CITY OF OMAHA
NPDES PERMIT FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
NE0133698
2012 ANNUAL REPORT

Submitted by:
Environmental Quality Division
5600 S. 10 St.
Omaha, NE 68107

April 1, 2013

Table of Contents

Report of Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations. See 18 U.S.C. 1001 and 33 U.S.C 1319, and Neb. Rev. Stat. 81-1508 thru 81-1508.02."

Marty Grate — Signature of Authorized Representative or Cognizant Official

3/29/13 — Date

Marty Grate — Printed Name

ES Manager — Title

Introduction

The second Omaha Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (NE0133698/PCS 73881-P) was issued by the Nebraska Department of Environmental Quality (NDEQ) and became effective on October 1, 2008. The MS4 permit authorizes the City of Omaha to discharge storm water from all existing City of Omaha owned or operated MS4 outfalls to the Papillion Creek, the Missouri River, and their tributaries subject to the identified limitations and the Storm Water Management Plan (SWMP) as modified. The City's Environmental Quality Control Division (EQCD) oversees the administration of the permit and ensures that the City is in compliance with the permit requirements.

The MS4 permit was issued for a five-year period and expires on September 30, 2013. The MS4 permit identifies the current City of Omaha SWMP. The SWMP requires the City to submit an annual report and a semi-annual progress report to the NDEQ. In addition, reports will be made available to the public on the Papillion Creek Watershed Partnership web site (www.papiopartnership.org).

The City of Omaha Departments that participate in meeting the MS4 permit requirements include:

- Public Works Department
  - Environmental Quality Control Division
  - Street Maintenance Division
  - Sewer Maintenance Division
  - Construction Division
  - Design Division
- Parks, Recreation and Public Property Department
  - Park Maintenance
  - Golf Operations
- Fire Department
- Law Department
- Planning Department

The City is committed to partnering with several organizations to meet the MS4 requirements in the most efficient manner possible. The major partners are listed below. The City intends to continue developing additional partnership throughout the permit cycle to meet the permit requirements.

- Keep Omaha Beautiful (KOB)
- Papillion Creek Watershed Partnership (PCWP)
- Douglas-Sarpy County Extension Office
- Papio-Missouri River Natural Resource District (P-MRNRD)
- Natural Resource Conservation Service (NRCS)

This report satisfies the annual reporting requirement for permit year 4 and covers the calendar year from January 1, 2012 through December 31, 2012

The report is laid out as follows: the program elements are shaded, the permit requirements are underlined, and the City's description of permit compliance is in plain text.

I. Public Education & Outreach

A. Distribute informational brochures on the proper disposal of household hazardous wastes and the availability of the Household Hazardous Waste facility.

The City of Omaha contracted with Keep Omaha Beautiful, Inc. (KOB) to distribute educational information. In the annual report submitted to the City by KOB they reported distributing a total of 2461 brochures at community events throughout the year. The 2461 brochures that were distributed covered 13 different topic areas concerning household hazardous waste. Brochures were delivered to commercial and public locations around the City for distribution. Additionally KOB distributed the brochures at outreach events that they attended. Below is a summarized list of the commercial and public locations where materials were distributed.

13th Street Coffee
Ace Hardware -- 50th & Center
Advanced Auto Parts -- 171st & W. Maple Road
Auto Zone -- 24th & Vinton
Auto Zone -- 30th & Lake
Auto Zone -- N. 30th Street
Auto Zone -- N. 72nd Street
Bellevue Public Library
Boy's & Girl's Club, Inc
Builder's Supply -- 72nd & Main
Community Center -- Columbus Park
Community Center -- Common Ground
Diamond Vogel Paint -- 78th & L
ENOA -- 42nd & Center
Girl Scouts -- 2121 S. 41st Street
Girls Inc.
Green Bellevue
HyVee -- 80th & Cass
Jazz -- 15th & Farnam
Kroc Center -- 2825 Y Street
Mattress Factory
Omaha Public Library -- Abrahams Branch
Omaha Public Library -- Bess Johnson Branch
Omaha Public Library -- Dale W. Clark Branch
Omaha Public Library -- South Branch
Omaha Public Library -- Swanson Branch
Omaha Public Library -- Washington Branch
Omaha Public Library -- Willa Cather Branch
One Community
O'Reilly Auto Parts -- 30th & Ames
O'Reilly Auto Parts -- 50th & L
O'Reilly's Auto Parts -- 205th Street
O'Reilly's Auto Parts -- 90th & Spaulding
Pittsburgh Paints -- 72nd & L
Sarpy County Court House
Sherwin Williams -- 174th & W. Maple Road
Smoke Shop -- 203rd & Wirt
Stadium Club -- 10th & Howard
Tobacco & Phones 4 Less -- 72nd & Blondo
Tobacco & Phones 4 Less -- 72nd & Military
Tobacco Outlet -- 78th & Cass
Tractor Supply -- 81st & L
Walgreen's -- 24th & Vinton
Walgreen's -- 30th & Ames
Walgreen's -- 30th & Martin
Walgreen's -- 50th & Center
Walgreen's -- 90th & Dodge
Western Douglas County Chamber of Commerce

In addition to the distribution of brochures, the City maintains a website www.underthesink.org that presents a variety of information about the site, materials accepted and not accepted, hours of operation, and alternative use products.

In the 2012 calendar year UnderTheSink, the household hazardous waste facility, had a total of 13,588 drop offs resulting in a total 898,144 lbs of material, an average of 4,491 lbs/day (of days accepting waste). A total weight of 202,710 lbs of HHW was shipped offsite by our disposal contractor. Those drop-offs and that total weight can be further broken down into:

Recycling Totals in 2012:

Steel from paint and aerosol cans: 69,020 lbs
Latex paint used with Posi-Shell at Sarpy County Landfill: 16,005 gal
Oil-based paint and flammable liquids used as industrial fuel: 12,375 gal
Antifreeze recycled: 1,475 gal
Automotive batteries: 11,288 lbs
Fluorescent bulbs: 7,656 bulbs

Oil Totals in 2012:

Collected approximately 13,200 gal
Sold a total of 2,550 gal during the summer to Tri-States Oil Reclaimers, Inc.
The remaining oil, was/is being burned in the waste-oil boiler

ReStore Totals in 2012:

People who took free useable items for their own use: 9,956 persons
Weight of non-paint items taken: 142,908 lbs
Gallons of free paint taken: 22,110 gal

15 tours were conducted in 2012

This permit requirement continues to be met.

B. Issue public service announcements related to storm water protection on local TV, radio or print outlets, which will address TMDL pollutants of concern.

In addition to the distribution of educational brochures and public outreach events, Keep Omaha Beautiful, Inc. contracted with KFAB, a local radio station, to broadcast 4 public service announcements in May, June and August. In total the PSA's were aired 16 times. For a full accounting see Attachment D.

This permit requirement continues to be met.

C. Continue existing drain marking program to improve public awareness concerning illegal dumping utilizing volunteer services, which will address TMDL pollutants of concern.

Keep Omaha Beautiful, Inc. coordinated neighborhood groups and eagle scouts in 2012 to mark and clean storm sewer inlets. In total, 1,700 disks were placed.

KOB, Inc also uses a GIS tracking system to better direct the volunteers to areas that have not been marked. The City has approximately 110,000 storm drains, using the GIS system should make tracking those inlets which have been marked or need marking easier to manage.

This permit requirement continues to be met.

D. Hold a Sediment and Erosion Control Seminar for the developers, builders, engineers, vendors, and graders, which will address TMDL pollutants of concern.

The City worked with the P-MRNRD, Douglas-Sarpy County Extension Office, NDEQ, NRCS, PCWP, and USACE to present the annual sediment and erosion control seminar on February 15, 2012. There were 204 people that signed in at the seminar. Topics that were covered included:

- Fines and Enforcement
- Environmental Permits
- Sediment and Erosion Control Products and Case Studies
- Time Sensitive Construction Based Levee Rehabilitation
- Benefits of Biotic Soil Builders for Critical Sites: Better Business, Improved Soil, and Stronger Vegetation.

This permit requirement continues to be met.

E. Schedule outreach events with industry trade organizations to educate the regulated community regarding Omaha's Industrial Permitting Program.

EQCD presented at 13 different outreach events attended by the permitted community. Events were held throughout the State of Nebraska but primarily in the Omaha area. Audiences varied from business owners to consultants and safety professionals. The table below is a summary of these events and activities.

Date	Location	Attendees	Activity	Comments
10/21/11	Mahoney State Park	40	Construction Stormwater Permit Presentation	Presentation to the Nebraska Construction Safety Professionals.
1/23/12	Mid-America Center; Council Bluffs, IA	20	NE Nursery & Landscape Association's Green Expo	Presentation on Green Infrastructure
2/15/12	Coco Key Resort	204	Building for the Future Sediment and Erosion Control	Annual seminar regarding sediment and erosion control.
3/7/12	Lauritzen Gardens	25	Omaha BMP Manual Stakeholder Feedback Meeting # 3	Revisions to chapters 8 & 9 of the Omaha Regional Stormwater Design Manual.
3/13/12	UNL Extension	20	Industrial Outreach for Printers	Education and outreach materials presented to the Printing Industry.
3/20/12	Lincoln, NE - UNL East Campus (Kiem Hall)	50	NE Post-Construction Workshop	Bioretention Workshop
3/21/12	Lincoln, NE - UNL East Campus	35	NE Post-Construction Workshop	Infiltration Study Presentation
3/27/12	CM's A Cut Above Office	6	Green Infrastructure & bioretention system training	
6/20/12	National Safety Council 11620 M Cir Omaha, NE	20	Industrial Permit Presentation	Presentation to the Omaha Safety Council on Industrial Stormwater Permit.
7/12/12	Younes Conference Center in Kearney, NE	30	Bioretention Infiltration Study Presentation	Nebraska Floodplain and Stormwater Managers Association Conference presentation.
8/2/12	Lamp, Ryerson & Associates Office	50	Green Infrastructure & Stormwater BMP design update	
9/14/12	Regency Marriott Hotel	8	Green Infrastructure Workshop	Workshop for the Parks and Recreation Department.
9/27/12	Omaha, NE - Downtown Courtyard Marriott	23	Ensuring Environmental Compliance During Construction	Presentation to builders and designers at a Half Moon Seminar.

This permit requirement continues to be met.

F. Work collaboratively with other community organizations to develop a campaign aimed at picking up pet waste which will address TMDL pollutants of concern.

The City of Omaha hired a marketing firm, MINT Design Group, to assist in the development and implementation of a pet waste campaign. Advertisements were developed and published in several area news papers, billboard space was used, mass mailings distributed, theater advertising purchased, posters placed on litter cans, radio announcements broadcast, a television commercial produced, and other media

printed. It was a very successful campaign and won the Silver Award in the Total Advertising Campaign category from the Eighth Annual Service Industry Advertising Awards. Additionally, EQCD attended four events where flyers were handed out along with pet waste bag dispensers, as shown in the table below;

Date	Location	Dispensers	Activity
11/19/11	Hanscom Park	100	Hanscom Bark Park Grand Opening
4/21/12	Hefflinger Dog Park	480	Spring Bark in the Park
4/28/12	Lake Zorinsky	54	Spring into Summer
9/30/12	Nebraska Humane Society	700	NHS - Walk for the Animals

The City of Omaha has also partnered with the Omaha Dog Park Advocates by supplying 20 Pet Waste Bag Stations and Pet Waste Bags to the two dog parks in Omaha. The Advocates keep the dispensers supplied with bags and submit a count to EQCD on a monthly basis. A total of 52,800 bags were used during this permit year.

This permit requirement is on schedule to be met.

G. Develop materials and displays associated with BMP demonstration projects installed with Storm Water Management Program Plan funds from NDEQ.

Educational signage was placed at both the UnderTheSink Facility and Orchard Park accessible by the public. The signage explains the design and function of the BMP's onsite. The green and traditional roofs at the Saddlebrook Joint Use facility have two weather monitoring stations installed. The public can view the differences between the two on two separate screens; one located in the library the other located in the stairwell outside of the indoor track. There are also webcams directed toward the green roof which will also be displayed on the screens. We also have the weather information of the green roof available on our website www.omahastormwater.org.

This permit requirement continues to be met.

H. Develop a City Storm Water Program Web Site, including but not limited to storm water related information and provide educational information targeted for residents, children, and industries, which will address TMDL pollutants of concern.

The City of Omaha has developed and deployed a website, www.omahastormwater.org dedicated to our Stormwater Management Program. From the website industries can access the necessary documents to apply for a permit as well as access resources to help them maintain compliance. Developers and engineers can access the necessary documents to apply for Construction and Post-Construction Stormwater permits.

Residents can access information as to how they can improve water quality by actions they take at home. Children's activities are also available on the website. There is also public information available on the demonstration storm water best management practices that have been implemented in areas of the city. The public can access information related to the monitoring program. Additionally there is an online complaint or comment form available to the public.

There were 4,246 visits and 12,336 page views in 2012, a higher number of visits and page views than the previous year. The three most popular areas in terms of page views were the Home page followed by the Forms page and finally the Post Construction page. The City continues to add content to the website and track usage.

This permit requirement continues to be met.

II. Public Participation & Involvement

A. Operate a storm water hotline and web based complaint system for Watershed (general information, complaints, reports of illegal dumping, etc.)

The City of Omaha's Environmental Quality Control Division investigated 74 reports of illegal dumping and/or illicit discharges in the 2012 Permit Year. Complaints ranged from excess yardwaste in the street to suspicious discharges into a creek. A table compiling the complaints, investigations and resolutions of these reports can be found in Attachment B.

This permit requirement continues to be met.

B. Participate in organizing to hold open houses on Papillion Creek Watershed Plan activities.

The Papillion Creek Watershed Partnership holds monthly meetings, which are open to the public, to discuss watershed and water quality policies. There were seven meetings held in the 2012 calendar year. The following table summarizes the times and attendance for the meetings.

Date	Count	Target Market	Location	Comments
1/26/2012	14	Partnership Members	Papio NRD	Partnership Meeting
2/23/2012	21	Partnership Members	Papio NRD	Partnership Meeting
3/22/2012	16	Partnership Members	Papio NRD	Partnership Meeting
4/26/2012	17	Partnership Members	Papio NRD	Partnership Meeting
5/31/2012	15	Partnership Members	Papio NRD	Partnership Meeting
8/7/2012	19	Partnership Members	Papio NRD	Partnership Meeting
8/23/2012	17	Partnership Members	Papio NRD	Partnership Meeting

This permit requirement continues to be met.

C. Continue to implement a stream Cleanup Day. Utilize Keep Omaha Beautiful, Inc. to identify stream segments in need of cleanup and recruit volunteers from the local area, public groups, and representatives from local area business and developments.

Keep Omaha Beautiful, Inc. (KOB) organized the 2012 Stream Clean up day on September 15th. There were a total of 60 participants. The water courses that KOB targeted were; Standing Bear Lake, Lake Zorinsky, Benson Park Lagoon, and a stretch of Cole Creek.

This permit requirement continues to be met.

D. Provide tours of UnderTheSink, household hazardous waste facility for schools and neighborhood organizations to learn about the proper way to manage household chemicals and about storm water treatment systems installed at the site.

