CALL TO ORDER: 6:00 p.m.

1. Resolution approving 2018 Ames Annual Outdoor Sculpture Exhibition selections
2. Resolution awarding a contract to Brimhall Industrial, Inc., Monte Vista, CO, for Unit 8 Feedwater Pump Inspection and Repair in the amount of $61,590 plus applicable sales taxes to be paid directly by the City of Ames to the state of Iowa
3. Second passage of Ordinance vacation of Apple Place and Peach Lane rights-of-way
4. Workshop on Post-Construction Stormwater Management Ordinance (Chapter 5B)

DISPOSITION OF COMMUNICATIONS TO COUNCIL:

COUNCIL COMMENTS:

ADJOURNMENT:
AMES ANNUAL OUTDOOR SCULPTURE EXHIBITION

April 17, 2018

The City’s Public Art Commission, established in 1990, is committed to the creation of a visual and aesthetic environment that integrates art into the lives of Ames Citizens. The Ames Annual Outdoor Sculpture Exhibition (AAOSE), the longest running program for the Public Arts Commission, will continue with its 22nd annual downtown exhibition in 2018. A related program is the Neighborhood Sculpture Program, which permanently selects and places sculptures from the Annual Outdoor Sculpture Exhibition in and around Ames at no cost to applying neighborhoods.

The 2018/19 Ames Annual Outdoor Sculpture Exhibition (AAOSE)

This year 46 entries were submitted by 20 artists from 7 states. The entries were evaluated by a jury of Ames residents, composed of a mixture of artists and business owners in Ames. The jury previewed entry materials, met, and then made their recommendation. The jurors selected eight sculptures as their top choices to be displayed in the Main Street Cultural District over the upcoming year. Their recommendations were then reviewed by the City’s Risk Manager to ensure these sculptures can be safely displayed.

Attached are photographs and descriptions of the sculptures recommended for the 2018-19 Ames Annual Outdoor Sculpture Exhibition. These include sculptures originally recommended as alternates, but which have replaced other selections that were sold or eliminated for safety reasons. Rotation and installation of the exhibit will take place during early May, after consultation with businesses and organizations near the likely sites and further risk analysis by City staff. Each artist will be paid a $1,000 honorarium, and a Best-in-Show award will be made to a winner determined by the public at a fall, city-wide arts event.

Funding for the coming year’s AAOSE exhibition was included in the City Council’s adopted 2017/18 Budget.
Time Passes by David Zahn
Bronze and Corten Steel
85”x30”x14”
350 lbs.
2016
$18,500

Parent and Child by Albert Rhea
Stainless Steel
103”x34”x49”
185 lbs.
2017
$9,000
Stairway to Nowhere? by Zach Bowman
Stainless Steel
60”x72”x24”
200 lbs.
2012
$1,900

Blue Heron with Sunfish by Judd Nelson
Hot forged Steel with Copper accents
48”x24”x24”
250 lbs.
2015
$7,200
Totem of Spring by Hilde Debruyne
Clay
72”x36”x24”
200 lbs.
2015
$7,000

Twisted Sister by Craig Snyder
Patinated Steel
96”x36x36
150 lbs.
2016
$6,000
Glow From Within by Tim Adams
Steel and Lexan
96"x60"x60"
800 lbs.
2018
$4,000
No Strings Attached by Paul Bobrowitz

Stainless Steel

174”x36”x25”

400 lbs.

2016

$22,000
COUNCIL ACTION FORM

SUBJECT: POWER PLANT UNIT NO. 8 FEEDWATER PUMP INSPECTION AND REPAIR

BACKGROUND:

Feedwater pumps are required for operation of the Power Plant, as they are the primary pumps used to pump water through the boiler for conversion to steam to drive the plant turbine. The work in this project includes furnishing all services, equipment, materials, labor, supervision and management necessary for a contractor to disassemble, document as-found conditions, repair or replace components, reassemble, document as-repaired conditions, and return the Unit #8 feedwater pump to the City.

Bid documents were issued to three companies. The bid was also advertised on the Current Bid Opportunities section of the Purchasing webpage and was sent out to three plan rooms.

On March 20, 2018, three bids were received as shown on the attached report.

<table>
<thead>
<tr>
<th>Bidder</th>
<th>Bid Price</th>
<th>Sales and/or Use Taxes Included</th>
<th>Evaluated Bid Price</th>
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<tr>
<td>Brimhall Industrial, Inc. Monte Vista, CO</td>
<td>$61,590.00</td>
<td>$4,311.30*</td>
<td>$65,901.30</td>
</tr>
<tr>
<td>Rotating Equipment Repair, Inc. Sussex, WI</td>
<td></td>
<td>Non-responsive</td>
<td></td>
</tr>
<tr>
<td>Superior Industrial Equipment Grimes, IA</td>
<td>$118,240.00</td>
<td>$6,291.00</td>
<td>$124,531.00</td>
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</tbody>
</table>

* Brimhall Industrial is not licensed to collect Iowa sales tax. The sales tax amount shown is what the City would pay directly to the state of Iowa. This ensures a fair evaluation of all bids.

Rotating Equipment Repair, Inc. – The bid submitted by Rotating Equipment Repair, Inc was determined to be non-responsive because, in their bid, they did not acknowledge the requirement of installing cartridge seals as described in the specification.

Staff reviewed the remaining two bids and concluded that the apparent low bid is acceptable. That bid was submitted by Brimhall Industrial, Inc., Monte Vista, CO in the amount of $61,590.00, plus applicable sales taxes (in the amount of $4,311.30) to be paid directly by the City to the State of Iowa.
The engineer’s estimate for this repair is $160,000. The approved FY 2017/18 operating budget for Unit #8 Auxiliary Equipment contains $165,000 which will be utilized to cover this repair.

ALTERNATIVES:

1. Award a contract to Brimhall Industrial, Inc., Monte Vista, CO, for the Unit 8 Feedwater Pump Inspection and Repair in the amount of $61,590.00, plus applicable sales taxes (in the amount of $4,311.30) to be paid directly by the City of Ames to the State of Iowa.

2. Award the contract to a different bidder.

3. Reject all bids, which will delay this repair.

CITY MANAGER’S RECOMMENDED ACTION:

This repair is crucial because boiler feed pump reliability is necessary for plant operation. The loss of a boiler feed pump would result in reduced unit capacity or unit shutdown for an extended period of time.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as stated above.
ITEM #4

Staff Report

REVIEW OF POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

April 17, 2018

BACKGROUND:

The City of Ames adopted Chapter 5B Post Construction Stormwater Management Ordinance on April 22, 2014. This Ordinance meets the requirements of the U.S Environmental Protection Agency’s National Pollutant Discharge Elimination System (NPDES) permit program as administered by the Iowa Department of Natural Resources (IDNR). The City of Ames was required to obtain an NPDES Permit for the discharge of stormwater from a Municipal Separate Storm Sewer System (MS4 Permit).

The ordinance requires that the site improvements be designed to control water quantity (flow rates) and to improve water quality from the stormwater runoff of applicable development properties within the City. It also encourages the use of low impact development to increase on-site infiltration, reduce pollutant loads in receiving waterways, and reduce stormwater runoff volumes from developed areas.

Since adoption of the ordinance, reduction in stormwater runoff volumes on re-developments, new developments, and the City Hall Parking Lot project have been achieved through either detention basins or underground storage. Water quality improvements have been achieved primarily through wet detention basins, soil quality restoration, native landscaping, or underground mechanical units.

The ordinance applies to the following properties and/or development sites:

- Any new development or redevelopment disturbing more than one acre of land.
- Any new development of redevelopment creating more than 10,000 SF of impervious cover.

