

COUNCIL ACTION FORM

SUBJECT: **LOW-HEAD DAM SAFETY COST-SHARE GRANTS**

BACKGROUND:

The City of Ames constructed a low-head dam in 1984 in order to create a pool of water in the primary recharge zone for the City's Downtown Well Field thereby providing a means to increase the capacity of these wells during periods of drought. This dam replaced temporary sand dams constructed in the 1970s for the same purpose. While the City has never promoted recreation at the dam, it is evident that the low-head dam attracts members of the public who use the area for recreation.

Low-head dams can pose a serious hazard due to the recirculation effect which occurs immediately downstream. This hazard is caused by the uniform hydraulics as the water flows over the top of the dam. Without something to break up the uniform hydraulics, a dangerous undertow can be created. Once caught in the uniform flow, it is easy for a water vessel to capsize and become caught in the recirculation.

A project to improve the safety of this piece of infrastructure, one that is critical to the overall management of the Ames drinking water supply, was first proposed in 2008. The original concept was to place a small number of large boulders on the downstream apron of the dam to break up the dangerous recirculation effect. The design has undergone several changes since 2008, and has been expanded to provide additional aquatic and recreational benefits, but the expansion has also increased the cost of the project.

In April 2016, RiverRestoration.org was awarded a contract in the amount of \$102,499 to begin design on the project. Prior to the start of design, staff hosted a stakeholder input meeting where representatives from the Skunk River Paddlers, Iowa Department of Natural Resources, Prairie Rivers of Iowa, Parks & Recreation Commission, and an adjacent property owner were able to learn about the project and help develop a list of project goals beyond the first and foremost goal of improved safety.

In March 2017, staff were authorized by City Council to move forward with Alternative C which is the full completed vision for the project that includes both in-channel improvements and bank improvements. Council also authorized an additional \$150,000 from the FY16/17 General Fund available balance and an additional \$150,000 from the Source Water Protection Plan CIP project to the North River Valley Low Head Dam Improvements CIP project.

Staff has submitted multiple grant applications to both state and federal programs. Recently, staff were notified that the City will receive an additional \$112,901 Low Head

Dam Mitigation Grant Funding and \$120,000 from the Water Trail Enhancement Grant Fund. All of these grants require a 50/50 local funding match. This brings total grant funding secured to date for the project to \$392,901.

Current funding for the project is as follows:

Grant Funds

Low Head Dam Safety Grant (2009)	\$ 75,000	
Low Head Dam Safety Grant (2016)	\$ 85,000	
Low Head Dam Safety Grant (2017)	\$112,901	
Water Trails Enhancement Grant (2017)	\$120,000	
Subtotal		\$392,901

Local (City) Funds

Water Utility Fund – FY 13/14 CIP	\$ 75,000	
Water Utility Fund – FY 16/17 CIP (from Source Water CIP Project)	\$150,000	
Parks System Improvements - FY 15/16 CIP Add Recreation Features	\$ 40,000	
Local Options Sales Tax	\$ 60,000	
General Fund (FY 16/17)	\$150,000	
Subtotal		\$475,000

In-Kind Donations

Manatts of Ames (asphalt restoration) – possible	\$ 8,000	
Martin Marietta (rock donation) - possible	\$ 32,000	
Iowa Whitewater Coalition - confirmed	\$ 1,000	
Hawkeye Fly Fishing Assoc. – confirmed	\$ 1,000	
City of Ames Park & Recreation staff (tree removal, excavation hauling)	\$ 75,000	
Subtotal		\$117,000

Total Available Funding **\$984,901**

The current estimated cost of the project including engineering is \$844,500. Any in kind donations secured will offset the funds needed by the City to match the grants awarded, and will be used to reduce the contribution from the Water Fund.

The current proposed timeline for the project is as follows:

Summer 2017	Finalize Design/Obtain permits
Fall/Winter 2017	Bidding and Construction

On November 16, 2016, staff hosted a public meeting on the project. Those in attendance showed tremendous support for Alternative C, knowing that funding for the project could be challenging and could result in a delay as additional funds were raised.

The following evening, staff met with the Parks and Recreation Commission who also indicated their preference, if the City was going to do a project, it should pursue Alternative C.

This project continues to be of high interest by several groups, including the Skunk River Paddlers, Hawkeye Fly Fishing Association (HFFA), Story County Conservation, Prairie Rivers of Iowa, Linda Manatt & Family, Iowa Department of Natural Resources, and other groups and interested citizens. City staff has continued to inform and engage in discussion with those interested in the project. City staff asked for letters of support for a grant application and within 48 hours received 20 letters of support from various organizations and citizens.

The driving concerns for the project continue to be recreation, fish passage, water quality, and most importantly improving safety. This project has the potential to create a unique and safe opportunity for the Ames community to enjoy the river.

The two most recent grant agreements with the Iowa Department of Natural Resources are now ready for Council approval and acceptance.

ALTERNATIVES:

1. a. Approve a resolution to enter into the grant agreement with the Iowa Department of Natural Resources Low Head Dam Mitigation Grant Program in the amount of \$112,901.

b. Approve a resolution to enter into the grant agreement with the Iowa Department of Natural Resources Water Trail Enhancement Grant Program in the amount of \$120,000.
2. Do not enter into any grant agreements at this time.

MANAGER'S RECOMMENDED ACTION:

As a result of the inherent danger of the City's low-head dam in North River Valley Park, staff has continued to pursue a modification to the dam that will significantly reduce the downstream recirculation effect. Staff has reviewed and agreed upon a preliminary design concept that will offer an opportunity to not only increase the safety associated with the City's low-head dam, but also create a unique recreational facility at a quality worthy of this community. Although the City has never promoted recreation at the dam, staff understands the attraction and potential danger of activities which are undertaken by both experienced recreational enthusiasts and by those experiencing the river for the first time.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as described above. Staff will continue to engage with vested stakeholders as the project moves forward.