A total of 15 tours were conducted at the UnderTheSink Facility in 2012. Stormwater Best Management Practices (BMPs) have also been installed at the facility along with educational signage. The BMPs were complete in the Fall of 2009 and are meant to serve as a demonstration project to the public.

This permit requirement continues to be met.

E. Hold World O! Water Festival focused on elementary school aged children to celebrate Clean Water and engage in water quality related activities.

The World O! Water Festival was held on August 25, 2012 from 12 PM until 4PM at Wehrspann Lake / Chalco Hills Recreation Area. There were over 50 organizations that participated by handing out information, conducting an activity or providing a demonstration. An estimated 1000 visitors attended the

event. Information that was handed out included water stewardship, recycling, water quality, and water conservation. Activities included putting "waste in its place", canoe rides, nature hikes, and science experiments. Demonstrations were provided by Wild Life Learning Encounters. This was the 8th successful year the event was held.

This permit requirement continues to be met.

F. Participate in community organizations, conferences workshops, and web casts related to water quality and storm water management.

City of Omaha EQCD staff attended or participated in 27 workshops or webcasts in the 2012 permit year. The following table is an accounting of the seminars attended.

Date(s)	***Title***	***Associated Program***	***Attendees***
1/11/12	Toolbox Safety Meeting	Good Housekeeping	10
1/26/12	5 steps to creating a successful outreach campaign	Outreach	5
2/8/12	Toolbox Safety Meeting	Good Housekeeping	11
2/16/12	Building for the Future: Erosion Prevention & Sediment Control Outreach	Construction	8
3/7/12	What is your Flow Data telling you? ISCO data webinar	Monitoring	4
3/14/12	Toolbox Safety Meeting	Good Housekeeping	15
3/20/12	Bioretention Garden Workshop	Post Construction	1
3/21/12	Post-Construction Workshop	Post Construction	1
3/22/12	Rain Check: Stormwater Pollution Prevention for MS4s (Muni Facilities)	Good Housekeeping	1
3/22/12	A Drop in the Bucket: Stormwater Pollution Prevention (ISW)	Industrial	1
4/4/12	Compliance Monitoring for Industrial Wastewater	Industrial	1
4/11/12	Ground Control: SWPPP for Construction	Construction	1
4/11/12	Spills & Skills: NonEmergency Hazmat Spill Response	Good Housekeeping	1
4/11/12	Spill Prevention Control & Countermeasures	Good Housekeeping	1
4/11/12	Toolbox Safety Meeting	Good Housekeeping	11
4/26/12	Construction's 10 Step Guide to Implementing an Env. Compliance Program	Construction	1
5/9/12	Toolbox Safety Meeting	Good Housekeeping	14
5/29/12	Stormwater runoff permit & spill SOP	Good Housekeeping	6
6/18/12	Toolbox Safety Meeting	Good Housekeeping	8
6/26/12	Discharge Compliance Monitoring: Do You Have a Smart, Flexible and Secure Platform?	Monitoring	1
7/9/12	Sharepoint 2010 - Microsoft training program	Good Housekeeping	1
7/10/12	SWPP Plan Employee Awareness Training	Good Housekeeping	39
7/10/12	SPCC Plan Employee Awareness Training	Good Housekeeping	17
7/11/12	Toolbox Safety Meeting	Good Housekeeping	13
8/8/12	Toolbox Safety Meeting	Good Housekeeping	8
8/29/12	ArcPad Training	IDDE	2
9/12/12	Toolbox Safety Meeting	Good Housekeeping	4

This permit requirement continues to be met.

III. Illicit Discharge Detection & Elimination

A. Perform dry-weather inspections including Physical Characteristics Examinations of storm water outfalls 72" or greater and any outfalls with documented complaints.

The City of Omaha – EQCD staff inspected all outfalls identified the previous year as priority outfalls (those 72" or greater and/or documented illicit discharges). EQCD Staff completed the inspections in September 2012. Any outfall with an obvious or suspicious discharge was to be reported immediately to EQCD. No discharges were found.

Outfall inspections were only conducted after 48 hours of dry weather. A Physical Characteristics Examination form was completed for each outfall, if flow was present sample was collected for pH testing in the field, if an illicit discharge was encountered EQCD Inspectors called supervisory staff immediately. Photographs were taken of outfalls to be kept as a record of outfall conditions during the inspection. Outfall inspections were entered into the City of Omaha's MS4 Web application. A total of 74 outfalls 72" or with documented illicit discharges were inspected.

This permit requirement continues to be met.

B. Investigate and seek resolution concerning any dry weather discharges potentially impacted by sources by notifying the source that they must discontinue discharging, and initiate enforcement action consistent with adopted ordinance which will address TMDL pollutants of concern. Any source that the applicant feels constitutes and immediate health or safety threat will be reported immediately to the NDEQ.

There were no confirmed illicit discharges from an outfall in during the permit year 2012. However a sanitary line break and repair resulting in a discharge to the Papillion Creek was reported under a separate NPDES permit.

A sanitary line break was reported and repaired in August 2012 which resulted in a discharge to the Papillion Creek however no illicit connections were found.

This permit requirement continues to be met.

C. Dry Weather inspection of storm water outfalls, including smaller outlets and those that discharge to lesser tributaries or other storm conduits in response to suspect conditions and / or complaints.

There were 268 potential outfalls identified by EQCD using GIS information collected by sewer maintenance in 2009. All outfalls were inspected during dry weather. A total of 74 outfalls have now been identified as priority outfalls.

This permit requirement continues to be met.

D. Enforce Existing City Codes prohibiting illicit discharge connections to storm sewers.

A total of 57 code enforcement actions were taken in 2012. Most actions were "Requests for Voluntary Compliance". There were no fines levied or collected in 2012. A table summarizing the year's activities can be found in Attachment B.

This permit requirement continues to be met.

E. Maintain and prevent instances of sanitary sewer leakage into MS4 or waters of the state.

The Sewer Maintenance Division is responsible for preventing sanitary seepage into the storm sewer. They perform preventive and corrective maintenance to the system and are able to identify areas where seepage is occurring. Because of the way the MS4 system is designed, sanitary seepage to the MS4 is an extremely rare

event. Storm water pipes are not located immediately below the sanitary line; they are almost always installed on the other side of the street or parallel to the sanitary line. There were two instances of sanitary seepage/leakage found in 2012; both instances were reported to the state under a separate NPDES Permit as a requirement to report Sanitary Sewer Overflows and Combined Sewer Overflows. The pipes were repaired and no further leaks occurred

This permit requirement continues to be met.

F. Maintain and update a sewer map of major storm water outfalls and identify the names of respective receiving waters.

The City maintains a GIS mapping application which can be updated in the field using handheld portable GPS units. These units then synchronize the data when they are returned to the office and connected to the GIS mapping application. Additionally the handheld GPS units are used to catalogue and record inspections of outfalls conducted by EQCD. The data from those inspections can be used to enter service requests into Sewer Maintenance's work order tracking software. The outfall data is also used for follow up inspections of potential illicit discharges.

In 2010, EQCD staff used the current GIS data collected by sewer maintenance in 2009 to direct our inspections. Two hundred and sixty eight points were inspected resulting in additional priority outfalls being identified. We are building on a database to better document outfall conditions so that future inspections will be comparative to the past inspections.

In 2012 EQCD inspected outfalls using the data collected during the inspections that took place in 2010. The data helped to better direct inspection and compare the previous year's condition with the current condition of the outfalls.

This permit requirement continues to be met.

G. Prevent, contain and respond to spills to the MS4. Review, as necessary, interdepartmental SOP's with respects to spills, dumping and illegal disposal that impacts the MS4.

The City of Omaha's Environmental Quality Control Division worked with the Omaha Fire Department (OFD) to develop a policy dealing with spills that the OFD responds to. Previously the OFD would chemically treat a spill to aid in the breaking down of petroleum products. The revised policy requires OFD to spread fly ash over a spill to absorb any petroleum products. They then collect the material and drop it off at one of several locations throughout the City. Each location has a dedicated 55 gallon drum for storage of the waste material. OFD monitors the capacity of the barrels and coordinates disposal with a hazardous materials processing contractor when the barrel is at a predetermined capacity.

The Omaha Fire Department's Hazardous Materials Unit responded to 546 incidents in the 2012 calendar year.

This permit requirement continues to be met.

IV. Construction Site Program

A. Maintain the construction site inspection and reporting web site and continue to make enhancements.
In February of 2009 the City of Omaha released an upgraded version of its sediment and erosion control reporting website. All active sites were transferred to the upgraded system and the City offered training courses to various users and stakeholders. The previous version was PHP based while the new version uses Java language. There is increased functionality and tracking of project activity. Each user is now given a unique id and password to access the system rather than using a firm wide log in. The system is being used by all of the communities within the Papillion Creek Watershed Partnership.

This permit requirement continues to be met.

B. Maintain a construction site inspection program that includes procedures for reporting, resolving deficiencies, and taking appropriate enforcement action consistent with adopted ordinances.
EQCD administers the inspection program for Erosion Control, both within the City of Omaha's jurisdiction as well as the Papillion Creek Watershed Partnership's (PCWP) individual member's jurisdiction. The City's Grading Permit Program requires that the owners of active sites hire an independent inspector to do inspections weekly and after 0.5 inches of rain. In the 2012 calendar year reports were submitted to a website by City Inspectors as well as private firms hired to inspect construction sites as per the NPDES Stormwater Discharges from Construction Sites General Permit. Additionally enforcement actions were entered by City personnel. The table below accounts for the reports submitted for sites within the City of Omaha's jurisdiction.

	City Inspection Reports	Private Inspection Reports
Phase I Sites (>5 acres)	568	3216
Phase II Sites (<5 acres)	485	2214
Total	1053	5430

A summary table of enforcements that were taken within the City of Omaha's jurisdiction can be found in Attachment C.

This permit requirement continues to be met.

C. Maintain regulations and design specifications for controlling erosion, sediment loss, and other TMDL pollutants of concern from construction sites that disturb areas of 1 acre or more.
The Omaha Municipal Code Section 32-101 (**Grading Permit Required**) requires owners/operators to obtain a grading permit on sites sufficiently large enough to require an NPDES construction general permit. On March 10, 2003 when the NPDES Phase II regulation became effective the City began enforcing the soil erosion and sediment control measures on sites that disturbed one acre or greater in the City's jurisdictional area, which extends 3 miles beyond City limits in Douglas County. This allows the City to regulate many of the large developments (SIDs) that remain active for years and have a great potential to adversely impact water quality.

The City has incorporated the Sediment and Erosion Control Manual into the Omaha Regional Storm Water Design Manual as Chapter 9. The Omaha Regional Storm Water Design Manual was adopted by the City of Omaha in April 2006. There were no changes to the Omaha Regional Storm Water Design Manual

in 2012. However there are pending revisions to Chapters 8 & 9 which should be adopted in the 2013 calendar year.

This permit requirement has been met.

D. Maintain a program for performing review of Grading Permit applications to ensure compliance with applicable regulations and design specifications.

The Public Works Department, Environmental Quality Control Division, reviews the grading permit applications and the associated Storm Water Pollution Prevention Plans (SWPPP). Unless the SWPPP meets the requirements specified in the Omaha Regional Storm Water Design Manual, a grading permit will not be issued. Sites 5 acres or greater are given priority over sites less than 5 acres.

The City of Omaha received 29 permit requests and issued 24 permits for sites greater than 5 acres in the calendar year 2012. There were 68 permit request and 47 permits issued for sites less than 5 acres in size for the calendar year 2012.

This permit requirement continues to be met.

V. Post Construction Runoff Control

A. Develop a guidance document for Post Construction Storm water Management Plan.

The City of Omaha finalized the guidance document titled *City of Omaha Post Construction Stormwater Management Planning Guidance* in July 2009. The document is available on the City's website www.omahastormwater.org. The guidance document was not revised in during this permit year..

This permit requirement continues to be met.

B. Participate with other City Departments to prepare an Environmental Element of City of Omaha Master Plan and include applicable storm water management provisions.

The Omaha City Council voted 7-0 to adopt the Environmental Element – a comprehensive environmental vision for the city – as a component of Omaha's master plan Dec. 14, 2010.

The document, developed through a two-year process led by the City of Omaha and Omaha by Design, includes more than 600 recommendations in five sections – the natural environment, urban form and transportation, building construction, resource conservation and community health. Each goal is accompanied by a set of objectives and strategies, and a set of measurements has been developed for each of the five sections.

This permit requirement continues to be met.

C. Develop a database of existing structural BMPs (private and public) that reduce the impact of urbanization on storm water run-off and improve water quality and enhance other amenities and activities such as green space, parks and recreation, urban planning, aesthetics, and public safety.

The City of Omaha reviews proposed post construction storm water BMPs for code compliance, functionality, and manageability. Once the proposed post construction BMP passes the review then a permit is issued which allows construction and implementation to begin. The management plan that is submitted along with the proposed BMP is then attached to the property deed to ensure long term compliance. The City has developed a database, Permix, for tracking purposes and will be integrating the Construction program and Public Improvements into this new database.

A database has been developed to track post construction BMPs within the City of Omaha. Information being entered include; location, ownership, provided capacity, required capacity, contributing drainage area, type of BMP, date of installation and CSO area. Each BMP has the latitude and longitude included so that they can be easily mapped using our GIS.

This permit requirement continues to be met.

D. Inspect annually and maintain (as necessary) City owned storm water BMP structures.

All City owned stormwater BMP structures were inspected for any major maintenance issues in March and October of 2012. A physical characteristics examination form was also completed during the inspection for structures that had flow or were wet. The table below indicates when the inspection occurred as well as any pending maintenance issues.

