

2015 Achievement Awards Virginia Association of Counties

APPLICATION FORM

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 1, 2015.** Please include this application form with electronic entry.

PROGRAM INFORMATION

Locality: HANOVER COUNTY

Program Title: POST CONSTRUCTION BMP - TRACKING AND MONITORING SYSTEM

Program Category: ENVIRONMENTAL

CONTACT INFORMATION

Name: W. R. HARDMAN II, P.E.

Title: DEPUTY DIRECTOR

Department: PUBLIC WORKS

Complete Mailing Address: P.O. Box 470, Hanover VA 23069

Telephone # 804-365-6181 Fax # 804-365-6233

E-mail: WENARDMAN@HANOVERCOUNTY.GOV

SIGNATURE OF COUNTY ADMINISTRATOR OR CHIEF ADMINISTRATIVE OFFICER

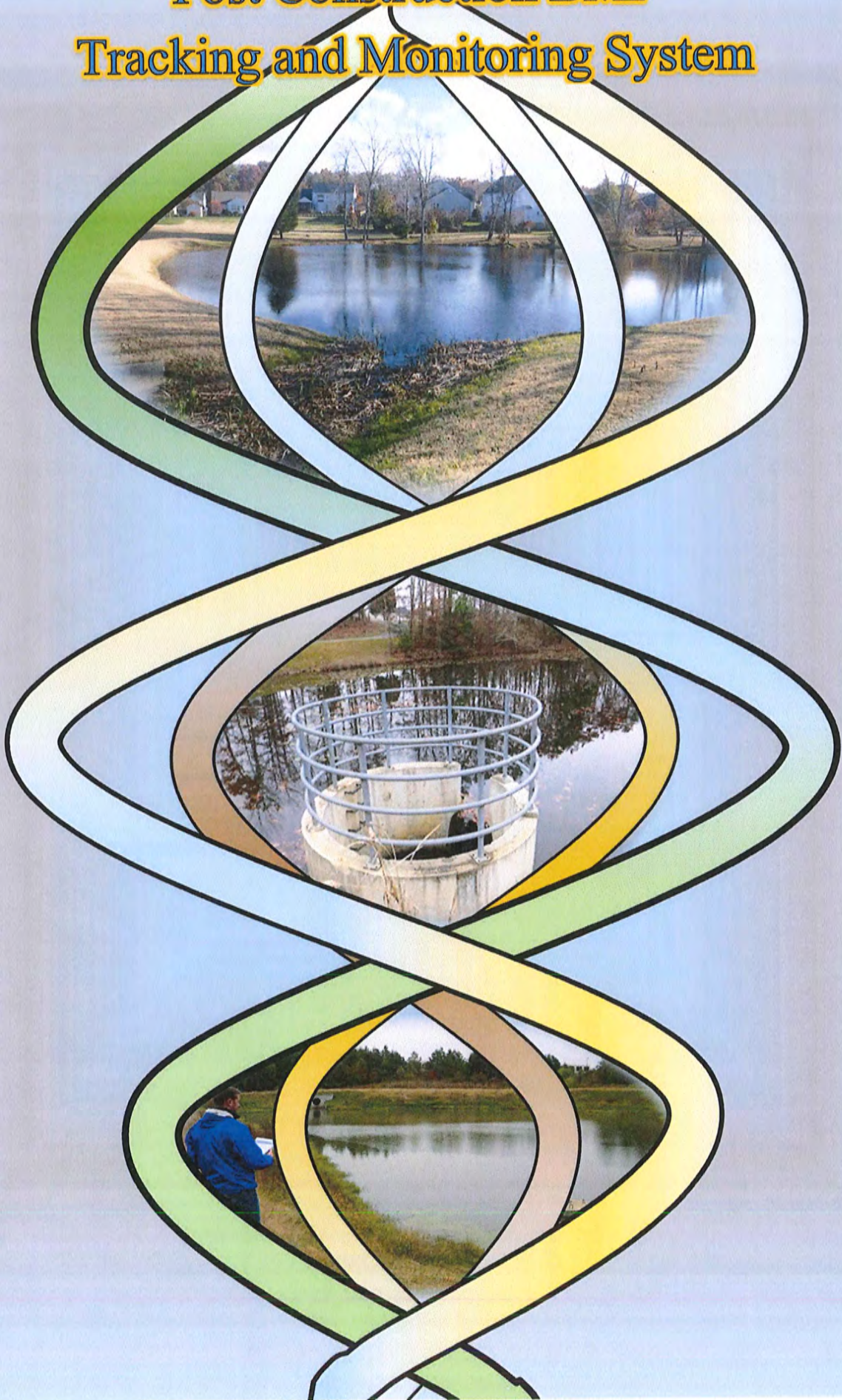
Name: Frank W. Harksen, Jr.

