AGENDA
SPECIAL MEETING OF THE AMES CITY COUNCIL
CITY COUNCIL CHAMBERS - CITY HALL
515 CLARK AVENUE
APRIL 17, 2018

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:

ITEM #_1__

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.

<u>Time Passes</u> by David Zahn
Bronze and Corten Steel
85”x30”x14”
350 lbs.
2016
$18,500



<u>Parent and Child</u> by Albert Rhea
Stainless Steel
103”x34”x49”
185 lbs.
2017
$9,000


<u>Stairway to Nowhere?</u> by Zach Bowman
Stainless Steel
60”x72”x24”
200 lbs.
2012
$1,900



<u>Blue Heron with Sunfish</u> by Judd Nelson
Hot forged Steel with Copper accents
48”x24”x24”
250 lbs.
2015
$7,200


<u>Totem of Spring</u> by Hilde Debruyne
Clay
72”x36”x24”
200 lbs.
2015
$7,000



<u>Twisted Sister</u> by Craig Snyder
Patinated Steel
96”x36x36
150 lbs.
2016
$6,000


<u>Glow From Within</u> by Tim Adams
Steel and Lexan
96”x60”x60”
800 lbs.
2018
$4,000

<u>No Strings Attached</u> by Paul Bobrowitz
Stainless Steel
174”x36”x25”
400 lbs.
2016
$22,000


ITEM # 2
DATE: 04-17-18

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.

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

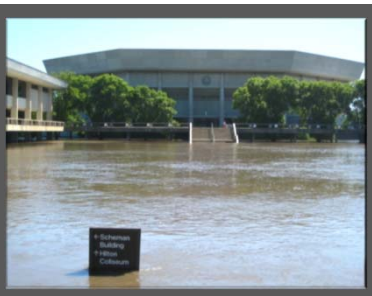
Attachments:

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

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

1



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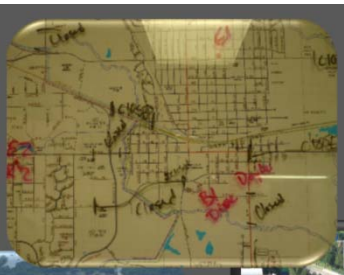
City Council Workshop April 17, 2018

CITY OF AMES HISTORY OF FLOODING

2

- 1965
- 1975
- 1990
- 1993
- 1996
- 2007
- 2008
- 2010
- 2016

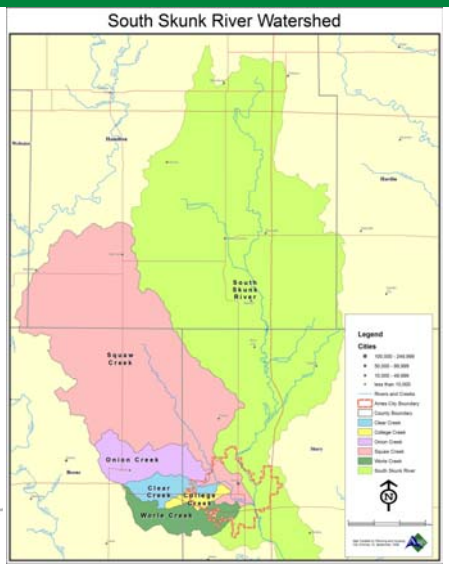



SMART WATERSHEDS

Ames Watersheds

3

- South Skunk River
- Squaw Creek
- Onion Creek
- Clear Creek
- College Creek
- Worle Creek

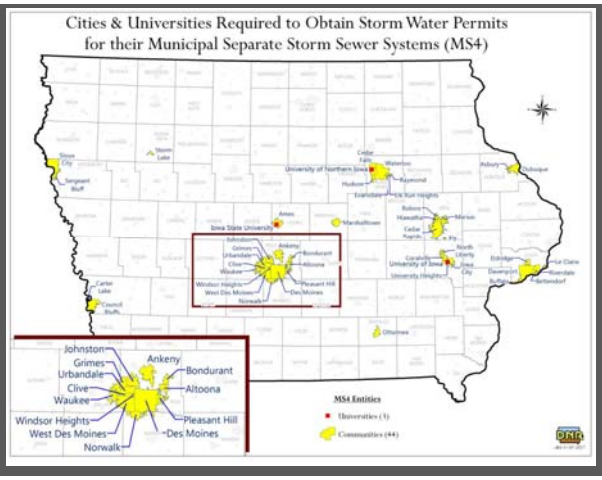


- S Skunk River Watershed:
  - Watershed covers parts of 13 counties
  - Drainage area of approximately 315 sq miles
    - 65% row crops
    - 30% wetlands/forest/grassland
    - 5% developed
  - Watershed has over 2,320 miles of streams
- Squaw Creek Watershed:
  - Watershed covers parts of 4 counties
  - 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

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

4

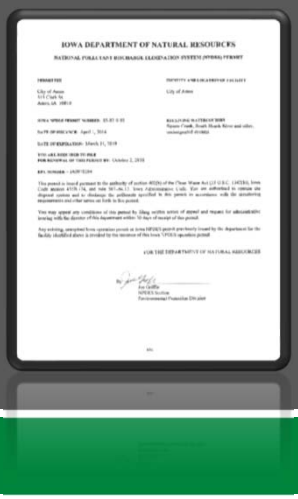
The determination of which cities and universities are required to obtain MS4 permits involves a combination of population, proximity to large, urbanized areas, and the water quality of receiving streams.