The following are exempt from the ordinance:

- Any agricultural activity.
- Additions or modifications to an existing single-family property.
- Storm Water Management Design standards do not apply to any area within a 1,000’ distance from any City of Ames drinking water well located in the Southeast Well Field and Youth Complex Well Field. In these specific areas, developments will need to meet requirements for stormwater quality-based treatment or a combination of quantity and quality-based treatment as approved.
by both the Director of Public Works and the Director of Water Pollution Control.

- Partial waiver can be granted to allow the movement of stormwater management facilities to an off-site location with sufficient justification.

**STAFF COMMENTS:**

The ordinance has been in place for four years since its original adoption. Because this ordinance implemented new requirements and practices for developers to follow and new requirements for staff to administer, it was anticipated that this ordinance would be brought back to City Council for review. Therefore, the City Council previously directed the staff to schedule a workshop to review the City's Post Construction Stormwater Ordinance (5b) with area developers and engineers.

It is important to gain the input from those that must comply with the ordinance and also maintain the stormwater management and quality improvements that it in turn provides for the community. Invitations were sent by email and press release was distributed giving notice of the workshop.

**Attachments:**

- Post Construction Workshop Presentation Slides
- Chapter 5B Post Construction Stormwater Management Ordinance
- Table: Summary of Iowa Municipalities – Stormwater Management Ordinance Applicability and Exceptions
- Comparative Stormwater Management Thresholds
- Listing of Post Construction Sites developed since adoption of the ordinance
POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

CITY OF AMES HISTORY OF FLOODING

• 1965
• 1975
• 1990
• 1993
• 1996
• 2007
• 2008
• 2010
• 2016
**Ames Watersheds**

- **South Skunk River Watershed:**
  - Watershed covers parts of 13 counties
  - Drainage area of approximately 315 sq miles
  - 65% row crops
  - 30% wetlands/forest/grassland
  - 5% developed
  - Watershed has over 2,320 miles of streams

- **Squaw Creek Watershed:**
  - Watershed covers parts of 4 counties
  - Drainage area of approximately 204 sq miles
  - 83% row crops
  - 10% wetlands/forest/grassland
  - 7% developed
  - Squaw Creek terminates in Ames at S Skunk River

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**CITY OF AMES MUNICIPAL SEPARATE STORM SEWER (MS4) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

The determination of which cities and universities are required to obtain MS4 permits involves a combination of population, proximity to large, urbanized areas, and the water quality of receiving streams.
CITY OF AMES MUNICIPAL SEPARATE STORM SEWER (MS4) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

- Current 5-year MS4 Permit from Iowa DNR (April 2014 – March 2019)
  - Public Education and Outreach on Storm Water Impacts
  - Public Involvement and Participation
  - Illicit Discharge Detection and Elimination
  - Construction Site Storm Water Runoff Control
  - Post-Construction Storm Water Management
  - Pollution Prevention/Good Housekeeping

Conservation Subdivision Ordinance

- Response to proposed development in Ada Hayden Heritage Park watershed
- Low Impact Development need to protect Ada Hayden water quality
- Alternative to common residential subdivision development in Ames, however, shall apply to all residential subdivision development in the undeveloped areas of Ada Hayden Watershed north of Bloomington Road.
- City staff met several times with developers and development engineers to develop various components to make up Conservation Subdivision Ordinance
- Engineers created sample conservation layouts for potential developments
- Conservation Subdivision Ordinance adoption by Ames City Council in 2010
Conservation Subdivision Ordinance

- Required in the Ada Haden Watershed
- Preserve existing natural features of the site
- Preserve the natural drainage features and hydrologic characteristics of the landscape
- Reduce the impacts of development on the landscape
- Promote interconnected greenways

- Provide commonly-owned open space and conservation areas for passive and/or active recreational use by residents
- Conservation area shall be designated as a Conservation Easement
- Conservation areas and open space shall be distributed throughout the development and combined shall comprise at least twenty-five (25) percent of the total area of the subdivision

Conservation Subdivision Ordinance

- All residential units should be in cluster groups unless the site has been designed to preserve sensitive areas and maintain a stormwater treatment train
- Eighty percent (80%) of residential lots shall abut a conservation area or open space
- Within all conservation areas, separation between external roads and residential lots, a vegetated buffer area at least 25 feet in width shall be maintained or established

- A 50-foot native vegetative buffer shall be maintained around open water areas such as ponds and lakes
- Stream buffers with native vegetation shall be maintained along stream areas
- Minimize the use of storm sewer piping and maximize the use of swales
**Conservation Subdivision Ordinance**

- An accessible and interconnected shared use path system shall be developed to connect residential areas with open space/conservation areas.
- Mass grading of sites shall be minimized.
- Sidewalk only required on one side of street, however each lot has access to either sidewalk or shared use path.
- All new landscaping in conservation areas to be native vegetation.
- Trees of native species.
- Informal, irregular, or natural arrangement is required for newly planted trees to avoid the urban appearance.

**Conservation Subdivision Ordinance**

- Conservation Area Management Plan
- Financial security in a form acceptable to the city for the maintenance and operation costs of conservation areas for a two-year period of time at time of the Final Plat.
- Ownership Alternatives: Conservation Areas
  - Homeowners Association
  - Non/For-Profit Conservation Org
  - Other as approved by City Council.
Post-Construction Storm Water Management Ordinance

MS4 Permit requirement - Post-Construction Runoff Control Policy Ordinance - An ordinance shall be adopted or amended as needed and enforced which will address the control of runoff from building activities after construction has been completed. The ordinance shall require water quality and quantity components be considered in the design of new construction and implemented when practical. The statement shall promote the use of storm water detention and retention, grass swales, bioretention swales, riparian buffers and proper operation and maintenance of these facilities.

The ordinance shall be enforced by the Engineering and Planning Department for the duration of the permit. (2009-2014 MS4 Permit language)

Pre 2014: “The rainfall frequencies that shall be incorporated in the design of the stormwater management system shall include the 5 year, 10 year, 50 year, and 100 year design storm events.”

- Portions of the community older than 1980s - Collect in storm drains and discharge to stream: Doesn’t address water quality nor flood control.
- Subdivisions (in general) built 1980s to 2014: wet or dry ponds: Collect in storm drains discharge to ponds-throttle down discharge rate, minimal treatment, impact stream stability-flashy flows
Post-Construction Stormwater Management Ordinance

MS4 Permit requirement - An ordinance shall be amended as needed and enforced which will address the control of runoff from building activities after construction has been completed. The ordinance shall require water quality and quantity components be considered in the design of new construction and implemented when practical. The ordinance shall promote the use of storm water detention, retention, infiltration, other Best Management Practices specific to each site which address water quality and quantity issues and proper operation and maintenance of these facilities.

