the runoff, and what is the expected maintenance frequency for this MTD in Virginia, per year?

For a typical commercial site with average stormwater runoff TSS concentrations ranging from 80 to 160 mg/L, Hydro International will recommend that Downstream Defender units are maintained once per year in Virginia.

Total life expectancy of MTD when properly operated in Virginia and, if relevant, life expectancy of media:

When installed and operated properly, the life expectancy of the Downstream Defender is in line with a 75-year design life due to suitability of precast concrete, rotationally molded PEX and stainless steel components for a stormwater drainage environment.

For media or amendments functioning based on cation exchange or adsorption, how long will the media last before breakthrough (indicator capacity is nearly reached) occurs?

N/A

For media or amendments functioning based on cation exchange or adsorption, how has the longevity of the media or amendments been quantified prior to breakthrough (attach necessary performance data or documents)?

N/A

Is the maintenance procedure and/or are materials/components proprietary?

Yes, proprietary

No, not proprietary

Maintenance complexity (check all that apply):

Confined space training required for maintenance

Liquid pumping and transportation

Specify method:

Vector truck removal of accumulated oil and standing water in sump; transportation to disposal location

Solids removal and disposal

Specify method:

Vector truck removal of sediment in sump; removal of floatable trash by either vector truck or by hand with skimming pole.

Other noteworthy maintenance parameter (describe):

11. Comments

Include any additional explanations or comments:

A study by leading stormwater researchers (Morquecho, et al., 2005) showed a strong association between the removal of very fine Total Suspended Solids (TSS) with the removal of a broad range of secondary constituents. These findings were confirmed and expanded in a 2005-2006 study conducted by the University of Alabama, in which Total Phosphorus was shown to be most highly associated with solids <75 micron (3580 mg TP per kg of solids) and 75 to 150 microns (1620 mg TP per kg of solids) (Pitt & Khambhammettu, 2006). The studies by Morquecho et al. (2005) and Pitt & Khambhammettu (2006) concluded that a reduction of particulate matter will lead to a reduction of Total Phosphorus.

The particle size bands studied by Pitt & Khambhammettu (Table 9) correlate closely with the cut points of OK-110 grade silica sand (shown previously in Table 6), a test material with which the Downstream Defender performance has been well characterized.

Table 9 – Reported associations of TP with various solids particle size bands (Pitt & Khambhammettu, 2006)

PARTICLE SIZE RANGE (MICRON)	CONCENTRATION OF TP (MG/KG)
< 75	3580
75 – 150	1620
150 – 250	511
250 – 425	315
425 – 850	496
850 - 2000	854
2000 – 4750	1400
> 4750	1700

The 4-ft Downstream Defender was shown to remove 80% of OK-110 grade material at a flow rate of 1.56 cfs. OK-110 has 98.8% of material between 212 and 53 microns, with only 3% of material below 75 microns. Conservatively assuming that it was the coarsest fraction of OK-110 that was removed by the Downstream Defender, it can be assumed that the Downstream Defender removed 100% of OK-110 material down to 90 microns. Table 10 shows an estimation of associated TP that the Downstream Defender would remove by virtue of removing 100% of OK-110 grade material down to 90 microns can be calculated given 1 kg of OK-110 material and 100% removal at 1.56 cfs down to 90 microns.

Table 10 – Calculation of TP removal by the Downstream Defender given 80% OK-110 Removal

PARTICLE SIZE RANGE (MICRON)	MASS TSS IN (KG)	MASS TSS CAPTURED (KG)	MASS OF TP IN (MG)	MASS OF TP CAPTURED (KG)
> 212	0	0	0	0
150 – 212	0.012	0.012	= 0.012 kg * 511mg/kg = 6.312	6.312 mg
90 – 150	0.788	0.788	= 0.788 kg * 1620 mg/kg = 1277 mg	1277 mg
75 – 90	0.17	0	= 0.17 kg * 1620 mg/kg = 275.4 mg	0 mg
< 75	0.03	0	= 0.03 kg * 3580 mg/kg = 107.4 mg	0 mg
TOTAL			1666 mg	1283 mg
TP REMOVAL EFFICIENCY				77%

Because a multitude of research has shown that large fraction of fine material (<75 micron) is present in stormwater runoff, Hydro International is not claiming that the Downstream Defender will remove 77% of TP from all stormwater runoff. However, we believe that the device’s demonstrated sediment removal performance, coupled with industry literature

showing the association of TP with various particle size ranges, supports the use of the Downstream Defender for 20% TP removal in Virginia.

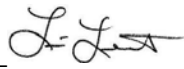
References:

1. Morquecho, R., R. Pitt, S. Clark. Pollutant Associations with Particulates in Stormwater. World Water & Environmental Resources Contress, ASCE/EWRI. Anchorage, Alaska. May 15 – 19, 2005. January 2005.
2. Pitt, R., & Khambhammettu, U. (2006). Field Verification Report for the Up-Flo™ Filter. Small Business Innovative Research, Phase 2 (SBIR2) Report. U.S. Environmental Protection Agency.

12. Certification

Signed by the company president or responsible officer of the organization:

“I certify that all information submitted is to the best of my knowledge and belief true, accurate, and complete.”

Signature:  _____

Name: Lisa Lemont, CPSWQ _____

Title: Business Development Manager _____

Date: August 25, 2014 _____

NOTE: All information submitted to the department will be made publically accessible to all interested parties. This MTD registration form will be posted on the Virginia Stormwater BMP Clearinghouse website.