

*Kearney
Nebraska*



Phase II MS4 Annual Report for Permit Year Ten

**Nebraska Department of Environmental Quality
Authorization to Discharge Stormwater.
Under the NPDES Storm Water Phase II Municipal Separate
Storm Sewer System (MS4) General Permit**

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Authorization No. NE 300008

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For Reporting Period: 01/01/15 through 12/31/15



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Executive Summary:

In August 2005, Kearney submitted the Notice of Intent for coverage under the NDEQ General Permit for Phase II Municipal Separate Storm Sewer Systems (MS4) Discharges for Small Cities within the State of Nebraska. Kearney also submitted portions of the Storm Water Management Program (SWMP) as required by the permit. The SWMP identifies the Minimum Control Measure (MCMs) and the Best Management Practices (BMPs), measurable goals, and implementation schedules for the MCMs. The permit requires the submission of an Annual Report to the NDEQ for each permit year within sixty (90) days after the anniversary date of the permit coverage which commenced on January 1, 2006 for Kearney. As required by the permit, Kearney evaluated the implementation of the BMPs for each MCM and assessed the overall compliance with the MCMs.

This annual compliance evaluation report fulfills the MS4 permit requirement to assess compliance with permit conditions, appropriateness of BMPs, and progress towards statutory goals of the permit and Measurable Goals established for each MCM. The attached report presents the results of this assessment and brief summaries representing implemented activities as required by the Nebraska Department of Environmental Quality (NDEQ) Permit NER300000.

Since the phase II programs are currently operating under an administrative extension on the current permit, the City of Kearney has continued the focus of our original SWMP. We have done our best to complete all of the original BMP tasks involved with the first permit. We feel that we have addressed each BMP in a sufficient manner. Even though more focus was directed to certain areas of our program it was our goal to continue to lay the foundation for all program elements as to continue their development if needed into the next permitting cycle. Education and outreach was the main focus of the first term SWMP and this has continued throughout this last year. Additional focus has been towards building new program requirements for construction, post-construction, and pollution prevention good housekeeping. We anticipate these previously mentioned areas to be continuously changing in the future due to new technologies and program requirements. Due to this, our goal for these areas was to establish a good program foundation for each MCM and continue its development as needed into the future of our program. This evaluation indicates that the City of Kearney has focused towards program compliance under each original BMP section.

At the time of this report the City of Kearney is not aware of the specific timeline for permit renewal the NDEQ has set. Our organization is under the impression that we remain on administrative extension under our current permit. It is our intent to operate under our current permit and established plan BMPs. In August of 2011 the City of Kearney submitted a new SWMP to meet the requirements of the anticipated upcoming permit.

It was also requested that this plan be effective January 1, 2012. At this point we have not received final word on the new NPDES Permit. We will continue to implement and operate previously established programs while on this extension and until the next permit is initiated. The City of Kearney still seeks approval of the new SWMP and implementation date.

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 submitted, this document 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 knowing violations.



Michael Morgan, City Manager



Date

Permittee Information:

Permittee: City of Kearney

Program Administrator: Andrew Harter, Assistant Public Works Director

Contact Person: Daniel Lillis, Stormwater Program Manager

Mailing Address: City of Kearney, 1919 15th Ave, Kearney, NE, 68845

Contact Phone Number: (308) 233-3273

Authorization Number: NER 300008

Authorization Date: January 1, 2006

Annual Report Due Date: April 1, 2016

Reporting Period: 1/1/15-12/31/15

Have any areas been added to the MS4 due to annexation or other legal means? **Yes**

Annexed Properties:

Commercial	69.29 Acres
Residential	53.81
Total for 2013	123.1

Status of Compliance with Permit Conditions:

The City of Kearney feels the program is within an acceptable measure of compliance with the Phase II MS4 General Permit conditions. The City of Kearney has developed a comprehensive SWMP according to the requirements of the permit including BMPs, Measurable Goals, and implementation schedules for each of the seven MCMs. For this Annual Report, the Permittee has evaluated compliance in regards to the SWMP implementation schedule and the Measurable Goals. To the best knowledge of the Permittee, all required documentation and records are currently accounted for and stored in a centralized records database and/or filing system.

Progress Towards Achieving the Statutory Goal of Reducing the Discharge of Pollutants to the waters of the State and overall the waters of the US.

Implementation of BMPs consistent with the provisions of the SWMP required pursuant to 40 Code of Federal Regulations (CFR) 122.33 and 122.34 constitutes compliance with the standard of reducing pollutants to the Maximum Extents Practical.

The Permittee has developed a comprehensive SWMP according to the requirements of the permit including BMPs, Measurable Goals, and implementation schedules for each of the six MCMs. The City of Kearney continues to work towards the overall goal of reducing discharge of pollutants to waters of the US. By following our approved SWMP and achieving the implementation of the BMPs outlined in the SWMP we feel that our efforts towards this are being accomplished. It is our observation that the mindset of multiple stake holders has been shifting over the past few years to a more protection way of thinking. We feel this is a direct result of the implementation of our programs. Individuals are much more aware of their responsibility of protecting our local environment and doing what is necessary to accomplish this.

Description and Schedule for Implementation of any Additional BMPs or Monitoring that may be Necessary to Ensure Compliance with any Applicable Total Maximum Daily Load (TMDL)

The City of Kearney does not currently discharge to any stream segments that have approved TMDLs during this reporting period.

Notice of Reliance on another Government Entity to Satisfy some of the Permit Obligations (if Applicable) and a Copy of the Written Agreement with that Entity

The City of Kearney does not rely on another government entity for compliance with any part of this permit. The City of Kearney is actively involved in the Nebraska Stormwater Cooperative (NSWC) and many public education items are based off of the Nebraska H2O public education program. The City of Kearney also participates with many other state, university and local agencies when possible for the development and implementation of programs.

This report covers activities which occurred between the following dates: 1/1/2015 to 12/31/2015

Permitting Authority: Nebraska Department of Environmental Quality
Permit Number: NER: 300008
Permit Type: SMS4 General Permit
Permit Name: City of Kearney SWMP
Date Issue: 1/1/2006 **Date Expire:** 12/31/2010 Currently under administrative extension, per NDEQ.

General Information for MS4 Operator

Operator Name: Mike Morgan
Operator Title: City Manager
Represented Entity: City of Kearney
Mailing Address: 18 East 22nd Street, P.O.BOX 1180
Mail City, State, Zip: Kearney, NE 68848-1180
Phone Number: (308) 233-3214
E-Mail Address: mmorgan@kearneygov.org

Co-Permitting With: N/A

Population: 32,469 **Households:** 0 **Area (sq mi):** 13.7

Official Website: www.cityofkearney.org and www.Nebraskah2o.org

General Information for Primary Contact Person

Name: Andrew Harter
Title: Assistant Public Works Director
Phone Number: (308) 233-3246
E-Mail Address: aharter@kearneygov.org

Name: Daniel Lillis
Title: Stormwater Program Manager
Phone Number: (308) 233-3273
E-Mail Address: dlillis@kearneygov.org

Receiving Water Lists:

Listed below are all the identified receiving water bodies to which areas of the City of Kearney outfalls discharge.

Receiving Streams (creek, stream, river, etc.)

North Channel of Platte River
Wood River
NPPD Canal

Receiving Water bodies (lake, wetland, ocean, etc.)

Kearney Lake
Lost Lake
Lighthouse Point Lake
Stoneridge Lake

Receiving Watersheds

Middle Platte

MCM 1: Public Education and Outreach

BMP 1: Develop and Distribute Educational Material in Member Communities.

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney as a part of its Public Outreach Program will develop Stormwater related educational materials and media campaigns in various media forms. These materials are to be distributed by member communities to the public. Materials will provide education on stormwater related concerns.

Work performed for the BMP listed above

Date of activity: Yearly Campaign

Description: KOLN/KGIN TV Education Campaign

Title: Kearney Stormwater Pollution Prevention and NE H2O "Don't Pollute Commercials"

Cost: \$4271

Delivered To: All General Population

Distribution: With a population base of over 500,000 in the viewing area and around 100 commercials aired it is extremely hard to put a number to this. However, this type of educational approach has proven effective in the past.

Summary: This television campaign has been continued for the past 6 years. We have received good feedback from this type of public education. With such a wide distribution area we feel that it reaches many citizens with our message. During this campaign we have around 134 spots aired at high viewing times and on the mostly viewed channels in the state "FOX". City of Kearney combined efforts of this campaign with two other cities "Grand Island, Hastings) in total we run approximately 134 TV commercials distributing our messages.

Date of activity: 1/2015

Description: Stormwater information video filmed for Channel 6 and City website

Title: City of Kearney Stormwater Programs Information Break

Cost: \$0

Delivered To: All General Population

Distribution: Runs periodically on Channel 6 and is included on the city web site

Summary: This is a 5 minute information interview with the Stormwater Program Manager. This interview highlighted some of the most common elements of the City of Kearney Stormwater Management Plan programs. It has been run on a rotation basis on the Cities channel 6 station and is continually available on the City of Kearney web page.

Date of activity: 4/15/2015

Description: Kearney Hub, Living Green Insert, Educational add placed in issue.

Title: Water Conservation Add

Cost: \$335.00

Delivered To: All General Population

Distribution: Kearney Hub Distribution Averages 11,000

Summary: A 4" column by 5" educational add was placed in the Hub's Living Green insert that provided readers with general education on protecting water resources, reducing unnecessary runoff and pollution prevention. The focus of this ad was water when and where needed, reducing chemical mitigation from landscape irrigation and proper lawn maintenance practices.

Date of activity: Continually

Description: Rain garden site and display

Title: Kearney Rain Garden

Cost: nothing additional

Delivered To: Site available to general population and promoted on City web page

Distribution: The City of Kearney, UNL - Stormwater Management Team with sponsorship from The National Institute of Food and Agriculture and The U.S. Department of Agriculture sponsored a free – of – charge workshop to anyone interested on September 15th, 2011. The system has performed very well since its updates in 2011. We are confident that changing some of the original design and materials has not only improved the esthetical appeal but also maintained the treatment capabilities of the system. We are hopeful that this will stem creative landscape ideas from our local residents. Plans for the garden are to add informational signage that explains plant selection and how this particular garden was designed and operates. The area is continually promoted on the city and Nebraska H2O websites.

Date of activity: Continually

Description: Nebraska H2O Promotional Education items and Educational Fliers

Title: Public Education Materials

Cost: Carry over products from last year

Delivered To: All General Population

Distribution: 1000 items promoting the Nebraska H2O education program were distributed throughout this year. These items were distributed at the Nebraska Outdoors Expo, School Education Events and Inlet Marking events.

Approximately 250 educational fliers were distributed this year at the Nebraska Outdoors Expo. The following fliers were distributed. (NE H2O program, Build Your Own Rain Barrel, Benefits to Rain Barrels, (3) different Neb Guides focusing on stormwater, After the Storm, Scoop the Poop and Recycling information)

Summary: All of our public education fliers and information is continuously available on the websites. In addition we distribute educational materials at City Hall and the Utility Department.

BMP 2: Develop Public Service Announcements

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney as part of its Public Education and Outreach Program will develop Public Service Announcements to provide educational information to the public related to stormwater in various media forms.

Work performed for the BMP listed above

Date of activity: 4/22/2015

Description: City of Kearney, Press Release

Title: Earth Day announcement.

Cost: \$0

Delivered To: All General Population

Distribution: To city council, all department and all local news media

Summary: Reminding citizens about the three R's – Reduce, Reuse, and Recycle. Also reminding individuals about the cities recycle programs (as well as their locations) and how much this reduces pollution and wastes sent to the landfill.

BMP 3: Develop Educational Information for inclusion in a Website

BMP Description:

The City of Kearney as part of its Education and Outreach Program will develop a Website to provide member Communities and the public access to stormwater related information. The Website will include links to member community's stormwater information and information on community programs and activities related to stormwater.

Date of activity: 1/1/15-12/31/15

Description: City of Kearney Stormwater Pages and Nebraska H2O Education Pages

Title: Continued updates

Cost: \$0 – No direct cost for the web pages.

Delivered To: All General Population

Distribution: See Appendix A for yearly website activity summary

Summary: These web pages are updated throughout the year with timely and program related materials. The site will continue to serve as a place where individuals can find information regarding the participation cities storm water programs.

BMP 4: Develop a Household Awareness Survey

BMP Description:

The City of Kearney will develop as part of its Public Education and Outreach Program a Household Awareness Survey to measure the effectiveness of the Public Education and Outreach Program in educating the public about stormwater related concerns.

A Household Awareness Survey was not completed this permit year.

BMP 5: Develop a call in system for Educational Information related to Storm Water

BMP Description:

The City of Kearney as part of its Public Outreach Program will develop a call in system for the public to access educational information related to stormwater.

No additional activities were scheduled for the BMP listed above during this reporting period.

Date of activity: Continually

Description: Kearney Access Citizen Complaint/Request Reporting System

Title: Access Kearney

Cost: N/A

Delivered To: Available to general public

Distribution: Access Kearney is available to all area residents.

Description: The call in system has been established for the complete permit term. All materials are published with the call in number and it is available on the websites. In addition, the City of Kearney operates the Access Kearney reporting system. On this system stormwater issues are listed. Citizens can report illegal dumping or any other question or comment on this site. These are then directly forwarded to the Stormwater Program Manager to take the necessary actions. All calls from citizens are logged in this program as well to allow for continued tracking of the event.

A summary of all cases and a summary of the open case have been provided in Appendix B.