SITE	INSPECTION DATES	SEDIMENT REMOVAL	TRASH REMOVAL	DEBRIS REMOVAL	MOWING	FERTILIZER	PCE COMPLETE
Storz Expressway (East)	10/25/2011	Yes	Yes	Yes	Yes	No	Yes
	1/6/2012	Yes	No	No	No	No	No
	5/21/2012	No	Yes	Yes	No	No	No
Adams Park Lagoon	10/21/2011	No	No	No	No	No	No
	2/1/2012	Yes	Yes	Yes	No	No	Yes
	5/22/2012	No	No	No	No	No	No
Lake James Park	10/21/2011	No	No	No	No	No	No
	1/5/2012	No	No	No	No	No	No
	5/22/2013	No	No	No	No	No	No
Fontenelle Park Lagoon	10/21/2011	No	No	No	No	No	No
	1/17/2012	No	Yes	Yes	No	No	Yes
	5/22/2012	No	No	No	No	No	No
Pershing 1.5	10/25/2011	No	No	Yes	No	No	Yes
	1/5/2012	No	No	Yes	Yes	No	No
	5/21/2012	No	No	Yes	Yes	No	No
Miller Park	10/25/2011	No	Yes	Yes	No	No	Yes
	2/2/2012	No	Yes	Yes	No	No	Yes
	5/22/2012	No	No	No	No	No	No
10th & Nicholas	10/24/2011	No	No	No	No	No	No
	1/5/2012	No	No	No	No	No	No
	5/21/2012	No	No	No	No	No	No
Storz Expressway (West)	10/24/2011	Yes	Yes	No	No	No	No
	1/6/2012	Yes	Yes	Yes	Yes	No	No
	5/21/2012	No	Yes	Yes	Yes	No	No
13th & Carter Blvd	10/24/2011	Yes	Yes	Yes	No	No	Yes
	1/13/2012	Yes	Yes	Yes	No	No	Yes
	5/22/2012	Yes	No	Yes	No	No	No
13 & Fowler	10/24/2011	No	Yes	Yes	No	No	Yes
	1/13/2012	Yes	Yes	Yes	No	No	Yes
	5/22/2012	No	Yes	Yes	No	No	No
Carter Lake	10/26/2011	Yes	Yes	Yes	No	No	Yes
	1/26/2012	Yes	Yes	Yes	No	No	Yes
	5/22/2012	Yes	Yes	Yes	No	No	No

SITE	INSPECTION DATES	SEDIMENT REMOVAL	TRASH REMOVAL	DEBRIS REMOVAL	MOWING	FERTILIZER	PCE COMPLETE
	10/24/2011	No	No	No	No	No	No
	1/30/2012	Yes	Yes	Yes	Yes	No	Yes
19 & Carter Blvd	5/22/2012	Yes	Yes	Yes	No	No	No
	10/21/2011	No	Yes	No	Yes	No	No
	1/30/2012	Yes	Yes	Yes	Yes	No	No
18th Street E & Ave H	5/21/2012	Yes	Yes	Yes	Yes	No	No
	10/24/2011	No	No	No	No	No	No
	2/1/2012	No	Yes	Yes	Yes	No	No
14th & Ida St	5/21/2012	No	No	Yes	Yes	No	No
	10/25/2011	No	No	No	Yes	No	No
	1/6/2012	No	No	No	Yes	No	No
John J. Pershing No. 1	5/21/2012	No	No	Yes	Yes	No	No
	10/25/2011	No	No	No	No	No	No
	1/6/2012	No	No	No	No	No	No
John J. Pershing No. 2	5/21/2012	No	Yes	Yes	Yes	No	No
	10/21/2011	No	No	No	No	No	No
	1/5/2012	No	No	No	No	No	No
Gifford Dr No. 1	5/22/2012	No	No	No	No	No	No

This permit requirement continues to be met.

E. Revise storm water BMP maintenance and inspection plan as needed.

There were five new structures completed in this permit year; South East Police Precinct Parking Lot (Permeable Concrete), 58th Street Scape (dry creek bed and bioretention), Florence Street Scape (bioretention planters), Metro Community College (bioretention), University of Nebraska (bioretention) Each feature will be inspected annually at a minimum. All bio-retention gardens are maintained on a Monthly basis at a minimum during the growing season. Maintenance is mostly picking up litter and weeding.

This permit requirement continues to be met.

F. Implement strategies, which include a combination of structural and or non-structural BMPs appropriate for the watershed, which will address TMDL pollutants of concern. Evaluate these strategies and implement changes as necessary to improve water quality and address TMDL pollutants of concern.

In addition to the BMP's listed in the previous year's report, the City of Omaha partnered with the Omaha Public Schools to provide the installation and monitoring of four discharge points from the Saddlebrook Joint Use Facility. That facility had one water quality sampling event taken from traditional design features as well as green design features. More sampling events are planned in the next permit year. Once the data has been collected the City will then do comparative analyses of the traditional versus the green features in terms of volume and pollutant reduction. We hope to have enough data to provide a better understanding of how well BMP's can reduce pollutants of concern so as to better promote their use in new and re-development.

Furthermore the City of Omaha partnered with UNO to do an assessment of TMDLs in the stream in conjunction with the water quality monitoring performed annually. The results of that study are included in Attachment F.

This permit requirement continues to be met.

VI. Pollution Prevention/Good Housekeeping

A. Maintain Facility Runoff Control Plans (FRCP) for all City maintenance facilities to indentify BMPs implemented. Review FRCP annually and update as necessary. Inspect all facilities annually.

The City of Omaha conducted compliance audits at 12 City Maintenance Facilities where FRCP's had been implemented. Three facilities scored poorly and need improvement, and facilities scored satisfactory, and two were given an outstanding rating. The scores were based upon the inspection report log kept at the facility. The auditor not only looked to see that inspections were being conducted but that any corrective actions that were noted had been addressed in a timely manner.

The City conducted twenty additional facility inspections where no FRCP had been recommended (primarily public parks/golf courses) to perform a "Hot Spot" evaluation. Three of those facilities scored a needs improvement, fifteen were satisfactory, and two were rated as outstanding.

This permit requirement on schedule to be met.

B. Inspect storm sewer conduits, channels and catch basins and remove and properly dispose of sediment and debris as needed to maintain an efficient system within permitted area.

The Sewer Maintenance Division is responsible for the inspecting, cleaning, repairing and maintaining of the storm sewer system. The Street Maintenance Division is responsible for any creek maintenance cleaning or clearing. They use the same work order tracking system to account for their activities. The table below represents both the Sewer Maintenance and Street Maintenance Divisions' storm sewer system activity for the permit year of 2012.

Work Order Type (Description of Work):	Storm/Storm Combined:	Combined:	Task Total:
Bait - (Put bait in nearest sewer entrances)	3	8	11
Clean Bar Screen - (Clean Bar Screen at levee/plant)	0	1	1
Clean FE - (Clean Flared End)	11	0	11
Clean Grease Pit - (Clean Treatment Plant Grease Pit)	1	0	1
Clean Inlet - (Clean Inlet)	840	516	1,356
Clean MH - (Clean Manhole)	4	20	24
Clean Structure - (Clean storm water pond inlet structure)	5	2	7
Dye Test - (Put Dye in Structure/Cavity to find flow)	176	190	366
I-Abandon - (Abandon the Inlet)	0	2	2
I-Clean - (Clean the Inlet)	3	0	3
I-Flared End - (Reset/Daylight/New Grate)	7	0	7
I-New - (Install new Inlet)	1	0	1
Inlet Blown Off - (Inlet Grate was blown off but is not missing)	4	2	6
Inlet Broken - (Inlet Grate was broken and replaced)	13	13	26
Inlet Stolen - (Inlet Grate cannot be found)	16	9	25
Insp FE - (Inspect Flared Ends)	8	3	11
Insp Inlet - (Inspect Inlet)	107	83	190
I-Repair - (Seal box, reset hood, reset grate, replace aprons)	174	47	221
I-Replace - (Replace Inlet, Includes all inlet types)	24	23	47
L/S Locate - (Locate where line segment is.)	2	9	11
Lat Defect - (Lateral has the defect)	0	3	3
MH Blown Off - (Manhole was blown off but not missing)	20	17	37

Work Order Type (Description of Work):	Storm/Storm Combined:	Combined:	Task Total:
MH Broken - (Manhole broken and replaced)	11	32	43
MH Locate - (Find the location of manhole)	17	28	45
MH Stolen - (Manhole cannot be found)	25	36	61
MH-Clean - (Clean the Manhole)	1	10	11
MH-Repair - (Ex-seal riser/brick or pipe wall link, floor rehab)	32	50	82
MH-Replace - (Replace manhole and or risers)	4	3	7
O-Backfill Tamp - (Backfill a void that is not sewer related)	3	0	3
O-Ditchwork - (Open ditching, culvert daylighting, etc...)	0	1	1
O-Erosion Control - (Replace dirt displaced by erosion)	4	0	4
O-Landscaping - (Doing any landscape work at the project area)	1	2	3
P-Abandon - (Abandon the Pipe)	1	4	5
P-Combo Repair - (Seal a Combined line)	0	17	17
P-Combo Replace - (Replace a Combined line)	1	2	3
P-New - (Install new Pipe)	2	0	2
Private - (Private Problem)	50	73	123
P-Storm Repair - (Repair a Storm line)	47	15	62
P-Storm Replace - (Replace a Storm line)	17	6	23
Street Flooding - (Storm Water is flooding the street)	1	1	2
Test Hole - (Drill Test Hole)	3	12	15
TV Assessment - (Complete PACP Assessment)	4	10	14
TV Inspection - (TV line to find defect)	71	133	204
Unscheduled Jet - (Jetting a line reactively)	33	123	156
Unscheduled Jet Vac - (Jet Vac'ing a line reactively)	22	34	56
Unscheduled Saw - (Jet Sawing a line reactively)	1	5	6
Vac Facility Pit - (Jet Vac the Grit Pit at a City Facility location)	1	2	3
Vac Grit Pit - (Jet Vac a Grit Pit not at a facility location)	0	2	2
Vac Wet Well - (Vac the wet wells at the levee lift stations.)	0	2	2
Culvert Cleaning	--	--	19
Culvert Installation	--	--	1
Culvert Repair	--	--	2
Ditch Maintenance / Cleaning	--	--	37
Total:	1,771	1,551	3,381

This permit requirement continues to be met.

C. Training will be provided for employees to prevent pollutant runoff from municipal operations at City maintenance facilities and at field operations.

The City of Omaha employed the services of Felsburg Holt & Ullevig (FHU) to develop a training program targeted toward municipal operations at City maintenance facilities. EQCD held three training sessions in 2012, there were a total of 62 employees in attendance.

This permit requirement continues to be met.

D. Provide for street cleaning in the following areas: Residential, Business, Major Streets, Other areas in conjunction with special projects.

There are approximately 3,766 curb miles within the City of Omaha. In 2012, the City mechanically swept a total of 11,112 curb miles. The table below gives a more detailed accounting of the City's street sweeping activities. The street sweeping operation no longer allows for debris to be separated by areas of the city.

Area of City	Curb Miles Swept	Tons of Debris Removed
Business District & Major Streets	5,669	1,681
Residential Areas	5,443	3,848
Totals	11,112	5,529

This permit requirement continues to be met.

E. City staff that applies pesticides will be trained in a certification program that complies with FIFRA regulations.

The City has two Divisions within the Parks and Recreation Department that have applicators who are required to be FIFRA certified. There are 43 certified applicators. Thirteen of those applicators were recertified in 2012. All certifications are obtained from the Douglas–Sarpy County Extension Office.

This permit requirement continues to be met.

F. The City will continue to minimize pesticide and fertilizer use on publically maintained properties.

EQCD works with the Parks Department to encourage applicators to minimize pesticide and fertilizer use on publicly maintained properties. Additionally Keep Omaha Beautiful Inc., distributed three different brochures to events and locations. In total there were 650 of each brochure distributed.

This permit requirement continues to be met.

VII. Industrial Facilities

A. Issue City of Omaha Industrial Stormwater Permits. Permits to be issued to specific sectors to maximize effectiveness of education and outreach activities and utilize staff resources efficiently.

The City of Omaha contracted the services of Felsburg Holt & Ullevig to aid in the assessment and prioritization of industries required to obtain stormwater discharge permit coverage. A "Risk Assessment Checklist" was developed using information gathered from an article published in February 2008 in the *Journal of the American Water Resources Association.* The risk assessment allocates points based upon level of exposure to stormwater as well as any pollutants of concern. As more sites are permitted and assessed for stormwater exposure those sectors and/or industries which score high on the risk assessment will be given a priority status and will be inspected on a more frequent basis then those industries which receive a low score. There were 15 permits issued in 2012.

This permit requirement on schedule to be met.

B. Inspect 20% of facilities per year issued City of Omaha Industrial Stormwater Permits, taking appropriate enforcement action consistent with adopted ordinances.

E & A Consulting Group (E&A) was contracted to assist the City in inspecting industrial facilities during this permit year. A total of 19 facilities in Sector U (Food and Kindred Products) were inspected for compliance during the calendar year of 2012. Lamp Rynearson and Associates (LRA) were also contracted to assist the City in inspecting industrial facilities during this permit year. A total of 17 facilities in Sector AC (Electronic, Electrical, Photographic, and Optical Goods) were inspected for compliance during the calendar year of 2012. The facilities that were inspected are required to submit permit applications to the City of Omaha in order to remain in compliance with Omaha Municipal Code. Most of the facilities were not permitted by the NDEQ and have been informed of their obligation to comply with the NPDES Program. Additionally, there were 12 or 23% of the 53 facilities permitted previous to 2012 were inspected for compliance by the City of Omaha.

This permit requirement continues to be met.

C. Implement a permit tracking system.

The City purchased CBI Systems, Inc MS4Web software which is used to track permitted sites as well as site inspections. Previously purchased software, Cityworks can also be used to schedule regulatory inspections. As the City issues more permits to industries, these programs will become valuable tools in maintaining permit compliance.

This permit requirement continues to be met.

D. Review City of Omaha Industrial Stormwater Permit for consistency with Federal and State NPDES Industrial Stormwater Permit.

The City of Omaha finalized their Industrial Stormwater Permit on April 1, 2009. In drafting the permit the City used language from the most recent EPA Multi-Sector General Permit (MSGP). Most of the content of the EPA's MSGP was adapted into the City's permit.

This permit requirement has been met.

VIII. Storm Water Monitoring Plan

A. Conduct in-stream water quality monitoring of named creeks in the Papillion Creek Watershed. Collect samples from at least 4 sites located in the Papillion Creek Watershed. Samples will be collected from May through August one day a week and analyzed for the following parameters: BOD5, TSS, ammonia nitrogen, nitrate-nitrogen, total nitrogen, soluble and total phosphorus, turbidity, pH, E coli, and Physical Characteristic Examinations. The purpose of the monitoring will be to evaluate the effectiveness of storm water management practices in the City of Omaha as it relates to TMDL pollutants of concern.

The City of Omaha conducted in-stream monitoring once a week beginning on May 16 and concluding on August 29. The data collected has been compiled into Attachment E. Additionally the City of Omaha worked with the University of Nebraska at Omaha (UNO) to develop a Water Quality Monitoring TMDL Assessment. The Assessment was presented to EQCD in July 2012 by Jeffrey Mihulka, a graduate student under the supervision of Professor John Stansbury. The complete report has been included as Attachment F of this document.

