ITEM # 31
DATE: 07-26-22

COUNCIL ACTION FORM

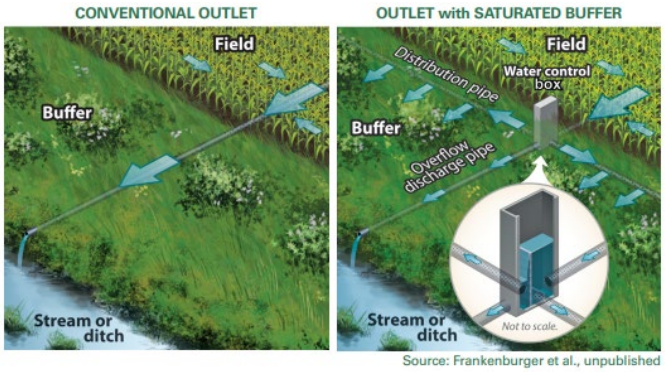
SUBJECT: AWARD OF CONTRACT FOR THE STORY COUNTY EDGE OF FIELD PROJECT

BACKGROUND:

The Water Pollution Control (WPC) Facility is being converted to implement nutrient removal treatment technology over a period of 20 years. Separate from the work that will occur at 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 year, staff has developed a partnership with multiple entities to bundle multiple Edge-of-Field (EOF) practices into a single bid package. This project will construct EOF practices in Story County, consisting of four saturated buffers and five bioreactors that will treat 22 agricultural tile outlets. These practices allow for the natural removal of nitrogen from subsurface drainage before it enters a stream or other surface waters. Additional information about these practices is shown below.

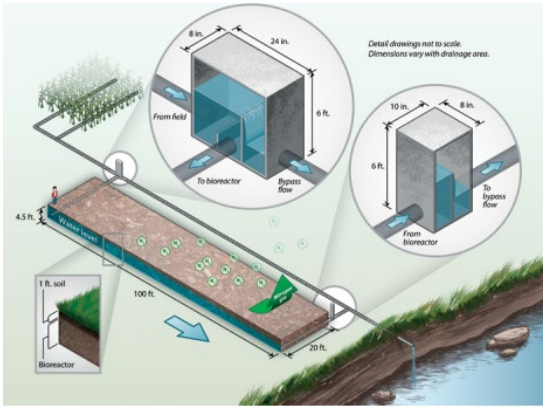
Saturated Buffers



Source: Frankenburger et al., unpublished

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.

Bioreactors



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.

In addition to the nutrient reduction benefits provided by these practices, they also provide a small measure of mitigation against both droughts and floods by holding water on the landscape longer.

On June 14, 2022, Council issued a Notice to Bidders for the construction of the four saturated buffers and five bioreactors in Story County. On July 13, 2022, staff opened bids for the project. One bid was received and is shown below along with the Engineer's Estimate:

Bidder	Total Project Bid Price
Engineer's Estimate	*$217,105.00*
Hands On Excavating, LLC	$240,389.42

In addition to the construction costs, payments of $1,000 per treated agricultural tile outlet are being made to the landowners. In exchange, each landowner is granting the City a temporary construction easement and providing land use information that will allow the City to accurately determine nutrient reductions. The total cost of these easement payments is $22,000.

City staff has negotiated a construction phase engineering services contract with JEO Consulting Group, Inc. The scope of the contract covers construction staking/observation and providing documentation necessary for entering the projects into the Nutrient Reduction Exchange. JEO Consulting Group, Inc. performed all design services for this project and staff is confident in their ability to also perform the requested construction phase services. The cost associated with this contract is $19,450.

The revised total project cost is as follows:

Construction	$240,389.42
Easement Payments	$22,000.00
Engineering Services - Construction Phase	$19,450.00
Total Project Cost	$281,839.42

The City of Ames is acting as the fiscal agent for the project and external funding is being provided by the Iowa Department of Agricultural and Land Stewardship (IDALS), Natural Resources Conservation Service (NRCS), Story County Conservation, and the Story County Soil and Water Conservation District. **In total, $249,634.37 of external funding has been secured for the project.**

A summary of the external funding is as follows:

Iowa Department of Agriculture and Land Stewardship	$126,456.85
Natural Resources Conservation Service (USDA)	$92,493.00
Story County Conservation	$26,480.05
Story County Soil and Water Conservation District	$4,204.47
Total External Funding	$249,634.37

This project is included in the FY 2022/23 WPC Capital Improvements Plan as part of the Watershed-Based Nutrient Reduction. Currently, $480,000 is available in the project fund. **The City's share of the construction, easement, and construction phase engineering costs is $32,205.05.** This is slightly higher than the $27,150 estimate shown in the June 14, 2022, Council Action Form at the time the Notice to Bidders was issued. Increased contributions from IDALS and NRCS offset the majority of the cost increase.

ALTERNATIVES:

1. Award a contract for the installation of four saturated buffers and five bioreactors to Hands On Excavating, LLC of Radcliffe, Iowa, for $240,389.42.

2. Do not award a contract at this time and provide direction to staff on the future of the Watershed-based Nutrient Reduction Project.

CITY MANAGER'S RECOMMENDED ACTION:

The 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. This project will treat 1,200 acres and reduce nitrate runoff by 45% on average. Following project completion, the City will register each of these practices and receive annual nutrient reduction credit for the lifespan of each practice. The work was bid in accordance with the City's adopted Purchasing Policies. The low bidder successfully performed nearly identical work for Polk County last year, and staff is comfortable with their expertise in this type of work.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as described above.