

**COUNCIL ACTION FORM**

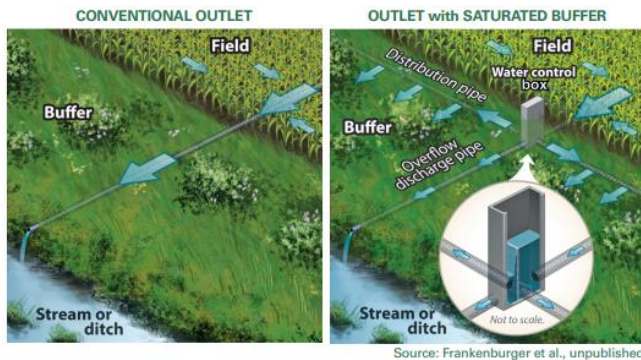
**SUBJECT: FUNDING AGREEMENTS ASSOCIATED WITH STORY COUNTY EDGE OF FIELD PROJECT**

**BACKGROUND:**

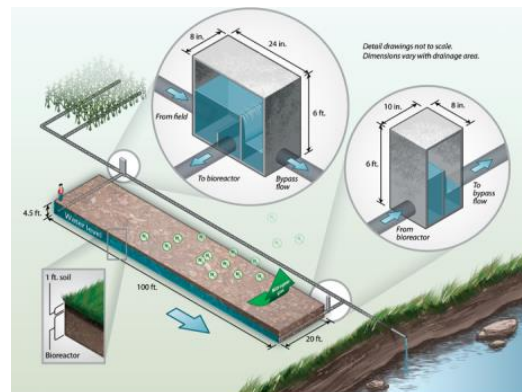
The Water Pollution Control Facility (WPCF) is being converted to a nutrient removal treatment technology over a period of 20 years. Separate from the work that will occur inside the treatment plant, watershed-based improvements performed by the City can be “banked” as credit toward any future, more stringent nutrient reduction regulations imposed on the WPC Facility. On February 24, 2021, staff executed a Memorandum of Understanding (MOU) with the Iowa Department of Natural Resources to allow these off-site nutrient reductions to be banked with the Iowa Nutrient Reduction Exchange.

Over the past 18 months, staff has developed a partnership with multiple entities to bundle together Edge-of-Field (EOF) practices that can be bid as a single bid package. The first year of the project is nearing completion with 22 tile outlets in Story County being treated by either saturated buffers or bioreactors. These practices allow natural removal of nitrogen from subsurface drainage before it enters a stream or other surface waters. Additional information about these practices is shown below.

**Saturated Buffers**



**Bioreactors**



A saturated buffer is an area of perennial vegetation between agricultural fields and waterways where tile outlets drain. Tile lines connect to a control structure, which distributes water laterally along the buffer. As water drains into the buffer, the living roots of perennial vegetation absorb water and nutrients, like nitrogen. According to the Iowa Nutrient Reduction Strategy, a saturated buffer has the potential to remove 50% of nitrogen from water that is diverted through the buffer.

A bioreactor is a buried trench on the edge of a farm field that is traditionally filled with woodchips. Drainage tiles outlet into the woodchips where bacteria convert nitrogen in tile water into nitrogen gas. According to the Iowa Nutrient Reduction Strategy, a bioreactor, on average, removes 43% of nitrogen from water diverted through it.

The success of the project's first year was due in large measure to the collaboration between City staff and Story County, Story County Conservation, Story County Soil & Water Conservation District (SWCD), and the Iowa Department of Agricultural and Land Stewardship (IDALS). **Staff from the Water & Pollution Control Department are again working in collaboration with these groups to develop a project involving 20 to 30 installations, each treating tile drainage from fields ranging in size from 20 to 100 acres.**

**The City of Ames will act as the fiscal agent for the proposed project. This will include receiving funds from the different partners, procuring necessary temporary easements, and then contracting for the work to be performed. The funding for this project will consist of 75% from IDALS and 25% split equally between the City and Story County. The estimated cost for the City's share is \$50,000 which will come from the Watershed Based Nutrient Reduction Capital Improvements Project, which sets aside \$200,000 per year for watershed-based projects.**

Two separate agreements have been developed to achieve the sharing of funds and resources: one with IDALS and SWCD and a separate agreement with Story County/Story County Conservation. Both IDALS and Story County will provide funding, while Story County SWCD will provide resources to execute the individual maintenance agreements with each landowner. City staff has coordinated with the Legal Department and each entity to review the agreements. Both agreements (attached) have been finalized and are now ready for approval by City Council.

With assistance from various entities, initial property owner meetings have been completed, and final landowner meetings are anticipated to take place in the coming months. Each landowner will be required to sign a 10-year maintenance agreement and allow temporary access to their property during construction, for which they will be compensated. Following landowner meetings, staff intends to bring preliminary plans and specifications to City Council for approval and to issue a Notice to Bidders for construction during the spring or summer of 2023.



**ALTERNATIVES:**

1. A. Approve a 28E agreement for fiscal agent assistance with the Iowa Department of Agricultural and Land Stewardship – Division of Soil Conservation and Water Quality, City of Ames, and Story County Soil & Water Conservation District.  
  
B. Approve an agreement between Story County, Iowa, Story County Conservation Board, and the City of Ames, for funding assistance for water nutrient removal practices.
2. Do not approve either agreement. The City would not be eligible to receive nutrient reduction credits for these specific projects.

**CITY MANAGER’S RECOMMENDED ACTION:**

The Ames Water Pollution Control Facility will be converted to a nutrient removal treatment technology over a period of 20 years. To mitigate future investment beyond what is already planned for, watershed-based projects can be performed, and the resulting nutrient reduction credits can be banked. Following project completion, the City will register each of these practices and receive annual nutrient reduction credit for the lifespan of each practice.

Funding agreements have been developed for the second year of the Story County Edge of Field Project and are ready for Council to approve. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as described above.