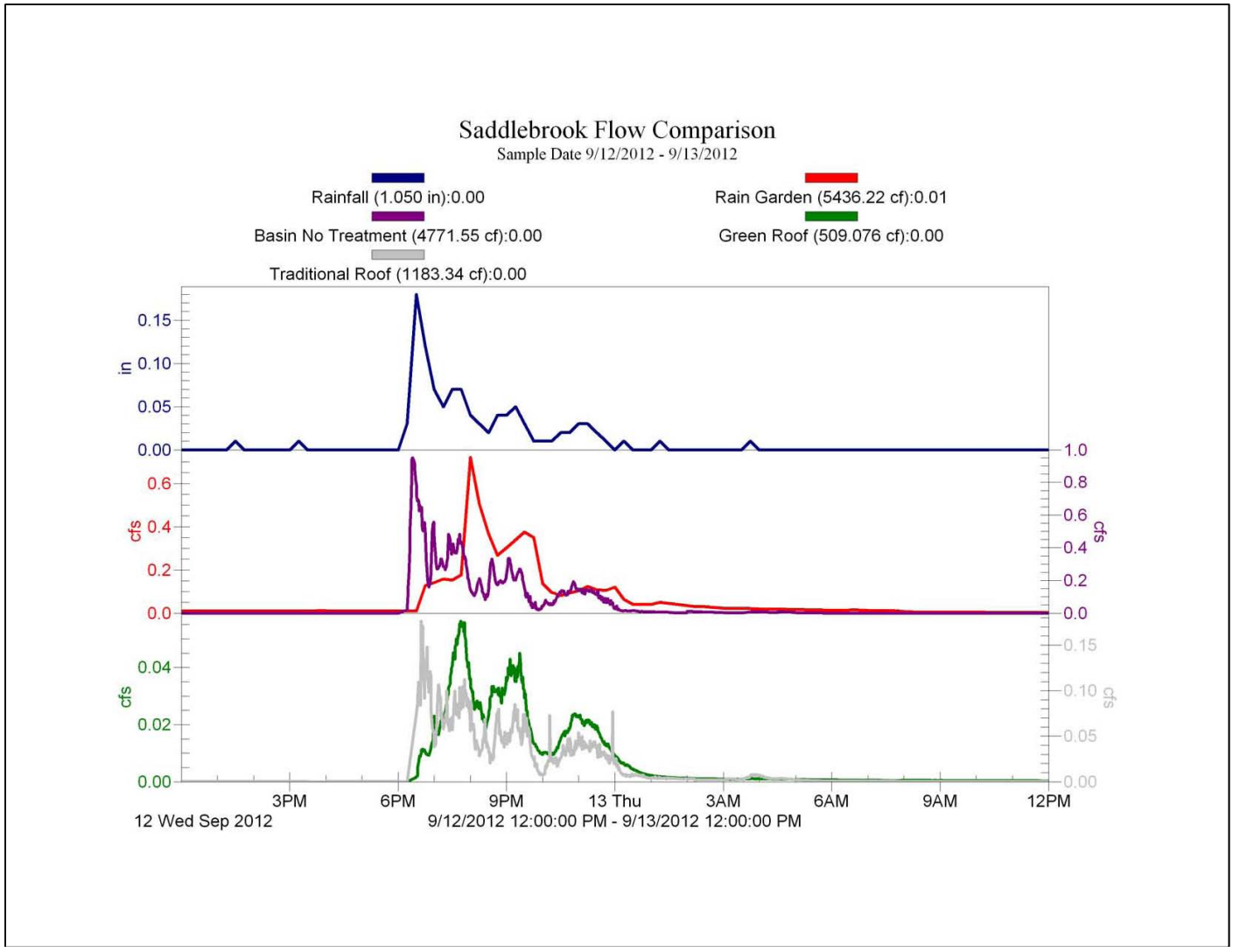
This permit requirement continues to be met.

B. Develop an assessment monitoring plan for demonstration BMPs. Evaluate the effectiveness of the selected BMPs to treat storm water for the TMDL pollutants of concern and other water quality benefits. Consider implementation of refinements to the BMPs, which would improve their effectiveness. One aspect of the monitoring plan will include the collection stream samples on the segment that runs through Orchard Park to establish baseline conditions for BMP assessment purposes. Additionally, the plan will address how the City proposed to use stream samples collected in dry weather and wet weather, as described in A above, to estimate the pollutant masses discharged on an event basis and an annual basis.

The construction of a green roof and a bioretention garden was completed in 2009 at the Saddlebrook Joint Use Facility. The bioretention garden receives runoff from part of the parking area at the facility. Monitoring stations were also installed at the; green roof discharge point, traditional roof discharge point, bioretention garden discharge point and a point of discharge from a parking area without a BMP upstream.

Flow monitoring equipment has been installed at all four sampling sites as well as a rain gauge. The City will use the data gathered from each site to compare the BMP installed to a traditional parking lot and roof. The City can then analyze the effectiveness of each BMP.

There was one sample collected during an event in September of 2012. Based upon an initial assessment it can be determined that the green infrastructure at this facility delays the peak runoff from the drainage area that is being treated. It can also be inferred that a volume of the water has been detained by the BMPs based upon a predicted and observed volume measured after treatment occurs. The samples that were taken and analyzed are presented in Attachment D. Below is a graphical representation of the flow through each sampling point during the rain event.



This permit requirement on schedule to be met.

IX. Additional Permit Reporting Requirements

1. Proposed SWMP Changes and Revisions

Attachment A is the SWMP for the City of Omaha; no changes were submitted 2012. The City annexed the following unincorporated areas in August 2012, and would now be considered part of the MS4 Permit coverage area.

Area Description	Population	Sq Miles	Acres
Pegasus	0	0.016283	10.421341
Hillsborough Plaza	0	0.014719	9.419895
Pepperwood	2094	0.353953	226.52975
Seven Pines and Highland Park	1300	0.24373	155.987375
Lakeview Heights	961	0.188599	120.703174
Walnut Lake	65	0.034179	21.874675
The Colonies	1586	0.256559	164.197888
Standing Bear	347	0.051746	33.117254

2. Expenditures for the Storm Water Program

At the time of preparation of this annual report the City Finance Department had not finalized the accounting for 2012 expenditures, so the following figures are subject to minor revisions. A copy of the complete City of Omaha budget with past expenditures can be found at http://www.ci.omaha.ne.us/departments/finance. Storm water management activities are embedded in variety of City programs and work groups. These activities are funded by a variety of sources including the General Fund, Sewer Revenue Funds, Stormwater Administrative Fee Fund, Street and Highway Allocations, and the Street Maintenance Fund.

As such, it is difficult to accurately compile a comprehensive financial summary of every City activity that may have impacts on stormwater. For example, the City maintains litter cans in business districts throughout the City and has a contractor scheduled to empty them on a regular basis. This activity constitutes a stormwater source control or pollution prevention program. These costs are expended from the Solid Waste budget and are not included in the figures below.

1. Administrative

The Quality Control Division of the Omaha Public Works Department has responsibility for coordinating City activities to implement the SWMP and insure that the City meets its MS4 and CSO permit requirements. The estimated MS4 administrative expenditures for 2012 and appropriated 2013 budget amounts are listed below.

Administrative	2012 Expenditures	2013 Planned
Flood Control Administration	$305,212	$571,262
Baseline/BMP Monitoring[1]	$276,715	$252,033
Sediment/Erosion Control Program	$276,715	$252,033
Industrial Program[2]	$55,343	$50,407
Public Education/Outreach	$202,924	$184,824
MS4 Planning	$110,686	$100,813
Annual Administrative Total	$1,227,594	$1,411,373

[1] Includes outfall monitoring, outfall inspections, and illicit discharge investigations

[2] Includes industrial inspections and permitting

2. Operation and Maintenance

The major MS4-related Operation and Maintenance 2012 expenditures and budgeted amounts for 2013 are listed below. These amounts were estimated by evaluating the overall activity costs in the City budget organizations and assigning a percentage for the costs attributable to storm water related activities. There are undoubtedly additional City funded expenditures that impact storm water management, and the following is a conservative estimate of total costs for the City.

Operation and Maintenance	2012 Expenditures	2013 Budgeted
Engineering Design	$384,613	$528,836
Pavement Maintenance	$383,837	$1,030,139
Creek/Open Channel Maintenance	$978,377	$982,097
Street /Right of Way Cleaning	$1,811,195	$3,546,116
OWP (debris removal)	$5,687	$38,994
Residential Street Rehabilitation	$325,791	$145,055
Bridge Maintenance and Rehab	$56,281	$57,000
Sewer Maintenance	$452,083	$427,487
Annual O&M Total	$4,397,865	$6,755,724

ATTACHMENT A

Attachment A

Stormwater Management Plan for the City of Omaha

#1: Public Education & Outreach

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
1.A	Distribute informational brochures on the proper disposal of household hazardous wastes and the availability of the Household Hazardous Waste facility.	Year 1 – 5: Print and distribute brochures. Include the following in Annual Report: • the quantity of waste received at the drop-off facility; • a summary list of the distribution outlets used for brochures; • an estimate of the brochures distributed each year.
1.B	Issue public service announcements related to storm water protection on local TV, radio or print outlets which will address TMDL pollutants of concern.	Year 1 – 5: A summary of the activities will be included in the Annual Report.
1.C	Continue existing drain marking program to improve public awareness concerning illegal dumping utilizing volunteer services (Boy Scouts) which will address TMDL pollutants of concern.	Year 1 – 5: Mark approximately 1,000 inlets annually and include a summary in the Annual Report.
1.D	Hold a Sediment and Erosion Control Seminar for the developers, builders, engineers, vendors, and graders which will address TMDL pollutants of concern.	Year 1 – 5: Annual Sediment and Erosion Control Seminar. Include a summary of the approximate number of participants in Annual Report.
1.E	Schedule outreach events with industry trade organizations to educate the regulated community regarding Omaha's Industrial Permitting Program.	Year 1 – 2: Industrial Permit Outreach. Include a summary of the number of events and approximate number of participants in Annual Report.
1.F	Work collaboratively with other community organizations to develop a campaign aimed at picking up pet waste which will address TMDL pollutants of concern.	Year 1: Develop outreach material and partnerships. Year 2 - 5: Distribute information. Provide an estimate of number of brochures distributed and activities targeted.
1.G	Develop materials and displays associated with BMP demonstration projects installed with Stormwater Management Program Plan funds from NDEQ.	Year 1 -5: Provide a narrative and examples of materials developed in annual report.
1.H	Develop a City Stormwater Program Web Site, including but not limited to storm water related information and provide educational information targeted for residents, children, and industries which will address TMDL pollutants of concern.	Year 1-5: Develop, operate and maintain a City Stormwater Web site. Include a narrative in the Annual Report describing the functions of the website.

 # 2: Public Participation and Involvement

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
2.A	Operate a stormwater hotline and web based complaint system for Watershed (general information, complaints, reports of illegal dumping, etc.).	Years 1 - 5: Maintain system operation and include summary of received calls/emails in the Annual Report.
2.B	Participate in organizing and hold open houses on Papillion Creek Watershed Plan activities.	Years 1 - 5: A summary of activities will be included in the Annual Report.
2.C	Continue to implement a stream Cleanup Day. Utilize Keep Omaha Beautiful to identify stream segments in need of cleanup and recruit volunteers from the local area, public groups, and representatives from local area business and developments.	Years 1 – 5: Conduct one clean-up day each year. A summary of the clean-up day activities will be included in the Annual Report.
2.D	Provide tours of UndertheSink, household hazardous waste facility, for schools and neighborhood organizations to learn about the proper way to manage household chemicals and about stormwater treatment systems installed at the site.	Year 1 – 5: Provide a summary of the tours conducted on an annual basis for the annual report. Document when BMPs are installed and included in the tour.
2.E	Hold World O! Water Festival focused on elementary school aged children to celebrate Clean Water and engage in water quality related activities.	Year 1-5: Hold event annually. Report estimated number of participants in Annual Report.
2.F	Participate in community organizations, conferences, workshops, and web casts related to water quality and stormwater management.	Year 1- 5: Report number of staff attending, dates, location, and description of events.

 # 3: Illicit Discharge Detection and Elimination

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
3.A	Perform dry-weather inspections including Physical Characteristics Examinations of storm water outfalls 72" or greater and any outfalls with documented complaints.	Year 1 – 5: Inspect and record observations. Included a count of outfalls inspected in the Annual Report.
3.B	Investigate and seek resolution concerning any dry weather discharges of potentially impacted by sources by notifying the source that they must discontinue discharging, and initiate enforcement action consistent with adopted ordinance which will address TMDL pollutants of concern. Any source that the applicant feels constitutes an immediate health or safety threat will be reported immediately to the NDEQ.	Year 1 – 5: The following information will be included in the Annual Report: • the number of potential process or wastewater sources found; • the number of above resolved at local level; and • the identity of any referred and/or unresolved discharge sources.
3.C	Dry weather inspection of storm water outfalls, including smaller outlets and those that discharge to lesser tributaries or other storm conduits, in response to suspect conditions and/or complaints.	Year 1 – 5: Inspect and record observations. Included a count for outfalls inspected in the Annual Report.
3.D	Enforce existing City codes prohibiting illicit discharge connections to storm sewers.	Year 1 -5: Summarize code violations and enforcement actions taken in annual report.
3.E	Maintain and prevent instances of sanitary sewer leakage into MS4 or waters of the state.	Year 1 -5: Summarize investigations of leakage and actions taken in Annual Report.
3.E	Maintain and update a sewer map of major storm water outfalls and identify the names of respective receiving waters.	Years 1 - 5: Map will be maintained electronically on City GIS.
3.G	Prevent, contain and respond to spills to the MS4. Review, as necessary, interdepartmental SOPs with respects to spills, dumping and illegal disposal that impacts the MS4.	Year 1-5: Summarize number of reports of spills and actions taken in Annual Report. Identify City Department SOP and review date in Annual Report.

 # 4: Construction Site Runoff Control

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
4.A	Maintain the construction site inspection and reporting web site and continue to make enhancements.	Year 1-5: Include a narrative in the annual report about major web site upgrades and the date implemented.
4.B	Maintain a construction site inspection program that includes procedures for reporting, resolving deficiencies, and taking appropriate enforcement action consistent with adopted ordinances.	Years 1-5: The Annual Report will contain the following information relative to this commitment: 1) the number of inspections conducted in each of the following size categories: < 5 acres and > 5 acres 2) the number of sites receiving enforcement actions.
4.C	Maintain regulations and design specifications for controlling erosion, sediment loss, and other TMDL pollutants of concern from construction sites that disturb areas of 1 acre or more.	Year 1 -5: Provide a narrative description of any changes implemented in the City's sediment and erosion control regulations or design specifications in the annual report.
4.D	Maintain a program for performing review of Grading Permit applications to ensure compliance with applicable regulations and design specifications.	Year 1 -5: Summarize the number of grading permit issued on an annual basis.

 # 5: Post-construction Runoff Control

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
5.A	Develop guidance document for Post-Construction Stormwater Management Plan.	Year 2: Develop guidance document for Post Construction Storm Water Management Plan Year 2-5: Revise as necessary.
5.B	Participate with other City Departments to prepare an Environmental Element of City of Omaha Master Plan and include applicable storm water management provisions.	Year 1-5: Summarize progress in annual report. Year 5: Present the Environmental Element to City Planning Board and Omaha City Council for their consideration to adopt into the Omaha Master Plan.
5.C	Develop a database of existing structural BMPs (private and public) that reduce the impact of urbanization on storm water run-off and improve water quality and enhance other amenities and activities such as green space, parks and recreation, urban planning, aesthetics, and public safety.	Year 2: Coordinate with engineering firms and the NRD to identify existing BMPs and their location. Year 3: Develop a database and GIS map of BMPs.
5.D	Inspect annually and maintain (as necessary) City owned storm water BMP structures.	Year 1 -5: List BMPs inspected and summarize maintenance activity in Annual Report.
5.E	Revise stormwater BMP maintenance and inspection plan as needed.	Year 1-5: Review maintenance plan annually and include new structures. Make revisions as necessary. Report revisions and new structures in Annual Report.
5.F	Implement strategies, which include a combination of structural and or non-structural BMPs appropriate for the watershed, which will address TMDL pollutants of concern. Evaluate these strategies and implement changes as necessary to improve water quality and address TMDL pollutants of concern.	Year 1 -5: Summarize strategies, findings, and any changes in the Annual Report.

