

STORMWATER MANAGEMENT MANUAL

A comprehensive guide to assist design professionals, property owners, contractors and residents with stormwater management projects and requirements.

July, 2014

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It is the goal of the City of Davenport's Stormwater Management Plan and ordinances to keep stormwater runoff from leaving a site during 90% of the rainfall events in Davenport. According to historical rainfall data, 90% of the rainfall events in Scott County, IA amount to 1.25 inches of less or rainfall in a twenty-four hour (24 HR) period.

Managing run-off is important to our community.

- Reduces and prevents stream degradation, erosion and land loss.
- Decreases stormwater runoff and the pollutants it contains.
- Lessens flash flooding, and downstream flood potential.
- Promotes a more resilient and sustainable community.
- Supports a healthy ecosystem.
- Necessary to meet federal and state clean water requirements.

This Stormwater Management Manual was created to assist design professionals, property owners, contractors and residents with meeting City of Davenport stormwater management requirements for development, redevelopment and voluntary projects that promote stormwater runoff reduction.

Most pollutants present on impervious surfaces are carried away with the first amount of stormwater runoff from a site. It is very important to clean and filter this 'first flush' of runoff before it enters the storm sewer or creeks and streams.

Treatment of this water through water quality best management practices (BMPs) is necessary for the health and resilience of our community. Removing pollutants before contaminated stormwater runoff enters receiving waters helps improve the quality of our creeks and streams.

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Contact | 563.326.7923, or, dpwnr@davenportiowa.com

1.0 GENERAL - REQUIREMENTS | APPLICABILITY | FUNDING | CITY PROGRAMS

1.1 Requirements

Davenport Municipal Code Section <u>13.34</u> identifies the water quantity and quality requirements for control of stormwater runoff in new developments and redevelopments. Code Sections <u>13.36</u> and <u>13.38</u> cover illicit discharge and construction site erosion and sediment control requirements for new development and redevelopment respectively.

Resources for meeting requirements can be found in the remaining sections of this manual.

1.2 Applicability

Stormwater management and water quality practices apply to all new land development and redevelopment projects that will create 5,000 square feet or more of impervious surface area, regardless of pre-existing impervious area.

In addition to water quality practices, all areas within the city limits are required to provide stormwater detention to reduce the potential for flood damage to areas downstream. According to Section 13.34.210 this includes: all residential development of two acres or more, all commercial and industrial developments, redevelopments, or part of a larger common plan of development that cumulatively creates 5,000 square feet or more of impervious area located within the Davenport city limits. In addition, Section 13.34.140 includes: any development which, in the opinion of the city engineer, lacks an adequate external or internal system for the passage of stormwater.

Still other stormwater management and water quality practices may be constructed by property owners on a voluntary basis, recognizing the need to reduce run-off and stabilize streambanks.

1.3 Best Management Practice (BMP) Funding Opportunities

The City of Davenport currently has two cost share programs in place to promote installation of stormwater practices and reduce run-off.

- 50/50 Streambank Stabilization Cost Share Program
- <u>50/50 Stormwater BMP Cost Share Program</u>
 - New development and redevelopment may qualify for a 50/50 cost share on practices that exceed the stormwater management requirements identified in City ordinance.
- Clean Water Fee Credits. Installed practices, stormwater housekeeping and education all qualify for credit from the Clean Water Fee. <u>See the Credit Manual for details.</u>

Some projects may also qualify for cost share with the Scott County Soil and Water Conservation District. Use this link for details.

1.4 Native Roots Program

Native plants are valuable in preventing stormwater run-off and pollution and are a great way to achieve a sustainable landscape. Our Native Roots Program is designed to recognize private-property owners who have incorporated native plant material into their lawn and landscape.

Property owners who register their lawns in the program receive lawn signage to celebrate their urban conservation efforts and educate the community on urban conservation practices that help prevent stormwater pollution and provide habitat.

It is important to use this program to register a property planted with native plant species to prevent enforcement under property maintenance code $\underline{8.14.050}$ as it relates to landscaping maintenance, acceptable turf heights, et al.

Use to this link find out more and to get started.