Most calls received are minor track out complaints and are addressed immediately by a site visit and a visit with the project owner. No call were received that would be a high risk discharge.

MCM 2: Public Involvement/Participation

BMP 1: Organize Public Meetings to educate the public on Storm Water related concerns

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney as part of its Public Education and Outreach Program will develop Public Meeting formats that may be used by member communities to organize and hold public meetings related to stormwater issues and concerns.

Work performed for the BMP listed above

Date of activity: 11/3/2015-11/6/2015

Description: American Water Works Association (AWWA) Fall Conference

Cost: \$0 – No direct cost

Delivered To: A number of 55 attendees were present at the AWWA Fall Conference this year. From Community Utility and Public Works employees to consulting engineers wanting to know the latest in the availability in water resources.

Summary: This conference last 3 days and allowed for the display of large equipment. The activities that were held were 'The Backflow Challenge,' a watered down version of trivial pursuit called 'Top Ops,' also on hand was 'Meter Madness,' a challenge to assemble a meter complete and accurate; there was a 'Water Tasting Contest' in which samples were taken from local water systems were judged.

Date of activity: 3/23/2015

Description: Nebraska Stormwater Cooperative (NSWC) Meeting-Rainfall, Runoff, and Minimum Treatment Standards

Cost: \$0 – No direct cost

Delivered To: The NSWC consists of 11 phase II communities in Nebraska (Kearney, Grand Island, Lexington, Hastings, North Platte, Scottsbluff, Columbus, Fremont, Beatrice, South Sioux City and Norfolk).

Summary: This group has one goal "Working together when possible to accomplish a common goal." In the past members have presented many projects and problems to the cooperative group in order to find ways that will most economically solve an issue. This meeting was hosted by Felsburg, Holt, and Ullevig in the Lincoln office.

Date of activity: 4/15/2015

Description: Nebraska Stormwater Cooperative (NSWC) Meeting- Hydrology discussion about 'flow through' BMP's.

Cost: \$0- No direct cost

Delivered to: The NSWC community members of Kearney, Grand Island, Lexington, Hastings, North Platte, Scottsbluff, Columbus, Fremont, Beatrice, South Sioux City and Norfolk.

Summary: This group convened in Kearney to continue the discussion on the recommended treatment standard, hydrology with equivalent treatment rates for 'flow through BMP's, and Relationship between water quality treatment and management storm sewer system and detention requirements.

Date of Activity: 5/6/2015

Description: Nebraska Stormwater Cooperative (NSWC) Meeting- Treatment Design Standards

Cost: \$0- No direct cost

Delivered to: All 11 members of the NSWC from Kearney, Grand Island, Lexington, Hastings, North Platte, Scottsbluff, Columbus, Fremont, Beatrice, South Sioux City and Norfolk

Summary: The group convened in Scottsbluff to discuss Best Management Practices and their relation to WQV and Qwq; Types of stormwater BMP's and design guidance provided by other municipalities and NDOR; Regional Variances and design considerations for Nebraska H20; BMP maintenance

Date of Activity: 6/10/2015

Description: Nebraska Stormwater Cooperative (NSWC) Meeting- General Procedures for Post Construction Program Design Standards

Cost: \$0- No direct cost

Delivered to: All 11 members of the NSWC from Kearney, Grand Island, Lexington, Hastings, North Platte, Scottsbluff, Columbus, Fremont, Beatrice, South Sioux City and Norfolk

Summary: A stormwater treatment plan submittal checklist was drafted and procedures for platting, site plan processes, inspections and maintenance were included

BMP 2: Participate/Sponsor Community Environmental Events

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The city will develop ways to provide organization, leadership or funding to members and groups of the community for local environmental events.

Work performed for the BMP listed above

Date of activity: 3/21/2015

Description: Kearney Canal Cleanup Event

Title: Event Sponsorship and Pollution Prevention Literature

Cost: \$0

Delivered To: Local Volunteers and Clubs

Distribution: 15-20 participants

Summary: Volunteers from the Kearney Whitewater Association, NPPD, and the City of Kearney removed a total of 5.5 tons of debris such as bicycles, wheels, tires, a stroller, box springs, water heater, bathtub, culverts, an axle, a refrigerator and some pipes.

Date of activity: Continually

Description: Summary of the sanitation division recycling programs

Cost: N/A

Delivered To: The program is available for weekly at home pick up, and five drop public locations.

Summary:

Sanitation Division collected and processed the following recyclables during permit term:

	Total 2014-2015	Monthly Average 2014-2015
Office Paper	39	3.25
Newspaper	1,152.7	96.05
Aluminum	16.4	1.37
Tin	59.9	5
Glass	157.8	13.2
Plastics	243.6	20.3
Cardboard	2317.4	193.1
Total tons of recycled	3,986.8	332.2

Total gallons of Motor Oil	10,112	842.7
Recycling revenue	\$311,860.58	\$25,988.00
Landfill avoidance savings	\$109,637.00	\$9,136.42
Total value of recyclables	\$421,497.58	\$35,124.80

We feel that the Kearney recycling programs provide a great reduction in the amount of possible pollutants that could potentially be dumped if an easy disposal resource is not provided. With over 8000 gallons of oil alone being collected this year the success and value of this program is obvious.

BMP 3: Develop a Storm Water Inlet Stenciling Program

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop a Stormwater Inlet Stenciling Program.

Work performed for the BMP listed above

Date of activity: 4/14/2015

Description: Inlet Marking

Cost: N/A

Delivered To: Southwest Kearney (2nd Ave to Kea West Avenue and from Talmadge Street to 11th St.)

Distribution: All inlets built within newly developed areas are installed with the City standard inlet lid that reads "No Dumping Drains to River".

Summary: A group of 7 individuals, headed by Kaydra Brodine from a leadership class at UNK marked 53 curb inlets with the "No Dumping, Drains to River" message on them.

MCM 3: Illicit Discharge Detection and Elimination

BMP 1: Develop an Illicit Discharge Ordinance and Illicit Discharge Detection and Elimination Program

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop an Illicit Discharge Ordinance and Standard Operating Procedures for the Illicit Discharge Detection and Elimination Program. The Ordinance is the basis for the Illicit Discharge Detection and Elimination Program.

No activities were scheduled for the BMP listed above during this reporting period aside from continued enforcement of the ordinance.

Description: Illicit Discharge Hotline Calls

Cost: No direct cost besides wages

Summary: The following is a summary of the calls received during the 2015 permit term. To date all calls were addressed without need for enforcement measures.

Complaint ID #	Date	Received By	Location	Site Inspection	Resolved?

The year produced no reports of actual dumping. As mentioned under the call in system BMP above we did have 10 calls directed to stormwater. These cases were not considered illicit discharges, which is why they are not included here as well. In most situations and when timely informed, the city will deploy a sweeper to clean up most small cases like this.

BMP 2: Perform Dry weather Inspections of Storm Water Outfalls

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The city will use Standard Operating Procedures and utilize a data base program for dry weather inspections of storm sewer outfalls. No dry weather inspections completed this permit year.

INDICATE WHEN INSPECTIONS WILL BE COMPLETED NEXT

BMP 3: Mapping of Storm Sewer System

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will research the current conditions and information available for the city storm sewer maps. A plan will be devised to complete the maps. Up to date maps will assist in the location and tracking of illicit discharges, source of pollutant and the areas that stormwater related complaints are coming from. The maps may be used in conjunction with the Illicit Discharge Detection and Elimination Program.

Date of activity: Continuous

Description: All new development projects are added to GIS mapping system.

Cost: wages

Area: All of Kearney Area

Summary: As development throughout the city is completed, development engineers are required to electronically submit as-built drawings of the development area infrastructure. This information is then

added to the current GIS mapping, keeping the system up to date.

Date of activity: Continuous

Description: Dry weather outfall evaluations

Cost: No direct cost besides wages

Area: City wide

Summary: Dry weather outfall investigations were completed in 2011. It was the original goal to initially complete these investigations during the first permit term. Now that we have been on administrative extension for three years the timeline would suggest doing the investigations again. It is planned to complete the dry weather outfall investigations again in 2016. No illicit discharges were reported or recorded at outfall location during system cleaning efforts this permit year. There is an 11"x17" map book of these outfalls updated by the GIS Department in December 2015.

MCM: 4 Construction Site Storm Water Runoff Control

BMP 1: Develop an Erosion and Sediment Control Ordinance

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop an Erosion and Sediment Control Ordinance. The ordinance will form the basis of a Construction Site Runoff Control Program put in place for reducing pollutants in Stormwater runoff from construction activities that result in land disturbance.

Work performed for the BMP listed above

No additional activities other than ordinance enforcement have been done under this section in the 2015 permit year.

BMP 2: Develop Site Inspection/Plan Review Program

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The city as part of its Erosion and Sediment Control Program will develop a Site Inspection and Plan Review Program for Construction Site Stormwater Runoff Controls.

Description: Site Plan Review

Summary:

Private Development - Stormwater management plans are required for all construction projects on sites greater than 1 acre in size. These plans are reviewed through the City of Kearney plan review process and approved by the Kearney Public Works Division. Sites less than 1 acre are also required to incorporate stormwater BMPs in their design as a means of satisfying other city codes. This is reviewed when the small site applies for a building permit. During 2015, Kearney Public Works took part in the preliminary review of 21 site plans for projects exceeding one acre in size or of the commercial nature. Of those 21 sites, all site plans received final approval with 4 NPDES permits required. Continued attention to erosion control plan submittals along with increased awareness in the industry provided for better compliance during site inspections. Our Development Services department issued 111 building phase of development permits for small lot ESC requirements. In the end the City of Kearney helped 132 project developments including commercial, multifamily and single-family developments maintain NPDES requirements associated with federal, state and local regulation.

The private developments were evaluated prior to land disturbing activity but after the initial BMP controls were in place. We used this time not only for an inspection but also for an educational opportunity if needed prior to construction. Most all sites were evaluated on a continuous basis using a drive by and complaint driven evaluation process. Issues found during these evaluations were taken directly to the permit applicant for correction.

Small lot developments are required to employ Stormwater BMP controls on their site during earth disturbing activities. The project is then inspected anytime a building inspection is requested. Increased awareness of the ordinance, improving plan submittals and a continued compliance based inspection program resulted in a continued rise in compliance.

Public Development – Public infrastructure and development projects are handled in-house. Meaning permit application, SWPPP development, project management and site compliance inspections are done by the Public Works department. This includes all district work but excludes infrastructure agreement projects built by the development owner.

A summary of the 2015 public infrastructure projects:

Projects: 6 active projects during 2015
Preconstruction Meetings Held: 3
Infrastructure SWPPP Inspections completed: 46 inspections were performed on city projects in 2015
Still Active Projects: 4
Closed Projects: 2

Date of activity: As needed or requested

Description: These are inspections requested by the developer, city inspection dept. or on an as needed basis determined by the Stormwater Program Manager.

Title: Individual site evaluation or inspection request

Cost: N/A

Delivered To: Construction Community

Distribution: N/A

Summary: Site drive-by reviews completed on the projects, contact made if needed.

BMP 3: Educate Contractors and the Development Community

BMP Description:

The City of Kearney will develop materials to educate contractors and members of the development community about the Stormwater Construction Site Runoff Control Program.

Work performed for the BMP listed above

Date of activity: Continually

Description: Make available program related materials and education on website

Title: City of Kearney storm water website and Nebraska H2O website

Cost: N/A

Delivered To: Construction Community

Distribution: N/A

Summary: Any planned changes to the City of Kearney Storm Water permitting and regulations program. How the changes to the program will effect large and small site developments within the City of Kearney.

Date of activity: Throughout Construction Season

Description: NPDES and Storm water BMP educational reminder (carpenter pencils)

Title: Educational Distribution

Delivered To: Construction Community

Distribution: 250

Summary: We are always looking for new ways to distribute quality educational materials to our local developers. We came up with the idea of printing "Sediment is a leading cause of water quality impairment. Check your BMP's" and then the website that can provide them more information on carpenter pencils. These pencils are distributed to local builders and trade contractors at construction sites. We hope they may get that statement etched in their minds as a constant reminder to take care of their site and simple things like checking BMPs can save them a lot of time and struggles.

BMP 4: Develop Design Standards for Storm Water Runoff Control Measures

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop Design Standards for Stormwater Runoff Control Measures as part of the Construction Site Stormwater Runoff Controls Program.

No activities were scheduled for the BMP

As part of the October 2008 City of Kearney Standard Specifications for Municipal Construction Erosion and Sediment Control and Seeding/Sodding standards were developed. These were general specifications for projects and a starting point for the construction design standards. These continue to be the active specifications and are planned to be review under the next permit term.

MCM 5: Post Construction Storm Water Management in New Development and Redevelopment

BMP 1: Develop a Post Construction Ordinance

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop a Post Construction Ordinance and Standard Operating Procedures for new development and redevelopment.

Work performed for the BMP listed above

No additional tasks were performed under this task in the 2015 year.

BMP Note: This ordinance was written as a foundation to future Post Construction program developments and goals.

BMP 2: Develop BMP Inspection and Plan Review Standard Operating Procedures

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop BMP Inspection and Plan Review Standard Operating Procedures as part of its Post Construction Stormwater Management Program for new development and redevelopment

Date of activity: Continually

Description: Subdivision language update for continued maintenance of detention structures

Summary: Language was updated to be included with all subdivision agreements that will obligate all owners of a drainage basin to maintain any detention structures that collect runoff for the area. This is required to be filed with the Register of Deeds office. It also allows the City of Kearney if needed to do maintenance to a structure and apply fees for this maintenance. A copy of this language can be found under Appendix F.