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

5

- 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



SMART WATERSHEDS

Conservation Subdivision Ordinance

6

•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

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SMART WATERSHEDS

Conservation Subdivision Ordinance

7

- 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

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SMART WATERSHEDS

Conservation Subdivision Ordinance

8

- 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

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SMART WATERSHEDS

Conservation Subdivision Ordinance

9

- An accessible and interconnected shared use path system shall be developed to connect residential areas with open space/conservation areas
- Sidewalk only required on one side of street, however each lot has access to either sidewalk or shared use path
- Mass grading of sites shall be minimized
- 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

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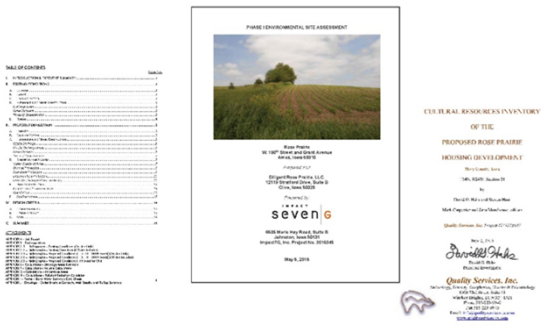
SMART WATERSHEDS

Conservation Subdivision Ordinance

10

- 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



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SMART WATERSHEDS

Post-Construction Stormwater Management Ordinance

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Post-Construction Storm Water Management Ordinance Adopted 2014

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."

CITY OF ames SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- 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

CITY OF ames SMART WATERSHEDS

Post-Construction Stormwater Management Ordinance

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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)

CITY OF ames SMART WATERSHEDS

Post-Construction Stormwater Management Ordinance

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- 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

Urban soils become compacted thru the development process

CITY OF ames SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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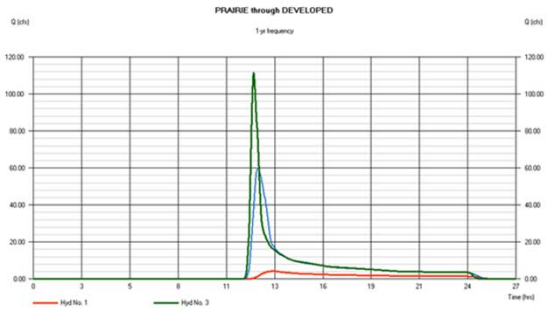
- Historic Landscapes
  - Prairie soils had 8-10% organic matter content and 45% pore space
  - Now soils have < 4% OM
  - Even less organic matter on construction sites
  - Soils have lost 60-80% of their ability to absorb and infiltrate rainfall events



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

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- Presentation to City Council – Decision Points


AMES STREAM ASSESSMENT 2011
Ames, Iowa

Final Report – February 6, 2012

Background Information

Research and Analysis Methods

APPENDIX A 2011 Ames Stream Assessment: Context Map

Extent of Stream Included in Study

Mimi Wagner Landscape Architecture LLC
Ames Iowa September 30, 2011

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

Mimi Wagner Landscape Architecture LLC
Ames Iowa September 30, 2011

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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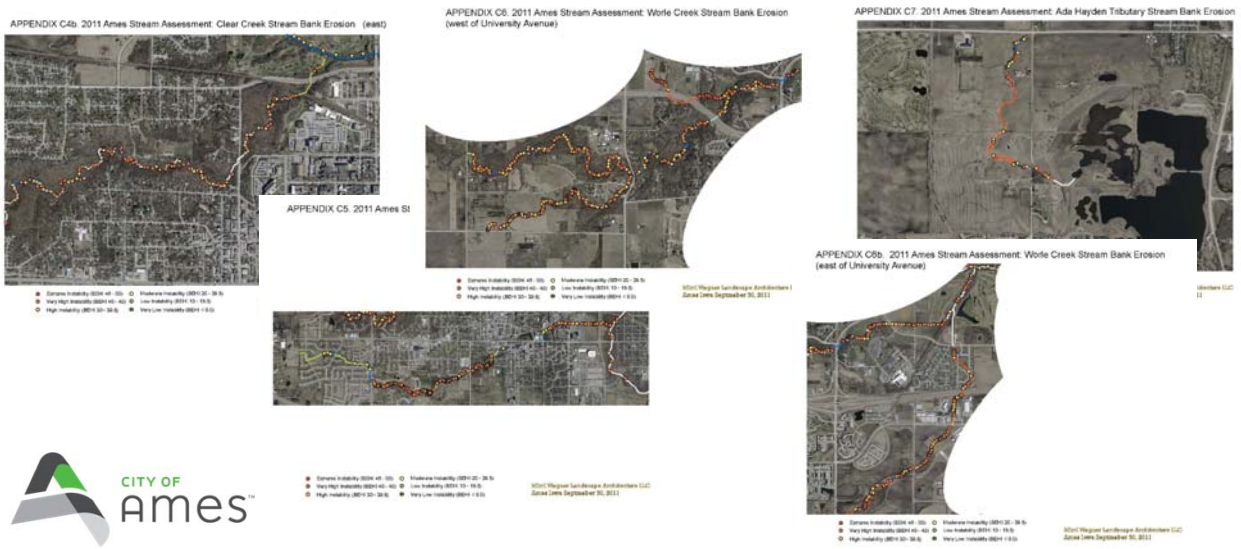

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Post Construction Stormwater Management Ordinance