1.5 Duck Creek Wild Auxiliary Club

Duck Creek Wild is an auxiliary club administered by the City of Davenport's Public Works Department, Natural Resources Division. The program is dedicated to supporting education and enhancement of Duck Creek's riparian areas within Davenport city limits by encouraging and providing involvement opportunities to interested community members.

The primary objective of Duck Creek Wild includes the eradication of invasive and non-native plant species followed by reintroduction of native plant species. Secondary objectives include educational meetings, grant writing, scientific research, and group discussion.

Find out more at www.davenportiowa.com/dcwild.

1.6 Private Streambank Management

To help maintain healthy waterways it is recommended that stream buffers are maintained on public and private property, whether or not they contain a dedicated drainage easement. Recommended buffer widths are fifty (50) feet on either side of the stream for residential, commercial and industrial areas. For properties without a dedicated drainage easement this is not required, however any no-mow stream buffer area will help keep soils in place, protect property and contribute to overall stream health.

City Code Chapter 13.34.070, easements, discusses buffer requirements in easement areas. A 50/50 Cost Share Program exists to support repair of degraded streambanks. See Section 1.3 for details.

2.0 POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

Applicant Site Evaluation	Develop Plan to Manage Run-off in Accordance with City and all other applicable codes	Schedule Concept Meeting with City Staff Recommended - but Optional	Develop Post- Construction Stormwater Management Plan	Draft Stormwater Management Maintenance Agreement	Draft Erosion and Sediment Control Plan (COSESCO)	Submit Completed Post- Construction Stormwater Management Plan Application
Section 3	Section 3	Section 2	Section 2	Section 2	Section 2	Section 2



2.1 Stormwater Management Plan Submittal | Requirements

Approval of a Post-Construction Stormwater Management Plan will require the submittal of an approved Post-Construction Stormwater Management Plan Application and an approved draft Maintenance and Repair Agreement (later signed, notarized, and returned to the City for recording in property records). The elements that make up these plans are detailed in the following sections.

Post-Construction Stormwater Management Plans shall be prepared by or under the supervision of a professional engineer licensed in the state of Iowa, a Certified Stormwater Manager (CSM), a Certified Professional in Storm Water Quality (CPSWQ) or other professional certification approved by the City of Davenport, Public Works, Natural Resources Division. The responsible professional shall be listed as the designer on the application, and will be required to provide a seal on the Stormwater Management Plan sheets and calculations.

2.2 Post-Construction Stormwater Management Plan Application | Submission

The Post-Construction Stormwater Management Plan Application provides city staff with critical information about proposed development and documents responsibility for the site and an understanding of site conditions that will affect post construction stormwater management.

Applicants or designers are strongly encouraged to schedule a concept plan meeting with Natural Resources staff prior to plan submission in order to facilitate mutual understanding of the plan. Schedule a meeting by calling 563.326.7923 or e-mailing dpwnr@davenportiowa.com.

Applications may be modified during the review process.

A Post-Construction Stormwater Management Plan is required anytime a Construction Site Erosion and Sediment Control (COSECO) application for grading is submitted, or a Building Permit Application for any development or redevelopment that will create 5,000 square feet or more of impervious area is submitted, regardless of pre-existing impervious area.

In addition, a Maintenance and Repair Agreement is required for all projects requiring a Post-Construction Stormwater Management Plan.

The Post-Construction Stormwater Management Plan Application can be found on-line at this link.

Submissions should be made on-line, along with other required submissions at <u>www.davenportiowa.com/eplan</u>.

The Construction Site Erosion and Sediment Control (COSESCO) Application can be found at this <u>link</u>. A template for residential projects requiring a Storm Water Pollution Prevention Plan can be found at this <u>link</u>.

2.3 Stormwater Maintenance and Repair Agreement

A Stormwater Maintenance and Repair Agreement is required for all projects requiring a Post-Construction Stormwater Management Plan. Once approved and prior to permit issuance, the document will need to be executed. The City will record the document with the property deed records through the Scott County Recorder's office.

The agreement documents responsibility for repair and maintenance of stormwater management practice(s) installed.

Use the template for the Maintenance and Repair Agreement found at this link.