Date of activity: Continually

Description: Plan review for Post Construction Measures

Summary: All projects are reviewed by the City Engineer/Public Works Director for currently required Post Construction measures. The measures currently include the requirement to detain the difference between the pre and post 10 year storm. During the 2015 permit term 21 developments were reviewed.

Date of activity: In progress

Description: Planning for future Post Construction requirements

Summary: Continued progress towards future development of the Post Construction program is detailed in the updated Kearney SWMP that was due to be put into effect at the end of the first permit term. We have contracted with a consultant with much experience in Post-construction programs. We will be developing these base elements as a group with the members of NE H2O.

Date of activity: In progress

Description: Phase-Planning for implementing Post Construction Storm Water Program into City ordinances

Summary: The City of Kearney attended and participated in a meeting with fellow Nebraska Storm Water Collective to discuss FHU proposed plan of implementation of the NPDES required Post Construction Storm Water Program. Attached in Appendix G is the "Construction/Post-Construction Storm Water Management Program Development Proposal for Phase 2-Standards Development"

Date of activity: In progress

Description: Documentation of the 'Final Post-Construction Storm Water Program Design Standards and Procedures Memorandum'

Summary: This document discusses and describes the final draft of the process of how the City of Kearney will implement the required 'Post-Construction Storm Water Program Design Standards.' In this document is also the Implementation Schedule which outlines the timeline for the Post-Construction Storm Water Program. It will be attached as Appendix H, "Final Nebraska H₂O Post-Construction Storm Water Program Design Standards and Procedures Memorandum."

BMP 3: Develop Educational Materials for the Development Community

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

See MCM 4 BMP 3 for educational details. The construction and post construction educational effort operate hand in hand. In most cases Post Construction information is presented at the same time.

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

BMP 1: Develop Training Materials for City Employees

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop training materials related to stormwater for City Employees.

Date of activity: Annually

Description: Stormwater Training Video

Title: Stormwater Pollution Prevention – Rain Check

Cost: \$0

Delivered To: Circulated to All Field Employees

Summary: Overview of Stormwater BMP as related to everyday work activities circulated to departments and requested that they show to all field employees.

Date of activity: 5/2015

Description: Letter to all department heads asking them to train all summer employees on proper maintenance practices

Cost: \$0

Delivered To: City Staff

Summary: A memo letter was sent to all department heads as they are currently hiring summer employees to help with maintenance activities. This reminder focused on properly informing the employees that steps must be taken to avoid contributing to waste allowed to enter the storm sewer systems. Yard wastes, trash and landscape debris must properly manage and not allowed to enter street where they can be carried to the system.

BMP 2: Evaluate Street Cleaning

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop Standard Operating Procedures to be used as guidelines for the Street Cleaning Programs

Date of activity: Annually

Description: Track the amount of collected materials

Cost: \$17,687.06 equipment operation cost. No wage added to figure.

Summary of Street Sweeping Operations: (See Appendix C for detail report of operations)

Route Events Performed: 185 % of completed routes: 100

Estimated cu/yds of material collected 2015: 2923 cu/yds

Comparison of collected material since tracked: 2014 29 2965: 2025 cu/yds. 2012= 2183 cu/yds.

2011 =1843 cu/yds. 2010 = 2137 cu/yds. 2009 = 3524 cu/yds. 2008 = 1217 cu/yds.

BMP Notes: The City of Kearney operates two sweepers continuously with weather permitting. During early spring and leaf off conditions three sweepers are operated. We are currently working to reestablish the GPS tracking software to assist with coverage awareness. Software issues have slowed this continuous tracking program. As you can see above less material was collected this past year. Combined, the three street sweepers operated 951 hours throughout the year. We hope this is a contribution of efforts by the community to address pollution prevention needs. More time on the streets sweeping and less material collected could mean individuals are hearing the message.

BMP 3: Evaluate Municipal Operations

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop Standard Operating Procedures for the evaluation of municipal operations related to stormwater runoff.

Date of activity: As needed, new employees

Description: Runoff Control Plan Update Training

Title: Facility Managers SWMP training

Cost: N/A

Summary: Facility managers from the park and recreation department and public works are asked to inform new employees of the SWMP. The SWMP for each hotspot facility are reviewed with employees on a periodic basis to inform them of the pollution prevention goals of the facility.

Date of activity: Semi Annually

Description: Park facility inspections

Title: North parks maintenance building, Yanney park maintenance building, Cemetery, Golf Course

Cost: N/A

Summary: Facility evaluations are conducted on a semi annual basis.

Date of activity: Semi Annually

Description: Public Works facility inspections

Title: facility evaluations and improvement suggestions to facility manager

Cost: N/A

Summary: Facility evaluations are conducted on a semiannual basis.

Date of activity: Winter Preparation November

Description: Calibration of salt spreaders

Title: Deicing material tracking

Cost: N/A

Summary: This is the first year we have calibrated the spreader systems on our deicing equipment. We will begin tracking the amount of chemicals applied during a snow season to evaluate and ways to decrease the use of deicing materials all while maintaining the high standard required for safe roadway travels.

MCM 7: Wet Weather Monitoring

BMP 1: Develop Standard Operating Procedures for conducting baseline wet weather monitoring

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop Standard Operating Procedures for conducting baseline wet weather monitoring.

No activities were scheduled for the BMP listed above during this reporting period

BMP Notes: SOP procedures established in 2009 were continually followed during this permit years monitoring events. These procedures seem to be working efficiently and will be the continued procedures. Since we are currently unaware of the next permit terms monitoring requirements we will continue the SOP procedures until changes to this MCM are presented.

BMP 2: BMP Assessment Monitoring

Start Date: 1/1/2015

End Date: 12/31/2015

BMP Description:

The City of Kearney will develop Standard Operating Procedures for conducting baseline wet weather monitoring.

No activities were scheduled for the BMP listed above during this reporting period

Appendix A

2015 Summary of Nebraska H2O Website Activity

NE H₂O

Site Stats [Configure](#)

February 4, 2016, 1:47 pm

[Return to Stats](#)

Months and Years

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2011							961	447	292	412	346	238	2,665
2012	293	419	525	467	356	396	490	382	323	333	361	281	4,426
2013	387	516	308	332	285	240	266	275	197	202	126	484	3,416
2014	308	268	323	2									901
2015	287	341	464	485	494	446	373	359	265	256	283	333	4,376
2016	313	41											354

Average per Day

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Overall
2011							31	14	9	13	12	8	14
2012	9	14	17	16	11	13	9	12	11	11	12	9	12
2013	12	11	10	11	9	8	9	9	7	7	4	16	9
2014	10	10	10	0			11						2
2015	9	12	15	16	16	15	12	12	9	8	9	11	12
2016	10	13											10

Recent Weeks

Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total	Average	Change
29	4	29	16		8	4	90	13	
1	19	19	6	17	11	13	86	12	-4.64%
16	23	10	7	3	5	4	68	10	+20.93%
9	8	3	21	21	8	8	78	11	+14.71%
15	2	4	9	23	10	6	69	10	-11.54%
24	4	10	3				17	13	+28.50%

About the math

Appendix B

2015 Summary of Citizen Reporting System

Appendix C

2015 Summary of Street Sweeping Activities

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2.923

North West			
	3/10/2015	Not Applicable	16.00
	3/16/2015	Not Applicable	18.00
	3/25/2015	Not Applicable	10.00
	3/26/2015	Not Applicable	5.00
	4/16/2015	Not Applicable	10.00
	4/28/2015	Not Applicable	12.00
	5/4/2015	Not Applicable	4.00
	5/5/2015	Not Applicable	15.00
	5/6/2015	Not Applicable	18.00
	5/8/2015	Not Applicable	9.00
	5/18/2015	Not Applicable	10.00
	5/18/2015	Not Applicable	9.00
	5/19/2015	Not Applicable	6.00
	5/20/2015	Not Applicable	18.00
	5/25/2015	Not Applicable	17.00
	5/26/2015	Not Applicable	15.00
	6/2/2015	Not Applicable	10.00
	6/3/2015	Not Applicable	10.00
	6/5/2015	Not Applicable	10.00
	6/23/2015	Not Applicable	10.00
	7/1/2015	Not Applicable	8.00
	7/2/2015	Not Applicable	7.00
	7/14/2015	Not Applicable	12.00
	7/29/2015	Not Applicable	6.00
	7/31/2015	Not Applicable	12.00
	8/12/2015	elginmech	9.00
	8/25/2015	elginmech	9.00
	8/25/2015	Not Applicable	12.00
	8/28/2015	elginmech	9.00
	9/4/2015	elginmech	6.00
	9/10/2015	elginmech	10.00
	9/18/2015	elginmech	10.00
	9/25/2015	elginmech	9.00
	9/28/2015	elginmech	8.00
	10/1/2015	elginmech	15.00
	10/2/2015	elginmech	14.00
	10/7/2015	elginmech	13.00
	10/12/2015	elginmech	12.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2,923

10/13/2015	elginmech	11.00
10/14/2015	elginmech	12.00
10/22/2015	Not Applicable	30.00
11/2/2015	elgin sweerp	10.00
11/3/2015	Not Applicable	40.00
11/3/2015	elgin sweerp	9.00
11/13/2015	elginmech	13.00
11/16/2015	Not Applicable	45.00
11/16/2015	elginmech	15.00
11/19/2015	Not Applicable	30.00
12/10/2015	elgin sweeper	18.00
12/11/2015	elgin sweeper	19.00
Total Debris Collected:		665.00
Downtown Areas		
3/12/2015	Not Applicable	10.00
3/18/2015	Not Applicable	8.00
4/9/2015	Not Applicable	6.00
5/4/2015	Not Applicable	6.00
5/5/2015	Not Applicable	4.00
5/7/2015	Not Applicable	10.00
5/7/2015	Not Applicable	8.00
5/18/2015	Not Applicable	8.00
5/20/2015	Not Applicable	7.00
5/21/2015	Not Applicable	10.00
5/21/2015	Not Applicable	7.00
5/27/2015	Not Applicable	8.00
6/4/2015	Not Applicable	5.00
6/18/2015	Not Applicable	6.00
6/18/2015	Not Applicable	4.00
6/24/2015	Not Applicable	6.00
7/9/2015	Not Applicable	2.00
7/23/2015	Not Applicable	6.00
8/6/2015	elgin sweeper	4.00
8/6/2015	Not Applicable	6.00
8/11/2015	elginmech	4.00
8/13/2015	Not Applicable	9.00
8/20/2015	elginmech	2.00
8/27/2015	Not Applicable	6.00
8/27/2015	elginmech	4.00
9/3/2015	elginmech	4.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2,923

	9/10/2015	Not Applicable	5.00
	9/10/2015	elginmech	4.00
	10/8/2015	elginmech	10.00
	10/8/2015	Not Applicable	4.00
	10/15/2015	elgin sweep	8.00
	10/23/2015	elgin sweep	6.00
	10/29/2015	elgin sweep	6.00
	11/5/2015	elgin sweep	6.00
	11/6/2015	Not Applicable	10.00
	12/1/2015	Not Applicable	6.00
	Total Debris Collected:		225.00
39th Street			
	4/10/2015	Not Applicable	12.00
	4/15/2015	Not Applicable	14.00
	7/22/2015	Not Applicable	8.00
	8/20/2015	Not Applicable	10.00
	8/24/2016	Not Applicable	8.00
	8/25/2015	Not Applicable	8.00
	9/30/2015	Not Applicable	20.00
	10/27/2015	Not Applicable	40.00
	10/28/2015	elgin sweep	6.00
	Total Debris Collected:		126.00
north east			
	7/20/2015	Not Applicable	4.00
	8/10/2015	Not Applicable	9.00
	8/14/2015	elginmech	8.00
	10/14/2015	Not Applicable	24.00
	Total Debris Collected:		45.00
2nd Avenue			
	1/20/2015	Not Applicable	9.00
	1/23/2015	Not Applicable	6.00
	2/10/2015	Not Applicable	17.00
	3/30/2015	Not Applicable	5.00
	3/31/2015	Not Applicable	4.00
	4/3/2015	Not Applicable	5.00
	5/11/2015	Not Applicable	12.00
	5/18/2015	Not Applicable	5.00
	6/8/2015	Not Applicable	10.00
	6/10/2015	Not Applicable	8.00
	6/18/2015	Not Applicable	6.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected 2,923

	6/29/2015	Not Applicable	6.00
	8/3/2015	Not Applicable	14.00
	8/17/2015	Not Applicable	4.00
	8/28/2015	Not Applicable	10.00
	9/18/2015	Not Applicable	8.00
	9/21/2015	Not Applicable	2.00
	10/1/2015	Not Applicable	15.00
	10/12/2015	Not Applicable	5.00
	10/23/2015	Not Applicable	10.00
	10/26/2015	Not Applicable	32.00
	10/27/2015	sign sweep	6.00
	11/2/2015	Not Applicable	40.00
	Total Debris Collected:		239.00
56th Street			
	4/20/2015	Not Applicable	15.00
	7/15/2015	Not Applicable	8.00
	8/18/2015	Not Applicable	12.00
	Total Debris Collected:		35.00
South East			
	1/23/2015	Not Applicable	9.00
	1/26/2015	Not Applicable	8.00
	3/10/2015	Not Applicable	19.00
	3/11/2015	Not Applicable	18.00
	3/13/2015	Not Applicable	15.00
	3/24/2015	Not Applicable	17.00
	3/25/2015	Not Applicable	14.00
	5/4/2015	Not Applicable	18.00
	5/5/2015	Not Applicable	8.00
	5/8/2015	Not Applicable	13.00
	5/14/2015	Not Applicable	10.00
	5/19/2015	Not Applicable	15.00
	8/14/2015	Not Applicable	12.00
	8/17/2015	elginmech	8.00
	8/19/2015	elginmech	7.00
	8/21/2015	elginmech	7.00
	9/1/2015	elginmech	6.00
	9/4/2015	elginmech	8.00
	9/8/2015	elginmech	8.00
	9/9/2015	elginmech	7.00
	9/29/2015	mech	9.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2,923