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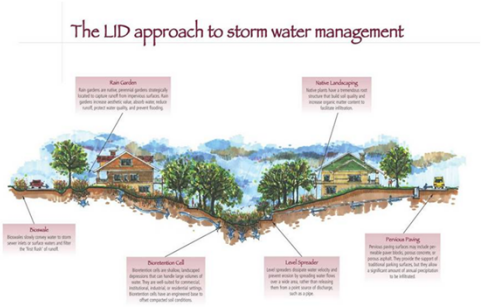
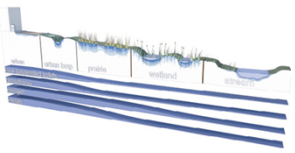
- Local goals of a Post-Construction Ordinance:
  - Utilize a combination of best management practices (BMPs) (also known as a stormwater treatment train)
  - Minimize increases in stormwater runoff,
  - Minimize non-point source pollution, and
  - Minimize mass grading





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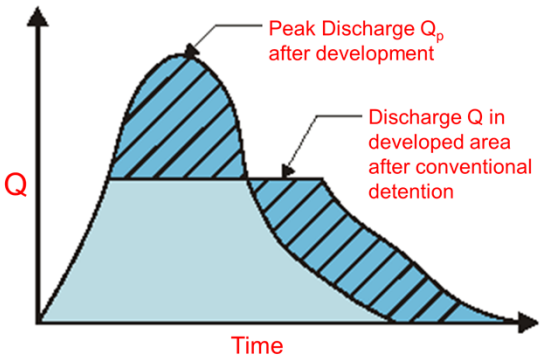
SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

19

- Hydraulic alteration after traditional methods



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- 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

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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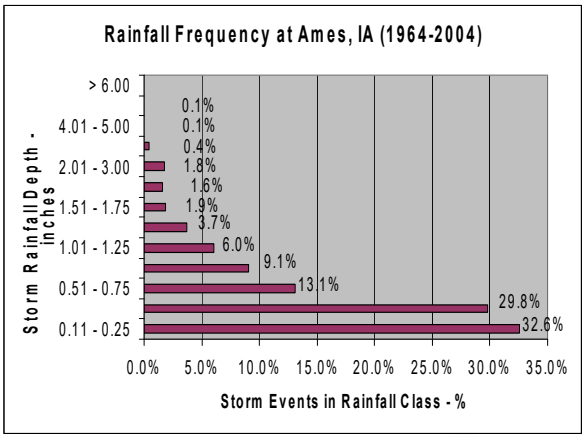
- The 'first flush' of rainfall moves pollutant loads to surface waters
- Use practices that retain water from the small storms water on-site
- Strategies include:
  - Slow down,
  - infiltrate,
  - cleanse,
  - discharge



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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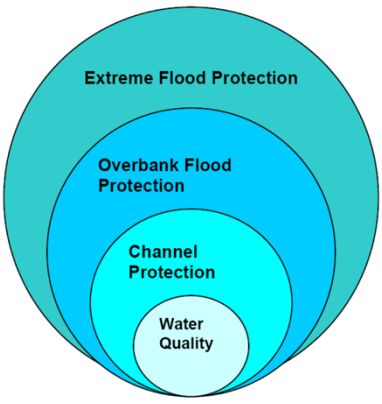
- Unified Sizing Criteria
  - Water Quality Volume
    - 1.25" rainfall event
    - 90% Ames rain events
  - Channel Protection Volume
    - 1-year, 24 hour storm event
    - Reduce rapid fluctuation in urban streams
      - Leads to erosive velocities and unstable stream conditions



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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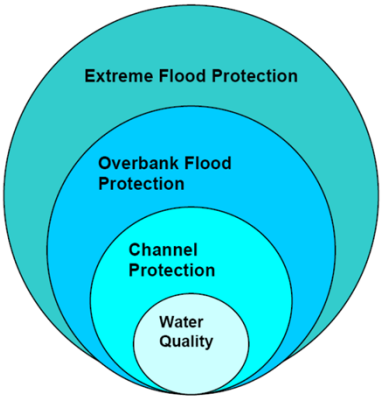
- Unified Sizing Criteria (continued)
  - Overbank Flood Protection
    - 5-year, 24 hour storm event
    - Reduces potential surcharge of local storm sewer system and/or overbank flooding
  - Extreme Flood Protection
    - Volume and peak runoff control of major storms (10 year to 100 year events)
    - Reduces potential infrastructure damage from major flooding



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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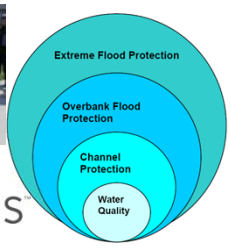
Stormwater Quality Management

- ❑ Low Impact Development
- ❑ Bioretention Cells
- ❑ Bioswales
- ❑ Native Landscaping
- ❑ Permeable Paving
- ❑ Rain Gardens
- ❑ Soil Quality Restoration



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- 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


CHAPTER 58
POST CONSTRUCTION STORMWATER MANAGEMENT

CITY OF ames

SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- 2014 Presentation to City Council – Decision Points
  - 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


Elevation Certificate

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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- 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

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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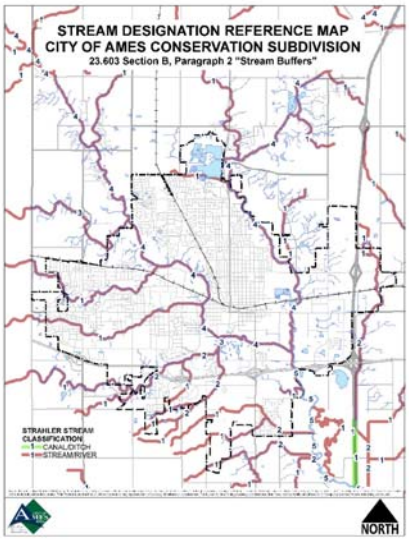
- 2014 Presentation to City Council – Decision Points
  - Stream buffers with native vegetation maintained or established along stream areas