The agreement must have prior approval, along with approved project plans prior to issuing any permits. It is necessary to have the Owner and the City signature prior to project commencement. It is not necessary to have the document recorded prior to project commencement. The City will file the signed and executed copy of the agreement with the Scott County Recorder's Office and mail a copy to the party identified in the agreement. The recording and mailing process will take several weeks, however, will not permits from being issued, or construction and inspection to occur.

3.0 DEVELOPING A POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN



3.1 Applicant Site Evaluation

Before a post-construction stormwater management plan can be developed, a site assessment must be performed. Information obtained during the site assessment enables the applicant and their consultant to assess site conditions that will contribute to an effective post-construction stormwater management plan. A complete site evaluation shall include consideration of limitation and advantages of each individual site. This process will enable the selection, sizing and location of stormwater practices that address the unique circumstances of a site.

Required fields in Davenport's Post-Construction Stormwater Management Plan Application provides guidance for conducting the site assessment. Consult Chapter 2, Section 2A-2 of the Iowa Stormwater Management Manual for guidance on the plan and design of the stormwater management plan.

- Post-Construction Stormwater Management Plan Application
- Iowa Stormwater Management Manual

→ Highlighted Data Collection Points

We have highlighted the following land characteristics due to the significant role they play in developing an effective Post-Construction Stormwater Management Plan.

Natural Resources: The development site's natural resources, including vegetation, soils, and geology, and aquatic resources need to be determined to assist in plan development and is part of the permit application. Important data includes wetlands, riparian corridors, native prairie and/or woodland. Natural resources should be assessed by trained professionals.

Site Topography: Topography dictates how and where water will drain from a site. On steeper sites, stormwater will run off more rapidly, with less infiltration and greater volume. Stormwater management requirements are substantially different than for more gently rolling or flat sites.

Soils: Soil information is important for development of the stormwater management plan, and for optimal planning of the new project. Soil depth, texture (sand, silt, and clay content), pH, organic matter content and structure are important factors that will provide understanding of infiltration capacity (permeability), ability to support vegetation, and erodibility. Engineering qualities and limitations of the soil are important for determining where structures can be placed, how stormwater runoff can be managed, and possible limitations for underground utilities. If hydric soils are present, it is important to understand limitations of building in these areas. Much of the information can be obtained from a USDA County Soil Survey if soils have not been disturbed, but an on-site soil assessment is recommended.

Topsoil: In addition to understanding the on-site soil characteristics, topsoil shall be kept on site per the National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 (GP#2). Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed (roadway, building footprint, etc.).

Aquatic Resources: The identification of streams, ponds, and lakes as receiving waters and the elevation of the water table as an integral part of the stormwater management plan is critical. Understanding the function of these water bodies, their current condition, and potential impacts from proposed development may influence your choice of stormwater management practices. The identification of these resources may also be necessary to comply with local, State and Federal regulations.

3.2 Stormwater Management Practice Selection Guidance

Many options are currently available to manage stormwater on a development rather than piping or allowing it to flow untreated to the nearest receiving stream. The City of Davenport encourages the use of Low-Impact Development (LID) techniques wherever possible. LID practices use strategies to integrate greenspace, native plants, natural waterways and wet areas, as well as other methods to reduce the amount of runoff from developed land. LID has been proven to be highly effective at controlling stormwater pollution and protecting waterways in both undeveloped and redeveloping landscapes. The photos, right, compare a traditional subdivision with a conservation subdivision featuring low-impact development. The same numbers of lots are present in both configurations.

Chapter 2, Sections 2-D through 2-K of the Iowa Stormwater Management Manual provide information about most management practices used for control and treatment of stormwater, including minimum control requirements, and other design criteria for Page 7 of 17



Traditional Subdivision Plat, *Source:* Hill Country Alliance



Low-Impact Development Plat

stormwater quality. Allowable practices are not limited to what is included in the Iowa Stormwater Management Manual and can be selected from other acceptable design manuals, per approval of the Public Works Director, or their Designee.

