

COUNCIL ACTION FORM

**SUBJECT: NORTH RIVER VALLEY PARK LOW HEAD DAM IMPROVEMENTS -
FEDERAL TRAILS GRANT APPLICATION**

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, providing a means to increase the capacity of these wells during periods of drought. This dam replaced temporary sand dams constructed in the 1970's 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 of the dam. 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 person to become caught in the recirculation and drown.

A project to improve the safety of this piece of infrastructure 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 which expanded the project to provide additional aquatic and recreational benefits, but that also increased the cost of the project.

In April 2016, RiverRestoration.org was identified as the preferred firm based on their prior work and a contract was approved by Council 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 and 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.

River Restoration developed three alternatives for the project.

- Alternative A is a project that addresses only the safety concern and is within the scope of current project funds available.
- Alternative B allows for additional in-channel improvements by creating two separate flow paths; one to allow aquatic species passage, and another to allow

boat passage during certain flow levels in the South Skunk River. The idea behind this alternative was to provide additional recreational opportunities and improved aquatic habitat, secondary goals that are important to the stakeholder groups.

- Alternative C is the full completed vision for the project that includes the same in-channel improvements as Alternative B, but provides additional amenities along the bank side. This alternative meets all of the primary and secondary objectives of the project. The full estimated projects costs are as follows:

| Project Alternatives | Estimated Project Costs |
|-----------------------------|--------------------------------|
| Alternative A | \$347,500 |
| Alternative B | \$537,500 |
| Alternative C | \$844,500 |

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 |

On November 16, 2016 staff hosted a public meeting on the project, presenting the three alternatives. Those in attendance showed tremendous support for Alternative C, but there was also a realistic recognition that funding the project could be challenging. The following evening, staff met with the Parks and Recreation Commission who also indicated that if the City was going to do a project, it should pursue Alternative C.

On November 22, staff discovered that a possible grant opportunity to help offset the significant gap in funding for Alternative C was available, but with a short application deadline of December 1. After careful review, staff pursued the Iowa Federal Recreational Trails Grant Fund Application and submitted a detailed application by the December 1 deadline. **One requirement of the application process is that the governing body must pass a resolution that commits to 20 years of maintenance for any improvement funded by the grant. The resolution must be submitted within 30 days of the application deadline for the City's application to be considered.**

Three other low head dam projects that are part of an existing or planned trail have been funded through this grant program. Grants have been awarded to those projects in

amounts around \$200,000. The grant application submitted by the City was for \$529,500, which is the difference between the current funding and the Alternative C cost estimate. Should the City not receive the full amount requested, staff would pursue additional grant alternatives to help offset the funding gap for this project.

With the caveat that proper funding must first be secured, staff's proposed timeline for the project is as follows:

| | |
|--------------------|--------------------------------|
| Spring/Summer 2016 | Finalize Design/Obtain permits |
| Fall/Winter 2017 | Bidding and Construction |

This project continues to be of high interest to 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. Staff asked for letters of support for the grant application and within 48 hours staff had received 20 letters of support from various organizations and citizens.

While recreation, aquatic life protection (i.e. - fish passage), and water quality are all valuable benefits that will result from this project, the single most important outcome will be improving safety. This project has the potential to create a unique and safe opportunity for the Ames community to enjoy the river.

ALTERNATIVES:

1. Approve a resolution to commit to 20 years of maintenance of project improvements at the North River Valley Park low head dam funded by the Iowa Federal Recreational Trails Program, should the City of Ames succeed in receiving grant funds.
2. Do not approve the requested resolution.

CITY 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 supports a 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.

Staff is working diligently to secure additional funding for the project through grants such as the Iowa Federal Recreational Trails Grant Program. This could result in a delay to the project as additional funds are sought, with no guarantee that sufficient outside funding would be obtained to allow the full Alternative C. However, the level of support for Alternative C at the November 16th public meeting has encouraged staff to continue to pursue sources of outside funding.

The Federal Recreational Trails program has provided grants to other low head dam projects. For the City's application to be considered, however, a Council resolution guaranteeing the maintenance of the improvement is required.

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