

UNIVERSITY OF NORTHERN IOWA

Municipal Separate Storm Sewer System 2019/2020 Report

Permit Number 07-09-0-04

August 2020

Prepared by:
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Introduction

The following is the Stormwater Annual Report for the University of Northern Iowa (UNI) prepared in accordance with Part III of the Municipal Separate Stormwater System (MS4) Permit Number 07-09-0-04. This report summarizes stormwater compliance activities within the boundaries of the University of Northern Iowa as identified in the permit.

In order to maintain transparency and work to inform the University of Northern Iowa community all stormwater related information is hosted on the UNI Facilities Management web site. <https://fm.uni.edu/stormwater-management>
The site contains

- Storm water management plan
- NPDES permit
- NPDES annual reports
- SPCC plan
- Construction and post construction program
- Illicit discharge and elimination program
- Pollution prevention program

The University of Northern Iowa is committed to being a good steward of the water quality and quantity associated with the University. It has dedicated member of its team to this effort. Those members are as follows:

Committee Member	Title/Department	Contact
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At Large	Student Representative	

1.0 Status of Implementing the Components of the Stormwater Pollution Prevention and Management Program.

The bullet points in 4.0 identify the required tasks for fiscal year 2019 that were completed as stated in Part II of the MS4 permit for the University of Northern Iowa. The tasks are based on six Best Management Practices (BMP's) listed in the MS4 permit. All required tasks for fiscal year 2019 were completed.

2.0 Status of compliance with any compliance schedule established by this Permit of any modifications to this permit.

The University of Northern Iowa fulfilled all schedule requirements as stated in Part II of the MS4 permit for the period of 7/31/19 to 07/31/20. No modifications of the permit were made within the reporting period.

3.0 A summary of all revisions to the approved management program.

No modifications of the permit were made within the reporting period.

4.0 A summary of the data, which is generated within the reporting period, includes narrative descriptions of storm water quality improvements or degradation.

- Summer 2020 Removal and refresh biocells
 - BMP-restoration of existing biocell
 - Removal of noxious weed and existing 10 yr old biocell plantings in 2,000 sqft installation
 - Installation of additional biocell planting medium and new biocell plants
- Spring 2020 Storm water drain-stenciling
 - BMP – labeling all storm water intakes with identifying “drains to River”
 - This involves checking each of the storm water intakes to ensure the medallion remains in place and the stenciling information is current and in a readable condition.
 - The medallions used by the university are the same as those purchased by the City of Cedar Falls so contractors will readily recognize the storm water intakes.
 - Those areas that where a medallion cannot be affixed have been stenciled with the message “Drains to river”.

- In the spring of 2020 a crew walked the intakes and replaced missing medallions and added a fresh coat of paint to any that were labeled, “drains to river”.
- Summer 2020 removal of failed pervious concrete project
 - BMP- Pervious asphalt
 - Removal of a failed installation of 6500 sqft of pervious concrete that is over 10 yrs old in conjunction with a steam tunnel installation project
 - Not able to install a different BMP in the same location because of tunnel installation
- Summer 2020, Student Garden
 - Successful student run garden and was maintained again this reporting year
 - Yield donated to local food pantries
- Winter 2019, Ash tree removal project
 - BMP – Removal of declining Ash trees
 - continued removal of perimeter ash
 - Planting 50 to 130 trees annually with emphasis on species diversity.
- Spring 2019, Gilchrist parking lot pervious asphalt
 - BMP – installation of pervious asphalt
 - Installed BMP informational signage
 - This project installed a 5,000 sqft pervious pavement strip in a 67,165 sqft or 1.54 ac parking lot
 - Partnership of the Dry Run Creek Watershed Improvement plan and funding received from grants associated with this organization. Specifically the WQI and 319 funds

Historical Summary

- Spring 2018, Intakes and outflow mapping
 - BMP- maintain
 - UNI maintains a Storm sewer layer in its GIS system with this attribute data. A technician dashboard was created for field access.
 - The UNI GIS data base has been shared with the City of Cedar Falls.
- Summer 2018, Storm water wetland project
 - BMP - Nutrient reduction wetland
 - Installed BMP informational signage
 - This project was completed in conjunction with grant funding from Blackhawk Soil and Water Conservation District and The Nature Conservancy
 - Grow of plant material is complete. There is a need for continued maintenance of invasive tree species with some work being completed by the City of Cedar Falls
- Summer 2018, Hillside Courts demolition project