The stormwater management practices listed in the Iowa Stormwater Management Manual emulate natural systems by integrating a variety of dispersed treatments at multiple scales, from backyard rain gardens to development-sized bio-retention basins. These treatments can be designed into new developments or retrofit into existing community open spaces, parks, road rights-of-way, side and rear yard areas of homes and commercial buildings, rooftops of structurally adequate buildings, below parking lots and in many other settings. All aspects of stormwater management can be integrated to contribute to positive community aesthetics and economics.

Typical stormwater management practices include:

- Infiltration (rain gardens, bio-retention cells, swales, soil quality restoration)
- Water Quality Detention (24 40 hour drawdown with fore bays)
- Wet Ponds
- Green Roof
- Pervious Pavement/Permeable Pavers
- Hydrodynamic Separators
- Subsurface Storage
- Inlet Filters

The Iowa Stormwater Management Manual can be found at <u>https://www.iowadnr.gov/Environmental-</u> Protection/Water-Quality/NPDES-Storm-Water/Storm-Water-Manual.

3.2.1 Other Guidance | Landscaping and Vegetation for Stormwater Best Management Practices. This section should be used as guidance for design and installation of plantings as part of landscape-based treatment controls in Davenport, Iowa. Site-specific climate and soil conditions must be determined prior to final plant selection and control installation.

Landscaping plans and/or hydro seeding specification shall be provided for water quality systems using landscaped-based treatment controls such as cells or buffer strips. Landscaping plans shall be provided for water quality systems and shall include species lists, plant sizes (*e.g.*, seed, plug, 1gallon container, etc.), planting layout, planting techniques, plant spacing, soil amendments, and hydro seed specifications.

Landscaping required by Title 17 Zoning in the City Code can be fulfilled though stormwater management vegetation if the vegetation areas required in Chapter 13 and Chapter 17 overlap. If weather conditions prevent final vegetation establishment for either Chapter, a landscaping bond for stormwater management and other vegetation systems can be submitted. This form can be found <u>here</u>. Landscaping will be required to be installed no later than the end of the next SUDAS or DOT seeding dates.

Native Landscape Resources

Native Plant Species Recommendations for Davenport, IA

- <u>Tallgrass Prairie Center</u>, and the <u>Tallgrass Prairie Center IRVM Technical Manual</u>
- <u>Iowa Living Roadway Trust Fund</u>
- Iowa Natural Heritage Foundation
- Iowa Prairie Network
- Iowa Stormwater Management Manual | Chapter 5

Invasive Plant Species Prohibited. To protect natural wetlands, stormwater management practices and agricultural areas, the use of invasive or undesirable species is specifically prohibited.

- Davenport List of Commonly Found Invasive and Noxious Weeds
- ISU Iowa's Noxious Weeds
- ISU Iowa Noxious Weeds and the Iowa Weed Law

3.2.2 **Other Guidance | Soil Management Plan.** As paraphrased from Section

13.34.320 of the Davenport Municipal Code, all areas subject to clearing and grading that are not covered by impervious surface, a stormwater management practice or engineered as a fill or slope shall, at project completion, shall replace the amount of topsoil present at the pre-developed condition, as noted on the civil construction plans or final plat. Pre-project topsoil verification methods are listed below and must be included in the soil management plan:

- Site map depicting the entire site showing the locations of all proposed impervious surfaces, open spaces, stormwater management practices and stockpile locations*.
- For areas not to be covered with impervious surfaces or stormwater practices indicate the type of soil management practice that will be utilized in each location.
- For areas to be left undisturbed indicate the type of protection measures to be used to preserve the areas.
- Topsoil volumes to remain on site will need to be calculated, based on the GP#2 regulations, to ensure the required volumes are available for re-spread on the entire development prior to final stabilization.
- Borehole locations and associated topsoil information including topsoil depth and soil characteristics. To ensure compliance with the GP#2, soil boring or probe information shall be provided at a rate of one per acre of development, at sufficient depth to illustrate the full topsoil depth at that location. For developments smaller than one acre, a minimum of two soil borings shall be conducted at sufficient depth to illustrate the full topsoil depth at those locations. Soil borings will also be required where infiltration practices are proposed. Borings shall be a minimum of 5' below the bottom elevation of the practice.
- For areas where soil quality restoration will be implemented to meet water quality management goals, include the application and incorporation techniques to be used, following the Iowa Storm Water Management guidelines.
- Or, the Storm Water Pollution Prevention Plan (SWPPP) that addresses soil quality and erosion management.
- If infiltration-based practices will be used, describe supporting information or tests

used to project subsoil infiltration rates (if applicable). Provide infiltration and percolation test rates or hydraulic conductivities of surface and subsurface soils.