Title: Deputy County Administrator

Signature: [Handwritten Signature]

2015

Post Construction BMP
Tracking and Monitoring System



Hanover County

Post Construction BMP –Tracking and Monitoring System

Overview

The Hanover County Department of Public Works (Department) is committed to the preservation of water quality and to the minimization of impact of development on the environment. The Department is responsible for implementing a Stormwater Program which requires development to demonstrate that their stormwater runoff does not impact downstream properties. Design features known as Best Management Practices, or BMP's, are used to achieve this goal. In order for a BMP to be eligible for approval, it has to be implemented in accordance with the Virginia Stormwater Management Program (VSMP).

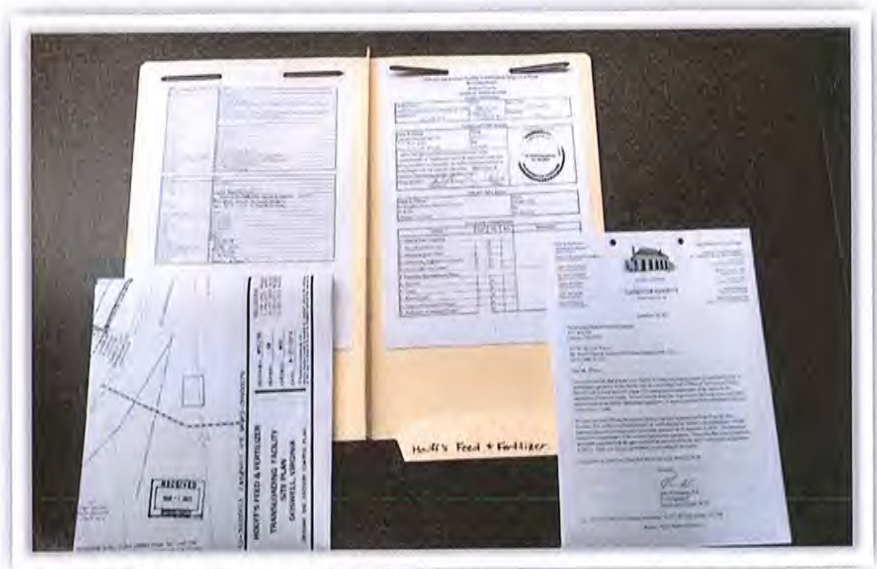
BMP's must be designed in accordance with the VSMP, however, they must also be properly constructed, inspected, and maintained to be effective. In order to ensure that this occurs, Hanover County requires that all BMP's have a recorded Maintenance Agreement which stipulates acceptance, inspection and maintenance requirements in accordance with the VSMP.