(2014-2019 MS4 Permit language)

Post-Construction Stormwater Management Ordinance

- Issues/Challenges being addressed
  - Reduce stream/river and localized flooding
  - Reduce home flooding (walk-outs, lowest entry)
  - Reduce stream/river erosion
  - Reduce alterations to hydrologic landscape
  - Protect and recharge local water resources (aquifer)
  - Improve water quality (nutrient and pollution reduction)
  - Protect and enhance natural resources
  - Excessive soil compaction resulting in increased runoff
Post Construction Stormwater Management Ordinance

- Historic Landscapes
  - Prairie soils had 8-10% organic matter content and 45% pore space
  - Now soils have < 4% OM
  - Even less organic matter on construction sites
  - Soils have lost 60-80% of their ability to absorb and infiltrate rainfall events

- Presentation to City Council – Decision Points

  - Red = Prairie
  - Blue = Agriculture
  - Green = Urban Single Family Residential

SMART WATERSHEDS

APPENDIX A: 2011 Ames Stream Assessment: Context Map

APPENDIX C2: 2011 Ames Stream Assessment: Squaw Creek Stream Bank Erosion

SMART WATERSHEDS

City Council Workshop April 17, 2018
Local goals of a Post-Construction Ordinance:

- Utilize a combination of best management practices (BMPs) (also known as a stormwater treatment train)
- Minimize increases in stormwater runoff,
- Minimize non-point source pollution, and
- Minimize mass grading

The LID approach to stormwater management
Post Construction Stormwater Management Ordinance

- Hydraulic alteration after traditional methods

- Build off of the Conservation Subdivision Ordinance
- Meetings with community, developers, and engineers/designers
- Considered comments received
- Presentation to City Council
  - Education about stormwater
  - Why a new ordinance
  - Decision points
Post Construction Stormwater Management Ordinance

- The ‘first flush’ of rainfall moves pollutant loads to surface waters
- Use practices that retain water from the small storms water on-site
- Strategies include:
  - Slow down,
  - infiltrate,
  - cleanse,
  - discharge

Rainfall Frequency at Ames, IA (1964-2004)

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<th>10.0%</th>
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Post Construction Stormwater Management Ordinance

- Unified Sizing Criteria
  - Water Quality Volume
    - 1.25” rainfall event
    - 90% Ames rain events
  - Channel Protection Volume
    - 1-year, 24 hour storm event
    - Reduce rapid fluctuation in urban streams
    - Leads to erosive velocities and unstable stream conditions
Post Construction Stormwater Management Ordinance

Unified Sizing Criteria (continued)

- Overbank Flood Protection
  - 5-year, 24 hour storm event
  - Reduces potential surcharge of local storm sewer system and/or overbank flooding

- Extreme Flood Protection
  - Volume and peak runoff control of major storms (10 year to 100 year events)
  - Reduces potential infrastructure damage from major flooding

Stormwater Quality Management

- Low Impact Development
- Bioretention Cells
- Bioswales
- Native Landscaping
- Permeable Paving
- Rain Gardens
- Soil Quality Restoration
### Post Construction Stormwater Management Ordinance

- **2014 Presentation to City Council – Decision Points**
  - Where would this apply?
    - New development and redevelopment if creating 10,000 sf of impervious cover
  - Manage water quality and quantity
    - Runoff Curve Number 58 (meadow with soils in good condition to mimic historic landscape)
  - Adoption of Iowa Stormwater Management Manual
    - Already being created and maintained through Iowa Dept. of Natural Resources
  - 14 of 26 MS4 community ordinances referenced

- **Lowest opening 3 feet above 100 year WSE**
- **Address local flooding issues/complaints**

- **Maintenance responsibility**
  - Routine and Long-Term responsibilities
  - Private (HOA) vs Public (City)
  - Regional detention for residential (long-term maintenance by City through easement)

- **Maintenance, Repair, and Landscaping Plan**
Post Construction Stormwater Management Ordinance

- 2014 Presentation to City Council – Decision Points
  - Topographic Base Watershed Map
  - Natural Resource Inventory
    - Inventory by a knowledgeable professional
  - Soil Management Plans
    - Technical assessment, including hydric soils
    - Information for successful placement of BMPs
    - General soils info free (website)
    - Soil borings for additional information (as needed)
  - 8 of 26 MS4 communities required

Post Construction Stormwater Management Ordinance

- 2014 Presentation to City Council – Decision Points
  - Stream buffers with native vegetation maintained or established along stream areas
Post Construction Stormwater Management Ordinance

- 2014 Presentation to City Council – Decision Points
  - Financial Security
    - Ensure correct construction of BMPs
    - Total estimated construction cost
    - Receive as-built plans
    - Final inspection/review
    - Release financial security
  - Performance Bond
    - Ensure BMPs maintained in effective state
    - Native vegetation establishment
    - 4 year period

- Waivers
  - Partial Waivers – granted by Municipal Engineer for redevelopment projects if proposed development does not impair objectives of ordinance
    - Alternative minimum requirements for on-site management
    - Provisions made to manage stormwater by an off-site facility

- Appeals
  - Heard by City Council
  - Made in writing and filed with City Clerk no later than 20 days
Post Construction Stormwater Management Ordinance

Chapter 12
Post Construction Stormwater Management

Post-Construction Storm Water

City of Ames

SMART WATERSHEDS

Natural Resource Checklist

Storm Water Summary Data Sheet

City of Ames
POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

SMART WATERSHEDS

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

SMART WATERSHEDS
POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

SMART WATERSHEDS

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

SMART WATERSHEDS
Post Construction Stormwater Management Ordinance

Challenges to date:
- Groundwater Source
  - Protection from reclassification
  - No open ground water detention
    - Within 1,000 ft of well
    - Fields at SE 16th & Youth Sports Complex
  - Super Wal-Mart
  - Bioretention Cell
    - Only Roof Run-Off

Post Construction Stormwater Management Ordinance

Challenges to date:
- As-built conditions
  - Volumes not consistent with design

- Financial Security/Performance Bond
  - Infrequent/New developers surprised

- Re-development
  - Most challenged to meet requirements
Post Construction Stormwater Management Ordinance

- Challenges to date:
  - Partial Waivers
    - Requests due to financial
    - Combination on-site and off-site
  - Geothermal Wells
    - Request/Approval to be in Conservation Easement area
  - Proprietary Units
    - Proof meet water quality improvements

Post Construction Stormwater Management Ordinance

- Challenges to date:
  - Soils information
    - Organic content
    - Infiltration rate – testing vs assuming
    - Accurate classification of soils (A, B, C, D)
      - Considering construction activity
  - Native Vegetation/Maintenance Plans
    - Time
    - Patience
    - Maintenance
    - Knowledge
AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY ENACTING A NEW CHAPTER 5B THEREOF, FOR THE PURPOSE OF POST CONSTRUCTION STORMWATER MANAGEMENT IN COMPLIANCE WITH BOTH FEDERAL AND STATE ENVIRONMENTAL LAWS; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amended by enacting a new Chapter 5B as follows:

"CHAPTER 5B
POST CONSTRUCTION STORMWATER MANAGEMENT

Sec 5B.1. GENERAL PROVISIONS

(1) The U.S. Environmental Protection Agency’s National Pollutant Discharge Elimination System (NPDES) permit program (Program) administered by the Iowa Department of Natural Resources (IDNR) requires that cities meeting certain demographic and environmental impact criteria obtain from the IDNR an NPDES permit for the discharge of stormwater from a Municipal Separate Storm Sewer System (MS4) (the MS4 Permit). The City of Ames (City) is subject to the Program and is required to obtain, and has obtained, an MS4 Permit. The City’s MS4 Permit is on file at the office of the City Clerk and is available for public inspection during regular office hours.

(2) As a condition of the City’s MS4 Permit, the City is obliged to develop, implement and enforce a program to address stormwater runoff from new construction and reconstruction projects for which stormwater permit coverage is required.

(3) No state or federal funds have been made available to assist the City with inspections, monitoring and/or enforcing the Program. Accordingly, the City shall fund its inspection, monitoring and enforcement responsibilities entirely by fees imposed on the owners of properties which are made subject to the Program by virtue of state and federal law, and/or other sources of funding established by a separate ordinance.

(4) Land development and associated increases in impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition if left uncontrolled; this uncontrolled stormwater runoff contributes to increased quantities of water-borne pollutants, and; stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from development sites.