• Permeability test data derived from borehole samples are required. Provide infiltration test data from either perc test (i.e. septic field test), borehole permeability testing, or bore sample laboratory permeability testing. One sample to be provided for each area of practice, sample must represent soils within five (5) feet of bottom of final elevation of practice. Recharge Volume is considered to be an infiltration-based practice, along with other optional practices for water quality.

*Areas where soil has been stockpiled must be scarified and amended as necessary once the stockpile has been removed unless the area will be covered by impervious material.

After the installation of soil quality restoration or soil replacement, contractors must use care to avoid compacting restored areas. If areas become compacted, re-tilling will be necessary. Suitable ground cover or other erosion control methods should be placed as soon as possible after completion of the soil quality restoration to prevent erosion of the newly amended soils.

An affidavit will be available for developers and builders to submit prior to final stabilization certifying that the topsoil design depth reserved for the lot(s) and placed on the lot(s) meets the GP#2 regulations. City staff reserve the right to verify topsoil volumes and depths prior to any permit final, certificate of occupancy or subdivision acceptance.

The topsoil affidavit for developers and individual homebuilders can be found at the links below.

- Developers Topsoil Affidavit
- Residential and Commercial Topsoil Affidavit

Section 5 of the Iowa Stormwater Management Manual is a good resource for information on soil management.

3.3 Fee-In-Lieu Waiver

The Fee-In-Lieu Waiver exists to achieve water quality treatment off-site when on-site stormwater management practices cannot be installed due to geography, building density or other factors beyond developer control.

To request a Fee-In-Lieu Waiver, property owners and developers who are faced with these constraints outside of Downtown Davenport must submit a request to Natural Resources that includes a cost estimate of a practice that would fulfill ordinance required on-site water quality treatment. City staff will verify constraints and cost estimate provided, and an agreed upon cost estimate, plus a 20% administrative fee and the costs associated with three-year maintenance of practice identified. Payment of the fee waives Stormwater practice installation on the property being developed. Funds are used to install a stormwater management practice elsewhere in the City.

To request a Fee-in-Lieu Waiver in Downtown Davenport, submit request for Fee-In-Lieu Waiver to Page 10 of 17

Natural Resources along with a copy of site plans and details regarding constraints such as building density and proximity to high water tables. Staff will verify constraints and determine the Fee-In-Lieu of installing a Stormwater practice on-site. Payment of the fee waives Stormwater practice installation on the property being developed.

Find the Fee-In-Lieu Waiver Application at this link.

3.4 Stormwater Management Practice Calculations

Chapter 2, Section 2B-1 of the Iowa Stormwater Management Manual provides unified sizing criteria which can be used to determine the appropriate size of a practice necessary to achieve a selected stormwater detention or water quality goal for the site.

For projects which discharge into the municipal separate storm sewer system (MS4), designers must verify that the system has appropriate capacity and follow the "No Adverse Impact" approach. Documentation to support the final design volume and structural components shall be included with the <u>Stormwater Management Report (Plan) application</u>.

The required stormwater management calculations template can be found at this link.

The City Engineer has the right to be more restrictive if there are known downstream stormwater issues per City Code 13.34.210 (B).

3.5 Water Quality Volume

The water quality volume (WQv) is the volume that will be required to be treated on-site and is explained in Chapter 2 of the Iowa Stormwater Management Manual.

3.6 Detention Volume

The detention volume is that as described in Sections 13.34.220 and 13.34.230 of the <u>Davenport</u> <u>Municipal Code</u>.