As part of the Stormwater Program, it is our responsibility to track the BMP's to ensure that the proper inspections and maintenance activities are occurring and provide follow up and enforcement actions when they are not. The Department has created and implemented a simple spreadsheet solution for tracking and enforcement requirements of the Stormwater Program. The approach avoids more sophisticated and expensive software solutions. The Virginia Department of Environmental Quality (DEQ) recognized the approach as a simple but an effective approach to accomplishing the regulatory requirement. (May 2015 DEQ/EPA Stormwater Training)

Implementation Challenge

Since the adoption of the Chesapeake Bay Preservation Act Ordinance and Erosion and Sediment Control Ordinance in the 90's, developments have had to meet stormwater discharge requirements for quantity and quality. When BMP's are installed, the County requires a recorded Maintenance Agreement to ensure perpetual long-term maintenance on these measures. The Maintenance Agreements are recorded by the owner of the property and run with the land over time. The agreements stipulate that inspections, certifications, and maintenance, if needed, be conducted on a prescribed schedule. These activities ensure that the BMP's are constructed properly and remain functional over time to provide the required treatment. The County began a more formal process of enforcement on maintenance agreements in 2005 in response to a state

and Environmental Protection Agency (EPA) audit of the County Municipal Storm Sewer System Permit (MS4). One of the challenges to creating a Post Construction BMP Monitoring and Tracking



system was to develop a mechanism that not only could be easily queried, sorted, and used for reporting, but also revised and modified easily once the initial set up occurred. The need for modification is driven by request for new and/or revised reporting information from the state regulators (DEQ)

BMP Tracking

The original monitoring and tracking system utilizes a basic Excel spreadsheet that list project name, location, maintenance agreement recordation information, BMP type, and whether the facility was a regulated dam. A separate BMP file was created for each project that had a maintenance agreement, which contains all pertinent plan, inspection, and maintenance data.

