

## COUNCIL ACTION FORM

**SUBJECT: SOURCE WATER PROTECTION – ZONING ORDINANCE AND  
SUBDIVISION REGULATION TEXT AMENDMENTS**

### **BACKGROUND:**

A primary responsibility of the Water and Pollution Control Department is to ensure an adequate source water supply for the City of Ames and to protect existing wells from known sources of contamination. Of particular concern is the Southeast Well field (See *attached Map A*) and Youth Sports Complex well field (See *attached Map B*). These well fields are comprised of a shallow, unconfined alluvial aquifer that has minimal overburden protecting it from contamination.

Currently, Ames *Municipal Code* Chapters 23 (Subdivisions) and 29 (Zoning) require all new developments within the City to meet storm water design requirements that prohibit an increase in the rate of runoff for 5-year, 10-year, 50-year, and 100-year design storm events. This is typically accomplished by constructing storm water detention basins. Iowa Department of Natural Resources (IDNR) separation criteria for new wells require 1,000 feet from any lagoons.

Based on past correspondence regarding the Super Wal-Mart site development and more recent correspondence with IDNR, any storm water detention or bioswale that is subject to contamination from storm water would be required to meet the same site separation distance as a lagoon. If an existing well were to fail, the City would not be allowed to re-drill a replacement well within 1,000 feet of a storm water detention basin. Super Wal-Mart was required to be platted and storm water quantity requirements were **waived** in lieu of storm water quality requirements as agreed upon by the developer and City staff and approved by City Council. Super Wal-Mart's bioswale is designed to only take rooftop water and is not considered a potential contaminant source.

Recently, a proposed development at 205 Southeast 5<sup>th</sup> Street (PETCO, Inc.) came before the City's Development Review Committee and staff determined that a minor site plan was required. In order to waive storm water quantity requirements, the developer applied for a variance from the Zoning Board of Adjustment (ZBA). The ZBA subsequently denied PETCO's request to waive the requirement. In that instance, the developer could likely meet storm water quantity requirements but was working informally with City staff to address concerns over wellhead protection which prevented storm water detention. Currently, there is nothing in either the zoning code or subdivision code that addresses the ability to use storm water quality in lieu of storm water quantity in these areas of concern.

Examples of water quality based treatment include vegetative filter strips, vegetated swales, sand filters, porous paving and mechanical separators. The intent of quality-based treatment is to treat 90% of typical storm events in central Iowa. Quality-based treatment alternatives will be designed in accordance with the Iowa Stormwater Management Manual.

Ames water utility customers have invested in our source water infrastructure, and the purpose of the proposed text amendment is to continue to protect that investment. The three main goals of the proposed text amendment to Chapters 23 and 29 are as follows:

1. Put protective measures in place based on requirements in the *Iowa Administrative Code* [567] Chapter 43 that preserves the ability to re-drill a well in the same location in the Southeast and Youth Sports Complex Well Fields. (See *attachments for Iowa Administrative Code*)
2. Allow coordination between Public Works, Planning & Housing, and Water & Pollution Control to provide more clarification to developers on storm water requirements within this area of concern and to allow storm water quality-based treatment in lieu of storm water quantity-based treatment or some appropriate combination.
3. Allow development to occur along the South Duff Avenue commercial corridor without jeopardizing the long-term water supply for the community.

In order to meet these goals, the proposed language for Chapter 23 (Subdivisions) is as follows (underlined is new text):

#### **Sec 23.401 SITE DESIGN STANDARDS**

- (8) Water Supply Protection: In order to protect the existing and future source water supply for the city, the following improvements and uses will be prohibited 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.
- (a) Including, but not limited to, borrow areas, pits, ponds, fountains, lagoons, storm water detention ponds, and mining operations.
  - (b) Permanent excavation below existing grade. Temporary excavation will be allowed for certain purposes. These include, but are not limited to, footings, basements, and installation of utilities.

In addition, any proposed improvement or use shall not be in violation of separation criteria for sources of contamination specifically listed in Table A, 567, Iowa Administrative Code section 43.3(7).