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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

29

- 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

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

30

- 2014 Presentation to City Council – Decision Points
  - 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

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SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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CHAPTER 58

POST CONSTRUCTION STORMWATER MANAGEMENT

CITY OF ames

SMART WATERSHEDS

Post Construction Stormwater Management Ordinance

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Smart Watershed Design Principles

CITY OF ames


Natural Resource Checklist


Storm Water Summary Data Sheet

SMART WATERSHEDS

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

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SMART WATERSHEDS

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

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SMART WATERSHEDS


POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE
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SMART WATERSHEDS


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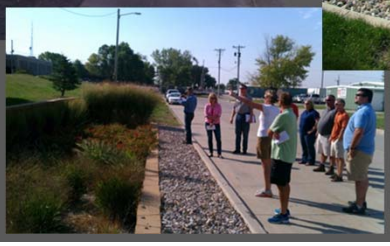


SMART WATERSHEDS

POST-CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

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Post Construction Stormwater Management Ordinance

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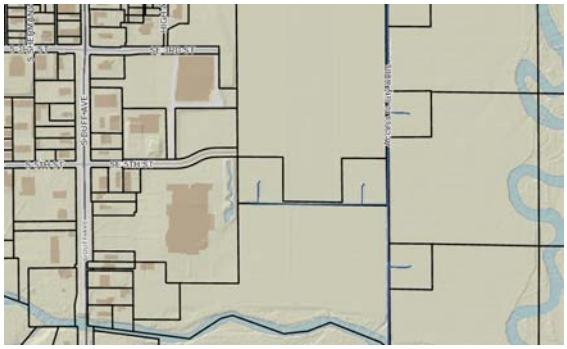
- Challenges to date:
  - Groundwater Source
    - Protection from reclassification
    - No open ground water detention
      - Within 1,000 ft of well Fields at SE 16th & Youth Sports Complex
    - Super Wal-Mart
      - Bioretention Cell
        - Only Roof Run-Off



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Post Construction Stormwater Management Ordinance

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- 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

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Post Construction Stormwater Management Ordinance

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- 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

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Post Construction Stormwater Management Ordinance

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- 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

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CITY OF AMES PUBLIC WORKS

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SMART WATERSHEDS

ORDINANCE NO. 4174

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 Stormwater 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.

"**COSESCO**" 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 storms 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.

(l) 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:

(i) 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.

(ii) 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.

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

(iv) 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.

(v) Waterways and/or dry channels with a contributing drainage area of less than 50 acres. The total required stream buffer width is twenty (20) 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) Dedicating 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 SWPPPs (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 BMPSs 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 abutting 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 BMPs 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, 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

Diane R. Voss, City Clerk

Ann H. Campbell

Ann H. Campbell, Mayor

SUMMARY OF IOWA MUNICIPALITIES STORMWATER MANAGEMENT ORDINANCE APPLICABILITY AND EXCEPTIONS

CITY	APPLICATION	EXEMPTIONS
Ames	*1. All development and redevelopment within the city:* *a. **Disturbing 1 acre of more of land** or* ***b. Creating at least 10,000 square feet of impervious cover.*** *Impervious cover 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.*	*1. Agricultural activity.* *2. Additions or modifications to an existing single family property.* *3. Stormwater 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 Complex Well Field. In these specific area, 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.* ***4. Partials waiver for on-site controls of redevelopment sites if approved by Municipal Engineer.***
Cedar Rapids	1. All development within the city. Development is defined as "improvement of land from its existing state". 2. Stormwater detention basins intended to serve single family residential development shall be publicly owned and maintained, unless approved otherwise by the City Engineer. 3. Non-single family lots with an overall area of one acre or more shall provide on-site stormwater detention. Non-single family lots with an overall area less than one acre shall comply with one of the following, as approved by the City Engineer: a. Privately owned, on-site detention basin. b. Tributary to a privately or publicly owned detention basin. In some watersheds, on-site stormwater detention may be required, at the discretion of the City Engineer, for non single-family lots with an overall area of less than one acre. 4. At the discretion of the City Engineer, if a detention basin serves non-single family zoning districts and can provide stormwater attenuation for a substantial drainage area, the facilities may be publicly owned and maintained.	1. Agricultural use of land 2. Emergencies posing an immediate danger to life or property, or substantial flood or fire hazards; 3. Land within flood plain areas as designated in the Federal Emergency Management Agency maps in effect at the time of development. 4. **Areas deemed appropriate by the City Engineer**.
Cedar Falls	1. Land disturbing activity exceeding 43,560 square feet in area on land previously vacant of buildings or largely free of previous land disturbing activity other than traditional agricultural activities; or 2. Land disturbing activity creating 5,000 square feet in area or more of impervious cover; or 3. Land disturbing activities that are smaller than the minimum square feet applicability 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. Land disturbing exceeding 25,000 square feet in area where the existing land is being redeveloped.	1. Any logging or agricultural activity which is consistent with an approved soil conservation plan or an approved timber management plan. 2. Additions or modifications to existing single family structures.