Basin ID (File Name or Regional Basin Designation)	Dam Class	Last Inspection Date	Next Inspection Due	Cert Status	Compliance Status	Comments	Status
Amerlist addition - 11552 Precast Rd. Ashland	N/A	17-Sep-14	ASAP	Current	In Compliance - Needs Repairs & Cert by AGS-needs repairs		Needs repairs
AMF Bowling - Bull Creek Rd.	N/A	8-Jun-12	8-Jun-17	Current	In Compliance - Needs Repairs & P.E. Cert-Resource International		AP
Arly's - Washington Hwy	N/A	8-Aug-14	8-Aug-19	Current	In Compliance - Needs Certificati P.E. Cert - Michael Moringo		AP
Ashcreek Section 4 (Morning Dew)	N/A	2-Sep-13	2-Sep-18	Current	In Compliance - Needs Certificati P.E. Cert - Lance Koth		AP
Ashcreek Section 5 (Brickarton)	N/A	2-Sep-13	2-Sep-18	Current	In Compliance - Needs Certificati P.E. Cert - Lance Koth		AP
Ashcreek Section 6,7,8 (Shawn's Grove)	N/A	2-Sep-13	2-Sep-18	Current	In Compliance - Needs Certificati P.E. Cert - Lance Koth		AP
Ashcreek Section 9 (Waldock)	N/A	6-Nov-13	6-Nov-18	Current	In Compliance - Needs Certificati P.E. Cert-Lance Koth		AP
Ashland Gardens & Nursery	N/A	14-Mar-07	14-Mar-14	Cert Due	Not In Compliance - Certs Past D, AP DPW		AP
Atlee Auto (future Marley Pointe)	N/A	24-Oct-11	24-Oct-16	-	EBS Bond Rel 10-26-11		15Y YEAR CERT DUE
Atlee Commerce Center Subdivision	N/A	29-Oct-13	29-Oct-18	Current	In Compliance - Needs Certificati P.E. Cert - Christopher Workman, P.E. - Koon		AP
Atlee Community Church - Pole Green & Verdi lane	N/A	7-Nov-13	7-Nov-18	Current	In Compliance - Needs Certificati P.E. Cert - Thomas Richeson		AP
Atlee Crescent Subdivision/Office	N/A	18-Aug-10	18-Aug-15	Current	In Compliance - Needs Certificati P.E. Cert - L. Swinford @ Zanino		AP
Atlee Ridge, Section A	N/A	10-Jun-09	10-Jun-14	Cert Due	Not In Compliance - Certs Past D, LS Cert - Paul Jalbert		AP
Atlee Station Self Storage - 9285 Cool Spring Rd	N/A	18-Feb-13	18-Feb-18	Current	In Compliance - Needs Certificati P.E. Cert - Mike Noggle		AP
Atlee Station Village	N/A	15-May-12	15-May-17	Current	In Compliance - Needs Certificati P.E. Cert - E.D. Lewis & Assoc.		AP
Battlefield Commons, Section BA	N/A	30-Jan-08	30-Jan-13	Cert Due	Not In Compliance - Needs Repal No Response		Needs repairs
Battlefield Green, Section A7-Townhomes-Thicket Run Way	N/A	22-Oct-13	22-Oct-18	Current	In Compliance - Needs Certificati P.E. Cert - Erik Allen		AP
Battlefield Green, Section B3 - Gettysburg Ln.	N/A	22-Oct-13	22-Oct-18	Current	In Compliance - Needs Certificati P.E. Cert - Erik Allen		AP
Battlefield Green, Section B6 - Dugout Terrace	N/A	22-Oct-13	22-Oct-18	Current	In Compliance - Needs Certificati P.E. Cert - Erik Allen		AP
Bear Island Industrial Land Fill Cell#3 basin	N/A	9-Feb-12	9-Feb-17	Current	In Compliance - Needs Certificati P.E. Cert - W. Hase Draper Aden		AP - (det to pre for 2, 10 & 100 y)
Bear Island Industrial Landfill Cell 4 Construction	-	30-Apr-12	30-Apr-17	Current	In Compliance - Needs Certificati P.E. Cert - W. Hase Draper Aden		AP
Bear Island Paper WB - Natural Pond	N/A	26-Oct-12	26-Oct-17	Current	In Compliance - Needs Certificati P.E. Cert - Draper Aden		AP
Bear Island Paper WB - Woodyard Pond	N/A	29-Oct-12	29-Oct-17	Current	In Compliance - Needs Certificati P.E. Cert - Draper Aden		AP
Beaufut Bodies, Inc. (JTB Properties, Inc.)	N/A	12-Jul-13	12-Jul-18	Current	In Compliance - Needs Certificati P.E. Cert-Resource International - Scott Cour		AP
Beulahem Presbyterian Church	N/A	16-May-14	16-May-19	Current	In Compliance - Needs Certificati P.E. Cert - Hulther		AP
Blue & Gray Self Storage - Sliding Hill	N/A	25-Jul-13	25-Jul-18	Current	In Compliance - Needs Certificati P.E. Cert - Joe Faudate		AP
Blue and Gray Self Storage Mech Tpk	N/A	13-Jun-13	13-Jun-18	Current	In Compliance - Needs Certificati P.E. Cert - Jordan Engr.		AP
Burkwood Recreation Association	N/A	29-Jan-08	29-Jan-13	Cert Due	Not In Compliance - Needs Repal Owner hired Engineer		Needs repairs / P.E. cert.
Car Pool, Inc.-Mechanicsville Turnpike	N/A	21-Jun-11	21-Jun-16	Current	In Compliance - Needs Certificati P.E. Cert -Youngblood Tyler		AP
ChemTreat, Inc. (1999 addition) - 4301 Dominion Blvd, Glen Allen	N/A	28-Oct-14	28-Oct-19	Current	In Compliance - Needs Certificati P.E. Cert - S Courtney-Resource Intl.		AP
Cherrydale Office Park	N/A	10-Jan-13	10-Jan-18	Current	In Compliance - Needs Repairs & LS Cert - Paul Jalbert		Needs repairs / P.E. cert.
Christian Village	N/A	10-Aug-12	12-Aug-17	Current	In Compliance - Needs Certificati P.E. Cert - Richard Bald		AP
Church of the Redeemer - Meadowbridge	N/A	3-Aug-12	5-Aug-17	Current	In Compliance - Needs Certificati P.E. Cert - AGS-Noggle		AP
Cold Harbor Church of Christ	N/A	28-Mar-12	28-Mar-17	Current	In Compliance - Needs Certificati P.E. Cert - Charles R. Hankins - Hulther		AP
Coal Spring Baptist Church addition	N/A	29-Feb-12	28-Feb-17	Current	In Compliance - Needs Certificati 03-01-12 letter- being removed		AP
Coal Spring Forest Section 4	N/A	12-Mar-14	12-Mar-19	Current	In Compliance - Needs Certificati P.E. Cert - Balzer		AP
Creighton Commercial	N/A	11-Mar-08	11-Mar-13	Cert Due	Not In Compliance - Certs Past D, AP DPW		AP
Crown Hill Estates, Section II	N/A	15-Feb-13	15-Feb-18	Current	In Compliance - Needs Certificati P.E. Cert - T. Andy Lamm		AP
CVS Pharmacy	N/A	15-Feb-13	15-Feb-18	Current	In Compliance - Needs Certificati P.E. Cert - T. Andy Lamm		AP
CVS Pharmacy	N/A	3-Jun-08	3-Jun-13	Cert Due	Not In Compliance - Needs Repal Owner ph call @ no HOA		Needs repairs / P.E. cert.
Cypressstee, Section II	N/A	20-Aug-13	20-Aug-18	Current	In Compliance - Needs Certificati P.E. Cert - Scott Courtney		AP
Dominion Womens Medical	N/A	15-Feb-12	15-Feb-17	Current	In Compliance - Needs Certificati Needs Cert. for repairs Basins 1&2		Needs Cert for repairs
Doswell Bark - Coastal Supply	N/A	15-Feb-12	15-Feb-17	Current	In Compliance - Needs Certificati Needs Cert. for basins, 5,5,6 & 4 Not repaired		Needs repairs / P.E. Cert.
Doswell Bark Expansion - Coastal Supply	N/A	1-May-12	1-May-17	Current	In Compliance - Needs Repairs & P.E. Cert - David Wegner		AP
Doswell Limited Partnership - Pond 1	N/A	1-May-12	1-May-17	Current	In Compliance - Needs Repairs & P.E. Cert - David Wegner		AP
Doswell Limited Partnership - Pond 2	N/A	17-Feb-13	17-Feb-18	Current	In Compliance - Needs Certificati P.E. Cert - Edward Bop 1 Koth		AP