- BMP – Prairie strip installation and reduction of impervious surface
- Installed BMP informational signage
- Remove of approximately 59,000 sqft of impervious surface including pavement and structures
- Regrade location and seed with pasture mix and install prairie seed mix along Dry Run Creek at the bottom of the regraded hill. Site is approximately acres of housing units, parking lots and sidewalks
- This project was delayed the seeding took place spring of 2020
- Partnership of the Dry Run Creek Watershed Improvement plan and funding received from grants associated with this organization
- Spring 2018, Renovation of the plaza east of the Schindler Education building
 - BMP – Pervious Pavers installation and impervious surface reduction
 - Installed BMP informational signage
 - Pervious paver installation was 3,945 sqft, estimated to treat 276,696 gallons of storm water annually. Impervious PCC concrete removal of 3,895 sqft
 - The project was completed in the fall of 2018 and inspected the spring of 2019. All pervious pavers appear to be functional
 - Partnership of the Dry Run Creek Watershed Improvement plan and funding received from grants associated with this organization
- Summer 2018, Union plaza pervious paver project
 - BMP – installation of pervious pavers
 - Replacing failing planting beds with in a side walk system that flood with heavy rains with a pervious pavers
 - Project is complete and BMP appear to be functioning as designed.
- Fall 2018 Ash tree removal
 - BMP – Phased removal of infected ash trees
 - With the Emerald Ash Borer confirmed on campus the grounds crew has been systematically removing Ash trees with significant decline.
 - 85 Ash trees were removed on the south half of campus
 - Treatment of ash specimen in the campus core.
- Spring 2018, Tree renewal planting
 - BMP – Installation of new trees with an emphasis on diversity of species
 - Installation of 50 trees
- Fall 2017, spring of 2018 and fall of 2018 prescribed burn of native prairie
 - BMP – prescribed burning native prairie

- Grounds shop was able to perform prescribed prairie burns around the perimeter of campus
 - Approximately 20 acres treated
- Fall 2017, Streambank stabilization project
 - BMP – Stream bank stabilization
 - Installed BMP informational signage
 - Stabilization of a section of Dry Run Creek surrounding the UNI south pedestrian bridge.
 - Seeding and native plugs were withheld until the spring of the following season (2018) and was completed by UNI biology students and Americor staff
 - Monitoring of the construction work was employed to ensure that DNR and Army Corp regulation of stream disturbance were followed
 - Partnership of the Dry Run Creek Watershed Improvement plan and funding received from grants associated with this organization
- Spring 2016, Spill Response and Prevention Plan
 - Brown Engineering Company created an SPCC plan for the University and the plan is located on the University Storm water website
- Summer 2016, Prairie prescribed burn
 - BMP – Prescribed burn was performed jointly with the City of Cedar Falls to refresh the wetland plants and control the invasive tree species
 - The City also had its forestry crew manually prune out some of the more aggressive clumps of trees
- 2009, Wetland plants installed at the Wetland Demonstration Park
 - Plants installed in the new wetlands park created in conjunction with the City of Cedar falls.
 - Located north of the UNI Dome parking lot
- Grounds staff continues to be involved in post-event clean-up of the turf and parking lots. The campus' Sustainability Director initiated student activities for recycling during outdoor events to reduce the amount of clean-up post event.

Future Environmental Sustainability Projects Planned

The university's Architect and Grounds department are developing a multi-year plan for future storm water quality improvement projects. Future projects planned for fiscal year 2010-2021 include:

- 1) Continued paver replacement on central campus
- 2) Reconstruction of Campbell parking lot island with a reduction of approximately 2,250 sqft of impervious surface

3) Reconstruction of south pedestrian bridge with associated stream bank restoration and protection

5.0 An estimate of the previous fiscal year's expenditures for implementation of the management program and the budget for the current fiscal year.

The storm water management budget for fiscal year 2019 was funded by the Senior Vice President for Finance and Operations, the Facilities Management Department, applicable grants and the University's general education fund.

- 2020-2021 fy- Maintenance costs expended for maintaining storm water projects and initiatives included around \$200,000 for labor and contracted services.
- 2018-2019 fy- Maintenance costs expended for maintaining storm water projects and initiatives included around \$1.2 million for labor and contracted services.

Facilities Management staff continue to expand the information on the stormwater initiatives through publishing BMP practices on the Facilities Management web site to provide educational information to the campus and surrounding communities.

6.0 A summary describing the number and nature of inspections, enforcement actions and public education programs conducted during the reporting period.

Construction Inspections

- Inspections were conducted by Owner Construction Representatives and/or Facilities Management staff on all University of Northern Iowa's construction sites requiring an NPDES General Permit No. 2 to verify that contractors were following specified BMPs that had been approved in each construction site's pollution prevention plan.
- Areas of focus during inspections include proper placement and maintenance of silt collection fences, installation of gravel areas to collect soil from vehicle tires and proper sweeping of streets on which truck traffic traveled after leaving construction sites.