4.0 STORMWATER MANAGEMENT PRACTICE INSPECTION, CERTIFICATION, AND APPROVAL



4.1 Inspection

Inspection of the stormwater management practices during installation is critical to ensure that they function as designed once completed. Receipt of a permit allows city inspectors the right to enter the property for the purpose of inspections of construction activities. Section 13.34.080 A of the <u>Davenport</u> <u>Municipal Code</u> refers to construction inspections.

4.2 Certification | Approval

Upon construction completion, all stormwater management practices that are part of the Final Post-Construction Stormwater Management Plan shall be certified by a professional engineer licensed in the Page 11 of 17

state of Iowa, or other professional approved by the City of Davenport Public Works Director, or their designee.

For certification, the professional approving the completion shall submit the following documents to the City of Davenport, Public Works, Natural Resources Division.

- 4.2.1 "As-built" drawings of the practice(s) completed per section 13.34.080 of the of the Davenport Municipal Code
- 4.2.2 Stormwater Management Practice Certification. The certification document can be found at this link. This document also provides space for indicating the inspector and inspection report holder as part of the annual monitoring requirements for the stormwater management practice.
- 4.2.3 Notice of Termination of the COSESCO Permit. Link to Permit.

5.0 MAINTENANCE



This section explains the requirements to inspect and maintain stormwater management systems that are constructed to comply with Section 13.34 of the Davenport Municipal Code. Maintenance is essential for ensuring that stormwater management systems continue to function effectively, and that the systems do not become a nuisance.

5.1 Stormwater Management Practice Maintenance Requirements

The requirements for Stormwater Management Practice Maintenance can be found in Section 13.34.065 of the Davenport Municipal Code.

5.2 Responsibility for Maintenance

The responsibility for inspection and maintenance of stormwater management systems is the ultimate responsibility of the owner of the property on which such systems have been constructed, unless other specific arrangements have been made.

It is preferred that inspections of all stormwater management systems and best management practices (BMPs), as detailed in the approved Maintenance and Repair Agreement, be conducted by a professional qualified in stormwater BMP function and maintenance as determined by acceptable credentials or documented experience submitted to the Public Works Director, or their designee. Proof of inspections should be maintained for a period of up to twenty-five years or the life of the practice. Upon request, documentation of inspection(s) shall be provided to the Public Works Director, or their designee.

The City of Davenport may conduct operation and maintenance verification inspections to ensure that stormwater management systems are being maintained.

5.2.1 Responsibility for Maintenance | Property Transfer

In the event of property transfer, the original owner or applicant shall have primary responsibility

for carrying out the provisions of the maintenance agreement until the transference of all property, sites, or lots served by the structural practice(s).

The requirements for property transfer and reassignment of maintenance is provided below. The Maintenance and Repair Agreement recorded with the deed is the responsibility of the current property owner.

Property Transfer and Maintenance Requirements						
Conditions, Covenants and Restrictions (CC&Rs)	Sales or Lease Agreement	Transfer to City of Davenport				
For properties on which the BMPs are located within a common area that will be maintained by an association, language regarding the responsibility for maintenance must be included in the project's CC&Rs or included on the plat. The property owner or developer shall be required to include printed educational materials with the first deed transfer to highlight the existence of the requirement and to provide information on what stormwater management facilities are present, evidence that maintenance is needed, how the necessary maintenance can be performed, and assistance that the owner or developer can provide. The transfer of this information shall also be required with any subsequent sale of the property.	Consists of written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance and conduct a maintenance inspection as described in the approved and recorded Maintenance and Repair Agreement.	If the City of Davenport accepts responsibility for maintenance of a stormwater management practice(s), a written statement from the Public Works Director, or their designee, assuming responsibility for stormwater management system maintenance will be provided and the Maintenance and Repair Agreement updated and filed with the Scott County Recorder's office. Refer to Section 5.5.				

5.3 Mechanisms to Ensure Maintenance

The Maintenance and Repair Agreement filed during the pre-construction phases along with as-built plans provided to the City of Davenport are the primary mechanism for ensuring maintenance of installed stormwater management practices. In no case shall construction proceed or a certificate of occupancy be issued for projects that do not have a recorded Maintenance and Repair Agreement.

Refer to 5.2 for maintenance responsibility and information on property transfers.