9/30/2015	elginmech	8.00
10/5/2015	elginmech	12.00
10/6/2015	elginmech	14.00
10/19/2015	elgin sweepr	11.00
10/20/2015	elgin sweepr	9.00
10/21/2015	elgin sweepr	8.00
10/23/2015	elginmech	8.00
11/4/2015	elgin sweepr	11.00
11/8/2015	Not Applicable	11.00
11/8/2015	elgin sweepr	10.00
11/6/2015	Not Applicable	0.00
11/17/2015	elginmech	16.00
12/8/2015	elgin sweeper	13.00
12/8/2015	elgin sweeper	9.00
Total Debris Collected:		376.00

U S Highway 30

1/14/2015	Not Applicable	5.00
1/21/2015	Not Applicable	10.00
1/22/2015	Not Applicable	7.00
3/25/2015	Not Applicable	6.00
3/31/2015	Not Applicable	3.00
4/1/2015	Not Applicable	5.00
5/1/2015	Not Applicable	7.00
5/11/2015	Not Applicable	5.00
5/15/2015	Not Applicable	5.00
5/21/2015	Not Applicable	7.00
5/22/2015	Not Applicable	6.00
7/1/2015	Not Applicable	8.00
7/6/2015	Not Applicable	9.00
7/8/2015	Not Applicable	10.00
8/5/2015	elgin sweeper	4.00
8/28/2015	elgin sweeper	3.00
9/14/2015	elgin sweeper	5.00
9/15/2015	elgin sweeper	5.00
12/7/2015	elgin sweeper	0.00
12/14/2015	elgin sweeper	10.00
Total Debris Collected:		120.00

North East

1/26/2015	Not Applicable	8.00
3/10/2015	Not Applicable	12.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2,923

3/11/2015	Not Applicable	12.00
3/12/2015	Not Applicable	15.00
3/18/2015	Not Applicable	12.00
4/13/2015	Not Applicable	8.00
4/22/2015	Not Applicable	18.00
5/8/2015	Not Applicable	10.00
5/8/2015	Not Applicable	8.00
5/13/2015	Not Applicable	20.00
5/15/2015	Not Applicable	5.00
5/20/2015	Not Applicable	14.00
6/8/2015	Not Applicable	10.00
6/15/2015	Not Applicable	10.00
7/2/2015	Not Applicable	6.00
7/13/2015	Not Applicable	12.00
7/30/2015	Not Applicable	8.00
8/12/2015	Not Applicable	10.00
8/19/2015	Not Applicable	8.00
8/17/2015	Not Applicable	10.00
9/23/2015	Not Applicable	6.00
9/28/2015	Not Applicable	12.00
10/2/2015	Not Applicable	20.00
10/19/2015	Not Applicable	30.00
10/28/2015	Not Applicable	35.00
11/4/2015	Not Applicable	40.00
11/5/2015	Not Applicable	30.00
11/8/2015	Not Applicable	30.00
11/20/2015	Not Applicable	15.00
11/23/2015	Not Applicable	10.00
11/25/2015	Not Applicable	20.00
Total Debris Collected:		464.00
11th Street		
1/22/2015	Not Applicable	10.00
4/14/2015	Not Applicable	12.00
4/27/2015	Not Applicable	4.00
5/14/2015	Not Applicable	3.00
6/2/2015	Not Applicable	8.00
6/22/2015	Not Applicable	5.00
6/23/2015	Not Applicable	4.00
6/25/2015	Not Applicable	8.00
7/10/2015	Not Applicable	5.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
 Total Debris Collected: 2.923

	8/11/2015	Not Applicable	10.00
	8/26/2015	Not Applicable	10.00
	9/22/2015	Not Applicable	2.00
	10/7/2015	Not Applicable	10.00
	10/26/2015	elgin sweep	7.00
	11/9/2015	elgin sweep	7.00
	12/21/2015	elgin sweeper	7.00
	Total Debris Collected:		112.00
30th Ave.			
	4/17/2015	Not Applicable	5.00
	5/22/2015	Not Applicable	4.00
	6/11/2015	Not Applicable	7.00
	7/7/2015	Not Applicable	8.00
	8/5/2015	Not Applicable	6.00
	8/7/2015	Not Applicable	7.00
	9/9/2015	Not Applicable	12.00
	9/15/2015	Not Applicable	12.00
	Total Debris Collected:		61.00
Ave N			
	2/9/2015	Not Applicable	15.00
	8/12/2015	Not Applicable	4.00
	8/18/2015	Not Applicable	5.00
	Total Debris Collected:		24.00
South West			
	1/22/2015	Not Applicable	15.00
	1/27/2015	Not Applicable	3.00
	1/28/2015	Not Applicable	15.00
	1/30/2015	Not Applicable	14.00
	2/11/2015	Not Applicable	15.00
	3/13/2015	Not Applicable	10.00
	3/16/2015	Not Applicable	3.00
	3/18/2015	Not Applicable	5.00
	3/20/2015	Not Applicable	8.00
	3/24/2015	Not Applicable	4.00
	3/24/2015	Not Applicable	15.00
	4/27/2015	Not Applicable	6.00
	4/28/2015	Not Applicable	10.00
	4/30/2015	Not Applicable	14.00
	5/1/2015	Not Applicable	10.00
	5/5/2015	Not Applicable	18.00

Overview of the Street Sweeping program

Start Date: 1/1/2015 End Date: 12/30/2015
Total Debris Collected: 2,923

5/12/2015	Not Applicable	16 00
6/2/2015	Not Applicable	10 00
6/18/2015	Not Applicable	10 00
7/1/2015	Not Applicable	8 00
7/21/2015	Not Applicable	8 00
8/4/2015	Not Applicable	10.00
8/7/2015	Not Applicable	4 00
9/10/2015	Not Applicable	20 00
9/15/2015	Not Applicable	10 00
9/18/2015	Not Applicable	12 00
9/22/2015	Not Applicable	8 00
9/29/2015	Not Applicable	20 00
10/2/2015	Not Applicable	8 00
10/8/2015	Not Applicable	15 00
10/13/2015	Not Applicable	20 00
10/20/2015	Not Applicable	5 00
10/20/2015	Not Applicable	24 00
10/21/2015	Not Applicable	10 00
10/29/2015	Not Applicable	25.00
11/24/2015	Not Applicable	25 00
Total Debris Collected:		431 00

Appendix D

2015 Assessment of the Appropriateness of Selected BMP's

Assessment of the Appropriateness of Identified Best Management Practices

Minimum Control Measure #1: Public Education & Outreach

Upon assessment of all Best Management Practices (BMP's) under this MCM it was found that each BMP is appropriate and effective. While we feel all required Measurable Goals for the permit year were achieved, the additional activities included brochures/flyers, NeH20 paraphernalia, newspaper articles, TV commercials and the continuation of Nebraska H20.

Minimum Control Measure #2: Public Participation and Involvement

Upon assessment of all Best Management Practices (BMP's) under this MCM it was found that each BMP is appropriate and effective. While we feel all required Measurable Goals for the permit year were achieved, the most successful activities included public gatherings and cleaning up the Kearney Canal. The events gave us the opportunity to address some common concerns of environmentally minded people.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination

Upon assessment of all Best Management Practices under this MCM it was found that each BMP is appropriate and effective. We will continue to locate all outfalls and add additional system mapping as it is discovered. As always, our Stormwater email and call-in line are up and available to the public. This program will be ongoing into the next permit term.

Minimum Control Measure #4: Construction Site Stormwater Runoff Control

Upon assessment of all Best Management Practices under this MCM it was found that each BMP is appropriate and effective. While all required Measurable goals for the permit year were achieved, the most successful activities remained educational meetings, site evaluations with contractors, participation in public events sponsored by the development community, and training events brought to the area and brochures/flyers.

Minimum Control Measure #5: Post Construction Stormwater Management

Upon assessment of all Best Management Practices under this MCM it was found that each BMP is appropriate and effective. We will continue to evaluate and develop this MCM into the next permit term. There has been significant discussion on the specifics of this MCM and it has been discussed at length amongst our Public Works Dept. in preparation of presenting it to the developers, engineers, and contractors.

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal

Operations Upon assessment of all Best Management Practices under this MCM it was found that each BMP is appropriate and effective. While almost all of the required Measurable Goals have been achieved we have continued evaluation of practices and implement systems and procedures to improve many of our operations.

Minimum Control Measure #7: Storm Water Monitoring

Upon assessment of all Best Management Practices under this MCM it was found that each BMP is appropriate with the approved 2008 amendment to this program. The City of Kearney will be exploring options to this program in the next permit term.

APPENDIX E

Summary of Continuing Program Activities until Permit Reissuance

Summary of Continuing Activities

BMP ACTIVITY	TARGET AUDIENCE	FREQUENCY	TO BE CONTINUED OR IMPLEMENTED BY
TV Public Service Announcement: Water quality impacts from urban stormwater	General public	Periodically	Continue
City Newsletter: Kearney Connection Article on stormwater quality and/or public participation events	General public	Once every permit year	Continue
Local newspaper: Add promoting Nebraska H2O	General public	Once every permit year	Continue
Posters: Public awareness about stormwater	General public, City staff	Continuous posting at City buildings on the table top display	Continue
Display Board: Public awareness about stormwater program	General public, City staff	Displayed at one local event every permit year	Continue
Booth at Local Event: Have a booth about the stormwater program	General public	As many as possible during the permit year	Continue
Free Promotional Items: Purchase and distribute items with water quality message Nebraska H2O	General public, schools	At all public events when brochures are distributed	Continue
Public Meeting: Discuss program-related items at Nebraska Storm Water Cooperative Meetings	General public	Regularly scheduled quarterly meetings. Elements of the SWMP will be discussed at the meetings.	As needed

BMP ACTIVITY	TARGET AUDIENCE	FREQUENCY	TO BE CONTINUED OR IMPLEMENTED BY
Brochures / Flyers: Various program-related topics including water quality impacts from urban stormwater, household chemical disposal options, proper on-site sewage disposal system maintenance, proper use of fertilizers and pesticides, recycling and re-use benefits, motor oil pollution prevention, responsible pet ownership	General public – adults Schools (5th – 12th) Business	Distribute throughout the year; continuously at City buildings. Events	Continue
Stormwater Website: Nebraska H2O City of Kearney	General public	Continuous access Update website	Continue
Recycle Drop-Off Event	General public	Twice every permit year	Continue by Utilities dept
Bulk Trash Pick-Up and Drop-Off Program	General public	Continuously available	Continue
Recycling Opportunities: Curbside recycling program, Christmas tree recycling event, Recycling Center, city office paper recycling program	General public, City staff	Continuously or periodically available	Continue
Household Hazardous Waste Program: Disposal program coordinated with Kearney Sanitation Department	General public	Continuously available	Continue
Stormdrain Marking: Stormdrain marking program	General public, schools, non-profit & civic organizations	Continuously available	Continue
Inspections: City inspection of reported illicit discharges	City-wide	Perform inspections on reported illicit discharges as needed.	Continue

BMP ACTIVITY	TARGET AUDIENCE	FREQUENCY	TO BE CONTINUED OR IMPLEMENTED BY
Enforcement: Take appropriate action to abate pollutant source	City-wide, all sources	As necessary	Continue
Site Plan Review: Review and modify current process of pre-construction site plan review for construction water quality impacts	City staff	All site plans for commercial, industrial, and residential developments will be reviewed	Continue under new ordinance conditions.
Stormwater Phone Line: Answer questions, give guidance, take complaints	General public	Continuously during office hours; voice mail available after hours to leave messages	Continue
Brochure / Flyer: Training brochure on various stormwater topics	City staff	Distribute as training for City staff; quarterly.	Continue
Training: Municipal Storm Water Pollution Prevention Video	City staff	Offered once during permit cycle	Continue
Training: Spill Response	City staff	Offered once during permit cycle	Continue
Training: Facility Inspections	City staff	Offered once during permit cycle	Continue
Training: General Stormwater Training	City staff	Offered once during permit cycle	Continue
Training: General Stormwater Training for summer staff	City staff	Offered once per year	Continue
Inspections: Conduct MS4 complaint inspections and track chronic sources; initial City facility inspection; and Good Housekeeping inspections	City-wide	Semi Annual inspections performed by facility supervisors. Annual assessment by storm water program manager.	Continue
Dry Weather Outfall Inspections: Continue dry weather outfall investigations. Evaluate any dry weather discharge for illicit discharge potential	City staff	This will be the initial outfall inspection and GPS location of the system. Yearly inspections will continue on a % basis in the following years.	Continue with the next 20% +/- outfall inspection

BMP ACTIVITY	TARGET AUDIENCE	FREQUENCY	TO BE CONTINUED OR IMPLEMENTED BY
Enforcement: Take appropriate action to abate pollutant source	City-wide, all sources	As necessary	Continue
Street Sweeping	City staff	Continually throughout city dependent on weather conditions. Record quantity of collected materials and miles swept.	Continue

Appendix F

Summary of Active Post-Construction Ordinances

DIVISION III. POST-CONSTRUCTION

9-1626 POST-CONSTRUCTION REQUIREMENT OF PERMANENT BMPs.

