

COUNCIL ACTION FORM

SUBJECT: **LOW HEAD DAM SAFETY COST SHARE GRANT**

BACKGROUND:

In 1984, the City constructed a low-head dam in North River Valley Park. The sole function of this dam was to create a pool of water in the primary recharge location for the City's downtown well field during drought conditions.

The process for proposed modifications to this dam began in March, 2008 when the City Council received a letter from a representative of the Skunk River Paddlers outlining the inherent dangers of low-head dams. In 2009, City staff secured \$75,000 in funding from the Iowa Department of Natural Resources (DNR) to improve safety at the dam. At the time, City staff did not have a complete design concept that met all the necessary requirements, and the City did not formally enter into the grant agreement with the Iowa DNR in 2009. However, the City did formally accept the grant in May 2015 once an acceptable design concept had been developed.

Over the past six years, City staff continued to work with the DNR to try and resolve some of the outstanding design issues to move the project forward. Some of these issues included finding an engineer to sign and seal the planned modifications, and meeting the "no rise" requirement for work taking place in the flood way. In 2008 when the project started, the City was one of the first in the state to consider a modification of this nature; most of the similar modifications that had been done were out of state. City staff does not have the requisite expertise and was uncomfortable signing the engineering certification for the design.

Since 2008, several low head dam modification projects have taken place in Iowa, including Manchester, Elkader, Story City, Boone, and Charles City; and there are now engineering firms that will do this type of work. DNR worked to develop some alternatives so the "certificate of no rise" can be issued. An acceptable alternative has been identified that would remove a portion of the south wing wall of the dam and cut back the south bank of the river. This will still allow the dam to serve its primary function, and the modification has been agreed upon by City staff.

The design has undergone several changes since 2008 which improved safety, but also increased the cost of the project. The original concept was to place a small number of large boulders on the downstream apron of the dam, mitigating the deadly recirculation effect that low head dams can create. **The revised concept is now a rock arch rapids design that has been successful in other locations. This design will withstand high water events better, and also functions as a "fish ladder," allowing fish and other aquatic life to migrate upstream past the dam.**

In the fall of 2014, during discussions for meeting the “certificate of no rise” criteria, DNR staff suggested the City consider adding some additional recreational opportunities to the new design. The additional features proposed would help improve bank access, increase shoreline fishing access, and provide a possible whitewater feature to the last weir of the rock arch rapids. City staff met internally to discuss the options, and then approached the Parks and Recreation Commission to ask for additional input and funding for these types of features. Several members of the community representing various stakeholder groups attended the meeting and voiced their support of the project and the additional recreational features. The Commission was also in favor, and supported inclusion of additional funds in the FY 15/16 Capital Improvements Plan which was subsequently approved by City Council.

In December 2015, staff submitted another funding request to the DNR to cover an additional \$85,000. This amount would cover the engineering fees needed to design the project and cover the additional funding gap for the project. Staff had originally hoped design would be handled by the DNR; however, a significant backlog of existing projects was going to delay this project at least 12 months or more. At the recommendation of the DNR, staff submitted the request for the additional funds to help move the design forward in a timely manner. Staff was notified on March 11 that the additional funding request was approved. **The grant agreement with DNR is now ready for Council approval and acceptance.**

Current funding for the project is as follows:

Water Utility Fund - FY 13/14 CIP	\$75,000
Low Head Dam Safety Grant (2009)	\$75,000
Low Head Dam Safety Grant (2016)	\$85,000
In-Kind Donations	
Manatts of Ames (asphalt restoration)	\$ 8,000
Martin Marietta (rock donation)	\$32,000
Parks System Improvements - FY 15/16 CIP	
Add Recreation Features	\$40,000
Total	\$315,000

A preliminary estimate of the proposed cost for the project is as follows:

Construction (2012 Estimate)	\$183,000
Additional Recreation Features	\$ 35,000
Additional Concrete Wall Work	\$ 15,000
Engineering (dam + recreation features)	\$ 55,000
Contingency	\$ 10,000
Total	\$298,000

The current proposed timeline for the project is as follows:

April 2016	Approve IDNR Grant Agreement
April/May 2016	Engineering Consultant Selection
Summer 2016	Public Input Meeting
Fall/Winter 2016	Finalize Design/Obtain permits
Spring/Summer 2017	Bidding and Construction

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, and other groups and interested citizens. City staff has continued to inform and engage in discussion with those interested in the project. Now that the project is slated to move forward, staff intends to host another public open house once a design consultant is on board. Staff then will meet with interested stakeholders at intervals in the design process to gather feedback on the design. Staff will also continue to meet with Parks and Recreation staff and the Commission to go over the impacts to North River Valley Park. These interested stakeholders have continued to express a desire to complete this project.

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.

ALTERNATIVES:

1. Enter into the Iowa DNR Low Head Dam Safety Grant agreement in the amount of \$85,000.
2. Do not approve the agreement at this time and direct staff to find alternative funding sources.

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 both improve safety and provide improved fish passage, fishing access, and recreational opportunities for the Ames community, all while maintaining the integrity and intended purpose of the dam. 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 into the design phase.