 # 6: Pollution Prevention/Good Housekeeping for Municipal Operations

BMP #	SWMP Element Description	Measurable Commitments & Implementation Schedule
6.A	Maintain Facility Runoff Control Plans (FRCP) for all City maintenance facilities to indentify BMPs implemented. Review FRCP annually and update as necessary. Inspect all facilities annually.	Year 1 -5: Review logs of FRCP updates and inspections. Report dates in annual report.
6.B	Inspect storm sewer conduits, channels and catch basins and remove and properly dispose of sediment and debris as needed to maintain an efficient system within permitted area.	Year 1 - 5: Report maintenance activities in the Annual Report.
6.C	Training will be provided for employees to prevent pollutant runoff from municipal operations at City maintenance facilities and at field operations.	Years 1 – 5: Provide training annually for employees and include summary in Annual Report of when training was held and number of attendees.
6.D	Provide for street cleaning in the following areas: • Residential • Business • Major Streets • Other areas in conjunction with special projects	Year 1 – 5: Summarize street cleaning activities in annual report.
6.E	City staff that applies pesticides will be trained in a certification program that complies with FIFRA regulations.	Year 1 -5: Report total number of City Staff certified each year in the Annual Report.
6.F	The City will continue to minimize pesticide and fertilizer use on publically maintained properties.	Year 1 -5: Summarize efforts in Annual Reports.

 # 7: Industrial Facilities

7.A	Issue City of Omaha Industrial Stormwater Permits. Permits to be issued to specific sectors to maximize effectiveness of education and outreach activities and utilize staff resources efficiently.	Year 1: Develop priority system based on industrial sector for targeting industries to issue City of Omaha Industrial Stormwater Permits Year 2- 5: Issue permits Report number of permits issued and industrial sector/SIC in Annual Report.
7.B	Inspect 20% of facilities per year issued City of Omaha Industrial Stormwater Permits, taking appropriate enforcement action consistent with adopted ordinances.	Year 1 -5: Summarize number of facilities issued permits, number of facilities inspected, and number of enforcement actions in Annual Report.
7.C	Implement a permit tracking system.	Year 2: Implement a GIS based tracking system for permits, inspections, and compliance. Develop automated summary to be included in Annual Report. Year 3 – 5: Include summary in Annual Report
7.D	Review City of Omaha Industrial Stormwater Permit for consistency with Federal and State NPDES Industrial Stormwater Permit.	Year 1 – 5: Summarize updates to City of Omaha Industrial Stormwater Permits in Annual Report.

ATTACHMENT A

#8: Storm Water Monitoring Plan

SWMP Element #	SWMP Element Description	Measurable Commitments & Implementation Schedule
8.A	Conduct in-stream water quality monitoring of named creeks in the Papillion Creek Watershed. Collect samples from at least 4 sites located in the Papillion Creek Watershed. Samples will be collected from May through August one day a week and analyzed for the following parameters: BOD5, TSS, ammonia nitrogen, nitrate-nitrogen, total nitrogen, soluble and total phosphorus, turbidity, pH, E coli, and Physical Characteristic Examinations. The purpose of the monitoring will be to evaluate the effectiveness of storm water management practices in the City of Omaha as it relates to TMDL pollutants of concern. List of potential sites: 170 and Highway 36 (Big Papio) 77th and L Street (Big Papio) 64th and L Street (Little Papio) Ft. Crook Road – USGS station (Papillion Creek)	Year 1- 5: Conduct monitoring The following information shall be included in the Annual Activity Report: • The monitoring data; • A summary report on the findings relative to SWMP efforts; • Any modifications of monitoring locations or procedures.
8.B	Develop an assessment monitoring plan for demonstration BMPs. Evaluate the effectiveness of the selected BMPs to treat storm water for the TMDL pollutants of concern and other water quality benefits. Consider implementation of refinements to the BMPs, which would improve their effectiveness. One aspect of the monitoring plan will include the collection stream samples on the segment that runs through Orchard Park to establish baseline conditions for BMP assessment purposes. Additionally, the plan will address how the City proposed to use stream samples collected in dry weather and wet weather, as described in 8.A above, to estimate the pollutant masses discharged on an event basis and an annual basis.	Year 1 – 2: Visually document and monitor the installation of the demonstration BMPs. Installation is expected to be complete by the end of Year 2. Provide a narrative to report progress in Annual Report. Year 2: Develop the BMP assessment monitoring plan and submit to NDEQ for approval as an attachment to the Annual Report. Years 3 - 5: Conduct monitoring. The following information shall be included in the Annual Activity Report: 1) the location of the monitoring site 2) the intensity and duration of the storm event monitored; 3) the timing of sampling in comparison to the occurrence of the storm event and to the discharge of peak storm water flows; 4) the monitoring data; and 5) a summary report on the findings of the removal rates of the constituents monitored for the BMPs.

ATTACHMENT B

ATTACHMENT B

COMPLAINT INVESTIGATIONS

Date	Complaint Type	Address	IDDE Classification	Enforcement Type
10/5/2011	Erosion around stormwater inlet	2953 S 168th	Not Classified	No Action Taken
10/14/2011	Sediment in street	11320 Camden Ave	Illicit Discharge	Notice of Violation
10/24/2011	Erosion around stormwater inlet	6426 Girard	Not Classified	Forwarded to Sewer Mintenance
10/25/2011	Sediment in street	2516 Farnam St	Water Main Break	Request for Voluntary Compliance (verbal)
10/28/2011	Acid discharge	14926 Grover Street	Illicit Discharge	Enforced by NDEQ
11/4/2011	No erosion controls	1902 Woodbridge Cir	Construction	Request for Voluntary Compliance (verbal)
11/15/2011	Dust complaint	13036 Shirley St	Construction	Request for Voluntary Compliance (verbal)
11/28/2011	Suspicious discharge to creek	12900 I Street	Spill/Illicit Discharge	Request for Voluntary Compliance
12/15/2011	Suspicious discharge at creek outlet	Elmwood Creek	Not classified	None
12/15/2011	Sediment in street	60th & Haskell Omaha	Construction	Request for Voluntary Compliance (verbal)
1/6/2012	Oil containment issue	10041 King Plaza	Invalid	None
1/17/2012	Truck leaking oil	3501 Jefferson Street	Potential Illicit Discharge	Request for Voluntary Compliance
1/23/2012	Suspicious discharge on street	6126 Oak Street	Potential Illicit Discharge	Request for Voluntary Compliance
1/26/2012	Car leaking oil	14852 Grebe Street	Potential Illicit Discharge	Request for Voluntary Compliance
2/2/2012	Oil containment issue	6702 Florence Boulevard	Invalid	None
2/15/2012	Sediment in street	180th and Burt Street	Construction	Request for Voluntary Compliance (verbal)
2/17/2012	Sediment in street	8th and Arbor Street	Construction	Request for Voluntary Compliance (verbal)
2/17/2012	Sediment in street	2525 N 176 St	Construction	Request for Voluntary Compliance (verbal)
2/21/2012	Mineral oil spill	444 S. 16th Street Mall	Illicit Discharge	None - Dry removal of material
2/28/2012	Sediment in street	2857 Ida Street	Construction	Request for Voluntary Compliance (verbal)
3/2/2012	Sediment in street	16th & Mandersen St	Invalid	None
3/14/2012	Suspicious discharge	80th and Pacific	Potential Illicit Discharge	Request for Voluntary Compliance
3/19/2012	Dumping to creek	87th & J Street	Potential Illicit Discharge	Request for Voluntary Compliance
3/19/2012	Dumping to creek	90th & Mockingbird	Potential Illicit Discharge	Request for Voluntary Compliance
3/19/2012	Dumping to creek	90th & L St.	Potential Illicit Discharge	Request for Voluntary Compliance (verbal)
3/20/2012	Sediment in street	6512 Van Buren Dr	Construction	Request for Voluntary Compliance (verbal)
3/29/2012	Dust complaint	1120 N 18th Street	Construction	Request for Voluntary Compliance (verbal)
3/29/2012	Oil in street	3711 S 126 Ave	Potential Illicit Discharge	Request for Voluntary Compliance (verbal)
4/5/2012	Oil Spill	31st & Dodge Street	Illicit Discharge	None - Dry removal of material
4/6/2012	Yard waste in inlet	Candlewood lake	Potential Illicit Discharge	Request for Voluntary Compliance
4/6/2012	Suspicious discharge to lake	1607 N 127th Cir	Potential Illicit Discharge	Request for Voluntary Compliance

ATTACHMENT B

Date	Complaint Type	Address	IDDE Classification	Enforcement Type
4/16/2012	Sediment in street	1819 Farnam St	Construction	Request for Voluntary Compliance (verbal)
4/16/2012	Clogged inlet	5153 Lake Street	Construction	Request for Voluntary Compliance (verbal)
4/17/2012	Sediment in street	40th and Jones Street	Construction	Request for Voluntary Compliance
4/19/2012	Sediment in street	901 Rawhide Drive	Construction	Request for Voluntary Compliance
4/25/2012	Drainage complaint	333 South 204th Street	Not classified	No Action Taken
4/30/2012	Yard waste in inlet	50th & Grand Street	Potential Illicit Discharge	Request for Voluntary Compliance
5/1/2012	Transformer oil spill	42nd & Seward Street	Illicit Discharge	None - Dry removal of material
5/8/2012	Sediment in street	2905 Jackson St	Construction	No Action Taken
5/9/2012	Erosion complaint	19388 Poppleton St	Construction	Request for Voluntary Compliance (verbal)
5/9/2012	Drainage complaint	17321 Spencer	Not classified	No Action Taken
5/9/2012	Sediment in street	19504 Emile	Construction	Request for Voluntary Compliance (verbal)
5/15/2012	Suspicious discharge to inlet	14029 Shirley	Potential Illicit Discharge	Request for Voluntary Compliance
5/15/2012	Suspicious discharge in street	14011 Shirley St.	Potential Illicit Discharge	Request for Voluntary Compliance (verbal)
5/21/2012	Car leaking oil	16450 Patrick Avenue	Potential Illicit Discharge	Request for Voluntary Compliance
5/22/2012	Dust complaint	1800 S. 214th st.	Construction	Request for Voluntary Compliance
5/24/2012	Dust and sediment control complaint	84th and Martha Street	Construction	Request for Voluntary Compliance
5/29/2012	Dust complaint	171st and Center	Construction	Request for Voluntary Compliance
5/30/2012	Suspicious discharge to street	3919 L Street	Potential Illicit Discharge	No Action Taken
6/5/2012	Grease discharge	5103 Leavenworth Street	Potential Illicit Discharge	Request for Voluntary Compliance
6/9/2012	Dust complaint	13015 Morrison Drive	Construction	Request for Voluntary Compliance (verbal)
6/9/2012	Dust complaint	131st and Pacific	Construction	Request for Voluntary Compliance (verbal)
6/12/2012	Oil spill	3105 Leavenworth	Potential Illicit Discharge	No Action Taken
6/19/2012	Sediment in street	3707 Davenport	Construction	Request for Voluntary Compliance (verbal)
6/20/2012	Sediment in street	1420 South 194th Street	Construction	Request for Voluntary Compliance (verbal)
7/6/2012	Suspicious discharge to inlet	6701 Florence Boulevard	Invalid	None
7/10/2012	Sediment in street	14th and O Street	Water Main Break	Request for Voluntary Compliance
7/20/2012	Dust complaint; Discharge to inlet	215 South 86th Streey	Construction	Request for Voluntary Compliance (verbal)
7/20/2012	Suspicious discharge to street	1601 Vinton Street	Potential Illicit Discharge	Request for Voluntary Compliance
7/20/2012	Dust complaint	7400 Military Avenue	Construction	Request for Voluntary Compliance (verbal)
7/23/2012	Dust complaint	Florence Blvd. And Charles St	Construction	Request for Voluntary Compliance (verbal)
8/13/2012	Dumping along property line	7226 Pinkney Street	Not Classified	Forwarded to Weeds and Litter Dept.

ATTACHMENT B

Date	Complaint Type	Address	IDDE Classification	Enforcement Type
8/20/2012	Sediment discharging to lake	4757 N 14th Avenue	Construction	Request for Voluntary Compliance (verbal)
8/23/2012	Suspicious discharge in street	4626 South 143rd Street	Construction	Request for Voluntary Compliance (verbal)
8/29/2012	Sanitary sewer discharge	6206 Buckingham Avenue	Illicit Discharge	Request for Voluntary Compliance
8/7/2012	Sanitary sewer discharge	2011 North 68th Street	Potential Illicit Discharge	Request for Voluntary Compliance
9/7/2012	Sediment in street	132nd and Meredith Street	Construction	Request for Voluntary Compliance (verbal)
9/10/2012	Drainage complaint	2326 S 179 Street	Not Classified	No Action Taken
9/17/2012	Suspicious discharge to street	1405 S. 8th Street	Potential Illicit Discharge	No Action Taken
9/17/2012	Sediment in street	62nd and Williams Street	Construction	Request for Voluntary Compliance (verbal)
9/19/2012	Sediment in street	3902 South 187th Street	Construction	No Action Taken
9/24/2012	Suspicious discharge to street	12236 Orchard Avenue	Potential Illicit Discharge	Request for Voluntary Compliance
9/24/2012	Dumping to creek	811 Cole Creek	Illicit Discharge	Request for Voluntary Compliance
9/25/2012	Yard waste in street	8805 Franklin Street	Potential Illicit Discharge	Request for Voluntary Compliance

ATTACHMENT C

ATTACHMENT C

Construction Program Enforcement Actions

Project Name	Date Submitted	Action Recommended	Outcome
UNMC College of Nursing Addition	2/9/2012	Letter of Warning	No Action Taken
Pacific Woods Lots 1-233 & Outlots A & B	2/9/2012	Letter of Warning	LOW Issued
John Deere	3/15/2012	Notice of Violation	NOV w/ Fine
Huntington Park Lots 444-465	4/12/2012	Letter of Warning	Request for Voluntary Compliance
Southern Valley	4/18/2012	Notice of Violation	Request for Voluntary Compliance
South Pacific Storage	4/23/2012	Notice of Violation	Request for Voluntary Compliance
South Pacific Storage	5/21/2012	Notice of Violation	Request for Voluntary Compliance
Andresen Meadows	6/20/2012	Notice of Violation	Request for Voluntary Compliance
Sterling Ridge	6/27/2012	Letter of Warning	Pending
Center Springs	9/27/2012	Letter of Warning	Pending
90th and Center	10/16/2012	Letter of Warning	Request for Voluntary Compliance
Village @ Butler St	12/13/2012	Notice of Violation	No Action Taken