A. Land development that meets the requirements of Section 9-1606 of this Article must address storm water runoff quality through the use of permanent BMPs. Permanent BMPs shall be provided for in the drainage plan for any subdivision plat, annexation plat, development agreement, subdivision agreement or other local development plan.

B. Structural BMPs located on private property shall be owned and operated by the owner(s) of the property on which the BMP is located; unless the City agrees in writing that a person or entity other than the owner shall own or operate such BMP. As a condition of approval of the BMP, the owner shall also agree to maintain the BMP in perpetuity to its design capacity unless or until the City shall relieve the property owner of that responsibility in writing. The obligation to maintain the BMP shall be memorialized on the subdivision plat, annexation plat, development agreement, subdivision agreement or other form acceptable to the City and shall be recorded with the City of Kearney Public Works Department.

(Ord. No. 7573, 2-23-2010)

9-1627 CERTIFICATION OF PERMANENT BMPs.

Upon completion of a project, and before a Certificate of Occupancy shall be granted, the City shall be provided a written certification stating that the completed project is in compliance with the approved Final Drainage Plan. All applicants are required to submit "as built" plans for any permanent BMPs once final construction is completed and must be certified by a professional engineer licensed in the State of Nebraska. A final inspection by the City of all post-construction BMPs shall be required before a Certificate of Occupancy will be issued or any public infrastructure is accepted.

(Ord. No. 7573, 2-23-2010)

9-1628 ONGOING INSPECTION AND MAINTENANCE OF PERMANENT BMPS.

A. The owner of site must, unless an on-site storm water management facility or practice is dedicated to and accepted by the City, execute an inspection and maintenance agreement, that shall be binding on all subsequent owners of the permanent BMPs.

B. Permanent BMPs included in a Final Drainage Plan which are subject to an inspection and maintenance agreement must undergo ongoing inspections to document maintenance and repair needs and to ensure compliance with the requirements of the agreement, the plan and this Article.

(Ord. No. 7573, 2-23-2010)

Appendix G

Construction/Post-Construction Storm Water Management Program Development Proposal for
Phase 2- Standards Development



FELSBURG
HOLT &
ULLEVIG

connecting and enhancing communities

February 4, 2015

City of Kearney
Public Works Department
c/o Mr. Andy Harter
1919 15th Avenue
P.O. Box 1180
Kearney, Nebraska 68848

RE: Nebraska H2O Construction/Post-Construction Stormwater Management Program Development
Proposal for Phase 2 – Standards Development

Dear Mr. Harter,

On October 31st in Kearney, Nebraska Felsburg Holt & Ullevig (FHU) convened with the Nebraska H2O group to discuss recommendations that came out of the Phase 1 – Background Assessment report and next steps associated with the development of a sustainable post-construction stormwater management program. What we heard from the Nebraska H2O group varied in terms of wants and needs; however, as the next step, the consensus by the group was to develop post construction stormwater standards that meet the minimum MS4 Permit requirements and could be readily adopted. This proposal addresses Phase 2 services that will be provided by FHU for the development of post construction stormwater standards as follows:

Task 1: Development of Post Construction Stormwater Standards and Procedures

FHU will meet with Participating Nebraska H2O members on four accounts. The meetings will be held in different Nebraska H2O communities across the state with the option for those interested in participating to join the meeting live or call in. With each of the first three meetings the intent is to (1) introduce participating members to representative standards and procedures adopted by up to four communities; (2) help participating members understand how those communities arrived at adopting various standards and procedures, including the process and technical aspects behind development of those standards and procedures; (3) draft a recommendation of at least one alternative for the group to consider adopting; and (4) finalize the recommended standards and procedures selected by participating communities in a format that may be adopted for use by each community.

For communities that desire to attend each meeting, FHU intends to provide the background behind standards adopted by representative communities so that each participating Nebraska H2O community has the opportunity to make an informed choice when adopting standards locally. This background presentation effort is part of the scope and is not broken out by community. FHU believes this effort is beneficial for equipping communities to implement the recommended program requirements sustainably. Each community may take advantage of these presentations if they choose to, but are not required. Lack of meeting attendance will not impact the project budget. At the end of this task, all participating communities will be able to make use of recommended language and standards that will be developed by FHU and the group. Nebraska H2O communities may then use these standards as a jumping off point to develop a more individualized and robust program together or separately as they see fit. Individual modifications for each community is not included as part of this project.

Four meetings have been broken up to systematically address the development of program standards and procedures as follows:

Rainfall, Runoff, and Minimum Treatment Standards

The first meeting will address rainfall, runoff, and minimum treatment standards. FHU will provide an overview of standards adopted by representative communities, how they arrived at those numbers, and how it relates to each of the participating communities across the state. We'll discuss the distribution of rainfall, rainfall amounts and frequency, accounting for runoff, and applicability to new development and redevelopment. We'll relate this information to water quality and minimum treatment standards. Our recommendations for minimum treatment standards and when TMDLs need to be addressed will be provided and the group will have time to discuss the topic. Notes of the meeting will be provided along with supporting documentation of any decisions. This meeting is expected to take approximately 3 hours.

Stormwater Treatment Hydrology

The second meeting will address stormwater treatment hydrology adopted by representative communities. Again, we'll provide background that includes the methods and criteria used to calculate the amount of rainfall or runoff that needs to be treated, discuss influencing circumstances such as stormwater runoff, and talk about the relationship between these calculations and stormwater Best Management Practice (BMP) sizing. Sizing is a critical factor in selecting BMPs. Available information will be shared that relates the sizing of BMPs to cost of a project. We'll also provide an overview of how this relates to your storm sewer systems and stormwater detention requirements. Our recommendations will be provided and the group will have time to discuss the topic. Notes of the meeting will be provided along with supporting documentation on any decisions. This meeting is expected to take approximately 3 hours.

Treatment Design Standards

The third meeting will address stormwater BMPs and design manuals. We'll provide an overview that summarizes the various types of BMPs adopted by representative communities and talk about BMP selection and applicability to varying soil and groundwater conditions across the state. We'll also talk about retrofitting existing detention basins and regional facilities and tie that back to our discussion on hydrology. Finally, we'll share options for requiring on-going maintenance and available information about the anticipated costs to provide maintenance for various BMPs. Our recommendations will be provided and the group will have time to discuss the topic. Notes of the meeting will be provided along with supporting documentation on any decisions. This meeting is expected to take approximately 3 hours.

Standards and Procedures Documentation

The fourth and final meeting will include discussion on a draft document that will be prepared based on feedback provided during previous meetings. This document will likely take the form of Post-Construction Stormwater Design Standards and Procedures Memorandum and include the following content:

- Minimum stormwater treatment standards and the conditions to which they apply
- Stormwater treatment hydrology calculations under varying conditions
- References to adopted BMP design manuals as accepted practices including general exceptions if warranted
- General procedures related to the platting and site plan processes
- General procedures related to inspections and maintenance
- Stormwater treatment plan submittal checklist

Again, the memorandum will be in a format that is readily adoptable by the community. A draft memorandum will be provided in advance of this meeting so that each participating community may review it beforehand. This meeting is expected to last approximately 2 hours. The document will be finalized based on feedback received at this meeting and provided to each participating community.

The anticipated schedule for deliverables and meetings (including meeting locations) is as follows:

Description	Planned Date
Meeting 1 (Lincoln)*	March 24, 2015
Meeting 2 (Kearney)	April 15, 2015
Meeting 3 (Scottsbluff)**	May 6, 2015
Meeting 4 (Kearney)	June 10, 2015
Final Report	July 1, 2015

* Date and Location Coincides with NeFSMA/IECA Spring Conference

** Date and Location Coincides with NeFSMA Annual Conference

The following assumptions or exclusions have been made in preparing this scope of work:

- This phase does not include the development of new material other than documentation of meetings and decisions made by the group on material referenced, discussed, and recommended during the meetings; and the development of the memorandum. The development of new material such as specific rainfall values for each community, new or modified BMP design guides, and specific maintenance procedures and forms, for example, are outside of this scope.
- The process and meetings scoped herein are not intended to include public involvement or involvement of a larger targeted stakeholder group. If this is desired in a manner that will benefit all participating communities, the scope may be amended to account for additional meetings and other tasks associated with expanded involvement. Individual community meetings with community leaders or public stakeholders may be contracted with FHU separately.

Each Nebraska H2O community is given the opportunity to participate. It is strongly recommended that all communities participate in the project to share the project cost, provide meaningful feedback, and improve the opportunity for successful local implementation. As with the Phase I project, FHU will issue a lump sum contract to each of those participating communities representing their share of this work.

The total amount for Task 1 services is \$46,700.00. Fees for the participating communities have been pro-rated based on Nebraska H2O community population percentages. The breakout of fees for Nebraska H2O communities is as follows:

Phase II Community	Population	Population Percentage	Pro-Rated Fee
Beatrice	12,459	5.20%	\$ 2,430.46
Columbus	22,111	9.24%	\$ 4,313.34
Fremont	26,397	11.03%	\$ 5,149.44
Grand Island	48,520	20.27%	\$ 9,465.12
Hastings	24,907	10.40%	\$ 4,858.78
Kearney	30,787	12.86%	\$ 6,005.83
Lexington	10,230	4.27%	\$ 1,995.63
Norfolk	24,210	10.11%	\$ 4,722.81
North Platte	24,733	10.33%	\$ 4,824.83
Scottsbluff	15,039	6.28%	\$ 2,933.76
TOTAL	252,746	100.00%	\$ 46,700.00

* 2010 Census Numbers

FHU proposes to conduct this scope of services for the City of Kearney for the lump sum amount of \$6,005.83.

This amount would be established as a “not to exceed” limit beyond which no charges could be made without your prior approval.

Additional services that are required outside the Scope of Work, such as additional meetings or documents, would be performed on a time and materials basis using the attached hourly rates. Additional work would not be performed without written authorization from the client.

If the conditions of this proposal and attached standard contract provisions are acceptable to you, please print and sign two copies of this letter, and mail or fax one copy to us for our files. If you have any questions about this proposal, please give Project Manager, Dave Lampe, or me a call at (402) 445-4405.

Sincerely,

FELSBURG HOLT & ULLEVIG



David G. Lampe, PE, CFM
Senior Water Resources Engineer

and



Kyle A. Anderson, PE, PTOE
Executive Vice President

Accepted By

Title

Date

LETTER AGREEMENT STANDARD PROVISIONS

A. SERVICES BY THE CONSULTANT

The CONSULTANT agrees to perform all services, hereunder, using reasonable skill and judgment in accordance with applicable professional standards. CONSULTANT agrees to keep the CLIENT informed on its progress through periodic reports, and to maintain accurate records relating to its services in connection with this project.

The CONSULTANT agrees to provide, directly or by association with such other Consultants or Contractors as it may deem necessary to further the interest of the CLIENT, the basic services as described in Scope of Work in the letter proposal or Letter Agreement.

B. RESPONSIBILITIES OF THE CLIENT

The CLIENT shall provide and make available to the CONSULTANT, for his use, all maps, property descriptions, surveys, previous reports, historical data, and other information within its knowledge and possession relative to the services to be furnished hereunder. Data so furnished to the CONSULTANT shall remain the property of the CLIENT and will be returned upon completion of its services.

The CLIENT shall make provisions for the CONSULTANT to enter upon public and private properties as required for the CONSULTANT to perform its services hereunder.

C. EXTRA WORK

The CLIENT may desire to have the CONSULTANT perform work or render services other than those provided in Scope of Work. This will be Extra Work. Work shall not proceed until so authorized by the CLIENT. Payment for all work under this Agreement shall be on an hourly basis plus expenses in accordance with the attached rate schedule. Charges for outside services, expenses, and subconsultant work will be billed at 1.10 times the invoice amount.

D. TIME OF BEGINNING AND COMPLETION

Signing this form is authorization by the CLIENT for the CONSULTANT to proceed with the work. Completion is as noted in the letter agreement.

E. PAYMENT

Unless otherwise provided herein, CONSULTANT shall submit monthly invoices for Basic, Additional or Special Services and for Reimbursable Expenses each month for work actually performed. If hourly, invoices will be based on labor and expenses incurred. If lump sum, invoices will be based on the percentage of work completed.

Payments not made within 60 days of the billing date shall bear interest at the rate of 1% per month which is an annual interest rate of 12%. In the event any portion of or all of an account remains unpaid 90 days after billing, the CLIENT shall pay all costs of collection, including reasonable attorney's fees.

F. DELAYS

If the CONSULTANT is delayed at any time in the progress of work by any act or neglect of the CLIENT or its agents, employees or contractors, or by changes in the work, or by extended reviews by the CLIENT, fire, unavoidable casualties,

or by any causes beyond the CONSULTANT'S control, the time schedule shall be extended for a reasonable length of time, and CONSULTANT'S compensation may be subject to renegotiation for increased expenses due to escalation of prices, extended services, relocation of other expenses incidental to such delays.

G. OWNERSHIP OF DOCUMENTS

All drawings, specifications, reports, records, and other work products developed by the CONSULTANT in connection with this project are instruments of service for this project only and shall remain the property of the CONSULTANT whether the project is completed or not. The CONSULTANT shall furnish originals or copies of such work product to the CLIENT in accordance with the services required hereunder. Reuse of any of the work product of the CONSULTANT by the CLIENT on an extension of this project or on any other project without the written permission of the CONSULTANT shall be at the CLIENT'S risk and the CLIENT agrees to defend, indemnify and hold harmless the CONSULTANT from all claims, damages, and expenses including attorneys fees arising out of such unauthorized reuse by the CLIENT or by others acting through the CLIENT. Any reuse or adaptation of the CONSULTANT'S work product shall entitle the CONSULTANT to equitable compensation.