SUMMARY OF IOWA MUNICIPALITIES STORMWATER MANAGEMENT ORDINANCE APPLICABILITY AND EXCEPTIONS

Council Bluffs	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.	1. Any logging or agricultural activity consistent with an approved soil conservation plan of a timber management plan. 2. Additions of 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.
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 surfacing exceeds 10,000 square feet.	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)**
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.	1. 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 create more than 5,000 square feet of impervious surface, provided they are not part of a larger common development plan. 4. Repairs to any storm water treatment practice deemed necessary by the City Engineer.
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. 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

Cedar Rapids	All development
Cedar Falls	0.57 Acres (25,000 SF for redevelopment)
Cedar Falls	1 Acre (new development)
Ames	1 Acre
Council Bluffs	1 Acre
Waterloo	1 Acre
Iowa City	3 Acres
Sioux City	Impervious threshold only

Impervious Cover

Cedar Rapids	All development
Cedar Falls	5000 SF
Waterloo	5000 SF
Sioux City	5000 SF
Ames	10,000 SF
Council Bluffs	Land disturbance threshold only
Iowa City	Land disturbance threshold only

Post Construction Stormwater Management Site Inventory 2014 through 2018

Site	Post Construction Required Yes or No		SQR	Water Quality Volume (1.25")	Channel Protection Volume (1 year)	Overbank Flood Protectoin (5 Year)	Extreme Flood Protection (10 and 100 year)	Dry Basin	Wet Basin	Infiltration BMP (swale/Basin)	Forebays	Bioretention Cell	Underground WQ System	Underground infiltration	Underground Storage
3334 Lincoln Way	Yes	Convert existing Wendy building into bank branch	no	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage						1	1	1
413 Northwestern Ave	Yes	Parking Expansion (Wheatsfield)	no	Trench Drains, Bio-Retention, Permeable pavement	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage					1	1	1	1
230 South Duff	Yes	Construction of Chick-Fill-A	no	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage						1	1	
3105 Grand and 30th (North Walmart)	Yes	New Walmart	no	Wet Detention Basin and Vortex Separator) (Downstream Defender) and Underground Detention	Wet Detention Basin and Vortex Separator) (Downstream Defender) and Underground Detention	Wet Detention Basin and Vortex Separator) (Downstream Defender) and Underground Detention	Wet Detention Basin and Vortex Separator) (Downstream Defender) and Underground Detention		1		1		1	1	1
511 South 17th Street	Yes, WQV on site In underground detention, Quality regional	Replace parking lot surface													
122 Hayward	Yes, Underground detentnion	Demo and constructon of commercial with parking and apartment units	no	Undertround Stone Storage	Underground Stone Storage	Underground Stone Storage	Underground Stone Storage								1
436 South Duff	Yes, Underground detention	Construction of Panda Express Restaurant	Yes	Undertround Stone Storage	Undertround Stone Storage	Undertround Stone Storage	Undertround Stone Storage						1	1	1
4506 Lincoln Way	Yes Underground detention and above grade detention	Demo old and built new Kum & Go	Yes	Chambers)	Undreground Storage and Detention Basin	Detention Basin	Detention Basin	1					1	1	1
2700 Block of Lincoln Way	Yes Underground detention	OPUS - Seven Story Mixed use building with underground parking													
3306, 3326 Lincoln Way (Aspen Heights)	Yes - Underground Detentnion on North	Multi family with retail													
2401 (2311) Chamberlain Street	Yes, underground detention (verify) Mindy CGA	New Building	no	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage						1		1
Buchanan Residenance hall -Iowa State	Yes, underground detention	Buchanan Residenance Hall - New building and Parking	Yes	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage	Underground Storm-Tech Storage							1	1
517 Lincoln Way (submitted 8-8-14) Laundy Facility	Yes - with waver close to well	construction of commercial building		WAIVER-WELL ON-SITE											
1204 South 4th Street	Yes - Waver of buffer	Apartment Buildings	Yes	Underground Trench	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin	1						1	1
1400 McKinley Drive	Yes	New elementary school	Yes	Staorage chamber (60" CMP in 6'x7' stone	Staorage chamber (60" CMP in 6'x7' stone	Staorage chamber (60" CMP in 6'x7' stone	Staorage chamber (60" CMP in 6'x7' stone	1					1	1	1
611 East Lincoln Way	Yes	Construction of new commercial building infiltrates on north side													
1200 McCormick Avenue	Yes, Waiver	Parking lot and layout improvements													
115 South Dakota (4619, 4701 Tood Drive after address change)	yes	Apartment Complex	Yes	5 BioWet Detention Cells	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin	1			5	5			1
4316 Ontario	Yes	Sawyer Elementary	Yes	Bioretention Cell and Underground	Dry Retention Basins and Underground	Dry Retention Basins and Underground Storage	Dry Retention Basins and Underground Chamber	2				1	1	1	1
3915 Mortensen Road	Yes	Dotson Drive Extension - parking lot													
2005 24th Street	Yes	Admin Bld, Sports Complex	Yes	SQR	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin	3			3				