ATTACHMENT D

SADDLEBROOK RESULTS -- 2012

	Green Roof	Gray Roof	Rain Garden	Basin	Field Duplicate	Blank	Method Code
Date Sampled	9/13/12						
Field pH	7.08	7.31	7.1	7.54			Standard Methods 4500-H^+, B
Temperature (°C)	18.3	12.03	17.6	16.35			
Conductivity (µS)	0.19	0.014	0.1	0.043			
Dissolved Oxygen (mg/L)	8.62	10.67	9.0	9.46			
Dissolved Oxygen %	93.64	101.16	96.5	98.61			
Physical Characteristics	amber color	clear	pale yellow color	pale brown			
Lab pH	7.68	7.00	7.16	7.65	7.45	8.89	Standard Methods 4500-H^+, B
Total Suspended Solids (mg/L)	12	22	2	24	28	< 1	Standard Methods 2540 D
Biochemical Oxygen Demand (mg/L)	14	3	4	4	4	< 2	Standard Methods 5210 B
Total Coliforms (cfu / 100 mL)	15230	1356	54750	51720	36540	<1	IDEXX Standard Methods 9223 B
***E. Coli* (cfu / 100 mL)**	3,890	<1	6,024	588	706	<1	IDEXX Standard Methods 9223 B
Ammonia (mg/L)	< 1	< 1	< 1	< 1	< 1	< 1	Standard Methods 4500-NH3
Total Kjeldahl Nitrogen (mg/L)	4.13	0.71	0.76	< 0.50	0.74	< 0.50	PAI - DK 02
Total Phosphorus (mg/L)	1.91	0.06	0.38	0.08	0.38	< 0.05	Standard Methods 4500-P F
Dissolved Phosphorus (mg/L)	1.59	< 0.05	0.29	0.07	0.30	< 0.05	Standard Methods 4500-P G
Nitrate / Nitrite Nitrogen (mg/L)	6.0	0.30	0.6	0.6	0.6	< 0.2	EPA 353.2
Nitrite Nitrogen (mg/L)	0.06	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	Standard Methods 4500-NO_2^- B
Hexane Extractable Materials (mg/L)	< 5	< 5	< 5	< 5	< 5	< 5	EPA 1664A - SPE
Copper (mg/L)			< 0.01	< 0.01	< 0.01	< 0.01	EPA 200.7
Zinc (mg/L)			0.01	0.01	0.01	< 0.01	EPA 200.7

ATTACHMENT E

ATTACHMENT E

2012 Precipitation Data							
DATE	**PRECIP (in)**	**DATE**	**PRECIP (in)**	**DATE**	**PRECIP (in)**	**DATE**	**PRECIP (in)**
5/1/2012	0.58	6/1/2012	0.04	7/1/2012	0.00	**8/1/2012**	**0.00**
5/2/2012	0.68	6/2/2012	0.00	7/2/2012	0.00	8/2/2012	0.00
5/3/2012	0.29	6/3/2012	0.00	7/3/2012	0.00	8/3/2012	0.00
5/4/2012	0.00	6/4/2012	0.00	7/4/2012	0.00	8/4/2012	0.00
5/5/2012	0.00	6/5/2012	0.00	**7/5/2012**	**0.00**	8/5/2012	0.00
5/6/2012	1.11	**6/6/2012**	**0.00**	7/6/2012	0.00	8/6/2012	0.00
5/7/2012	0.00	6/7/2012	0.00	7/7/2012	0.00	8/7/2012	0.45
5/8/2012	0.00	6/8/2012	0.00	7/8/2012	0.01	**8/8/2012**	**0.81**
5/9/2012	0.00	6/9/2012	0.00	7/9/2012	0.00	8/9/2012	0.00
5/10/2012	0.00	6/10/2012	0.78	7/10/2012	0.00	8/10/2012	0.00
5/11/2012	0.00	6/11/2012	0.00	**7/11/2012**	**0.00**	8/11/2012	0.01
5/12/2012	0.00	**6/12/2012**	**0.00**	7/12/2012	0.00	8/12/2012	0.00
5/13/2012	0.00	6/13/2012	0.00	7/13/2012	0.00	8/13/2012	0.01
5/14/2012	0.00	6/14/2012	1.07	7/14/2012	0.00	8/14/2012	0.00
5/15/2012	0.00	6/15/2012	0.46	7/15/2012	0.00	**8/15/2012**	**0.33**
5/16/2012	**0.00**	6/16/2012	0.12	7/16/2012	0.00	8/16/2012	0.00
5/17/2012	0.00	6/17/2012	0.00	7/17/2012	0.00	8/17/2012	0.00
5/18/2012	0.00	6/18/2012	0.00	**7/18/2012**	**0.00**	8/18/2012	0.11
5/19/2012	0.38	6/19/2012	0.00	7/19/2012	0.00	8/19/2012	0.00
5/20/2012	0.00	**6/20/2012**	**0.91**	7/20/2012	0.00	8/20/2012	0.00
5/21/2012	0.00	6/21/2012	0.00	7/21/2012	0.00	8/21/2012	0.00
5/22/2012	0.00	6/22/2012	0.00	7/22/2012	0.00	**8/22/2012**	**0.00**
5/23/2012	**0.01**	6/23/2012	0.12	7/23/2012	0.00	8/23/2012	0.00
5/24/2012	0.02	6/24/2012	0.00	7/24/2012	0.00	8/24/2012	0.45
5/25/2012	0.01	6/25/2012	0.00	**7/25/2012**	**0.00**	8/25/2012	0.22
5/26/2012	0.00	6/26/2012	0.00	7/26/2012	0.00	8/26/2012	0.00
5/27/2012	0.22	**6/27/2012**	**0.00**	7/27/2012	0.00	8/27/2012	0.00
5/28/2012	0.11	6/28/2012	0.00	7/28/2012	0.00	8/28/2012	0.00
5/29/2012	0.00	6/29/2012	0.07	7/29/2012	0.00	**8/29/2012**	**0.00**
5/30/2012	**0.15**	6/30/2012	0.00	7/30/2012	0.00	8/30/2012	0.00
5/31/2011	0.41			7/31/2012	0.00	8/31/2012	0.00
Bold = Sampling Day							

ATTACHMENT E

Site F 66th and L St

(**Bold** text indicates that the sample result was less than the detection limit, gray background indicates probe or analysis error)

	5/16/12		5/23/12		5/30/12		6/6/12		6/12/12		6/20/12		6/27/12		7/5/12		7/11/12		7/18/12		7/25/12		8/1/12		8/8/12		8/15/12		8/22/12		8/29/12		
Total Coliform	28373	A	19546	A	41060		16160		26030		72700		11350	A	10713	A	41060		51720		19560		32628	A	22337	A	155310		43520		111990		**SM 9222 D** MDL = 1 cfu / 100 mL
e coli	1392	A	2913	A	9810	A	548	A	1056	A	1817	A	698	A	316	A	223	A	177	A	255	A	155	A	567	A	10812	A	1052	A	7306	A	**Colilert Method** MDL = 1 cfu / 100 mL
Nitrate / Nitrite Nitrogen (mg/L)	1.0		1.5		1.3		1.4		1.3		1.5		1.5		1.3		1.5		0.7		1.4		1		1.2		1.1		0.9		1.1		**EPA 353.2** MDL = 0.2 mg/L
Kjeldahl Nitrogen (mg/L)	0.52		0.81		0.97		0.79		0.62		1.13		0.86		0.71		1.2		1.12		1.17		0.89		**0.65**		0.62		0.9		0.76		**EPA 351.3** MDL = 0.5 mg/L
Nitrite Nitrogen (mg/L)	1.60		0.04		0.04		0.04		0.03		0.03		0.03		0.02		0.02		0.03		0.07		0.05		0.04		0.04		0.06		0.06		**SM 4500-NO_2^- B** MDL = 0.02 mg/L
Ammonia Nitrogen (mg/L)	**< 1**	U	**< 1**	U	**<1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	**U**	**< 1**	U	**SM 4500-NH_3 D** MDL = 1 mg/L
Total Phosphorus (mg/L)	0.12		0.39		0.16		0.14		0.15		0.20		0.19		0.21		0.14		0.16		0.23		0.18		0.19		0.15		0.22		0.2		**SM 4500 P F** MDL = 0.05 mg/L
Dissolved Phosphorus (mg/L)	0.05		0.06		0.24		0.05		0.07		0.08		0.08		0.08		0.06		**< .05**	U	0.09		0.08		0.06		0.08		0.1		0.11		**SM 4500 P F** MDL = 0.05 mg/L
pH (lab)	8.08		7.50		7.94		8.03		7.92		8.18		8.1		8.15		8.06		7.96		7.99		7.81		7.91		7.76		7.75		7.79		**SM 4500-H^+ B**
BOD (mg/L)	2		2		**< 2**	U	2		2		**< 2**	U	**< 2**	U	2		**< 2**	U	2		2		2		2		**2**		**< 2**	**U**	**< 2**	U	**SM 5210 B** MDL = 2 mg/L
TSS (mg/L)	30		26		33		24		19		44		46		44		33		39		56		25		31		4		1		4		**SM 2540 D** MDL = 1 mg/L
TDS (mg/L)	452		476		443		526		447		472		506		492		577		519		632		619		649		604		556		512		**SM 2540 C** MDL = 1 mg/L
Temp (C)	---		---		17.83	A	---		19.91	A	23.38	A	23.93	A	26.13	A	23.24	A	26.43	A	25.69	A	26.22	A	24.89	A	20.59	A	21.08	A	22.08	A	Field Measurment
DO (mg/L)	---		---		6.55	A	---		7.87	A	7.54	A	7.5	A	6.67	A	6.55	A	5.56	A	6.30	A	6.16	A	6.60	A	7.19	A	--		4.47	A	Field Measurment
SpCond (æS/cm)	---		---		686.0	A	---		672.1	A	746.0	A	720.2	A	780.1	A	851.7	A	835.5	A	942.3	A	781.6	A	956.3	A	892.2	A	870.5	A	751.3	A	Field Measurment
Turb (NTUs)	---		---		---		---		0.0	A	437.1	A	658.6	A	476.5	A	74.5	A	81.1	A	435.7	A	4.8	A	--		--		--		--		Field Measurment
pH	---		---		8.09	A	---		7.76	A	8.09	A	8.04	A	7.98	A	7.85	A	7.83	A	8.01	A	7.78	A	7.89	A	7.82	A	7.66	A	7.66	A	Field Measurment
Duplicate	D		F		B		D		F		D		F		D		B		S		D		F		B		F		D		F		

Data quality control is done "in house" for the following tests: COD, BOD, TSS, TDS.

A = Value is an average results obtained from multiple analyses

L = The actual value is greater than the value given.

U = Value below detection limit.

X = Value exceeds instrument range.

Site S 78th and L St

(**Bold** text indicates that the sample result was less than the detection limit, gray background indicates probe error)

	5/16/12		5/23/12		5/30/12		6/6/12		6/12/12		6/20/12		6/27/12		7/5/12		7/11/12		7/18/12		7/25/12		8/1/12		8/8/12		8/15/12		8/22/12		8/29/12		
Total Coliform	18985	A	5794		> 241960	L/X	27230		57940		57940		34410		20140		13378	A	11164	A	17016	A	25163	A	8857	A	18553	A	23115	A	32550		**SM 9222 D** MDL = 1 cfu / 100 mL
e coli	698	A	1482	A	86640		2040	A	3217	A	5133	A	1503	A	334	A	188	A	150	A	245	A	729	A	179	A	642	A	803	A	4114	A	**Colilert Method** MDL = 1 cfu / 100 mL
Nitrate / Nitrite Nitrogen (mg/L)	7.2		6.6		6.7		6		6		5.2		5.4		5.4		5.7		4.5		4.2		2.9		2.5		1.9		1.9		2.1		**EPA 353.2** MDL = 0.2 mg/L
Kjeldahl Nitrogen (mg/L)	0.61		1.06		1.63		0.83		1		0.84		0.72		0.6		0.079		1.16		0.89		0.67		0.59		0.55		0.75		0.61		**EPA 351.3** MDL = 0.5 mg/L
Nitrite Nitrogen (mg/L)	0.06		0.1		0.14		0.05		0.04		0.05		0.04		0.04		0.03		0.04		0.03		0.03		0.03		0.04		0.04		0.05		**SM 4500-NO_2^- B** MDL = 0.02 mg/L
Ammonia Nitrogen (mg/L)	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	1		**< 1**	U	**< 1**	U	**< 1**	**U**	**< 1**	U	**SM 4500-NH_3 D** MDL = 1 mg/L
Total Phosphorus (mg/L)	0.33		0.49		0.62		0.37		0.29		0.34		0.32		0.32		0.29		0.26		0.25		0.25		0.22		0.16		0.2		0.23		**SM 4500 P F** MDL = 0.05 mg/L
Dissolved Phosphorus (mg/L)	0.014		0.18		0.24		0.16		0.15		0.17		0.15		0.17		0.14		0.13		0.12		0.1		0.08		0.09		0.09		0.12		**SM 4500 P F** MDL = 0.05 mg/L
pH (lab)	8.29		7.77		8.24		8.28		8.35		8.36		8.4		8.37		8.31		8.27		8.25		8.09		8.09		7.94		8.05		8.04		**SM 4500-H^+ B**
BOD (mg/L)	**< 2**	U	2		4		**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	2		**2**		**< 2**	**U**	**< 2**	U	**SM 5210 B** MDL = 2 mg/L
TSS (mg/L)	152		262		272		152		95		134		111		79		82		57		49		64		75		22		43		42		**SM 2540 D** MDL = 1 mg/L
TDS (mg/L)	466		458		486		456		483		420		455		455		489		459		485		498		503		476		497		476		**SM 2540 C** MDL = 1 mg/L
Temp(C)	---		---		17.95	A	---		19.62	A	23.78	A	23.95	A	26.27	A	23.34	A	26.62	A	26.50	A	25.89	A	24.95	A	20.98	A	21.24	A	22.08	A	Field Measurment
DO (mg/L)	---		---		7.40	A	---		8.52	A	7.63	A	8.06	A	7.26	A	7.10	A	7.11	A	7.41	A	7.08	A	7.67	A	7.82	A	--	A	6.56	A	Field Measurment
SpCond (æS/cm)	---		---		730.5	A	---		698.1	A	680.4	A	688.7	A	706.2	A	716.3	A	713.0	A	734.3	A	740.9	A	764.1	A	771.2	A	782.1	A	733.7	A	Field Measurment
Turb (NTUs)	---		---		---		---		0.0	A	536.3	A	890.7	A	662.5	A	154.7	A	105.0	A	353.1	A	25.3	A	--		--		--		--		Field Measurment
pH	---		---		8.40	A	---		8.25	A	8.23	A	8.18	A	8.22	A	8.17	A	8.20	A	8.29	A	2.78	A	8.14	A	8.01	A	7.92	A	7.94	A	Field Measurment

Data quality control is done "in house" for the following tests: COD, BOD, TSS, TDS.
A = Value is an average results obtained from multiple analyses
L = The actual value is greater than the value given.
U = Value below detection limit.
X = Value exceeds instrument range.