H. INSURANCE

During the course of the services, the CONSULTANT shall maintain Workmen's Compensation Insurance in accordance with the Workmen's Compensation laws of the State of Nebraska, Professional Liability Insurance in the amount sufficient to cover CONSULTANT'S liability under paragraph O. below, Automobile Liability of \$150,000 per person, \$600,000 per occurrence, and Comprehensive General Liability of \$150,000 per person, \$600,000 per occurrence. The CONSULTANT shall provide certificates of insurance to the CLIENT indicating compliance with this paragraph, if requested.

I. TERMINATION

Either the CLIENT or the CONSULTANT may terminate this Agreement at any time with or without cause upon giving the other party seven (7) calendar days prior written notice. The CLIENT shall within sixty (60) calendar days of termination pay the CONSULTANT for all services rendered and all costs incurred up to the date of termination, in accordance with the compensation provisions of this contract.

J. DISPUTES

In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the CLIENT and the CONSULTANT agree that all disputes between them arising out of or relating to this Agreement shall be submitted to non-binding mediation unless the parties mutually agree otherwise.

K. GOVERNING LAW

Unless otherwise agreed in writing, this Agreement and the interpretation thereof shall be governed by the law of the State of Nebraska.

L. SUCCESSORS AND ASSIGNS

The CLIENT and the CONSULTANT each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Agreement and to the partners, successors, executors, administrators and assigns of such other party with respect to all covenants of this Agreement. Neither party shall assign or transfer its interest in this Agreement without the written consent of the other.

M. EXTENT OF AGREEMENT

This Agreement represents the entire and integrated agreement between the parties and supersedes all prior negotiations and representations. Nothing herein shall be deemed to create any contractual relationship between the CONSULTANT and any other CONSULTANT or contractor or material supplier on the project, nor obligate it to furnish any notices required under other such contracts, nor shall anything herein be deemed to give anyone not a party to this Agreement any right of action against a party which does not otherwise exist without regard to this Agreement.

N. NOTICES

All notices and instructions given by either party to the other shall be in writing, and shall be deemed to be properly served if delivered to the address of record shown below, or if deposited in the United States Mail properly stamped with the required postage and addressed to such party at the address shown below. The date of service of a notice sent by mail shall be deemed to be the day following the date on which said notice is so deposited. Either party hereto shall have the right to change its address by giving the other party written notice thereof.

O. ACCURACY OF SERVICES AND LIMITATION OF LIABILITY

The CONSULTANT shall use reasonable professional skill and judgment in connection with services, hereunder, but does not warrant that such services are without errors and/or omissions. If, during the authorized use and prudent interpretation of documents or advice furnished by the CONSULTANT, an error or omission is discovered within a reasonable time, the CONSULTANT shall be responsible for correction of any work which must be removed or altered to meet the project requirements, provided the CONSULTANT is given a reasonable opportunity to make remedial recommendations and to correct or arrange for the correction of the work itself. The CONSULTANT will not be liable for the cost of procurement of work or services performed in correcting such errors and/or omissions where such work or services result in a value to the Project over and above that which the original work or services provided.

In providing opinions of probable construction cost, the CLIENT understands that the CONSULTANT has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinions of probable construction costs provided herein are to be made on the basis of the CONSULTANT'S qualifications, and experience. The CONSULTANT makes no warranty,

expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.

The CONSULTANT agrees, to the fullest extent permitted by law, to indemnify and hold the CLIENT harmless from any damage, liability or cost (including reasonable attorneys' fees and costs of defense) to the extent caused by the CONSULTANT'S negligent acts, errors or omissions in the performance of professional services under this Agreement and those of his or her subconsultants or anyone for whom the CONSULTANT is legally liable.

The CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold the CONSULTANT harmless from any damage, liability or cost (including reasonable attorneys' fees and costs of defense) to the extent caused by the CLIENT'S negligent acts, errors or omissions and those of his or her contractors, subcontractors or consultants or anyone for whom the CLIENT is legally liable, and arising from the project that is the subject of this Agreement.

To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of the CONSULTANT and the CONSULTANT'S officers, directors, partners, employees, agents and subconsultants, and any of them, to the CLIENT and anyone claiming by, through or under the CLIENT, for any and all claims, losses, costs or damages of any nature whatsoever arising out of, resulting from or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability, breach of contract or warranty, express or implied, of the CONSULTANT or the CONSULTANT'S officers, directors, employees, agents or subconsultants, or any of them, shall not exceed the total compensation received by the Design Professional under this Agreement, or the total amount of \$50,000, whichever is less.

IN WITNESS WHEREOF, the CLIENT agrees to the terms of these Special Provisions in conjunction with the attached Letter Agreement:

CLIENT: _____

By: _____

Title: _____

Date: _____



Appendix H

Final Nebraska H₂O Post-Construction Storm Water Program Design Standards and Procedures
Memorandum



FELSBURG
HOLT &
ULLEVIG

connecting and enhancing communities

FINAL Nebraska H₂O Post-Construction Stormwater Program Design Standards and Procedures Memorandum

To: Participating Nebraska H₂O Members

Project: NE H₂O Post Construction Stormwater Management Program Development – Phase 2
(FHU No. 12-221-XX)

From: Felsburg Holt & Ullevig

Date: August 26, 2015

1.0 Objective and Purpose

The Clean Water Act requires select communities in Nebraska to implement treatment practices to manage urban stormwater runoff in a manner that protects receiving water quality. These requirements are enforced through the National Pollutant Discharge Elimination System (NPDES) permit for each Municipal Separate Storm Sewer System (MS4). This programmatic permit is issued by the Nebraska Department of Environmental Quality (NDEQ).

Nebraska H₂O is a working group of Phase II communities in Nebraska that collaborate to develop solutions for common challenges in meeting MS4 permit requirements. Post-Construction Stormwater Management is one of six minimum control measures that each Nebraska H₂O community must satisfy. Each community is required to establish a Post-Construction Stormwater Management Program that meets Phase II MS4 permit general conditions as required by NDEQ.

The purpose of this memorandum is to provide the framework and guidance that each Nebraska H₂O community can use to satisfy part of their post-construction stormwater management program. Establishing this framework helps a community meet MS4 permit requirements and promotes sustainable watershed management policies. Whereas traditional storm sewer design and stormwater management focused on addressing water quantity and potential flood issues, the post-construction program also addresses water quality in each community. The framework includes establishment of minimum treatment and design standards, submittal and review process procedures, as well as maintenance, inspection and enforcement protocol.

2.0 Applicability

Post-construction stormwater program requirements shall be applicable to all construction activity and land developments requiring; including, but not limited to site plan applications, subdivision applications, building applications, and right-of-way applications from the City, unless exempt below. These provisions apply to all portions of any common plan of development or sale which would cause the disturbance of at least one acre of soil even though multiple, separate and distinct land development activities may take place at different times on different schedules.

The following activities are exempt from these requirements:

- (1) Any emergency activity that is necessary for the immediate protection of life, property, or natural resources; and
- (2) Construction activity that provides maintenance and repairs performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

3.0 Definitions

Definitions applicable to this memorandum are as follows:

70th Percentile Rain Event: A rainfall storm event equivalent to a depth of rainfall which is not exceeded in 70 percent of the historic runoff producing rainfall events. The depth of rainfall to be used shall be that which is identified in this memorandum or by a specific community using local precipitation data. The depth of rainfall is used in hydrologic calculations to determine the water quality volume or rate of discharge to be controlled for.

80th Percentile Rain Event: A rainfall storm event equivalent to a depth of rainfall which is not exceeded in 80 percent of the historic runoff producing rainfall events. The depth of rainfall to be used shall be that which is identified in this memorandum or by a specific community using local precipitation data. The depth of rainfall is used in hydrologic calculations to determine the water quality volume or rate of discharge to be controlled for.

Best Management Practices (BMPs): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to storm water, receiving waters, or storm water conveyance systems.

To avoid confusion with temporary and permanent BMPs used during construction; best management practices associated with the post-construction stormwater management program shall be referred to as stormwater treatment facilities (STFs).

Builder: shall mean the general contractor responsible for permitting and constructing a structure and associated construction activity.

August 26, 2015

Nebraska H2O Post-Construction Stormwater Management Program

FINAL Design Standards and Procedures Memorandum

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Common Plan of Development or Sale: A contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan which may include, but is not limited to, any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

Construction Activity: Such activities include but are not limited to clearing and grubbing, grading, excavating, demolition and other land disturbing actions.

Construction Site: Any location where construction activity occurs.

Contractor: Any person performing or managing construction work at a construction site, including, but not limited to, any construction manager, general contractor or subcontractor, and any person engaged in any one or more of the following: earthwork, pipe work, paving, building, plumbing, mechanical, electrical, landscaping or material supply.

Clearing: Any activity that removes the vegetative surface cover.

Drainage Design Guidance or Manual: Documentation that references design criteria and guidance by a community for stormwater management.

Disturbed Area: Area of the lands surface disturbed by any work or activity upon the property by means including, but not limited to, grading; excavating; stockpiling soil, fill, or other materials; clearing; vegetation removal; removal or deposit of any rock, soil, or other materials; or other activities which expose soil. Disturbed area does not include the tillage of land that is zoned for agricultural use.

Earthwork: The disturbance of soil on a site associated with construction activities.

Final Drainage Plan: A plan that indicates the characteristics of the complete project. The plan will also indicate the future conditions post-construction STFs will be maintained under.

Grading: Excavation or fill of material, including the resulting conditions thereof.

Municipal Separate Storm Sewer System (MS4): Publicly-owned facilities by which storm water is collected and/or conveyed, including, but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, catch basins, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage ditches/channels, reservoirs, and other drainage structures.

Land Development: Any land change, including, but not limited to, clearing, digging, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, construction, paving, and any other installation of impervious cover.

Maintenance Agreement: A binding document between an owner or developer and the community that outlines responsibilities of maintenance and inspection for STFs associated with land development along with recourse by the community upon default of said responsibilities.

August 26, 2015

Nebraska H2O Post-Construction Stormwater Management Program

FINAL Design Standards and Procedures Memorandum

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MS4 Boundary: The boundary defined by each individual community that is subject to the requirements of their MS4 program. In no instance shall the MS4 boundary be less inclusive than the Urbanized Area map boundary prepared by the U.S. Census Bureau, the minimum boundary adopted by the EPA for Phase II communities as part of the MS4 program.

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: A permit issued by the EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b) i.e. Nebraska Department of Environmental Quality) that authorizes the discharge of pollutants to waters of the State.

Owner: The person who owns a facility, development, part of a facility, or land.

Person: Means any individual, association, organization, partnership, firm, corporation, cooperative, limited liability company or other entity recognized by law.

Pollutant: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coli form and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; wastes and residues that result from mobile washing operations; and noxious or offensive matter of any kind.

Pollution: The presence in waters of the State of any substances, contaminants, pollutants, or manmade or man-induced impairment of waters or alteration of the chemical, physical, biological, or radiological integrity of water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation unless authorized by applicable law.

Post-Construction Stormwater Management: The management of stormwater for a period of time in perpetuity from approval for final acceptance of the construction phase of any construction activity. The management of stormwater includes the use of STFs that meet minimum site performance standards in accordance with a community's MS4 permit. STFs are intended to provide stormwater treatment during this time period and are considered functional after vegetation has been established.

Post-Construction Stormwater Management Plan: Documentation supporting analysis, design, maintenance and inspection of STFs installed on a site in order to meet minimum site performance standards in accordance with a community's MS4 permit.

Receiving Water: Any water of the State of Nebraska, including any and all surface waters that are contained in or flow in or through the State of Nebraska, all watercourses, even if they are usually dry, irrigation ditches that receive municipal storm water, and storm sewer systems owned by other entities.

Sediment: Soil (or mud) that has been disturbed or eroded and transported naturally by water, wind or gravity, or mechanically by any person.

Site: The land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

Stormwater: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Treatment Facilities (STFs): Permanent best management practices put in place to provide control and treatment of stormwater runoff after construction activity for land development is complete. These facilities are physical in nature and sometimes referred to as “structural” BMPs.

Subdivision: Includes activities associated with the platting of any parcel of land into two or more lots and all construction activity taking place thereon.

Utilities: Infrastructure constructed to provide services that support land development such as water, sanitary sewer, storm sewer, electric, gas, telephone, television and communication services.

Waters of the State: Any and all surface and subsurface waters that are contained in or flow in or through the State of Nebraska. The definition includes all watercourses, even if they are usually dry.

4.0 Requirements

Each MS4 will implement a set of minimum programmatic requirements for new and redevelopment projects that disturb one acre of soil or more within their jurisdiction. This collection of requirements is generally referred to as the Permanent Stormwater Treatment for Post-Construction program. NDEQ has not dictated what minimum program requirements must be implemented, but five content areas must be satisfied according to Part IV.D.4 of the MS4 Permit. The five content areas include:

1. Minimum Site Performance Standards
2. Site Plan Review
3. Maintenance of Controls
4. Tracking Controls
5. Inspection and Enforcement

4.1 Minimum Site Performance Standards

Each MS4 will require new and redevelopment projects to satisfy minimum site performance standards that address water quality. Minimum site performance standards vary in each of these instances however the methodology for calculating the minimum water quality control volume (WQCV) and water quality volume discharge rate (Q_{wq}) remain the same. The methodology is based on average daily rainfall data gathered regionally and applied to three specific zones across the state. From that data, the runoff amount is calculated and applied to the treatment drainage area to get the WQCV or Q_{wq} .