## **Sec. 23.407 STORM WATER MANAGEMENT**

- (2) Storm Water Management Design Standards: Storm water management design shall include grading, facilities or improvements or some combination thereof, which results in no increase in the rate of runoff when compared to the undeveloped condition of the area to be subdivided. The rainfall frequencies that shall be incorporated in the design of the storm water management system shall include the five year, ten year, 50 year, and 100 year design storm events. In the case of major subdivisions, the calculations and design of the storm water management system shall be prepared by an engineer licensed to practice in Iowa.
- (a) Exemption. 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.

The same language will be utilized in Chapter 29 (Zoning). This will make this applicable to developments that do not meet the major or minor subdivision criteria.

## **Sec. 29.406 OFF STREET PARKING**

### **(11) Improvements of Off-Street Parking Areas.**

- (c) Storm Water Management Design Standards: Storm water management design shall include grading, facilities or improvements or some combination thereof which results in no increase in the rate of runoff when compared to the undeveloped condition of the area to be developed. The rainfall frequencies that shall be incorporated in the design of the storm water management system shall include the five year, ten year, 50 year and 100 year design storm events. The calculations and design of the storm water management system shall be prepared by an engineer licensed to practice in Iowa.
- (Ord. No. 3591, 10-10-00)*
- (i) Exemption. 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.

## Sec. 29.408 OTHER GENERAL DEVELOPMENT STANDARDS

- (8) **Water Supply Protection.** In order to protect the existing and future source water supply for the city, the following improvements and uses will be prohibited 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.
- (a) Including, but not limited to, borrow areas, pits, ponds, fountains, lagoons, storm water detention ponds, and mining operations.
  - (b) Permanent excavation below existing grade. Temporary excavation will be allowed for certain purposes. These include, but are not limited to, footings, basements, and installation of utilities.

In addition, any proposed improvement or use shall not be in violation of separation criteria for sources of contamination specifically listed in Table A, 567, Iowa Administrative Code section 43.3(7).

One main issue brought up at the Zoning Board of Adjustment meeting was that, by waiving storm water quantity requirements for the 205 Southeast 5<sup>th</sup> Street development, site flooding downstream on other properties would occur. Staff has reviewed the merits of this issue and believe that, because of the limited amount of developable area affected by the proposed ordinance and the proximity to the South Skunk River, waiving the storm water quantity requirement would have little to no effect on flooding downstream during minor storm events, which is where detention has the most effect this close to the floodplain.

Another possible concern is the cost of doing storm water quality based treatment. Staff is in the beginning stages of requiring both storm water quantity- and quality-based management for all new developments, so this may become the standard in the near future for the City of Ames. Thus, the cost of development due to this ordinance revision would be minimal. Staff believes that the proposed changes are necessary to protect existing water sources, and that they are consistent with the following objectives of the Land Use Policy Plan.

**Land Use Policy Plan.** *(See attachments for full text)* As evidenced in the Land Use Policy Plan, Goals for a New Vision, in Chapter 1, Planning Base, Goal #3, (page 16) objective 3.C., it is the City of Ames' intention to protect aquifers:

"Ames seeks to protect and conserve its water resources for the following purposes: aquifer protection; water quality protection; user conservation management; plant and animal life support; water-borne recreation; scenic open space; and, provision of a long-term/reliable/safe source of water for human consumption and economic activities."

Also, in Chapter 4, Environmental (page 76), it is the City of Ames' intention to further develop regulations that are more site specific in protecting aquifers:

“With respect to water resources, more detailed Storm water Management Planning on a watershed level will likely be needed. To protect the water resources, mitigation measures such as storm water quality ponds and other Best Management Practices will be required as development within a watershed occurs.”