Side D Hwy 75 and Capehart

(**Bold** text indicates that the sample result was less than the detection limit, gray background indicates probe error)

	5/16/12		5/23/12		5/30/12		6/6/12		6/12/12		6/20/12		6/27/12		7/5/12		7/11/12		7/18/12		7/25/12		8/1/12		8/8/12		8/15/12		8/22/12		8/29/12		
Total Coliform	11447	A	24196		81640		21398	A	27550		48840		24000		8481	A	9085	A	17347	A	21043	A	23590		> 241960	L/X	16279	A	23893	A	21342	A	**SM 9222 D** MDL = 1 cfu / 100 mL
e coli	230	A	1076		13733	A	640	A	2047	A	1857	A	705	A	176	A	111	A	447	A	159	A	266	A	198630		1193	A	475	A	697	A	**Colilert Method** MDL = 1 cfu / 100 mL
Nitrate / Nitrite Nitrogen (mg/L)	3.4		7.8		3.5		4.0		3.7		2.8		3.4		3.1		2.9		2.5		2.5		1.9		1.2		1.4		1.6		1.4		**EPA 353.2** MDL = 0.2 mg/L
Kjeldahl Nitrogen (mg/L)	0.59		1.72		1.67		0.8		0.82		1.1		1.30		0.57		1.09		1.34		1.2		0.73		1.3		0.63		1.16		0.59		**EPA 351.3** MDL = 0.5 mg/L
Nitrite Nitrogen (mg/L)	0.04		0.09		0.09		0.03		0.03		**< 0.02**	U	0.03		0.03		0.04		0.04		0.04		0.04		0.04		0.02		0.03		0.03		**SM 4500-NO_2^- B** MDL = 0.02 mg/L
Ammonia Nitrogen (mg/L)	**< 1**	U	**< 1**	U	**< 1**	U	1.1		**< 1**	U	**<1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**1.1**	U	**< 1**	**U**	**< 1**	U	**SM 4500-NH_3 D** MDL = 1 mg/L
Total Phosphorus (mg/L)	0.2		0.48		0.49		0.23		0.3		0.29		0.27		0.21		0.16		0.24		0.23		0.25		0.31		0.2		0.24		0.24		**SM 4500 P F** MDL = 0.05 mg/L
Dissolved Phosphorus (mg/L)	0.13		0.19		0.18		0.14		0.15		0.14		0.14		0.12		**< .05**	U	0.1		0.09		0.11		< .05		0.1		0.14		0.15		**SM 4500 P F** MDL = 0.05 mg/L
pH (lab)	8.2		7.59		8.07		8.25		8.18		8.34		7.93		8.38		8.36		8.24		8.25		7.99		7.71		7.92		8.12		8.06		**SM 4500-H^+ B**
BOD (mg/L)	**< 2**	U	3		4		**< 2**	U	2		**< 2**	U	**< 2**	U	2		4		3		2		2		9		2		**< 2**	**U**	**< 2**	U	**SM 5210 B** MDL = 2 mg/L
TSS (mg/L)	45		131.0		286.0		66.0		78.0		112		63		24		30		53.0		48		63		82		23		34		44		**SM 2540 D** MDL = 1 mg/L
TDS (mg/L)	451		444.0		376.0		488.0		428.0		427		456		454		478		461		494		511		388		507		484		439		**SM 2540 C** MDL = 1 mg/L
Temp (C)	---		---		17.90	A	---		19.97	A	23.87	A	23.87	A	26.83	A	23.46	A	27.19	A	26.47	A	26.69	A	24.18	A	21.17	A	21.56	A	22.52	A	Field Measurment
DO (mg/L)	---		---		7.25	A	---		---	A	7.82	A	7.86	A	6.83	A	7.36	A	6.14	A	6.70	A	6.16	A	4.42	A	7.48	A	--	A	6.39	A	Field Measurment
SpCond (æS/cm)	---		---		63.1	A	---		651.8	A	677.6	A	700.2	A	732.2	A	727.8	A	754.2	A	783.3	A	781.6	A	528.4	A	778.5	A	800.0	A	698.2	A	Field Measurment
Turb (NTUs)	---		---		---		---		---		264.3	A	113.7	A	92.6	A	96.1	A	124.4	A	331.9	A	18.1	A	--		--		--		--		Field Measurment
pH	---		---		7.96	A	---		7.99	A	8.18	A	8.19	A	8.18	A	8.15	A	8.09	A	8.17	A	8.01	A	7.67	A	8.07	A	7.93	A	7.95	A	Field Measurment

Data quality control is done "in house" for the following tests: COD, BOD, TSS, TDS.
A = Value is an average results obtained from multiple analyses
L = The actual value is greater than the value given.
U = Value below detection limit.
X = Value exceeds instrument range.

ATTACHMENT E

Site B 168th and Hwy 36

(**Bold** text indicates that the sample result was less than the detection limit, gray background indicates probe error)

	5/16/12		5/23/12		5/30/12		6/6/12		6/12/12		6/20/12		6/27/12		7/5/12		7/11/12		7/18/12		7/25/12		8/1/12		8/8/12		8/15/12		8/22/12		8/29/12		
Total Coliform	7357	A	43520		46110		17757	A	19607	A	43520		30760		64880		32550		46110		20460		21727	A	15266	A	16985	A	14121	A	14121	A	**SM 9222 D** MDL = 1 cfu / 100 mL
e coli	540	A	6198	A	10679	A	1309	A	1475	A	6349	A	2339	A	1451	A	1273	A	941	A	793	A	547	A	351	A	662	A	879	A	496	A	**Colilert Method** MDL = 1 cfu / 100 mL
Nitrate / Nitrite Nitrogen (mg/L)	7.2		7.8		8.5		7.8		8.0		7.77		5.4		7.1		7.5		6.3		6.3		5.2		5.2		4.6		4.3		4		**EPA 353.2** MDL = 0.2 mg/L
Kjeldahl Nitrogen (mg/L)	0.61		1.72		1.7		0.95		1.19		0.85		0.72		0.76		0.8		0.70		0.7		**<.50**	U	< .50	U	< .50	U	< .50	U	0.53		**EPA 351.3** MDL = 0.5 mg/L
Nitrite Nitrogen (mg/L)	0.06		0.09		0.09		0.06		0.05		0.08		0.04		0.06		0.04		0.06		0.06		0.06		0.06		0.04		0.04		0.04		**SM 4500-NO_2^- B** MDL = 0.02 mg/L
Ammonia Nitrogen (mg/L)	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**	U	**< 1**		**< 1**	**U**	**< 1**	U	**SM 4500-NH_3 D** MDL = 1 mg/L
Total Phosphorus (mg/L)	0.33		0.49		0.45		0.34		0.3		0.41		0.32		0.4		0.28		0.3		0.3		0.22		0.22		0.23		0.18		0.27		**SM 4500 P F** MDL = 0.05 mg/L
Dissolved Phosphorus (mg/L)	0.014		0.19		0.21		0.14		0.16		0.20		0.15		0.20		0.14		0.16		0.16		0.14		0.12		0.13		0.11		0.15		**SM 4500 P F** MDL = 0.05 mg/L
pH (lab)	8.29		8.01		8.3		8.33		8.39		8.37		8.4		8.38		8.37		8.31		8.35		8.16		8.28		8.28		8.4		8.34		**SM 4500-H^+ B**
BOD (mg/L)	**< 2**	U	2		**< 2**	U	**<2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	U	**< 2**	**U**	**< 2**	U	**SM 5210 B** MDL = 2 mg/L
TSS (mg/L)	152		204		215		179		106		161		111		127		95		111		65		34		29		43		27		44		**SM 2540 D** MDL = 1 mg/L
TDS (mg/L)	433		448		447		449		468		449		455		441		457		433		438		456		427		424		401		436		**SM 2540 C** MDL = 1 mg/L
Temp (C)	---		---		15.95	A	---		17.75	A	22.15	A	22.71	A	24.25	A	20.25	A	23.89	A	24.64	A	22.60	A	21.62	A	18.80	A	17.96	A	19.93	A	Field Measurment
DO (mg/L)	---		---		8.39	A	---		9.65	A	8.30	A	8.83	A	8.21	A	8.09	A	8.01	A	8.32	A	8.61	A	9.11	A	9.43	A	--	A	8.34	A	Field Measurment
SpCond (æS/cm)	---		---		688.5	A	---		668.5	A	8.3	A	677.0	A	671.3	A	664.2	A	655.3	A	647.6	A	654.1	A	648.7	A	656.8	A	646.1	A	658.5	A	Field Measurment
Turb (NTUs)	---		---		---		---		231.4	A	676.4	A	1119.0	A	838.0	A	170.0	A	143.1	A	434.3	A	120.2	A	--		--		--		--		Field Measurment
pH	---		---		8.52	A	---		8.43	A	8.27	A	8.18	A	8.31	A	8.40	A	8.29	A	8.43	A	8.32	A	8.39	A	8.40	A	8.40	A	8.45	A	Field Measurment

Data quality control is done "in house" for the following tests: COD, BOD, TSS, TDS.

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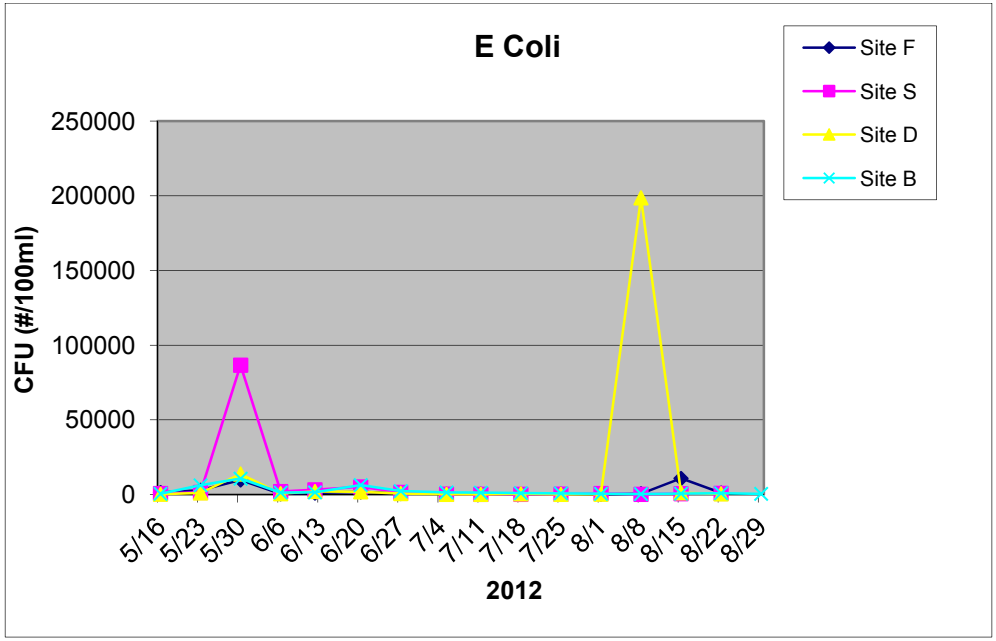
X = Value exceeds instrument range.

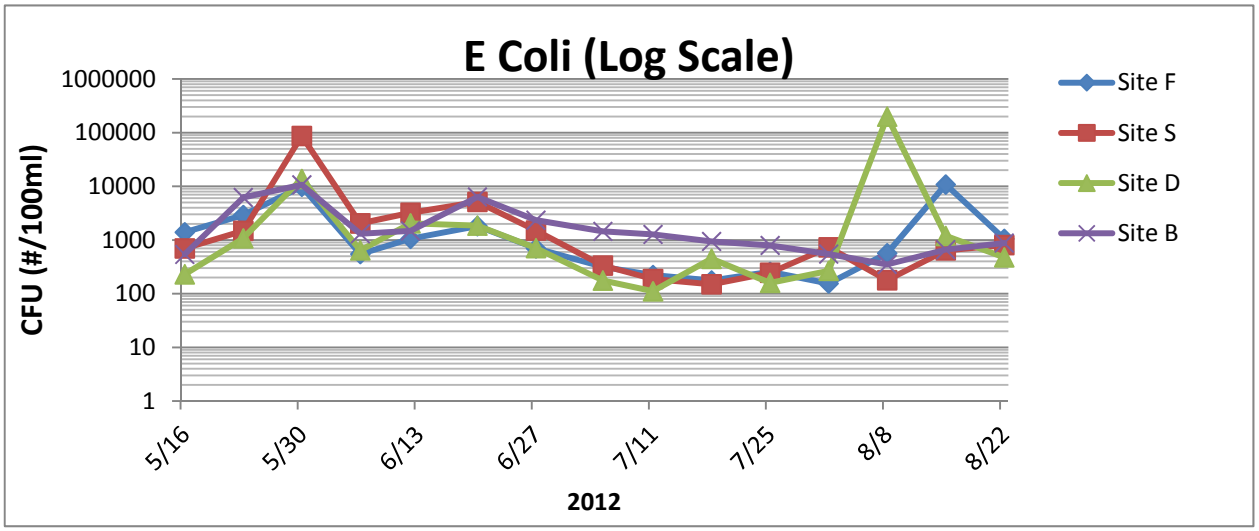
ATTACHMENT E

E. Coli 2012

	Site F	Site S	Site D	Site B
5/16/12	1392	698	230	540
5/23/12	2913	1482	1076	6198
5/30/12	9810	86640	13733	10679
6/6/12	548	2040	640	1309
6/12/12	1056	3217	2047	1475
6/20/12	1817	5133	1857	6349
6/27/12	698	1503	705	2339
7/5/12	316	334	176	1451
7/11/12	223	188	111	1273
7/18/12	177	150	447	941
7/25/12	255	245	159	793
8/1/12	155	729	266	547
8/8/12	567	179	198630	351
8/15/12	10812	642	1193	662
8/22/12	1052	803	475	879
8/29/12	7306	4114	697	496
Geomean	975.91	1068.56	894.99	1313.29

Bold indicates the actual value is greater than the value given.



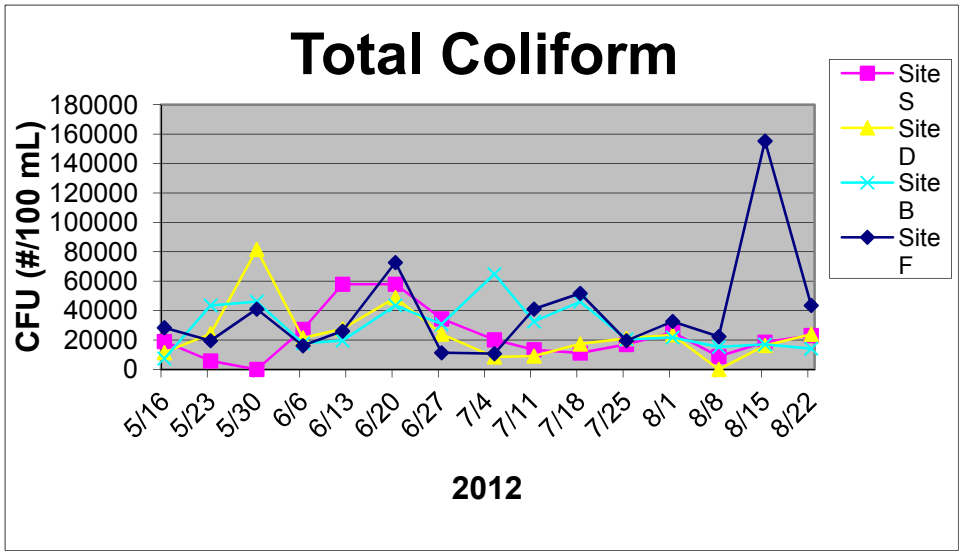


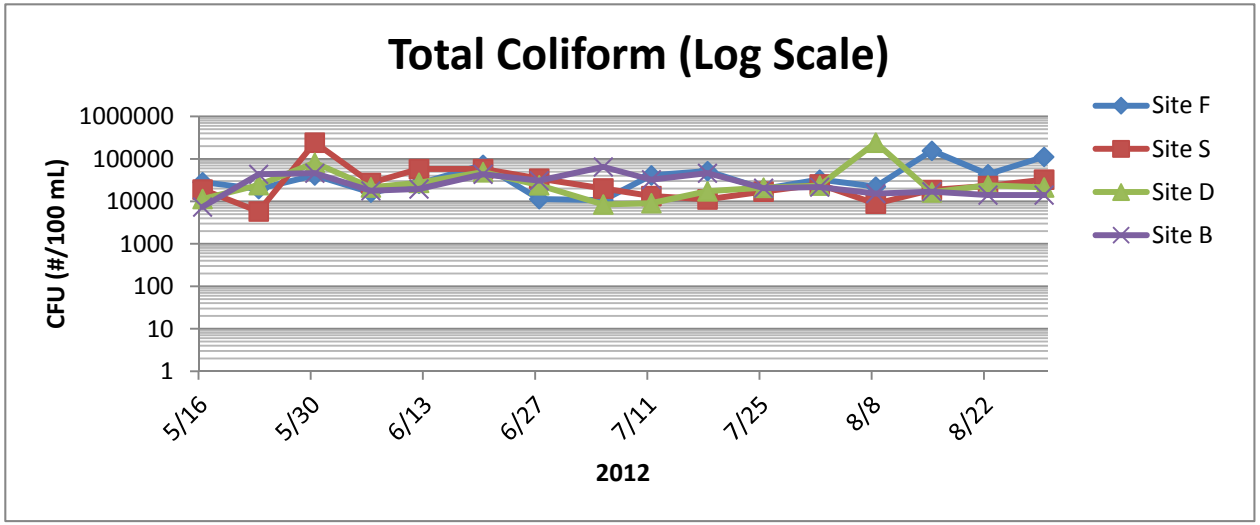
ATTACHMENT E

Total Coliform 2012

	Site F	Site S	Site D	Site B
5/16/12	28373	18984.5	11446.5	7357
5/23/12	19545.5	5794	24196	43520
5/30/12	41060	**241960**	81640	46110
6/6/12	16160	27230	21398	17756.5
6/12/12	26030	57940	27550	19606.5
6/20/12	72700	57940	48840	43520
6/27/12	11349.5	34410	24000	30760
7/5/12	10713	20140	8481	64880
7/11/12	41060	13377.53	9084.5	32550
7/18/12	51720	11163.5	17346.5	46110
7/25/12	19560	17015.5	21043	20460
8/1/12	32628	25163	23590	21726.5
8/8/12	22336.5	8857	**241960**	15265.5
8/15/12	155310	18553	16278.5	16984.5
8/22/12	43520	23115	23893	14120.5
8/29/12	111990	32550	21341.5	14120.5
Geomean	32960.16	24143.48	24825.79	24362.09

Bold indicates the actual value is greater than the value given.