New Development

New development requirements apply to those areas which are being platted for development or have been platted but not built and are within the community's "MS4 boundary". The percentile rainfall event used as a minimum standard for new development is the 80th percentile rainfall event.

Example 1) A parcel that had not been platted or zoned for development (i.e. agricultural land) is being platted as a subdivision for single family residential and is greater than 1 acre. The subdivision would be required to meet the minimum standard set forth herein for new development.

Example 2) Several parcels are being replatted for development and the total area being replatted is greater than 1 acre. The replatted parcels would be required to follow new development standards.

Example 3) An undeveloped parcel is being rezoned for another use and is greater than 1 acre. The rezoned parcel would be required to follow new development standards.

Example 4) A warehouse has been proposed on an undeveloped parcel in an industrial area. Site disturbance is greater than 1 acre. The proposed development would be required to follow new development standards.

Redevelopment

Redevelopment requirements apply to those areas which have been platted and built on within the community's "MS4 boundary". The percentile rainfall event used as a minimum standard for new development is the 70th percentile rainfall event.

Example 1) A parcel that included a structure that was purchased and demolished by the City or other entity, and was sold or deeded over to a new property owner for constructing his or her own building. Site disturbance is greater than 1 acre. This site would be required to meet the minimum standard set forth herein for redevelopment.

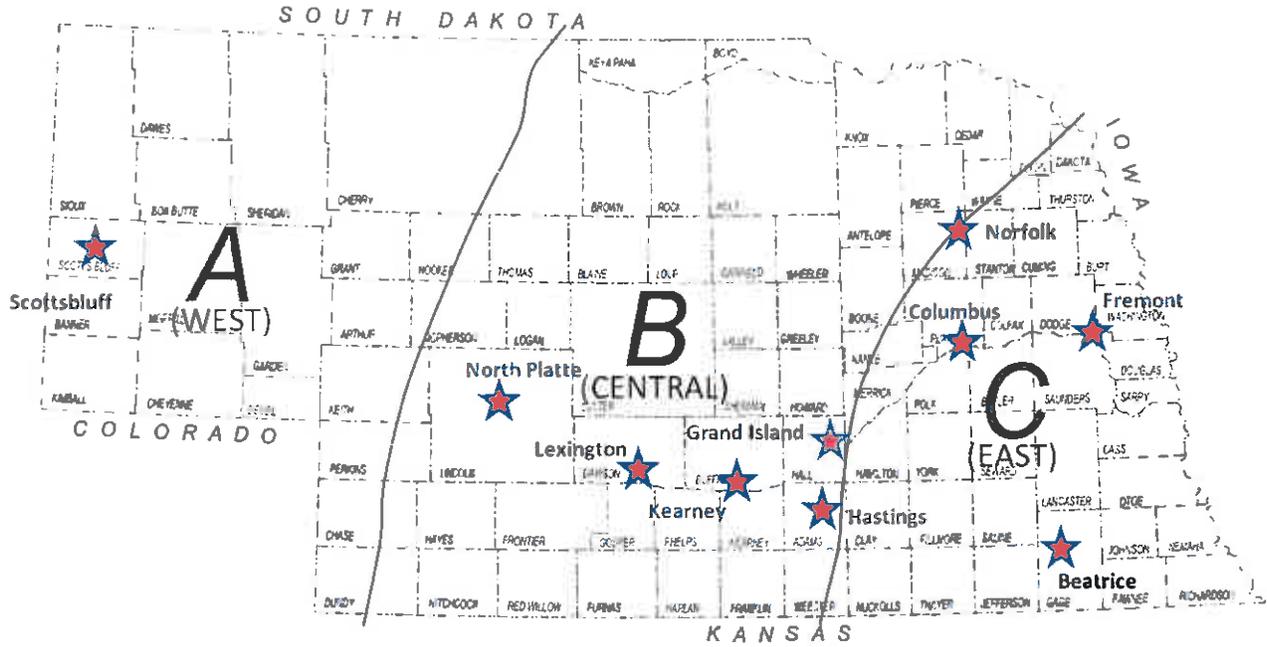
Example 2) A parcel with a building has been sold and is being converted into a new use with expanded parking. Site disturbance is greater than 1 acre. This parcel would be subject to requirements for redevelopment.

Rainfall Zones

The percentile rainfall event varies across the state. Three regional rainfall zones have been established to support the calculation of WQCV or Q_{wq} by any MS4 in Nebraska. These zones are displayed in Figure 1 and are the same as the zones portrayed in the Nebraska Department of Roads (NDOR), "Drainage and Erosion Control Manual", Chapter One.

Rainfall values were interpolated between the depth of rainfall identified in Urban Drainage and Flood Control District's (UDFCD) "Urban Storm Drainage Criteria Manual" for the Denver, Colorado area for Region A (West Region) and the City of Lincoln's "Drainage Criteria Manual" for Region C (East Region).

Figure 1. Nebraska Regional Rainfall Zones



NEBRASKA

Adapted from NDOR Drainage and Erosion Control Manual Ch. 1

Rainfall amounts by region for new and redevelopment are provided in Table 1. These values will be used to calculate runoff and water quality control volume (WQCV).

Table 1. Rainfall Depth (P) By Region for Defined Percentile Rainfall Events

Applicable Region	Rainfall, P	
	80 th Percentile Event (New Development)	70 th Percentile Event (Redevelopment)
A (West)	0.61"	0.44"
B (Central)	0.72"	0.53"
C (East)	0.83"	0.62"

Minimum Design Criteria

STFs must be sized to handle the appropriate WQCV or equivalent water quality discharge rate to properly treat stormwater. Best Management Practices include retention-based stormwater treatment facilities that typically require or encourage using infiltration, evapotranspiration, or harvest practices to control a specified volume of stormwater within each development site.

The regulatory logic of controlling volume is that the stormwater pollutants contained in the volume of runoff captured are prevented from reaching the receiving water, and the remaining volume that does reach the receiving water is less polluted and erosive to the receiving waterbody.

The regulatory logic of controlling discharge rate is that the stormwater pollutants contained in stormwater runoff can be reasonably treated and that volume that does reach the receiving water is less polluted and erosive to the receiving waterbody.

Water Quality Volume

Design criteria to meet minimum site performance standards for new and redevelopment are expressed as the runoff from a specified percentile rainfall event applied across the treatment drainage area. The minimum WQCV for new and redevelopment can be calculated as follows:

$$WQCV = P \times (0.05 + 0.009 \times \%Imp) \times A \times 1/12 \times 43,560$$

Where, P = rainfall depth, in (from Table 1)

A = treatment drainage area, ac

%Imp = maximum percent imperviousness (expressed as a whole number not as a decimal) for proposed zoning type (varies by community)

The following example illustrates use of the WQCV equation:

Example 1) A 4.2 acre parcel in Kearney was purchased to construct a storage facility. The parcel is one of 4 in a new development that was zoned limited industrial district (M-1). Light industrial zoning in Kearney has a maximum impervious percentage of 90%. On that parcel, 2.4 acres will be disturbed to construct the facility. An additional 0.4 acres, also zoned M-1, drain directly onto the site from adjacent property. The WQCV for the site is calculated as follows:

$$WQCV = 0.72'' \times (0.05 + 0.009 \times 90) \times (2.4 \text{ ac} + 0.4 \text{ ac}) \times 1/12 \times 43,560 = 6,294 \text{ cubic feet}$$

If there are multiple land uses within the treatment drainage area, the effective maximum percent imperviousness should be pro-rated based on the area of each zone as a percentage of the total area.

Stormwater runoff from all disturbed areas shall be treated before leaving the site. The treatment drainage area shall include all disturbed areas on the site and upstream drainage or "runon" unless the runon is diverted or bypasses the disturbed site (i.e. by pipe or swale) so that STFs are not overwhelmed. STFs may be distributed across the site to provide the required treatment.

Additional storage in the STF may be allowed, depending on the type of STF selected, to address stormwater detention requirements to control runoff from larger storm events such as the 2-, 10-, or 100-year event.

Water Quality Volume Discharge Rate

STFs that are sized based on a flow rate (i.e. swales, filter strips, manufactured systems, etc.) shall use the water quality volume discharge rate (Q_{wq}). The Q_{wq} is the peak runoff from the design water quality volume rainfall event. This peak runoff equivalent shall be calculated using the Natural Resources Conservation Service (NRCS) Curve Number (CN) procedure. The calculation is based on the 80th percentile rainfall event depth by region, a 24 hour duration storm event, and a time of concentration of 5 minutes. The area used is the impervious surface only within the treatment drainage area.

Table 2 has been prepared to provide the Q_{wq} in each Region for sites with up to 6 acres of impervious area. These values shall be used to size STFs for the area of impervious surface within a given treatment drainage area. For sites greater than 6 acres, the designer shall use the methods and criteria specified above in a suitable model to calculate the discharge rate.

Table 2. Water Quality Discharge Rate (Q_{wq}) for Selected Impervious Areas By Region

Impervious Area (Acres)	Q_{wq} (cfs)			Impervious Area (Acres)	Q_{wq} (cfs)			Impervious Area (Acres)	Q_{wq} (cfs)		
	West	Central	East		West	Central	East		West	Central	East
0.2	0.1	0.2	0.2	2.2	1.5	1.9	2.2	4.2	2.9	3.6	4.2
0.4	0.3	0.3	0.4	2.4	1.6	2.0	2.4	4.4	3.0	3.7	4.4
0.6	0.4	0.5	0.6	2.6	1.8	2.2	2.6	4.6	3.2	3.9	4.6
0.8	0.5	0.7	0.8	2.8	1.9	2.4	2.8	4.8	3.3	4.1	4.8
1.0	0.7	0.8	1.0	3.0	2.1	2.5	3.0	5.0	3.4	4.2	5.0
1.2	0.8	1.0	1.2	3.2	2.2	2.7	3.2	5.2	3.6	4.4	5.2
1.4	1.0	1.2	1.4	3.4	2.3	2.9	3.4	5.4	3.7	4.6	5.4
1.6	1.1	1.4	1.6	3.6	2.5	3.0	3.6	5.6	3.8	4.7	5.6
1.8	1.2	1.5	1.8	3.8	2.6	3.2	3.8	5.8	4.0	4.9	5.8
2.0	1.4	1.7	2.0	4.0	2.7	3.4	4.0	6.0	4.1	5.1	6.0

4.2 Platting and Site Plan Review

Land development that meets the land disturbance criteria of this memorandum must address storm water runoff quality through the use of STFs. STFs shall be provided for in the drainage plan for any subdivision plat, annexation plat, development agreement, subdivision agreement or other local development plan.

Implementation Schedule

Each Nebraska H2O partner will adopt a post-construction stormwater management program based on the guidance in this memorandum. Each community must consider local conditions, criteria, and procedures that are compatible or conflict with these recommendations and advance the final post-construction stormwater management program for local adoption. Each community will implement their program independently and under their own schedule; however, the implementation schedule for the post-construction stormwater management program for Nebraska H2O partners should not exceed the following:

January 1, 2016: Local MS4 shall begin or continue a public involvement process with local leaders, engineers, the development community and the general public that will lead to adoption of the post construction stormwater management program no later than January 1, 2017.

January 1, 2017: For all developments that have not had a preliminary plat approved, the post-construction stormwater management plan MAY BE required to be satisfied. The MS4 MAY elect to require minimum stormwater treatment practices for replats that significantly increase the amount of impervious area in a preliminarily platted subdivision previously approved by this date. During this period, the municipality shall make known to the owners of all preliminarily platted subdivision that implementation of stormwater treatment controls SHALL BE required if a replat is January 1, 2019 or later. The method of notification will be left up to the individual communities and make take the form of a Public Notice.

January 1, 2019: For all developments that have not had a preliminary plat approved, the post-construction stormwater management plan SHALL BE required to be satisfied. The MS4 SHALL require minimum stormwater treatment practices for all replats and modifications of preliminary platted subdivisions.

Procedures

Platting

For major subdivision applications drainage and post-construction shall be discussed at the pre-application conference. This would be followed by an initial review of the general design at the preliminary platting stage and detailed design carrying over into final design review.

The plat applicant shall identify, through the Subdivision Agreement or other City-approved means, whether post-construction stormwater management facilities will be (1) constructed by each lot owner on their own lot (Lot Level STFs); (2) constructed for the subdivision by the developer with reimbursement sought from individual lot builders (Neighborhood STFs); (3) mitigated off-site at regional facilities (Regional STFs), or (4) addressed by other means approved by the City. Any other conditions agreed to between the two parties, including inspections, maintenance, and funding of maintenance shall be included in that agreement.

Building Permits

When seeking a building permit, the City will need to investigate how drainage and post-construction stormwater management is being handled. If Lot Level STFs are required per the Subdivision Agreement or

other agreement, then the lot builder will need to develop and have approved a drainage study, post-construction stormwater management plan, and maintenance agreement. A maintenance agreement for an individual lot shall include provisions for maintenance that shall be binding on all subsequent owners.