**Recommendation of the Planning & Zoning Commission.** At its meeting of August 5, 2009, with a vote of 4-0, the Planning and Zoning Commission recommended approval of the text amendment to Ames *Municipal Code* Chapters 23 (Subdivisions) and Chapter 29 (Zoning). Scott Renaud, FOX Engineering, was present on behalf of four property owners. Mr. Renaud stated that this was a reduction of property rights for those owners he was representing. The staff explained that the only use that would be removed under this proposal would be “mining.” The other restrictions have to do with site development excavations. The staff recognized the concern and further explained that it is fully within the City’s authority to protect community resources using development standards and use restrictions. This approach is consistent with how many communities protect airport approach paths or require buffering of environmental resources. Now that new information is available to the City regarding the vulnerability of the groundwater supply, it is the City’s goal to implement protection measures on a more consistent basis.

Mr. Renaud also stated that the city is basing this proposal on the broad interpretation of the word “lagoon” as stated by only one IDNR (Iowa Department of Natural Resources) official. The staff’s response was that the City depends on the IDNR as the authority for permitting new wells and therefore must rely on this person’s interpretation.

**ALTERNATIVES:**

1. The City Council can adopt the text amendments as described above.
2. The City Council can adopt the text amendments described above with modifications.
3. The City Council can decide not to adopt the proposed text amendments.
4. The City Council can refer this issue to staff for further information.

**MANAGER’S RECOMMENDED ACTION:**

It is important that the City take appropriate measures to protect the community’s source water supply. Amendments to these two chapters will provide protection of our current and potential future investments in source water, while at the same time allow for continued development along the South Duff Avenue commercial corridor. The proposed ordinance revisions seek a balance between source water protection, storm water management and continued development. The proposed amendment implements

the policies of source water protection within the Land Use Policy Plan that have, thus far, been unclear to the development community.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving the above text amendments to Ames *Municipal Code* Chapters 23 (Subdivisions) and Chapter 29 (Zoning).

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE TO AMEND THE SUBDIVISION REGULATIONS OF THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTIONS 23.401 AND 23.407 TO INCLUDE 23.401(8)(a)(b), AND 23.407(2)(a), THEREOF, FOR THE PURPOSE OF PROVIDING PROTECTION OF CURRENT AND POTENTIAL FUTURE INVESTMENTS IN SOURCE WATER; 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 amending Sections 23.401, and 23.407, to include 23.401(8)(a)(b), and 23.407(2)(a) as follows:

**“Sec 23.401 SITE DESIGN STANDARDS**

\* \* \*

(8) **Water Supply Protection:** In order to protect the existing and future source water supply for the city, the following improvements and uses will be prohibited 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.

(a) Including, but not limited to, borrow areas, pits, ponds, fountains, lagoons, storm water detention ponds, and mining operations.

(b) Permanent excavation below existing grade. Temporary excavation will be allowed for certain purposes. These include, but are not limited to, footings, basements, and installation of utilities.

In addition, any proposed improvement or use shall not be in violation of separation criteria for sources of contamination specifically listed in Table A, 567, Iowa Administrative Code section 43.3(7).

**Sec. 23.407 STORM WATER MANAGEMENT**

\* \* \*

(2) **Storm Water Management Design Standards:**

\* \* \*

(a) Exemption. 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.

Section Two. Violation of the provisions of this ordinance shall constitute a municipal infraction as provided by law.

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

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

Passed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Diane R. Voss, City Clerk  
001023

\_\_\_\_\_  
Ann H. Campbell, Mayor



ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE TO AMEND THE ZONING ORDINANCE OF THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY AMENDING SECTIONS 29.406 AND 29.408 TO INCLUDE 29.406(11)(i), and 29.408 (8)(a)(b), THEREOF, FOR THE PURPOSE OF PROVIDING PROTECTION OF CURRENT AND POTENTIAL FUTURE INVESTMENTS IN SOURCE WATER; 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:

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**“Sec. 29.406 OFF STREET PARKING**

(11) **Improvements of Off-Street Parking Areas.**

(c) Storm Water Management Design Standards:

\* \* \*

(i) Exemption. 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.

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

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

Passed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

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Diane R. Voss, City Clerk  
001022

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Ann H. Campbell, Mayor