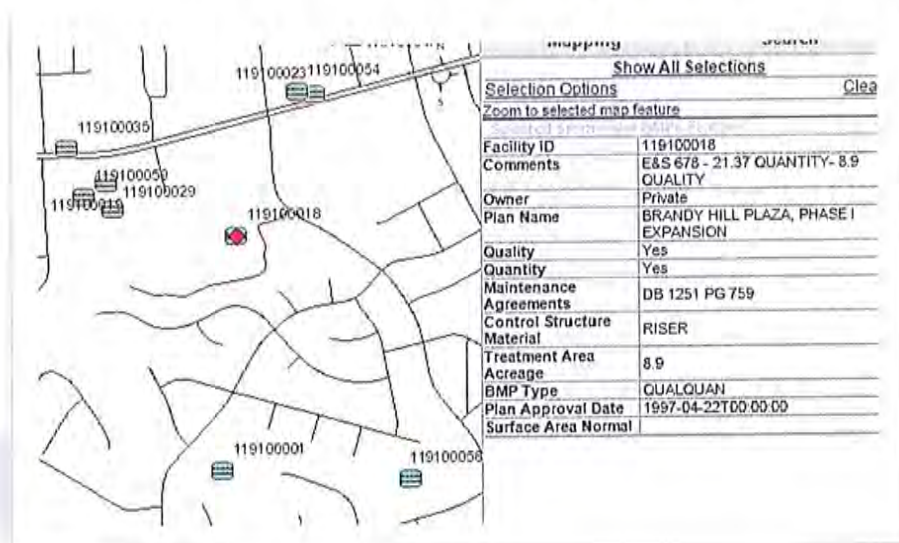
The Department considered implementing a database, however due to the ever changing landscape of the BMP's and required reporting, staff decided that the database may be to complex to modify and manipulate. Because staff was proficient with Excel, the Department decided to utilize a spreadsheet since it was a program with broad applicability and could be easily edited to adapt to changes.