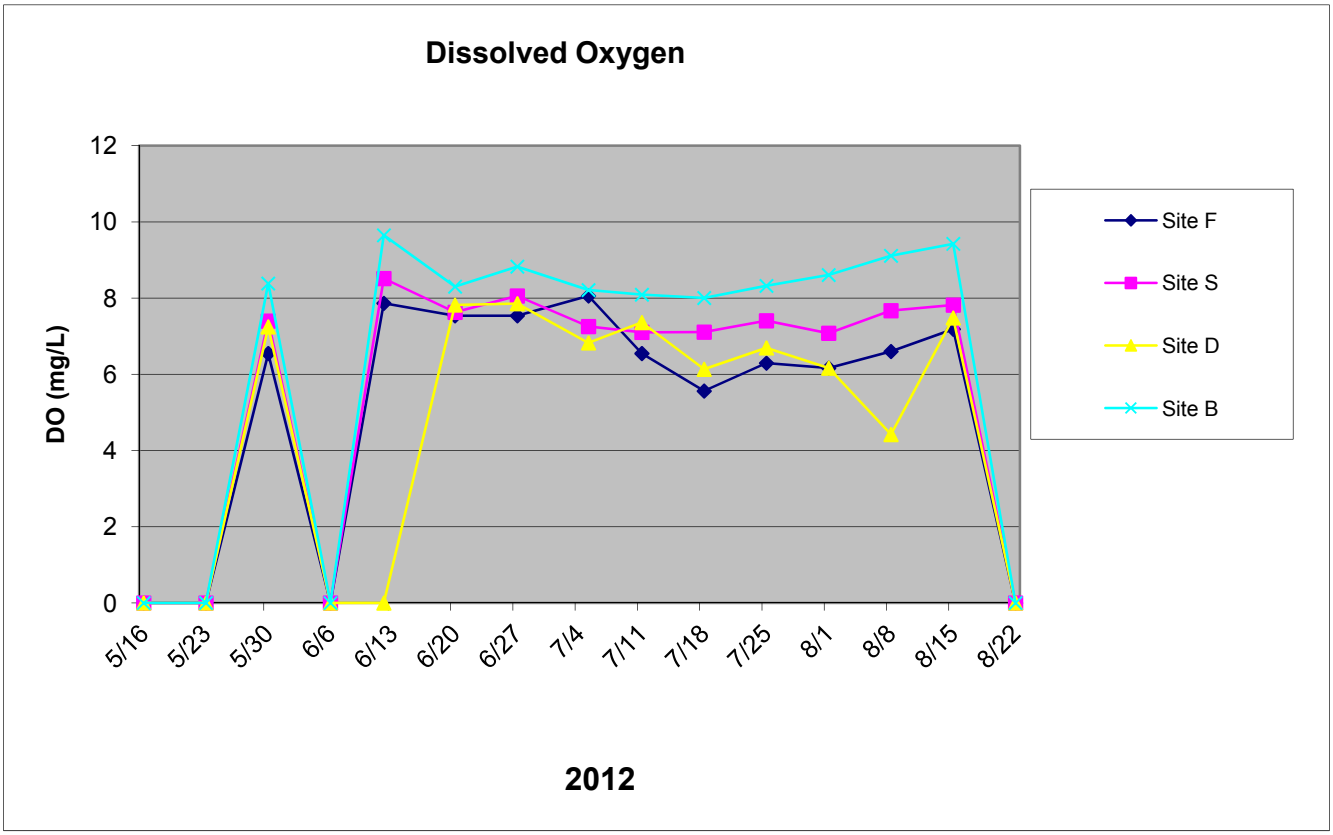




ATTACHMENT E

Dissolved Oxygen 2012

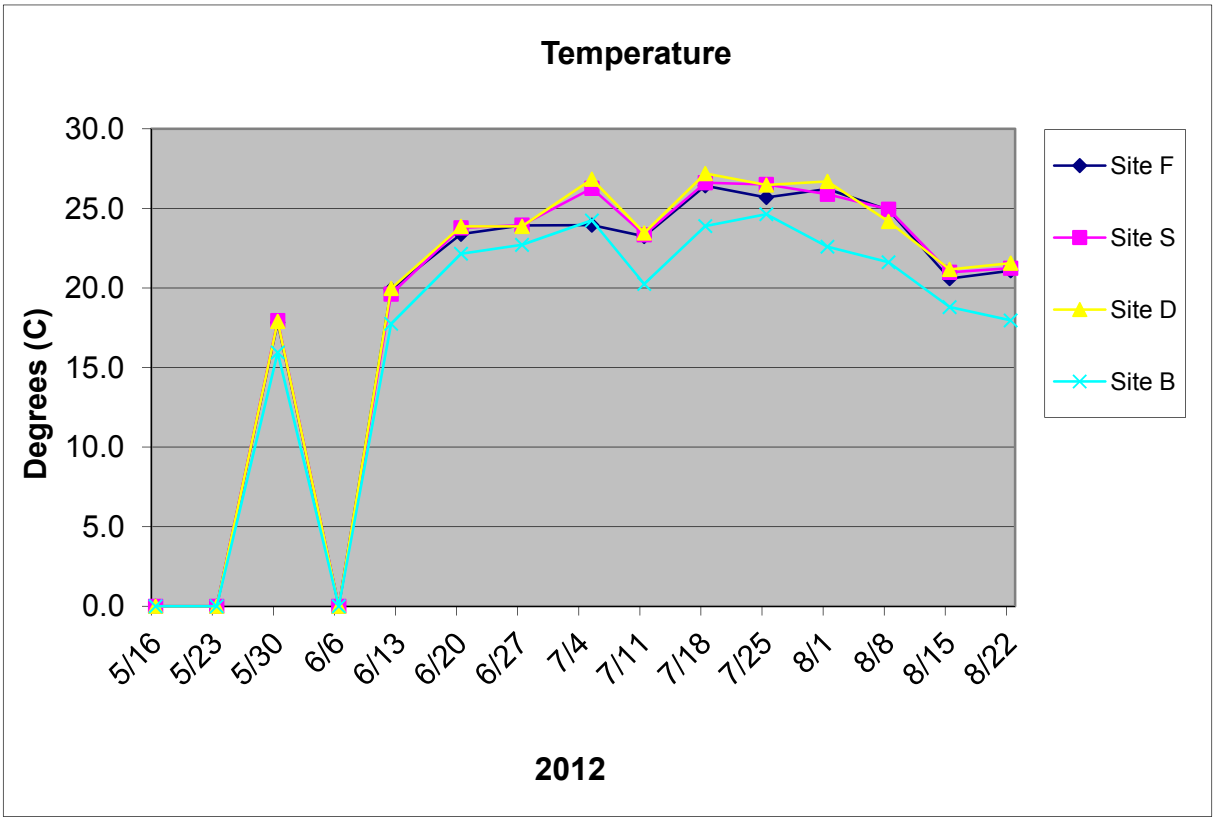
	Site F	Site S	Site D	Site B
5/16/2012	---	---	---	---
5/23/2012	---	---	---	---
5/30/2012	6.5475	7.3975	7.2475	8.385
6/6/2012	---	---	---	---
6/12/2012	7.865	8.515	---	9.65
6/20/2012	7.5375	7.63	7.82	8.3025
6/27/2012	7.5375	8.0575	7.8575	8.8275
7/5/2012	8.0575	7.255	6.825	8.2125
7/11/2012	6.5475	7.1025	7.36	8.09
7/18/2012	5.5625	7.1075	6.135	8.005
7/25/2012	6.295	7.4075	6.695	8.3225
8/1/2012	6.1625	7.0775	6.1625	8.6075
8/8/2012	6.6	7.6725	4.4225	9.1125
8/15/2012	7.185	7.8175	7.48	9.425
8/22/2012	--	--	--	--
8/29/2012	4.472	6.555	6.3925	8.3425
Average	6.70	7.47	6.76	8.61



ATTACHMENT E

Temperature 2012

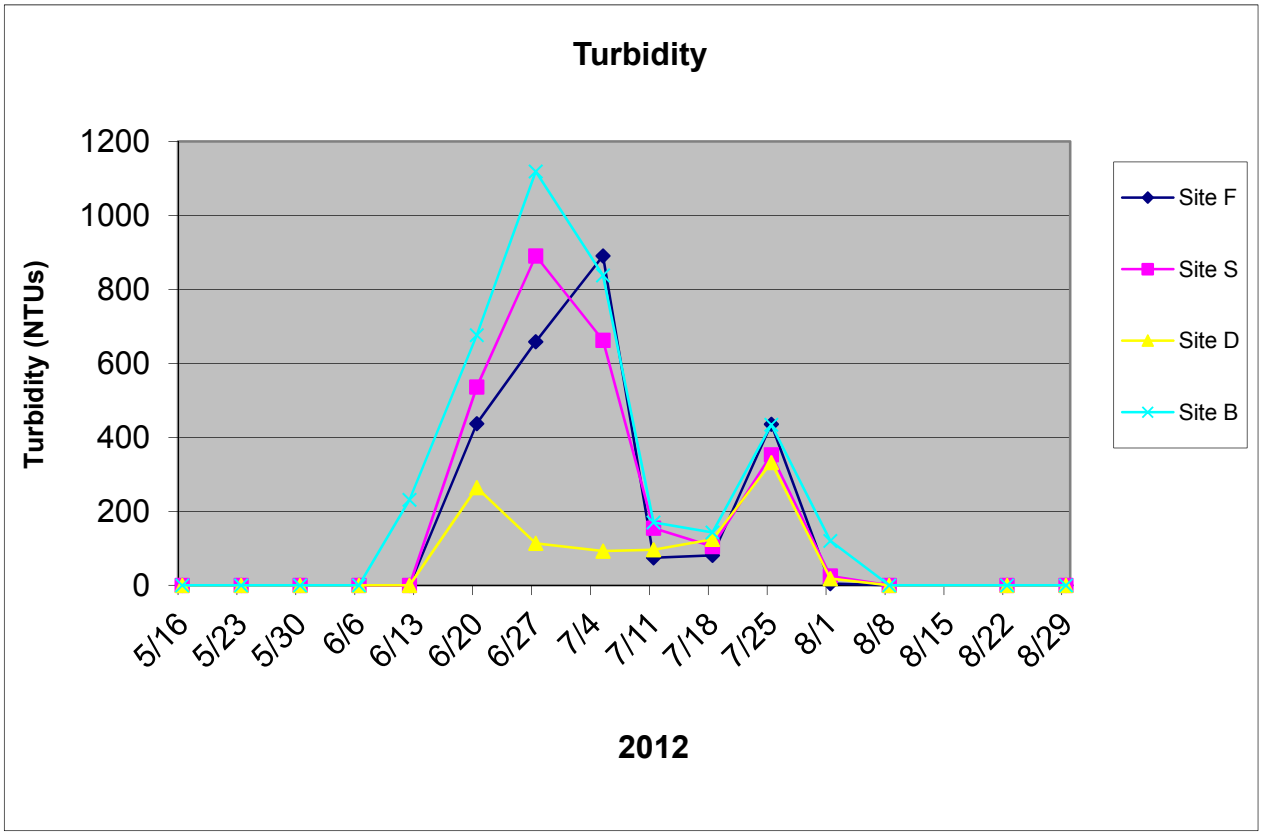
	Site F	Site S	Site D	Site B
5/16/2012	---	---	---	---
5/23/2012	---	---	---	---
5/30/2012	17.83	17.95	17.90	15.95
6/6/2012	---	---	---	---
6/12/2012	19.91	19.62	19.97	17.75
6/20/2012	23.38	23.78	23.87	22.15
6/27/2012	23.93	23.95	23.87	22.71
7/5/2012	23.95	26.27	26.83	24.25
7/11/2012	23.24	23.34	23.46	20.25
7/18/2012	26.43	26.62	27.19	23.89
7/25/2012	25.69	26.50	26.47	24.64
8/1/2012	26.22	25.89	26.69	22.60
8/8/2012	24.89	24.95	24.18	21.62
8/15/2012	20.59	20.98	21.17	18.80
8/22/2012	21.08	21.24	21.56	17.96
8/29/2012	22.08	22.08	22.52	19.93
Average	23.09	23.42	23.60	21.05



ATTACHMENT E

Turbidity 2012

	Site F	Site S	Site D	Site B
5/16/2012	---	---	---	---
5/23/2012	---	---	---	---
5/30/2012	---	---	---	---
6/6/2012	---	---	---	---
6/12/2012	0.00	0.00	---	231.38
6/20/2012	437.08	536.30	264.33	676.43
6/27/2012	658.63	890.65	113.65	1119.00
7/5/2012	890.65	662.45	92.60	838.00
7/11/2012	74.45	154.65	96.13	170.00
7/18/2012	81.13	105.03	124.43	143.05
7/25/2012	435.68	353.13	331.88	434.33
8/1/2012	4.75	25.25	18.13	120.20
8/8/2012	--	--	--	--
8/22/2012	--	--	--	--
8/29/2012	--	--	--	--
Total Average	219.42	744.57	286.07	423.86



ATTACHMENT F