111 Lynn Ave	Yes	University Towers Subdivision													
3915 / 3914 Mortensen Road	Yes	Middle School Track improvements	No	extended detention basin	Detention Basin	Detention Basin	Detention Basin	1							
519 South Duff Avenue	Yes	2 building additions and parking lot addition		NO REPORT-found SWPPP only											
100 Dayton Ave	Yes	Expand Existing North Parking lot and add spaces (Hatch Chemical)	No	Detention Basin Forebay	Detention Basin	Detention Basin	Detention Basin	1			1				
2710 South Loop	Yes	Office Building - Vermeer Bld.		REPORT?	Detention Basin	Detention Basin	Detention Basin	1							
202 SE 5th Street	Yes, Partial Waver (Native Plants, SQR, Reduced impervious by 10,000 but disturbe	Removal of structure and waterproofing													
100 Dayton Ave	Yes	South Parking lot addition	No	Detention Basin Forebay	Detention Basin	Detention Basin	Detention Basin	1			1				
2503 South Loop	Yes	Newlink Genetics Building 5 improvements													
101, 105, 107, 205 South Wilmoth (Aspen Heights)	Yes	Multi-family residential and limited retail.	Yes	Infiltration Basin and Underground Storm Tech	Infiltratin Basin and Underground Stormtech	Infiltration Basin and Underground Stormtech	Infiltration Basin and Underground Storm Tech						1	1	1
108 S. 5th Street	Yes	New Aldi Grocery Store	No	BioWet Detention Cell	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin	2			1	1			
919 East Lincoln Way	Yes	Strip Industrail office and warehouse	Yes	SQR	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin								
5310 Mortensen	Yes	Multi-family residential with clubhouse complex													
122 North Dakota	Yes	Apartment Bldg	No	Extended Detention	Detention Basin	Detention Basin	Detention Basin	1							
3915 Mortensen Road	Yes	Middle School Stadium Improvements													
535, 600 Soth 17th Street (Quarters Site at Aspen Ridge)	Yes	Apartment Complex, poo, clubhouse, and parking	No	Infiltration Basin	Infiltration Basin	Infiltration Basin	Infiltration Basin			1	1				
3012 Duff Avenue	Yes	Site Improvements Northwood preschool center	No	extended detention-underground											1
516 S. 17th Street (535, 600 S. 17th Street)	Yes with Quarters Site	Aspen Business Park 3rd Addition													
302, 304, 308 S. 3rd Street	Yes	Demo and build new Bldg with underground detentnion	No	Bioretention and Underground Detention								1	1		1
3303 and 3311 East Lincoln Way	Yes	Barilla - New buildings, rails	No	Swales	Detention Basin	Detention Basin	Detention Basin	4							
722 South Duff	Yes	Uhaul site improvements - underground detention													
2500 Duff Ave	Yes	Park improvments Miracle Park	No	Detention Basins	Detention Basin	Detention Basin	Detention Basin	4							
530 and 900 SE 16th Stree (menards Site)	yes	Menards Site													
311 Sondrol Ave	yes	Confirm with Nate Willey													
415 Stanton Ave (renovate school to apartments/condo)	Yes	Renovate School Building and new parking lot													
Regional Facilites															
2600/2618/2626 Bobcat Drive	yes	Construction of 3 12 Plexes North end of Ringenberg		REPORT? Pipes go to Co-op detention basin											
2617 Bobcat Drive (Ringenbert North end Subdivsion)	Yes	Construct 22 Townhomes (Regional Facilites)													
2135 Cottonwood	Yes, Regional with subdivsion	Apartment Buildings													
2121 Cottonwood	Yes, Regional with subdivsion	Apartment Buildings													
2110, 2126 Cottonwood	Yes, Regional with subdivsion	Aparmtent Buildings	Yes	Dry Detention Basins and Wet Detention Basins	Dry Detention Basin and Wet Detention Basin	Dry Detention Basin and Wet Detention Basin	Dry Detention Basin and Wet Detention Basin	2	1						
2041, 2105 Cottonwood Raod	Yes, Regional with subdivsion	Apartment Buildings													
Ringenberg 5th, Townhomes on bobcat	Yes	Town Homes on Bobcat.													
3500 University Boulevard	Yes, Regional water quality and quantity	Mcfarland Clinic at ISU research park													
3400 University Blvd Research Park	Yes	ISU Research Park Phase 3													
Mcfarland Clinic	Yes	At Research Park Regional													
3600 University	Yes	Ames Racquet and Fitness facility	Yes	Infiltration Trenches and Swales	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin	1		2					
3305, 3315, 3331, 3405, 3400, 3420, Village Park Apartments	Yes Regional with Plat	Village Park Apartments													
3535 530th	Yes	Village Park Subdivision													
2151 Cottonwood	Yes	Village Park Subdivision Apartment Building													
1115 South Bell	Yes	Industrail spec building - Regional, Calculated water quality in basin													
810 South Bell	Yes	Approved but never built - industrial building													
1213 South Bell Ave	Yes (regional quantity and quality)	Industrial office building													
1216 South Bell	Yes - Regional facilities	Building, Storage, Bus Storage													
810 South Bell	Yes - Regional facilities	Office Building													
2825 Wakefield Circle	Yes	Draintech													
5499 Mortensen (crane farms subdivision)	Yes	Crane Farms Subdivision	Yes	Wet Detention Basins (sotheast and center of property)	Wet Detention Basins (sotheast and center of property)	Wet Detention Basins (sotheast and center of property)	Wet Detention Basins (sotheast and center of property)		2		1				
5498 Mortensen Ave (Mortensen Heights 2nd Addition in crane farms	Yes		Yes	Retention Basin	Retention Basin	Retention Basin	Retention Basin		2						