Submittals

Post Construction Stormwater Management Plan (PCSMP) Submittal

The PCSMP submittal will include the following components:

Plans

Plans showing topographic survey information along with proposed, grading, stormwater infrastructure (including STF's), pavement, and structures shall accompany any PCSMP submittal. Specifically, plans shall include the following information:

- Site topography including existing contours, property lines and easements, utilities, and site features such as existing water bodies, trees and shrubs, pavement and other structures
- Proposed contours
- Proposed inlets, storm sewer, culverts, and drainageways
- Proposed STF's and/or detention facilities
- Proposed roadways, parking, building footprints, and other structures

A table shall be provided in construction drawings that include, for each STF; (1) a location identifier, (2) the type of STF, (3) the location for each STF in latitude/longitude format, (4) the drainage area, and (5) the water quality volume/water quality volume discharge rate. The designer shall differentiate between the amount required by design and the amount that will be provided. Any discrepancies should be discussed with and approved by the City. The information shall be provided on drawings in a format that is consistent with the following:

STF Identification Number	STF Type	STF Location (Lat/Long)	Drainage Area (Acres)	Design WQCV (cf) or Q_{wq} (cfs)	WQCV (cf) or Q_{wq} (cfs) Provided

Preliminary submittals required by the City will include preliminary information. Final plans shall be representative of the intended construction bid package.

Calculations

All calculations for water quality volume and water quality volume discharge rate shall be submitted to the City as part of the site development drainage study. Calculations shall be completed as described herein for the appropriate STFs. Design criteria specific to the various STFs shall also be shown in the drainage study (i.e. calculations for drain down and infiltration).

When combining stormwater detention with STFs, the designer shall provide calculations that address both water quality volume and stormwater detention requirements using methodology approved by the community.

STFs shall be clearly shown on the drainage map along with other stormwater infrastructure and drainage basin boundaries.

Certification of Permanent STFs

Upon completion of a project the City shall be provided a written certification, by qualified personnel, stating that the completed project is in compliance with the approved Final Drainage Plan. Qualified personnel shall be a professional civil engineer licensed in the State of Nebraska or person(s) under the direct supervision of a professional engineer licensed in the State of Nebraska.

For commercial and industrial construction, certification will be required before a Certificate of Occupancy is granted (unless authorized by the community). All applicants shall submit "as built" plans certified by a professional engineer licensed in the State of Nebraska once final construction is completed. A final inspection by the City of all post-construction STFs shall be required before a Certificate of Occupancy will be issued or any public infrastructure is accepted.

Ongoing Inspection and Maintenance of STFs

A maintenance agreement will be required by the developer or builder for proposed STFs. The maintenance agreement shall include provisions that outline regular maintenance activity, and a schedule of periodic inspections by the Owner or Designees. Inspection frequency shall be consistent with the design criteria manual used and generally includes quarterly inspections during the first year of establishment following construction and annually thereafter.

The Owner or Designees providing routine inspections shall document all inspections and maintenance and repair needs to ensure compliance with the requirements of the agreement and the plan. The agreement shall allow access to City personnel for inspection and maintenance should the owner default in their responsibilities with the intent to invoice the owner for said work, if needed. Information about inspections and maintenance shall be provided by the owner to the City upon request.

PCSMP Submittal Checklist

A PCSMP checklist shall be submitted with design plans and be recorded by the City with the project record. The PCSMP checklist provided in Appendix A of this document may be used for reference by communities, developers, designers, and builders.

Off-Site Stormwater Mitigation

In some cases it may not be practicable to provide the required treatment within project limits due to various constraints such as site limitations, costs, or other obstacles. If shown by the owner that it is not practicable, off-site mitigation may be allowed at the discretion of the City.

Off site mitigation may be provided by a private land owner in a City-approved stormwater treatment facility or within a City-approved publicly owned stormwater treatment facility provided the proposed mitigation location meets the following minimum criteria;

- A drainage study confirms that the proposed mitigation location provides excess stormwater treatment that is not required to provide treatment for the drainage area.
- The excess treatment capacity in the proposed mitigation location is not already providing mitigation of required stormwater treatment for another development or redevelopment project.
- The owner of the proposed mitigation location maintains or enters into a maintenance agreement that shall be binding on all subsequent owners and includes all required inspection and maintenance requirements for stormwater treatment practices.

Off site mitigation should take place in accordance with the rules and conditions of each individual community. Each community will need to be able to provide the appropriate documentation for tracking all water quality debits and credits for such facilities in the event of an audit. Fees shall be established by the entity funding the stormwater treatment facility.

4.3 Maintenance of Controls

STFs located on private property shall be owned and operated by the owner(s) of the property on which the STF is located; unless the City agrees in writing that a person or entity other than the owner shall own or operate such STF. As a condition of approval of the STF, the owner shall also maintain the STF in perpetuity to its design capacity unless or until the City shall relieve the property owner of that responsibility in writing. The obligation to maintain the STF shall have been memorialized on a subdivision plat, annexation plat, development agreement, subdivision agreement or other form acceptable to the City and recorded by the City with the project records.

The City shall continue to maintain public storm sewer infrastructure including public STFs. Each homeowners association of a subdivision or individual lot owner shall maintain post-construction STFs. When public infrastructure improvements are constructed by the City, such as with the widening of a major arterial or other public improvement, the City shall take responsibility for maintenance of the STF unless otherwise specified in a maintenance agreement.

5.0 Design Guidance

STFs shall be designed using an approved design guidance manual that provides minimum design criteria and considerations. A selection of regional design guides are recommended for design within Nebraska H₂O communities. The most recent versions of the following design guides and manuals are approved for general use in the design of STFs:

- City of Omaha, *"Omaha Regional Stormwater Design Manual – Chapter 8: Stormwater Best Management Practices"*
- City of Lincoln, *"Drainage Criteria Manual - Chapter 8: Stormwater Best Management Practices"*
- NDOR, *"Drainage and Erosion Control Manual – Chapter 3: Stormwater Treatment within MS4 Communities"*
- Urban Drainage and Flood Control District (UDFCD), *"Urban Storm Drainage Criteria Manual, Volume 3: Best Management Practices"*

The designer is encouraged to adopt one design guide/manual for use on a project to the extent practicable. Other approved design guides and manuals may be used if design criteria for the desired STF are not provided in the primary design guide/manual. Any variances from these manuals will require approval of the City Engineer or their Designee. The community may evaluate the suitability of other types of STFs not referenced in the approved design guides and manuals on a case-by-case basis.

The designer shall discuss the use of the alternative design guidance manuals prior to starting design along with any variance in STF design. The designer shall also discuss other requirements for stormwater management within the community including the potential need for stormwater detention. Where one manual conflicts with another, the Engineer shall use sound, cost-effective design practices to resolve the issue. The following minimum design standards are provided to help resolve some conflicts identified.

Stormwater Treatment Facility Selection

Each design guidance manual includes a unique selection of STFs and what is included in one may not be included in another. Furthermore, two manuals may use different names for an STF with the same or similar function. The function, criteria and considerations of a specific STF is what shall be used to determine its use by a design engineer. Table 3 provides a general comparison of the types of STFs included in the approved design guidance manuals.

Table 3. STF Design Guidance for Various Regulatory Agencies

STF Type	Omaha	Lincoln	NDOR	UDFCD
Vegetated Filter Strip	X		X	X
Grass Swale	X		X	X
Infiltration Trench			X	
Infiltration Basin			X	
Bioretention Basin	X	X	X	X
Media Filter			X	
Sand Filter				X
Extended Dry Detention	X	X	X	X
Wet Detention Ponds	X	X	X	X
Stormwater Wetland	X	X	X	X
Underground Detention		X		X
Pervious Pavement	X	X	X	X
Proprietary Structural Treatment Controls	X		X	X
Green Roofs	X	X		X
Soil Conditioning	X			

All design guidance manuals include criteria and considerations for STF selection and should be used for this purpose. The design criteria within these guides shall be adhered to unless the design engineer demonstrates to the City why the criteria do not apply. Stormwater STF suitability will depend on number of factors including, but not limited to, the following:

- Available Space
- Property Access
- Site Topography
- Drainage Basin Size
- Infiltration Rates
- Depth to Groundwater/Bedrock
- Capital Costs/Maintenance

Community Preferences

Each community reserves the right to approve or reject certain STFs based on preferences and/or suitability for their community. Furthermore, certain communities may have regional STFs that they would prefer to use over on-site STFs. It is suggested that the designer discuss these preferences with the community during the pre-application phase of platting or at the beginning of design when considering building on an individual lot.

Collectively, Nebraska H₂O recommends the following preferences and exclusions from the approved manuals for consideration in your design:

Infiltration Rates

Minimum infiltration rate shall be 0.5 in/hr

Maximum infiltration rate shall be 12 in/hr

Infiltration Cells

Infiltration cells should incorporate conditioned soils to reduce the quantity of select material needed to provide treatment in a bioretention garden/basin. This method is described in the Omaha Regional Stormwater Design Manual and NDOR Drainage and Erosion Control Manual.

Drain Time and Control Valves

A design drain time of 24 hours will be used for all STFs that use a water quality control volume to provide treatment and control of runoff. Control valves shall be placed in underdrains to allow for adjustments to the drain time as needed.

Cleanouts

Cleanouts shall be provided on all underdrains to assist with providing needed maintenance.

Pretreatment

Measures shall be incorporated that prevent sediment from depositing in STFs during and after construction. Pretreatment of stormwater runoff through barriers, grass buffers or forebays is recommended on all STFs.

August 26, 2015

Nebraska H2O Post-Construction Stormwater Management Program

FINAL Design Standards and Procedures Memorandum

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Landscaping

The following resources have been provided to assist in the design of landscaping for a project. It is strongly suggested that a landscape architect or designer assist with plant selection and landscape design.

- UNL Extension, "Stormwater Management: Plant Selection for Rain Gardens in Nebraska"
<http://www.ianrpubs.unl.edu/epublic/live/g1759/build/g1759.pdf>
- UNL Extension, "Nebraska Bioretention and Rain Garden Plants Guide"
<http://marketplace.unl.edu/extension/ec1261.html>
- NDOR, "Plan for the Roadside Environment"
<http://www.transportation.nebraska.gov/environment/docs/road-env-plan-total.pdf>
- NDOR, "Roadside Flowers and Grasses"
<http://www.transportation.nebraska.gov/environment/flowers.html>
- NDOR, "Roadside Vegetation Establishment and Maintenance"
http://www.transportation.nebraska.gov/environment/docs/veg-manual_2014.pdf
- "The Seed", A Publication of the Nebraska Statewide Arboretum, Fall 2008
<http://arboretum.unl.edu/documents/The%20Seed%20Water%20in%20Landscape.pdf>

These links may contain other references to sources that may be helpful in plant selection and suitability for use with STFs. Keep in mind regional difference in your selection of plants along with differences in soil, light, and moisture within the stormwater STF itself.

APPENDIX A

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN (PCSMP)

SUBMITTAL CHECKLIST

Post-Construction Stormwater Management Plan (PCSMP) Submittal Checklist



Preliminary submittals required by the City will include preliminary information. Final submittals shall be representative of the intended construction bid package.

PROJECT NAME: _____

PLANS

- Site topography including existing contours, property lines and easements, utilities, and site features such as existing water bodies, trees and shrubs, pavement and other structures
- Proposed contours
- Proposed Inlets, storm sewer, culverts, and drainageways
- Proposed STFs and/or detention facilities
- Proposed roadways, parking, building footprints, and other structures
- A table shall be provided in construction drawings that includes, for each Stormwater Treatment Facility (STF) The information shall be provided on drawings in a format that is consistent with the following:

STF Identification Number	STF Type	STF Location (Lat/Long)	Drainage Area (Acres)	Design WQCV (cf) or Q _{wq} (cfs)	WQCV (cf) or Q _{wq} (cfs) Provided

CALCULATIONS

- Water Quality Volume (WQCV) or Water Quality Volume Discharge Rate (Q_{wq}) for each STF (To be included with a site design or subdivision drainage study)
- Drainage Study

AGREEMENTS

A maintenance agreement is required for neighborhood level and lot level STFs. If an agreement is made for mitigation off site or other agreements are made, make note and describe below

- Inspection and Maintenance Agreement
- Other Agreement

CERTIFICATION OF PERMANENT STFs

Unless otherwise indicated by the City, a Hold on the Certificate of Occupancy will be placed on the project until the STF has been certified. If applicable, check "Hold" until certification is received. If not applicable, check N/A.

- Hold on C.O.
- N/A

Submitted upon completion of a project; a statement by a professional engineer licensed in the State of Nebraska or person(s) under the direct supervision of a professional engineer licensed in the State of Nebraska attesting that the completed project is in compliance with the approved Final Plan.

- Certification of Permanent STFs
- Record Drawings (if required by City)

Hold on C.O. Released (if applicable) Released By: _____

City of Kearney Authorized Representative
&
Stormwater Management Program Signatures

Any questions about the SWMP please contact the City of Kearney Stormwater Program Manager at 308-233-3273.

Authorized Representative:

City of Kearney	aharter@kearneygov.org	308-233-3246
Permit Applicant	Representative's Email	Phone Number
Andrew Harter	1919 15 th Ave.	308-233-3209
Representative's Name	Address	Fax Number
Assistant Public Works Director	Kearney / NE	68845
Representative's Title	City/State	Zip Code
		
3/25/16		
Representative's Signature / Date		

Stormwater Program Contact:

City of Kearney	dlillis@kearneygov.org	308-233-3273
Permit Applicant	Representative's Email	Phone Number
Daniel Lillis	1919 15 th Ave.	308-233-3209
Representative's Name	Address	Fax Number
Stormwater Program Manager	Kearney / NE	68845
Representative's Title	City/State	Zip Code
		
3/25/2016		
Representative's Signature / Date		