The original spreadsheet contained 15 columns of information; however, it has been expanded over time to currently include 36 columns of data. These changes were necessary to respond to requests from DEQ to include categorization of BMP's, quantifying BMP efficiencies, tracking BMP pollutant removal, and impervious area treatment. The current Post Construction BMP Monitoring and Tracking system spreadsheet inventory includes 179 privately owned BMP's, 22 County owned and operated BMP's, as well as 25 Regional Stormwater Program facilities, 8 of which are

regulated
dams.

Geographic

location is
recorded with
each BMP
which allows



integration with the County Geographic Information System (GIS) for mapping and summary reporting.

Financing and Staffing

Implementation of this BMP tracking, maintenance and enforcement program has evolved over time using existing staff resources. Currently, approximately 0.25 FTE is dedicated to the effort. There have been no additional financial commitments for the operation of this program. The in-house approach has enabled flexibility to address changing demands, meet regulatory requirements and avoided some potential pitfalls of consultant developed programs.

Conclusion

The goal of the Post Construction BMP Program –Tracking and Monitoring System is to ensure that BMP's are being maintained as intended so that they continue to provide the required level of treatment over time. Using a simplified approach and existing software the Department has created a tracking spreadsheet that documents the attributes of the individual BMP's and easily helps determine and report on the compliance status of individual BMPs. A monthly dashboard reports the overall compliance of the Program. In addition the information helps determine inspection and follow-up needs necessary for the Department to maintain regulatory compliance. This approach has enabled easy adaptation to changing BMP terminology/efficiency based on performance or technology based design criteria and it has facilitated reporting to DEQ concerning current and historical BMP's for the County. The queryable data has been used to

DASHBOARD FY 2015			
PRIVATE BMP PROGRAM			
	#	%	
Current Number of BMP's	179	100.0	
# of BMP's IN Compliance	152	84.9	123 Current
			29 Need Repairs
# of BMP's NOT in Compliance	27	15.1	19 Not Current
			8 Need Repairs
County Owned/REGIONAL BMP PROGRAM			
	#	%	
Current Number of BMP's	47	100.0	
# of BMP's IN Compliance	47	100.0	26 Current
			21 Need Repairs
# of BMP's NOT in Compliance	0	0.0	0 Not Current
			0 Need Repairs

sort BMP's based on type, location, creation date, maintenance date, certification date, etc. This data has been invaluable with

recent requests from DEQ as they refine their Watershed Implementation Plan and set goals for Total Maximum Daily Loads (TMDL's). The program can be used as a model for other localities as an example of how these regulatory requirements can be achieved without having to make large investments in computer programs or outside consultant resources.

Staff Resources

Tuesday, April 17, 2012
2:00 PM

Donnetta' s re-assignments

Septic tank pump out	Linda B, Linda V and Lisa
Mapping of CBPA	Engineers, until we are trained
Septic Tank Emails	Linda B/Linda V
Phones	Primary, Linda B.
logging in permits	Linda B, back up Linda V
updating H T E for permits	Linda B, back up Linda V
Tonnage Report	Linda V
Recycling Report	Linda V
Operations Special projects	Linda V
Drainage complaints	All
Price calling for metals	Peggy
Filing	Linda B, Lisa
Cleaning out files	all
Expense report (data entry)	Lisa
Transfer station payments	Linda V
Accounts Payable	Linda V, Lisa

Linda Vitek -Septic Tank Pump out, Tonnage report, Recycling report, Operations special projects, Transfer station payments

Linda Barker - Phones, Logging in permits, Updating H T E permits, PITT sheets, Filing, Septic tank pump out

Lisa Dabney- Septic tank pump out, Expense report

Other Changes:

- Lisa to take over Dashboard, Monthly Report, Thursday reports for Engineers.
- Peggy to take over calling for prices on metals