(5) Therefore, City establishes this set of City stormwater standards applicable to all surface waters to provide reasonable guidance for the regulation of stormwater runoff for the purpose of protecting local water resources from degradation. It is determined that the regulation of stormwater runoff discharges from land development and other construction activities shall not result in increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and non-point source pollution associated with stormwater runoff, is in the public interest and will prevent threats to public health and safety.

(6) The Iowa Stormwater Management Manual published by the Iowa Department of Natural Resources and maintained by the Iowa Storm Water Education Program establishes guidelines consisting of unified sizing criteria (water quality volume, channel protection storage volume, overbank flood protection, extreme flood protection) stormwater management designs, specifications, and best management practices (BMPs). City hereby finds and declares that the guidelines provided in the Iowa Stormwater Management Manual, and in future editions thereof, along with any locally adopted modifications, are hereby adopted as the stormwater management standards of City. Any BMP installation that complies with the provisions of the Iowa Stormwater Management Manual, or future editions thereof, along with any locally adopted modifications, at the time of installation shall be deemed to have been installed in accordance with this ordinance.

(7) The purpose of this ordinance is to adopt as City’s standards the guidelines established in the Iowa Stormwater Management Manual (hereinafter collectively City’s stormwater requirements or standards) in order to protect and safeguard the general health, safety, and welfare of the public within this jurisdiction. This ordinance seeks to meet that purpose through the following objectives:

(a) Minimize increases in stormwater runoff from development within the city limits and within 2 mile limit where the City has exercised subdivision authority fringe area in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion in order to maintain the integrity of stream channels;
(b) Minimize mass grading of sites to preserve natural features and drainageways as well as protection of open space and impervious cover minimization;
(c) Minimize increases in non-point source pollution caused by stormwater runoff from development which would otherwise degrade local water quality;
(d) Distribute and minimize runoff by utilizing vegetated areas for stormwater treatment (e.g. parking lot islands, vegetated areas along property boundaries, front and rear yards, building landscaping. Encourage infiltration and soil storage of runoff through such practices as bioswales, soil quality improvement with compaction reduction and compost amendments, bioretention cells and rain gardens. Plant vegetation that does not require irrigation beyond natural rainfall and runoff from the site;
(e) Mitigate stormwater runoff rates and volumes, soil erosion and non-point source pollution, wherever possible, through establishment of appropriate minimum stormwater management standards and BMPs and to ensure that BMPs are properly maintained and pose no threat to public safety.

(8) This ordinance shall be applicable to all development and redevelopment applications meeting the minimum square foot applicability criteria of 5B.1.(8)(a), unless eligible for an exemption or granted a waiver by City under Section 5B.4 of this ordinance. The ordinance also applies to land disturbance activities that are smaller than the minimum square foot applicability criteria specified in 5B.1.(8)(a) if such activities are part of a larger common plan of development or redevelopment that meets the minimum square foot applicability criteria of 5B.1.(8)(a), even though multiple separate and distinct land development activities may take place at different times on different schedules.

(a) City stormwater requirements must be met for development or redevelopment to be approved. City stormwater requirements apply to any new development, redevelopment disturbing 1 acre or more of land, or to any development disturbing less than said acreage of land if the amount of impervious cover created exceeds 10,000 square feet. New development includes any new residential, commercial, or industrial subdivision or individual site improvement requiring a site development plan. The following activities are exempt from this ordinance:

(i) Any agricultural activity.
(ii) Additions or modifications to an existing single family property.
(iii) Storm Water Management Design standards do not apply to any area within a 1,000-foot distance from any City of Ames drinking water well located in the Southeast Well Field and Youth Sports Complex Well Field. In these specific areas, developments will need to meet requirements for storm water quality-based treatment or a combination of quantity- and quality-based treatment, as approved by both the Director of Public Works and the Director of Water and Pollution Control.

(9) Compatibility with Other Permit and Ordinance Requirements is as follows:

(a) It is intended that this ordinance be construed to be consistent with Municipal Code Chapter 5A Construction Site Erosion and Sediment Control, Chapter 23 Subdivisions, Chapter 28 Utilities, and Chapter 29 Zoning.

(b) The requirements of this ordinance should be considered minimum requirements, and where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher protective standards for human health or the environment shall be considered to take precedence.

Sec 5B.2. DEFINITIONS

(1) Terms related to stormwater management in this ordinance other than those defined below shall have the meanings set out in the Iowa Storm Water Management Manual.

"Applicant" means a property owner or agent of a property owner who has filed an application for a storm water management permit.

"Best Management Practice (BMP)" means a practice or series of practices used to manage stormwater and as further defined in the Iowa Storm Water Management Manual.

"Building" means any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 150 square feet of area.

"Channel Protection Storage Volume" means providing for practices that will allow for extended detention of the runoff generated by a 1-year, 24-hour event. This means capturing the runoff volume from a storm of this nature, and slowly releasing it over a period of no less than 24-hours to reduce the rapid "bounce" effect common in many urban streams that leads to downcutting and streambank erosion.

"City Stormwater Requirements" or "standards" mean the guidelines provided for in this ordinance and the Iowa Stormwater Management Manual.

"COESCO" means Construction Site Erosion and Sediment Control Ordinance permit issued by the City of Ames Public Works Department.

"Dedication" means the deliberate appropriation of property by its owner for general public use.

"Developer" means a person or entity that undertakes land development activities.
"Development" means land disturbance activity of one acre (43,560 square feet) or more on land previously vacant of buildings or largely free of previous land disturbance activity other than agriculture.

"Drainage Easement" means a legal right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

"Enforcement Officer" means that person or persons designated by the City having responsibility for administration and enforcement of this ordinance.

"Extreme Flood Protection" means managing the effects of larger storm events (10-year to 100-year recurrence intervals) on the stormwater management system, adjacent property, and downstream facilities and property. The impacts of these extreme events is accomplished using detention controls and/or floodplain management.

"Fee in Lieu" means a payment of money in place of achieving or exceeding all or part of City stormwater requirements.

"Impervious Surface" means surfaces (roads, sidewalks, driveways and parking lots) that are covered by impenetrable materials such as asphalt, concrete, brick, and stone, rooftops as well as soils compacted by urban development.

"Iowa Stormwater Management Manual (ISWMM)" means the manual collaboratively developed by the Iowa Department of Natural Resources (IDNR) and the Center for Transportation Research and Education (CTRE) at Iowa State University and updated by the Iowa Storm Water Education Program that contains the sizing criteria, design and specification guidelines and BMPs that address stormwater quality and quantity management.

"Land Disturbance Activity" means any grading, digging, cutting, scraping, or excavating of soil, placement of fill materials, paving, construction, substantial removal of vegetation, or any activity which bares soil or rock or involves the diversion or piping of any natural or man-made watercourse.

"Low Impact Development" means an approach to stormwater management that attempts to mimic pre-development conditions by compensating for losses of rainfall abstraction through infiltration, evapotranspiration, surface storage, and increased travel time to reduce excess runoff.

"Landowner" means the legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights to the land.

"Overbank Flood Protection" means providing on-site stormwater detention to limit runoff peak flow rates from the 5-year recurrence interval storm event to prevent downstream surcharge of conveyance systems and reduce overbank flooding. At the site development level, this can be accomplished by providing detention practices with multi-stage outlets that control the outflow from these events to pre-settlement conditions (meadow in good condition).

"Pre-Settlement Land and Vegetation Conditions" means for intended stormwater design calculations, meadow in good condition.