To ensure on-going maintenance, property owner(s) assigned maintenance are required to submit an updated "As-built" survey to Public Works, Natural Resources Division every five years to verify stormwater management systems are functioning as designed and "as-built".

In those instances a property(s) "as-built" survey is not received. Public Works, Natural Resources will reach out to the property owner(s) assigned maintenance. If within sixty days after notification an "as-built" survey is not received, Public Works, Natural Resources staff will cause an inspection to be conducted.

The inspection will be conducted, when possible, in the presence of the property owner or the property owner's representative with sufficient authority to implement any needed changes to the stormwater practice.

- If, upon inspection, it is determined that no significant changes have occurred to the stormwater practice and the system functions as originally designed, the Natural Resources Division will issue a waiver to the property owner for the survey period.
- If, upon inspection, it is determined that actions are needed to bring the stormwater practice(s) into compliance with the most recent as-built survey, such actions shall be completed within the time given by the Natural Resources Division. If such actions are not completed as directed, the owner shall be considered in violation of section 13.34.090 of the Davenport Municipal Code and may be subject to enforcement actions.

5.4 Past Due | Five-Year "As-Built" Surveys.

In those instances a property(s) "as-built" survey is not received. Public Works, Natural Resources will reach out to the individual(s) assigned maintenance. It is the responsibility of assigned individuals to schedule the maintenance. If within sixty days after notification an "as-built" survey is not received, Public Works Natural Resources staff will cause an inspection to be conducted.

The inspection will be conducted, when possible, in the presence of the property owner or the property owner's representative with sufficient authority to implement any needed changes to the stormwater practice.

If, upon inspection, it is determined that no significant changes have occurred to the stormwater practice and the system functions as originally designed, the Natural Resources Division will issue a waiver to the property owner for the survey period. The <u>form for waiving the "as-built" survey</u> can be found at this link.

If, upon inspection, it is determined that actions are needed to bring the stormwater practice(s) into compliance with the most recent as-built survey, such actions shall be completed within the time given by the Natural Resources Division. If such actions are not completed as directed, the owner shall be considered in violation of section 13.34.090 of the Davenport Municipal Code and may be subject to enforcement actions.

5.5 Transfer of Stormwater Management System Maintenance to the City of Davenport

At their discretion, the Public Works Director or their designee, may accept maintenance responsibility of stormwater management practice(s) that are installed following a warranty period of three (3) years from the date of as-built certification for the stormwater management system.

The following conditions must be met if transfer of maintenance responsibilities is agreed to:

- Documentation that the stormwater management system has been satisfactorily maintained for the three (3) year warranty period following, at minimum, as-built certification.
- Documentation that demonstrates the stormwater management system meets all of the requirements of Section 13.34 of the Davenport Municipal Code and the requirements of the Davenport Stormwater Manual. This can be demonstrated by having an "as-built" survey performed. Such inspection shall be at the expense of the property owner.

- The City of Davenport is granted adequate and perpetual access and sufficient area, by easement or otherwise, for inspection, maintenance, repair or reconstruction.
- Ownership of the parcel upon which the stormwater management system is located is transferred to the City of Davenport. If the property is owned by an association, a majority of the members must agree to transfer ownership of the parcel containing the stormwater system to the City. In consideration of the transfer of property to the City of Davenport for the purpose of stormwater management, the Owner shall cover costs associated with title survey, transfer and recording.
- No major structural repairs must need to be completed to make the system functional at the time of transfer unless; the current ownership will assist in payment for major structural repairs necessary to keep the system in operating condition.

To request a transfer of maintenance, submit a completed Transfer of Maintenance Application <u>found at</u> <u>this link</u>.

6.0 Other Land Disturbing Activities

Other activities that disturb more than one acre of land require certain stormwater run-off management activities. These requirements are in place, in accordance with the Clean Water Act and the EPA National Pollutant Discharge Elimination System, to reduce water pollution and to ensure no adverse impact to downstream properties and waterways.

6.1 Demolition

A Demolition Permit Application is required for all land disturbing activities related to demolition of a building. Requirements for erosion control are identified in City Code Chapter <u>13.38.040</u>.