Crane Farms 2nd Addtion	Yes	Single Family lots on Wilder													
5400 Mortensen	Yes, Crane Farms Regional	Dog Park													
5414 Mortensen	Yes	Apartments													
5312 Mortensen	Yes	Apartments													
Southfork 8th	Yes - Credit for regional detention	Single family home development													
Southfork subdivision	Regional	southfork subdivision													
Haydens Crossing	Yes	Subdivision	Yes	West-Forebay & Wet DetentionBasin, East-Infiltration Basin	West-Forebay & Wet DetentionBasin, East-Infiltration Basin	West-Forebay & Wet DetentionBasin, East-Infiltration Basin	West-Forebay & Wet DetentionBasin, East-Infiltration Basin		1	1	1				
Haydens Crossing 2nd	yes	Haydens Crossing 2nd													
5400 Grant Ave	Yes	Haydens Crossing													
Dauntless Subdivision (1010 Dickinson Ave) BB and Tennis Courts	Yes	basketball court, parking lot, tennis facility, detention basin	Yes	Contech Hydodynamic Separator	Wet Detention Basin	Wet Detention Basin	Wet Detention Basin		1				1		
4710 Mortensen Road (West of Hilton Garden Inn)	Yes, WQV only, took credit for vomume in pond	3 Multifamily Residential Buildings		REPORT?											
Quarry Estates	Yes	Subdivision	Yes	2 Detention Basins with Forebays	Detention Basin	Detention Basin	Detention Basin	2			2				
Walnut Ridge 3rd Addition (3505, 3515 Lincoln Way)	Yes, water quality, Reginal water quantity (off site credit swap)	construction of commercial building	Yes	Dry Detention Basins and Underground Stone/	Dry Detention Basins and Underground Storage	Dry Detention Basins and Underground Storage		1					2	2	2
3505 & 3515 Lincoln Way (Walnut Ridge 3rd)	Yes	Mixed use development to construct two three story apartment buildings													
5752 GW Carver	Yes	Irons Subdivision													
Dotson Drive Development	Yes	Dotson Drive Development Subdivision	Yes	Detention Basin and Infiltration Trench	Detention Basin and Underground Infiltration Trench	Detention Basin	Detention Basin	1					1	1	1
901 (825 & 835) Airport Road	Yes	Office, commercial bldg expansion (Mun Lumber)	Yes	SQR	Dry Detention Basin	Dry Detention Basin	Dry Detention Basin								1
2400 North Loop Drive	Yes - water quality in existing basin, quantity regional	Porvision /Fougasse Restaurant (lot 42)	Yes	SQR (east) and Reginal Wet Detention Basin	Off-site Wet Detention Basin	Off-site Wet Detention Basin	Off-site Wet Detention Basin		1(regional)						
900 Airport Road	Yes	Airport Hanger		REPORT?											
900 Airport Road	Yes	Airport Terminal													
1509 Baltimore	Yes , regional quantity, on site water quality	New office building, parking, drives, sidewalk.		Wet Detention Basin	Wet Detention Basin	Wet Detention Basin	Wet Detention Basin		1						
1519 Baltimore Drive	Yes, Regional quantity , On site water quality	New office building (Bolton & Menk)		REPORT?											
601 and 705 Dotson	Yes	Dotson Development													
Sunset Ridge 7th (south townhomes)	Yes	Sunset Ridge	Yes	Water Quality Swales and SQR	Existing Detention Basins #1 within Sunset Ridge	Existing Detention Basins #1 within Sunset Ridge	Existing Detention Basins #1 within Sunset Ridge								
5871 Ontario Street Birtch Meadows Subdivison	Yes	Broadmoore Heights changed name to birtch meadows	Yes	Wet Detention Basin(south) with forebay, Detention Basin (northwest)	Wet Detention Basin(south) with forebay, Detention Basin (southwest) Detention Basin	Wet Detention Basin(south) with forebay, Detention Basin (southwest) Detention Basin	Wet Detention Basin(south) with forebay, Detention Basin (southwest) Detention Basin (northwest)	1	1		1				
3599 GW Carver	Yes	Scenic Point	Yes	SQR	Detention Basin	Detention Basin	Detention Basin	1							
Irons Subdivision (5252) GW Carver Ave	Yes	Single Family , Regional Detention	Yes	NO REPORT-found SWPPP only	Wet Detention Basins	Wet Detention Basins	Wet Detention Basins		3						
101 Dayton (LDY Subdivision) (2105 East Lincoln Way)	Yes	3 commercial lots	Yes	Retention Basin	Retention Basin	Retention Basin	Retention Basin		1		1				
2100 Green Hills Drive	Yes	Addition with parking lot to Green Hills with basins													
Bricktowne Development (3119,3301,3325,3409,3115,3413, S Duff)	Yes	Bricktown Development	Yes	Retention	Retention	Retention	Retention	2	5						
2005 24th Street (school admin tennis courts)	Yes will be required	This is in addition to the orrigional SWM Plan													
321 State Street	N/A stormwater for street - not fully designed yet. GDBG funds	single famly subdivision													
926 South 16th Street	Yes	Noodles Restaurant	yes	SQR	Dry Detention Basin	Dry Detention	Dry Detention	1							
3305 Stange Road	Yes	Northridge Village 2nd building	Yes	SQR	Wet Detention Basin	Wet Detention Basin	Wet Detention Basin								
Trinitas Site (lincoln Way and 500th Avenue)	Yes - was withdrawn never had approved site plan	Approved for stormwater, denied by council		PROJECT DENIED BY COUNCIL					1						
4811 Hyde - Rose Prairie	Yes - overall concept is approved	Will submit to confirm with each plat.		PRELIMINARY DESIGN-FINAL DESIGN TO BE SUBMITTED LATER											
2325 N Loop	No, Less than 10,000	Building Addition and Driveway entrance addition (BIOVA)													
2500 North Loop Drive	No, temporary and less than 10,000	Temporary Water Tank													