"Redevelopment" means land disturbance activity in areas where existing land use is commercial, industrial, institutional or multi-family residential.

"Stormwater Management" means the use of BMPs that are designed in accordance with City stormwater requirements to reduce stormwater runoff pollutant loads, discharge volumes, peak flow discharge rates and detrimental changes in stream temperature that affect water quality and habitat.

"Stormwater Management Plan" means a plan that addresses post construction stormwater management addressing water quality and quantity.

"Storm Water Pollution Prevention Plan" (SWPPP) means a plan that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities and includes provisions for additional pollution prevention and addresses stormwater quality and quantity management after construction.

"Stream" means perennial and intermittent water sources identified through site inspection, and/or an approved city of Ames map, and/or United States Geological Survey (USGS) 7.5 minute series topographical map.

"Stream Buffer" means a vegetated strip of land which lies adjacent to a stream and provides such functions as protecting water quality, providing wildlife habitat and storing flood waters.

"Stream Order" means a classification rank, used by the United States Geological Survey and other hydrological entities, of the relative sizes of streams draining a watershed based on the nature of their tributaries. The smallest unbranched tributary is first order, the stream receiving the tributary is second order etc.

"Unified Sizing Criteria" means an integrated approach to managing stormwater runoff quality and quantity by addressing the adverse impacts of stormwater runoff from development. The intent is to comprehensively manage stormwater to remove pollutants and improve water quality, prevent downstream streambank and channel erosion, reduce downstream overbank flooding and safely convey and reduce runoff from extreme storm events.

"Water Quality Volume" means the runoff resulting from a rainfall depth of 1.25", or less which is approximately 90% of the rainfall events in Central Iowa. By managing these storms many of the "first flush" pollutants of concern will be effectively managed on-site.

Sec 5B.3. PROCEDURES AND REQUIREMENTS

(1) No land owner or developer shall receive any building or other site development approvals without first meeting the requirements of this ordinance.
(2) Unless otherwise exempted by this ordinance, the Stormwater Management Plan and maintenance plan must be included with the site plan or subdivision preliminary plat and include the COSESCO permit application or approved COSESCO permit.

(3) The stormwater management plan and maintenance plan shall be prepared to meet the requirements of Section 5B.3(7) of this ordinance, and fees shall be those established by the City as necessary by separate ordinance or resolution.

(4) Following submission and approval of Stormwater Management Plans to the City, all applicable state and federal environmental permits shall be obtained prior to issuance of local permits including floodplain permits.

(5) If the stormwater management plan and maintenance plan are approved by the City, all appropriate local land development activity permits may be issued.

(6) Approvals issued in connection with this ordinance shall be valid from the date of issuance through the date City notifies the permit holder that all stormwater management BMPs have passed the final inspection required and the financial security has been released.

(7) The stormwater management plan and maintenance plan shall be prepared to meet the following requirements:

(a) Be prepared by a Licensed Professional Engineer (PE) or Professional Landscape Architect or credentialed in a manner acceptable to the City; and
(b) Indicate whether stormwater will be managed on-site or off-site and, if on-site, the general location and type of BMPs, with clear citations to the Iowa Storm Water Management Manual; and
(c) Include a signed and dated certification, under penalty of perjury by the preparer, of the stormwater management plan that it complies with all requirements of this ordinance and applicable sections of the Iowa Stormwater Management Manual, meets the submittal requirements outlined in the Iowa Stormwater Management Manual, and is designed to achieve City stormwater requirements.
(d) Contact Information, including but not limited to the name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected.
(e) Topographic Base Watershed Map, at a scale no greater than 1" = 100' which extends a minimum of 200' beyond the limits of the proposed development and indicates existing surface water drainage including streams, ponds, culverts, field tiles, ditches, and wetlands; current land use including all existing structures; locations of utilities, roads, and easements; and significant natural and manmade features not otherwise shown. A minimum of 2' contours shall be shown on-site and 2' contours outside of the proposed property.
(f) A written or graphic inventory of the natural resources at the site and immediate area as it exists prior to the commencement of the project and a description of the watershed and its relation to the project site. This description should include a discussion of existing predevelopment soil conditions such as hydric soils and areas for infiltration-based BMPs, vegetative and forest cover, topography, wetlands, and other native vegetative areas on the site. Particular attention should be paid to environmentally sensitive resources that provide particular opportunities or constraints for development.
(g) Use hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storm specified in the Iowa Stormwater Management Manual. Low Impact Development hydrology should be applied where appropriate and as approved by the City Municipal Engineer. Provide information in accordance with Section 2A-5 Project Drainage Report using the methodologies referenced in Sections 2B and 2C in the Iowa Stormwater Management Manual.
(h) Minimize the rate and volume of surface water runoff which flows from any specific development project site after completion to not exceed the pre-development hydrologic regime of meadow in good condition.
(i) If mass grading is used, flows shall not exceed the predevelopment hydrologic requirements of meadow in good condition. Classification of the altered soils shall be taken into consideration throughout the design.
(j) Utilize Low Impact Development features such as (but not limited to):
   (i) Open space protection and restoration through conservation of existing natural areas, reforestation, re-establishment of prairies and wetlands, and re-establishment of native vegetation into the landscape including native turf.
   (ii) Minimizing impervious cover.
   (iii) Capture, store and reuse runoff for irrigation in areas where irrigation is necessary.
(k) A soil management plan shall be provided that includes a site map that identifies areas where soils and vegetation will not be disturbed and shows where topsoil will be stripped and stockpiled. It shall include, if used, a description of soil health (quality) improvement methods such as tilling, ripping, and amending with materials such as compost and topsoil. It shall also include a technical assessment of soils that identifies the soil series and the site limitations based on soils data provided in the Web Soil Survey for Story County hosted by Natural Resources Conservation Service (NRCS). Soil borings shall be included when necessary to confirm suitable site conditions for placement of buildings with basements and related structures, especially in areas with hydric soils.
and shallow depth to groundwater. Existing soil conditions should be considered when designing the site layout. If a stormwater BMP depends on the properties of soils, the assessment shall include the necessary information such as, but not limited to: organic content and percolation/infiltration rates. The number and location of required soil borings and/or soil test sites shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the BMP. This information shall be used to provide a summary of the associated risks and potential for adequate drainage related to infiltration practices, groundwater mounding and basement flooding. Consultation with a Certified Professional Soil Scientist or Soil Classifier may be necessary or required.

(i) Provisions shall be made for stream buffers. The area shall be defined within a recorded easement that includes a management plan. They shall be maintained with native vegetation along naturally occurring stream areas using the following requirements based on stream order:

(ii) Streams exceeding 3rd order and above, the City requires sketches, maps, studies, engineering reports, tests, profiles, cross-sections, construction plans and specifications to determine adequate buffer widths.

(iii) Perennial streams (1st and 2nd order). The total required stream buffer width is one hundred (100) feet on each side perpendicular to the waterway measured from the outer wet edge of the channel during base flows.

(iv) Intermittent streams. The total required stream buffer width is fifty (50) feet on each side perpendicular to the waterway measured from the centerline of the channel.

(v) Waterways and/or dry channels that have a contributing drainage area of fifty (50) acres or greater. The total required stream buffer width is thirty (30) feet on each side perpendicular to the waterway measured from the centerline of the waterway.

(m) A Maintenance, Repair, and Landscaping Plan that is periodically updated for all structural and nonstructural stormwater BMPs including detailed routine maintenance as well as long-term maintenance of vegetation, and repair procedures to ensure their continued efficient function shall be provided to the Public Works Department. These plans will identify the parts or components of a stormwater BMP that need to be maintained and the equipment, skills or training necessary. The plan shall also indicate who will be responsible for the maintenance of vegetation at the site. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan. Native Iowa plants and trees shall be considered for use with stormwater BMPs.