UNI has 6 current projects with active NPDES General No.2 permits.

1. West Campus Recreation Field Enhancement project (Permit No. IA-33595-33282)
2. Hillside Courts demolition project (Permit No. IA-33520-33203).
3. Steam Distribution System Replacement Phase 2A - Campbell to Towers (IDNR Permit No. 34700-34365).

The Storm Water Committee continues to meet and UNI student members are active participants. Information updates are periodically completed to remind members of the University Community about the importance of storm water management; updates are placed on the Facilities Management Grounds web site under the Storm Water Program heading.

A member of the UNI Facilities Management team serves on the Dry Run Creek Advisory board acting as a liaison for the University with the Blackhawk Soil and Water Conservation District Dry Run Creek Watershed Improvement Project.

UNI has an Office of Sustainability and a Sustainability Action Committee who as a part of their charter address water quality issues on campus, in Blackhawk County and across Iowa.

Historical Summary

UNI faculty and staff have been involved in hands-on educational opportunities in conjunction with the Dry Run Creek watershed improvement program and Americorps. These programs have included the installation of 5 residential raingardens treating 37,000 gallons of rain water and the creation of a number of rain barrels. These events gathered over 100 volunteers.

The University's Reuse, Recycle Technology Transfer Center (RRTTC) led the 2017 UNI Earth Week Celebration, a week long, campus-wide event that provides various opportunities for students, faculty, staff and the general public to receive education on relevant topics, participate in local clubs and recreation and volunteer in service projects to clean up both main branches of the Dry Run creek that run through campus. The goal of the Earth Week celebration is to improve the local environment and the week culminated with an Earth Day Fair with a number of booths providing information to those who attended the events. The RRTTC develops and implements several environmental education outreach programs to serve various focus groups at the university and in the community.

UNI has a variety of educational resources relating to water quality, sustainability and the environment, including various educational and

research centers on or around campus. These include, Tallgrass Prairie Center; Recycling and Reuse Technology Transfer Center; Center for Energy and Environmental Education and the Iowa Waste Reduction Center.

In 2018 we toured Hawkeye Community College representatives on campus displaying our established BMPs. From this visit we entered into a joint grant application for WQI funds dollars to install additional BMPs on both campuses. This grant was awarded and is partially funding the Schindler Education Center plaza project.

Sustainable Landscaping: The University strives to put into practice the best use of our resources and time in creating a beautiful, clean, healthy and sustainable campus. UNI has established several areas of prairie plantings to avoid mowing expenses, including labor, equipment, fertilizer and pesticides. UNI recycles leaves and branches accumulated from our campus maintenance practices. These materials are composted and then stagnant finished. Compost is utilized in landscape maintenance activities. UNI has been looking at alternative products to apply to turf areas on campus and has recently created a test plot for an organic fertilizer option. Trials of these materials are ongoing.

UNI dining centers work with Green RU in a pre-consumer and post-consumer composting project

Fy 2018 – 254,975 lbs of food waste diversion

Fy 2019 – 187,350 lbs of food waste diversion

Fy 2020 – 171,300 lbs of food waste diversion

UNI grounds also partners with a remote dining center performing on campus composting of some pre-consumer waste which is added to the grounds green waste.

The Facilities Management Grounds unit is involved with enhancing water quality in the Dry Run Creek watershed in which UNI is located. The university has developed several bio-cells, bio-swales, pervious paving installations, green roofs and streambank restoration projects that reduce the environmental impact from storm water run-off from impermeable pavements and roofs and enhance the visual quality of the campus landscape.

Through the Office of the Provost, the University established a Certificate in Sustainability in collaboration with the Faculty Leadership in Sustainability Education Program that includes classes that focus on storm water.

7.0 Summary

This report summarizes required storm water compliance activities completed by the University of Northern Iowa for reporting year 2019/2020. The 2007 reporting year was the first year of compliance activity associated with MS4 Permit number 07-09-0-04 issued to the University of Northern Iowa by the Iowa Department of Natural Resources

All permit activities for the reporting year 2019/2020 permit period were completed on or before specified timelines. The University of Northern Iowa will continue to evaluate opportunities to improve storm water quality.

Individuals with questions, comments or concerns about storm water quality issues at the University of Northern Iowa should contact Brian Hadley, Assistant Director of Campus Services, 1801 West 31st Street, Cedar Falls, Iowa 50614-0003, phone (319)273-7653 or email to brian.hadley@uni.edu.