

COUNCIL ACTION FORM

SUBJECT: DRAFT SOURCE WATER PROTECTION ORDINANCE

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 are the Southeast Well field (Map A) and Youth Sports Complex well field (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 SE 5th 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.

Ames water utility customers have invested into our source water infrastructure and the purpose of a proposed text amendment is to continue to protect that investment. There are three main goals of a proposed text amendment to both Chapter 23 and Chapter 29:

- 1) Put protective measures into 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.
- 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 allow storm water quality based treatment in lieu of storm water quantity based treatment.
- 3) Allow development to occur along South Duff Avenue corridor without jeopardizing the long-term water supply for the community.

One main issue brought up at the Zoning Board of Adjustment meeting was that, by waiving storm water quantity requirements for the 205 SE 5th Street development, site flooding downstream on other properties would occur. Staff has reviewed the merits of this issue and feel 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 will be minimal.

Since 2005, staff at the Water & Pollution Control Department has been working with Dr. Bill Simpkins of Iowa State University to develop a better understanding of the maximum sustainable drought yield for the Ames aquifer. The same model will be used to evaluate how water reaches each of the City's wells. From this, capture zones for each well field can be developed to determine the length of time water from the surface reaches the well field, such as a 6 month or 2-year capture zone. Once this study is complete, it is the goal of the department to recommend a more extensive source water protection ordinance by creating an aquifer protection overlay that would limit certain land uses that could contaminate the aquifer within these designated capture zones.

ALTERNATIVES:

1. Direct staff to develop the appropriate text amendments to Ames Municipal Code Chapters 23 (Subdivisions) and Chapter 29 (Zoning) that will protect the city's

ability to re-drill a well based on separation distances listed in the Iowa Administrative Code [567] Chapter 43.

2. Direct staff to not address this issue at this time.

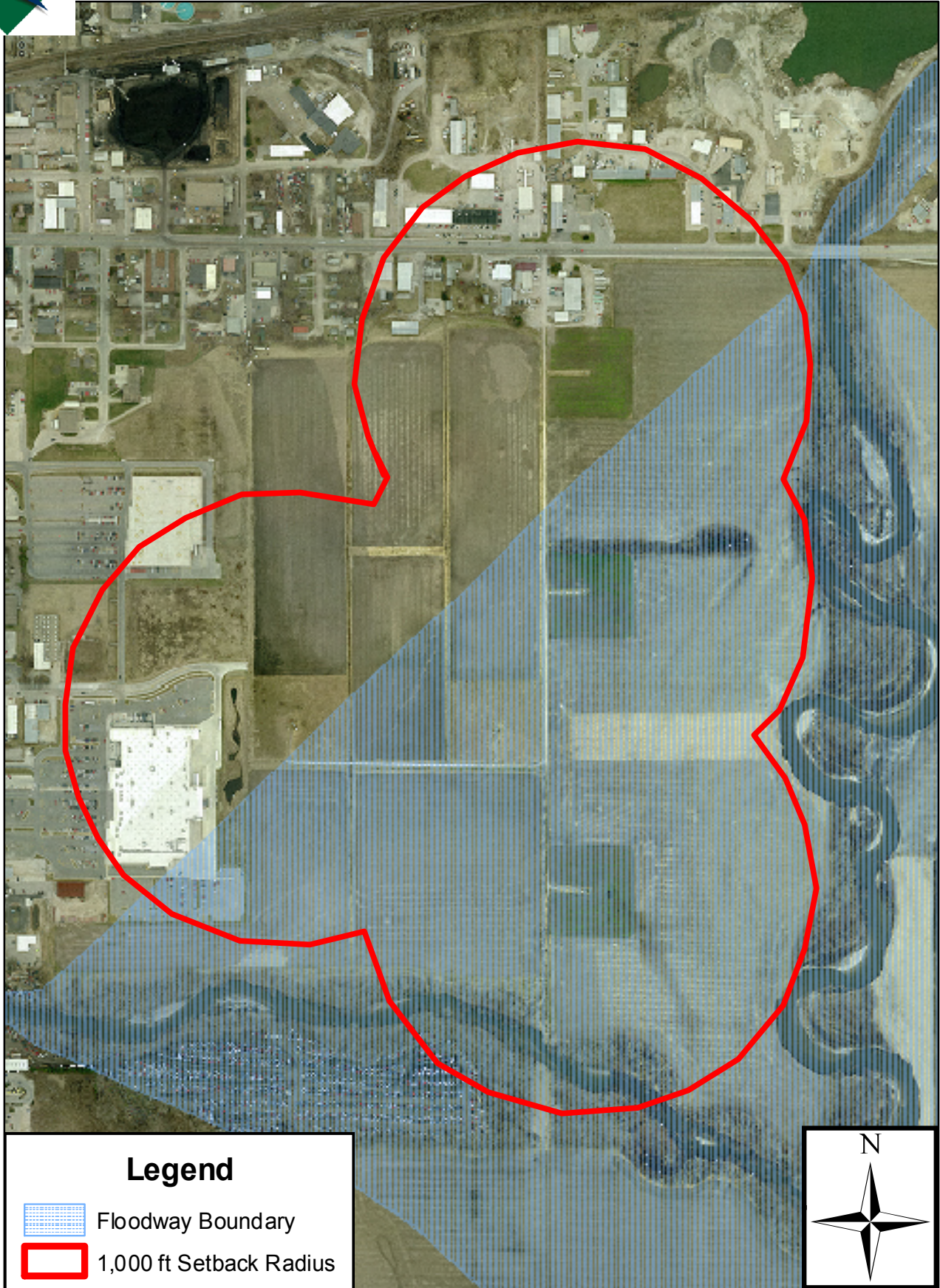
MANAGER’S RECOMMENDED ACTION:

It is important that the City take appropriate efforts 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 corridor. The proposed ordinance revisions seek a balance between source water protection, storm water management, and continued development.



Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby directing staff to develop appropriate text amendments to Ames Municipal Code Chapters 23 (Subdivisions) and Chapter 29 (Zoning) that will protect the City’s ability to re-drill a well based on requirements found in the Iowa Administrative Code [567] Chapter 43. Staff will present the proposed changes to the Planning and Zoning Commission for their review and recommendation prior to bringing the Code amendments to the City Council for approval.

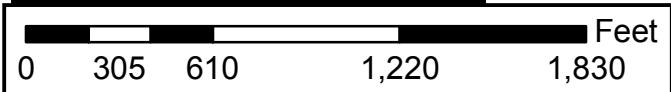
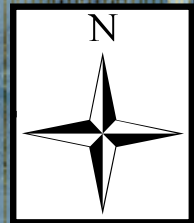


Map A: Southeast Well Field



Legend

-  Floodway Boundary
-  1,000 ft Setback Radius





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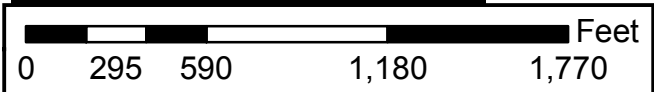
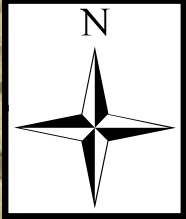


Map B: Youth Sports Complex Well Field



Legend

-  Floodway Boundary
-  1,000 ft Setback Radius



07/07/2009