(n) Proof of permanent recorded Maintenance Easements that will ensure access to all stormwater BMPs at the site for the purpose of inspection and repair. These easements will be recorded with the stormwater management final plan and will remain in effect even with transfer of title to the property.

(o) Dedicated Drainage Easements: Any stormwater BMP outside of the public right-of-way shall be dedicated in a perpetual unobstructed easement with satisfactory access to a public way and from a public way to a natural watercourse or to other stormwater management measure. Any such easement shall be secured by the subdivider or developer and dedicated to the City without cost to the City.

(p) The property owners of residential, commercial, and industrial properties are responsible for short and long-term maintenance of all water quality practices. The City of Ames accepts long-term responsibility (e.g. dredging, outlet structure replacement) for large water quantity (flood) control practices (e.g. detention basins) as part of residential developments. A recorded easement shall be provided to the City of Ames to cover the entirety of and access to the large water quantity control practices. The property owners have short-term maintenance responsibility (e.g. mowing, weed control, removal of volunteer trees) of the water quantity (flood) control practices as part of residential developments. The property owners are responsible for maintenance of all stormwater facilities as part of commercial and industrial properties.

(q) Copies of all existing SWPPP (as required by the City’s COSESCO ordinance) current as of the date of submission of the stormwater management final plan for all construction activities related to implementing any on-site stormwater BMPs.

(r) For lot development impacted by stormwater BMPs and conveyance features:

(i) The builder shall provide to the Municipal Engineer, or designated City representative, an Elevation Certificate that is signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information.

(ii) The Elevation Certificate shall certify that the protected level (lowest opening or protective flood barrier that achieves the same result) of all buildings shall be a minimum of 3 feet above the 100 year water surface elevation of stormwater BMPs.

(iii) Building foundations adjacent to stormwater BMPs and/or stormwater infrastructure (i.e. conveyance features, inlets, manholes) shall be 3 feet above the 100 year water surface elevation.
(s) Any required storm sewers including foundation drain collector lines shall be separate from any required sanitary sewers and shall be installed at the subdivider's or developer's expense and subject to requirements of the City and shall be adequate to serve all lots or parcels of land within the area to be subdivided.

(i) The storm sewer system shall be designed with due regard to the present and reasonably foreseeable needs of the area to be subdivided and to the location and capacity of existing storm sewers and other stormwater management measures available to serve existing and reasonably anticipated development or use of areas abating the area to be subdivided.

(ii) Upon determination by Municipal Engineer, such storm sewers may become the property of the City, upon determination of the Municipal Engineer through the City's inspection, approval, and acceptance of such sewers, after the subdivider pays to the City any costs associated with their installation including any reasonable charge for any supervisory or other services provided by the City.

(t) Accommodating Upstream Drainage Areas: Any necessary and appropriate stormwater BMPs shall be designed to accommodate runoff from any upstream area potentially draining into or through the area to be subdivided, whether such area is inside or outside the area to be subdivided. Such design shall assume that the upstream area upon development or redevelopment will be regulated such that volume of surface water runoff shall be equal to the runoff from the current landuse condition.

(u) Protecting Downstream Drainage Areas: Any development shall provide for mitigation of any overload condition reasonably anticipated on any existing downstream stormwater BMPs outside the area to be subdivided, provided that the development or use of the area to be subdivided creates or contributes to such condition.

Sec 5B.4. WAIVERS

(1) Every applicant shall provide for stormwater management as required by this ordinance except in certain redevelopment situations when confronted with difficult site conditions that limit design of such BMPs listed in the Iowa Stormwater Management Manual. In such case, a written request must be filed to waive implementation of BMPs in part or in whole. Requests to waive implementation of BMPs in part as defined in 5B.4(2) shall be submitted to the Municipal Engineer for approval.

(2) Partial Waivers

(a) Partial waivers of BMPs required by this ordinance may be granted for redevelopment projects if the proposed development is not likely to impair attainment of the objectives of this ordinance. At least one of the following conditions, in successive order, shall be established by applicant based on authoritative written evidence satisfactory to the Municipal Engineer:

(i) Alternative minimum requirements for on-site management of stormwater have been established in a stormwater management plan that has been approved by the Municipal Engineer and fully implemented. If the applicant is unable, for good cause shown, to meet the requirements of this subsection, the applicant shall meet the following condition:

(ii) Provisions are made to manage stormwater by an off-site facility that has been approved by the Municipal Engineer. The off-site facility is required to be in place, to be designed and adequately sized to provide a level of stormwater control that is equal to or greater than that which would be afforded by on-site practices and there is a responsible entity legally obligated to monitor the performance of and maintain the efficiency of stormwater BMP's in accordance with an approved maintenance plan.

(b) In instances where one of the above conditions is established, the applicant must further establish by authoritative written evidence satisfactory to the Municipal Engineer that the partial waiver will not result in any of the following impacts to downstream waterways:

(i) deterioration of existing culverts, bridges, dams, and other structures;

(ii) degradation of biological functions or habitat;

(iii) accelerated streambank or streambed erosion or siltation;

(iv) increased threat of flood damage to public health, life, and property.

Sec 5B.5. FINANCIAL SECURITY AND PERFORMANCE BOND

(1) City shall require the submittal of an installation performance security or bond prior to issuance of approval in order to insure that the stormwater BMPs are installed as required by the approved stormwater management final plan:

(a) The amount of the installation financial security or bond shall be the total estimated construction cost of the stormwater BMPs approved in the stormwater management plan. The installation financial security or bond shall contain forfeiture provisions for failure to complete work specified in the stormwater management plan.
(b) The installation financial security or bond shall be released in full only upon submission of "as built plans" of all stormwater BMPs specified in the stormwater management plan and written certification by a Licensed Professional Engineer or Professional Landscape Architect or person credentialed in a manner suitable to the city that the stormwater BMPs have been installed in accordance with the approved stormwater management final plan and other applicable provisions of this ordinance. City will make a final inspection of stormwater BMPs to ensure compliance with the approved stormwater management plan and the provisions of this ordinance. Provisions for a partial pro-rata release of the installation performance security or bond based on the completion of various development stages can be made at the discretion of the Municipal Engineer.

(2) City shall also require the submittal of a maintenance performance security or bond prior to issuance of a permit in order to insure that the stormwater BMPs are maintained in an effective state for a minimum of four years. This maintenance performance security or bond may be released by the City upon a showing satisfactory to the Municipal Engineer that:

(a) another bona fide financially responsible legal entity, such as a home-owners’ or similar organization organized under Iowa law, has been assigned responsibility for maintenance of the stormwater BMPs in an effective state for the balance of the four year period after assignment; and

(b) said assignee-legal-entity has fully accepted such responsibility in a written document that qualifies for recording and has been recorded in the county recorder’s office under Iowa law; and

(c) said assignee-legal-entity posts a substitute maintenance performance security or bond subject to release at the end of the initial four year period upon a further showing by the assignee-legal-entity that the stormwater BMPs are, in City’s sole judgment, still reasonably effective.

Sec 5B.6. CONSTRUCTION INSPECTION

(1) After construction is completed, applicants are required to submit actual "as built" drawings satisfactory to City for any stormwater BMPs located on-site. The drawings must show the final design specifications for all stormwater BMPs and must be certified by a Professional Engineer, Landscape Architect or credentialed in a manner acceptable to the city. A final inspection by City is required before the release of any performance securities can occur.