Post Construction Stormwater Management Site Inventory 2014 through 2018

2609 Ferndale	No, Less than 10,000	New Mainenance Building
23 Space Parking Lot (5300 Grant Ave Project)	N/A case withdrawn	Was part of Grand Ave Construction and SWMP
905 9th Street	No, Less than 10,000	Play Ground structure
1125 South 16th	No, Less than 10,000	Play Ground Structure
1205 Buckeye Ave	No, Less than 10,000	Replace Paving and install landscaping and loadign dock
3311 East Lincoln Way	No, Less than 10,000	New lilo support structure and breezeway
3440 Grand Ave	No, Less than 10,000	Building addition and parking improvements
201 Gray Ave	No, Less than 10,000	Addition to fraternity house
905 9th Street	No, less than 10,000	Roosevelt Park Amenities
Green Brior Park Amenities	No, less than 10,000	Green briar Park Amenities
311 East Lincoln Way	No, less than 10,000	Barilla silo support structure and breezeway
135 Campus Avenue	No, less than 10,000	(new apartment building)
2400 bloomington	No, less than 10,000	Ascension Lutheran Church modular classroom
111 Lynn Ave	No, less than 10,000	Renovaton of existing apartment
307 Ash	No, less than 10,000	Convert apartments into sorority housse
2600 Norhridge Parkway	No, less than 10,000	Flatiron Lofts , small office building
2200 Hamilton Drive	No, less than 10,000	Green Hills improvments
400 Main Street Ames	No, less than 10,000	sitewalk improvements
1105 Top O Hollow Road	No - less than 10,000	Addition to substation
1805 East Lincon Way	No	?
2120 Lincoln Way	No	Improvments to fraternity
2500 Ford Street	No	This site has a 2010 site plan which did quantity controls
2007 Greeley Street	No	Improvments to sorority
215 SE 5th	No , less than 10,000 interior work	Petsmart to new store
2804 & 2410 Chamberlain Street	No, less than 10,000	Apartments/Restoratn on ground floor
1712 East Lincoln Way	No - Less than 10,000	Parking lot improvements and demo of building
1404 Boston Ave	No - less than 10,000	Pizza Ranch
534 South Duff	No	Improvments to Walmart.
2312 Edision	No, less than 10,000	
2400 University	No, less than 10,000	Addition to gas station (car wash)
2326 SE 5th Street	No, Less than 10,000	Paved parking lot, possible future buiding.
820 miller (play ground equipment)	no (soccer field did not effect storm water management	soccer field
600 South Maple Ave	No, less than 10,000	Construction of a wireless tower and shelter
Cochrane Farms SD	Not yet	Not yet designed
Southfork 9th	No	single family lots on Coy East end
Scenic Valley 2nd Addition	No, Many componants of 5B, came in with 1st addion, Nate Easter	Scenic Valley
2516 Lincoln Way	No, Less than 10,000 (excludes sidewalk)	Mixed use development (Randle propery on Lincoln Way)
301 South 4th	No, Less than 10,000 Fire	Construcion of apartment building
114 South Duff	No, Less than 10,000	Demo of old building, build new boulder tap house restaurant
2320 Lincoln Way	No, less than 10,000	Exterior attached walk in cooler for blaze pizza
801 Dayton	No, Less than 10,000	50X11'4" mobile modular laboratory
1300 Coconino	No, Less than 10,000	Sidewalk, fence, pavement around pool, landscaping
409 South Duff	No, Less than 10,000	exterior shell and façade renovation and parking lot renovation
1015, 1111 Duff Ave	No, Less than 10,000	MGMC Paving repairs - Medical Arts Bldg
301 South 4th	No, rebuilt after fire (less then 10,000)	Multi Family Residential Building (Oakridge Apartments)
313 Lynn Ave	No, Less than 10,000	Remodel and building additon (Delta Gamma Sorority)
406 & 410 Freel Drive	no , less than 10,000	Concrete Slab expansion for two existing bldgs
3502 Lincoln Way	Case withdrawn	
517 Lincoln Way	No, Less than 10,000	Tropial Smoothie Café Deck
1300 Coconino	No, Less than 10,000	5,000 square foot garage and parking
1320 Dickson	No (regional and less than 10,000)	Mini golf course
201 Gray Ave	No, might have pervious pavement	Addition to fraternity house
316 Hayward	No, Less than 10,000	Construction of town homes
439 South Maple	No, Less than 10,000	Parking Lot Renovations
1307 East Lincoln Way	No, Less than 10,000	J&K Shop Addition
1209 North Dakota	No, Less than 10,000	construction of maintenance shed
2120 East 13th	No - Less then 10,000	Manatts office building addition
1000 East 13th street	No - Less then 10,000	AOA Ash Handling Operation Bldg.
138 Gray Ave	No, Did pervous pavemet to stay below 10,000	Fraternity House 3 story 42 bed.
217 6th Street	No, Less than 10,000	east entry enclosure
1200 East 13th	No, Less than 10,000	Park Shelter and water fountain
3720 Lincoln Way	No, Less than 10,000	Demo and constructon of restaurant (sports page)
3615 Lincoln Way	No, Less than 10,000	Attached garage and driveway
716 South Duff	No, Less than 10,000	Restaurant and retail (jimmy Johns)
2811 West Street	No, Less than 10,000	Apartment Construction with grading, paving, and utility work (west street lofts)
3020 South Duff	No, Less than 10,000	Addition and remodel of esisting Casey store
1817 East Lincoln Way	No, Less than 10,000	Enterprise Rent-A-Car
Revisions to 2807 & 2810 Bobcat Drive	no	Previously did SWM
2120 E. 13th Street	No, Less than 10,000	Reconstruct Manatts office Bldg
408 Freel Drive	No, Less than 10,000	50 x 75 building
615 South Dayton Avenue	No, Less than 10,000	Warehouse Addition
314 South 17th Street	N/A case withdrawn	Bld. Addtion, Detention Basin
311 Ash	No, Less than 10,000	Addition and Renovation of Fraternity
3707, 3711, 3715 Marigold Drive	No - regional detention in subdivision	Construction of three townhomes
2715 Northridge Parkway	No, Less than 10,000	Construct 1 Story commercial Building - office building
1205 Buckeye Ave	No, Less than 10,000	Paving, loading Dock, trash enclosure