Find the Demolition Permit Application at this link.

6.2 Fill

A fill permit application is required anytime fill will be placed. Additional requirements and controls may be necessary based on the land to be disturbed.

Find the Fill Permit Application at this link.

If fill will be placed in the floodplain, a Floodplain Development Permit Application is required. The application can be found <u>at this link</u>.

Other plans and applications may include a COSESCO Permit Application, Erosion Control Plan, Storm Water Pollution Prevention Plan (SWPPP), Site Plan detailing Stormwater pollution prevention controls, and a NPDES Permit from the Iowa DNR may apply.

7.0 Resource Links

Quick Link to Plan Submissions

www.davenportiowa.com/eplan

Quick Link to Construction Applications and Forms www.davenportiowa.com/constructionapps

Quick Link to Stormwater Program Links

BMP Cost Share | www.davenportiowa.com/5050bmpNative Plant Registration | www.davenportiowa.com/nativerootsStreambank Stabilization Cost Share | www.davenportiowa.com/5050streamDuck Creek Wild Auxiliary Club | www.davenportiowa.com/dcwild

All Forms and Resources

As-Built Survey Waiver https://www.davenportiowa.com/common/pages/GetFile.ashx?key=19w6ARIi

Construction Site Erosion Control Application https://www.davenportiowa.com/common/pages/DisplayFile.aspx?itemId=10835979

Construction Site Erosion Control Application | Demolition https://www.davenportiowa.com/common/pages/DisplayFile.aspx?itemId=10835981

Construction Site Erosion Control Application | Fill https://www.davenportiowa.com/common/pages/DisplayFile.aspx?itemId=10835977

Construction Site Erosion Control Storm Water Pollution Prevention Plan Template for Residential Projects <u>https://www.davenportiowa.com/common/pages/GetFile.ashx?key=1dw6ARAi</u>

Davenport City Code https://ecode360.com/DA4058

Davenport Stormwater Utility Credits Manual https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17710117

Davenport/Scott County – List of Commonly Found Invasive and Noxious Weeds https://www.davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17569224

Iowa DNR NPDES Permit Applications https://www.iowadnr.gov/environmental-protection/water-quality/npdes-storm-water

Iowa Living Roadway Trust Fund http://www.iowalivingroadway.com/

Iowa Natural Heritage Foundation <u>http://www.inhf.org/</u>

Iowa Prairie Network http://www.iowaprairienetwork.org/

Iowa Stormwater Management Manual https://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Storm-Water/Storm-Water-Manual

ISU – Iowa's Noxious Weeds http://www.weeds.iastate.edu/reference/noxiousimages.shtml

ISU – Iowa Noxious Weeds and the Iowa Weed Law http://www.weeds.iastate.edu/reference/weedlaw.htm

Landscape Delay Bond https://www.davenportiowa.com/common/pages/GetFile.ashx?key=hnErAVKP

Native Plant Species Recommendations for Davenport, IA <u>https://www.davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17569226</u>

Notice of Termination of the COSESCO Permit <u>https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=10835983</u>

Post Construction Stormwater Management Plan https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17778342

Stormwater Management Report (Plan) Template https://www.davenportiowa.com/common/pages/GetFile.ashx?key=%2b3ArAS%2bO

Stormwater Management Maintenance and Repair Agreement https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17711092

Stormwater Management Practice Certification Document https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17710259

Stormwater Management Practice Fee-in-Lieu Application https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17778258

Tallgrass Prairie Center http://www.tallgrassprairiecenter.org/

Tallgrass Prairie Center IRVM Technical Manual https://tallgrassprairiecenter.org/sites/default/files/irvm-technical-manual-2015-2_0_0.pdf

Topsoil Affidavit – Developers https://www.davenportiowa.com/common/pages/GetFile.ashx?key=zZQ5AQtg

Topsoil Affidavit – Residential and Commercial https://www.davenportiowa.com/common/pages/GetFile.ashx?key=z5Q5AQlq

Transfer of Maintenance Application for Stormwater Management Practices https://davenportiowa.com/common/pages/DisplayFile.aspx?itemId=17778250