(2) Construction inspections will be conducted by the City or designated representative of the City at the conclusion of a development or redevelopment project after as-built plans are submitted to the City to ensure the stormwater BMPs have been built according to the stormwater management plan. For subdivisions, the owner is responsible for covering actual Engineering cost per City code. For individual site developments, the cost is included in the COSESCO fee.

(3) Financial security or bond will be released upon acceptance.

Sec 5B.7. MAINTENANCE AND REPAIR OF STORMWATER BMPs

(1) The applicant or owner of every site, or an assignee qualified, shall be responsible for maintaining as-built water quality BMPs in an effective state.

(2) Prior to the issuance of a COSESCO permit that has a stormwater management BMP as one of its requirements of the permit, and part of receiving approval of the stormwater management plan, the applicant or owner of the site agree to provide for access to the BMP and the land it serves at reasonable times for periodic inspection by City or City’s designee and for regular or special assessments of property owners to ensure that the BMP is maintained in proper working condition to meet City stormwater requirements.

(3) Maintenance of all stormwater management BMPs shall be ensured through the creation of a maintenance plan that must be approved by City at time of the stormwater management plan approval. As part of the plan, a schedule shall be developed for when and how often maintenance will occur to ensure proper function of the stormwater management BMPs. The plan shall also include plans for periodic inspections to ensure proper performance of the BMPs between scheduled cleanouts.

(4) All stormwater management BMPs must undergo an annual inspection to document maintenance and repair needs and ensure compliance with the requirements of this ordinance and accomplishment of its purposes. Any maintenance or repair needs detected must be corrected by the developer or entity responsible in a timely manner, as determined by City, and the inspection and maintenance requirement may be increased as deemed necessary to ensure proper functioning of the stormwater management BMPs.

(5) Inspection programs may be established on any reasonable basis. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in storm water BMPs, and evaluating the condition of stormwater management BMPs.

(6) Parties responsible for the operation and maintenance of stormwater management BMPs shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least 3 years. These records shall be made available to City during inspection of the facility and at other reasonable times upon request.

(7) If a responsible party fails or refuses to meet the requirements of the approved plan or any provision of this ordinance, City, after reasonable notice, may correct a violation by performing all necessary work to place the BMP in proper working condition. In the event that the stormwater management BMP becomes a danger
to public safety or public health, City shall notify the party responsible for maintenance of the stormwater management BMP in writing. Upon receipt of that notice, the responsible person shall have 30 days to effect maintenance and repair of the stormwater management BMP in an approved manner. After proper notice, City may assess, jointly and severally, the owner(s) of the stormwater management BMP or the property owners or the parties responsible for maintenance under any applicable written agreement for the cost of repair work and any penalties; and the cost of the work shall be a lien on the property, or prorated against the beneficial users of the property, and may be placed on the tax bill and collected as ordinary taxes.

Sec 5B.8. ENFORCEMENT BY LEGAL OR ADMINISTRATIVE ACTION

1. Violation of any provision of this ordinance may be enforced by civil action including an action for injunctive relief. In any civil enforcement action, administrative or judicial, the City shall be entitled to recover its attorneys’ fees and costs from a person who is determined by a court of competent jurisdiction to have violated this ordinance.

2. Violation of any provision of this ordinance may also be enforced as a municipal infraction within the meaning of Iowa Code Section §364.22, pursuant to the City’s municipal infraction ordinance.

3. Restoration of lands: Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, City may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

4. Holds on Occupation Permits: Occupancy permits shall not be granted until all storm water management BMPs have been inspected and approved by City.

Sec 5B.9. MEANS OF APPEAL

Any person directly affected by a decision of the Municipal Engineer or other City staff, or a notice or order issued under this code, shall have the right to appeal. That appeal shall be heard by the City Council. An appeal shall be made in writing and be filed with the City Clerk no later than 20 days after the date of the notice or order. The written appeal shall specify in detail the action appealed from, the errors allegedly made by the enforcement officer giving rise to the appeal, a written summary of all oral and written testimony the applicant intends to introduce at the hearing, including the names and addresses of all witnesses the applicant intends to call, copies of all documents the applicant intends to introduce at the hearing, and the relief requested.

An application for appeal shall be based on a claim that:

1. the true intent of this Code or the rules legally adopted hereunder have been incorrectly interpreted, or
2. the provisions of this Code do not fully apply, or
3. the requirements of this Code are adequately satisfied by other means, and the specific proposed alternative action will increase the degree of general code compliance of the specific system or the building and premises, or
4. there are specific fixed conditions that make strict compliance with this Code impracticable, or
5. required actions cannot be completed within the time limit specified by the Municipal Engineer or other City official.”

Section Two. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Three. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

Adopted this 22nd day of April, 2014.

Diane R. Voss, City Clerk

Ann H. Campbell, Mayor
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<tr>
<th>CITY</th>
<th>APPLICATION</th>
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<tr>
<td>Ames</td>
<td>1. All development and redevelopment within the city:</td>
<td>1. Agricultural activity.</td>
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<td></td>
<td>a. Disturbing 1 acre of more of land or</td>
<td>2. Additions or modifications to an existing single family property.</td>
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<td>b. Creating at least 10,000 square feet of impervious cover.</td>
<td>3. Stormwater Management Design standards do not apply to any area within a</td>
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<td>Impervious cover means surfaces (roads, sidewalks, driveways, and</td>
<td>1,000 foot distance from any City of Ames drinking water well located in</td>
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<td>parking lots) that are covered by impenetrable materials such as asphalt,</td>
<td>the Southeast Well Field and Youth Complex Well Field. In these specific</td>
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<td>concrete, brick, and stone, rooftops as well as soils compacted by urban</td>
<td>area, developments will need to meet requirements for storm water</td>
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<td>development.</td>
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<td>3. Additions or modifications to existing single family structures.</td>
<td>the Director of Water and Pollution Control.</td>
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<td>4. Partials waiver for on-site controls of redevelopment sites if approved</td>
<td>4. Areas deemed appropriate by the City Engineer.</td>
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<td>by Municipal Engineer.</td>
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<td>Cedar Rapids</td>
<td>1. All development within the city. Development is defined as “improvement</td>
<td>1. Agricultural use of land</td>
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<td>of land from its existing state”.</td>
<td>2. Emergencies posing an immediate danger to life or property, or substantial</td>
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<td>2. Stormwater detention basins intended to serve single family residential</td>
<td>flood or fire hazards;</td>
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<td>development shall be publicly owned and maintained, unless approved</td>
<td>3. Land within flood plain areas as designated in the Federal Emergency</td>
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<td>otherwise by the City Engineer.</td>
<td>Management Agency maps in effect at the time of development.</td>
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<td>3. Non-single family lots with an overall area of one acre or more shall</td>
<td>4. Areas deemed appropriate by the City Engineer.</td>
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<td>provide on-site stormwater detention. Non-single family lots with an</td>
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<td>overall area less than one acre shall comply with one of the following,</td>
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<td>as approved by the City Engineer:</td>
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<td>a. Privately owned, on-site detention basin.</td>
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<td>b. Tributary to a privately or publicly owned detention basin. In some</td>
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<td>watersheds, on-site stormwater detention may be required, at the</td>
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<td>discretion of the City Engineer, for non single-family lots with an</td>
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<td>overall area of less than one acre.</td>
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<td>4. At the discretion of the City Engineer, if a detention basin serves</td>
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<td>non-single family zoning districts and can provide stormwater</td>
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<td>attenuation for a substantial drainage area, the facilities may be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>publicly owned and maintained.</td>
<td></td>
</tr>
<tr>
<td>Cedar Falls</td>
<td>1. Land disturbing activity exceeding 43,560 square feet in area on land</td>
<td>1. Any logging or agricultural activity which is consistent with an</td>
</tr>
<tr>
<td></td>
<td>previously vacant of buildings or largely free of previous land</td>
<td>approved soil conservation plan or an approved timber management plan.</td>
</tr>
<tr>
<td></td>
<td>disturbing activity other than traditional agricultural activities; or</td>
<td>2. Additions or modifications to existing single family structures.</td>
</tr>
<tr>
<td></td>
<td>2. Land disturbing activity creating 5,000 square feet in area or more</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of impervious cover; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Land disturbing activities that are smaller than the minimum square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>feet applicability criteria set forth in this subsection, if such</td>
<td></td>
</tr>
<tr>
<td></td>
<td>activities are part of a larger common plan of development that may or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>may not take place at the same time; or</td>
<td></td>
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<tr>
<td></td>
<td>4. Land disturbing exceeding 25,000 square feet in area where the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>existing land is being redeveloped.</td>
<td></td>
</tr>
<tr>
<td>Council Bluffs</td>
<td>1. Development of one acre of more of land or less than one acre if proposed disturbance is part of a larger common plan of development that meets the one acre minimum.</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Des Moines          | 1. Water Quality controls for 1.25" storm.  
2. Detention required on-site for any development site exceeding 10,000 square feet in area or for redevelopment sites when the disturbed area of impervious surfaсing exceeds 10,000 square feet. |
| Iowa City           | 1. Development which results in an aggregate gross area of three (3) acres or more of drainage from or to a single drainage area. The gross aggregate drainage area shall include streets and other dedicated lands.  
2. Excludes the central business district.  
3. Excludes the area designated as the new south side neighborhood. |
| Sioux City          | 1. Construction activity creating 5,000 or more square feet of impervious surface.                                                                                                                                                                             |
| Waterloo            | 1. Land disturbing activity exceeding forty-three thousand five hundred sixty (43,560) square feet or more in area on land previously vacant of buildings or largely free of previous land disturbing activity; or  
2. Land disturbing activity creating five thousand (5,000) square feet or more in area of impervious surface; or  
3. Land disturbing activity that is smaller than the minimum area criteria set forth in this subsection, if such activities are part of a larger common plan of development that may or may not take place at the same time; or  
4. Construction of new parking and storage areas or the expansion, reconstruction or hard surfacing of existing parking lots or storage areas. The addition of granular material to the existing footprint of a granular surfaced parking lot or storage area shall not be considered reconstruction. |
|                     | 1. Any logging or agricultural activity consistent with an approved soil conservation plan or a timber management plan.  
2. Additions or modifications to existing single-family structures.  
3. Developments that do not disturb more than one acre of land provided they are not part of a larger common development plan.  
4. Repairs to any stormwater management implementations deemed necessary by the City. |
|                     | 1. Currently the Neighborhood Pedestrian Commercial District (NPC) allows the stormwater release rate to be at the 5-year storm of the current conditions (instead of 100% grass) *(this is anticipated to be eliminated with zoning code revisions taking place now for adoption in May 2018)* |
|                     | 2. Excludes the central business district.  
3. Excludes the area designated as the new south side neighborhood. |
|                     | 1. Development or redevelopment of property within the central business district, as defined in the current city of Waterloo zoning ordinance.  
2. Any additions or modifications to existing single-family dwellings provided that said additions and/or modifications do not create a dwelling with impervious surfaces greater than five thousand (5,000) square feet.  
3. Any logging activity consistent with an approved timber management plan.  
4. Any agricultural activity consistent with an approved soil conservation plan. |
**Stormwater Management Ordinance Applicability Thresholds**

### Land Disturbance

<table>
<thead>
<tr>
<th>City</th>
<th>Area or SF Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedar Rapids</td>
<td>All development</td>
</tr>
<tr>
<td>Cedar Falls</td>
<td>0.57 Acres (25,000 SF for redevelopment)</td>
</tr>
<tr>
<td>Cedar Falls</td>
<td>1 Acre (new development)</td>
</tr>
<tr>
<td>Ames</td>
<td>1 Acre</td>
</tr>
<tr>
<td>Council Bluffs</td>
<td>1 Acre</td>
</tr>
<tr>
<td>Waterloo</td>
<td>1 Acre</td>
</tr>
<tr>
<td>Iowa City</td>
<td>3 Acres</td>
</tr>
<tr>
<td>Sioux City</td>
<td>Impervious threshold only</td>
</tr>
</tbody>
</table>

### Impervious Cover

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Cedar Rapids</td>
<td>All development</td>
</tr>
<tr>
<td>Cedar Falls</td>
<td>5000 SF</td>
</tr>
<tr>
<td>Waterloo</td>
<td>5000 SF</td>
</tr>
<tr>
<td>Sioux City</td>
<td>5000 SF</td>
</tr>
<tr>
<td>Ames</td>
<td>10,000 SF</td>
</tr>
<tr>
<td>Council Bluffs</td>
<td>Land disturbance threshold only</td>
</tr>
<tr>
<td>Iowa City</td>
<td>Land disturbance threshold only</td>
</tr>
<tr>
<td>Post Construction Stormwater Management Site Inventory 2014 through 2018</td>
<td></td>
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<tr>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Site Name</strong></td>
<td><strong>Post Construction</strong></td>
</tr>
<tr>
<td>3334 Lincoln Way</td>
<td>Yes</td>
</tr>
<tr>
<td>3105 Grand and 30th (North Walmart)</td>
<td>Yes</td>
</tr>
<tr>
<td>1400 McKinley Drive</td>
<td>Yes</td>
</tr>
<tr>
<td>611 East Lincoln Way</td>
<td>Yes</td>
</tr>
<tr>
<td>1200 McCormick Avenue</td>
<td>Yes</td>
</tr>
<tr>
<td>11 Lynn Ave</td>
<td>Yes</td>
</tr>
<tr>
<td>100 Dayton Ave</td>
<td>Yes</td>
</tr>
<tr>
<td>2710 South Loop</td>
<td>Yes</td>
</tr>
<tr>
<td>5310 Mortensen</td>
<td>Yes</td>
</tr>
<tr>
<td>3012 Duff Avenue</td>
<td>Yes</td>
</tr>
<tr>
<td>516 S. 17th Street (535, 600 S. 17th Street)</td>
<td>Yes</td>
</tr>
<tr>
<td>302, 304, 308 S. 3rd Street</td>
<td>Yes</td>
</tr>
<tr>
<td>722 South Duff</td>
<td>Yes</td>
</tr>
<tr>
<td>415 Stanton Ave (renovate school to apartments/condo)</td>
<td>Yes</td>
</tr>
<tr>
<td>2121 Cottonwood</td>
<td>Yes</td>
</tr>
<tr>
<td>2110, 2126 Cottonwood</td>
<td>Yes</td>
</tr>
<tr>
<td>2041, 2105 Cottonwood Road</td>
<td>Yes</td>
</tr>
<tr>
<td>5752 GW Carver</td>
<td>Yes</td>
</tr>
<tr>
<td>5871 Ontario Street</td>
<td>Yes</td>
</tr>
<tr>
<td>900 Airport Road</td>
<td>Yes</td>
</tr>
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<td>Yes</td>
</tr>
<tr>
<td>101 Dayton (LDY Subdivision)</td>
<td>Yes</td>
</tr>
<tr>
<td>5499 Mortensen (crane farms subdivision)</td>
<td>Yes</td>
</tr>
<tr>
<td>McFarland Clinic</td>
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<tr>
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