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**Title:** Approval of contracts to begin design work for the Devonwood Lower Dam Reconstruction

**Sponsors:**

**Indexes:**

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**Attachments:** 1. CPO 2017-52 (Devonwood Lower Dam), 2. Devonwood Lower Dam Condition Letter\_Sealed\_12012016, 3. Freese & Nichols - Devonwood Lower Dam - Project Management, 4. WK Dickson - Devonwood Lower Dam - Design, 5. eng\_report\_narrative\_10\_10\_17

Date	Ver.	Action By	Action	Result
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**TO:** Mayor and Members of City Council

**THRU:** Kristoff Bauer, Deputy City Manager

**FROM:** Rob Stone, PE, Public Services Director  
Tracey Broyles, Budget and Evaluation Director

**DATE:** February 26, 2018

**RE:** Approval of contracts to begin design work for the Devonwood Lower Dam Reconstruction

**COUNCIL DISTRICT(S):**  
Districts 9

**Relationship To Strategic Plan:**

- Goal 1: Safe and secure community
- Goal 3: High quality built environment
- Goal 4: Desirable place to live work and recreate

**Executive Summary:**

Devonwood Lower Dam (located on McFadyen Drive) was damaged by Hurricane Matthew on October 8, 2016. Funding for repair of the dam was appropriated by Council on April 24, 2017 under Capital Project Ordinance 2017-52 (\$3,279,200) with the expectation that the project would be reimbursed by FEMA. To date, FEMA has not committed to reimbursement for this project. The City, however, faces a time constraint due to federal regulations and must begin design of the project now to avoid potential \$600,000 cost increase from wetland mitigation fee requirements. This resolution would authorize the City manager to approve the project management & design contracts in the

absence of a commitment by FEMA.

**Background:**

Hurricane Matthew caused severe damage to multiple roads and dams within the City. One of those structures was the Devonwood Lower Dam, located on McFadyen Drive, which impounds Fleetwood Lake and is maintained by the City of Fayetteville.

Initial site visits by FEMA and City staff identified the damage to the dam and it was placed on the list of structures to be repaired under the FEMA Public Assistance program.

The City performed repairs to ensure traffic safety on McFadyen Drive and prevent erosion on the face of the dam. These repairs were emergency in nature to maintain traffic flow and prevent further damage to the dam. No repair plan was submitted to the North Carolina State Dam Safety Office.

On April 24, 2017, the Council appropriated \$3,279,200 under Capital Project Ordinance 2017-52 for the project.

A follow-up FEMA site visit concluded that the emergency repairs constituted a permanent repair. When City staff explained more work was required, FEMA requested the City conduct an additional engineering evaluation of the dam to demonstrate there was still damage. An engineering evaluation was conducted and submitted to FEMA in October 11, 2017. No response to that submission has been received from FEMA and reimbursement funding for the permanent repair of the Devonwood Lower Dam remains uncertain.

The North Carolina Dam Safety Office reviewed the engineering evaluation and directed that the dam be reconstructed to repair the Hurricane Matthew damage and bring the dam into compliance with current standards and requirements. Consideration of funding sources is not a factor in this directive since it is based on standard dam safety requirements and is not specific to Hurricane Matthew damage.

City staff has coordinated with two design firms to perform project management and engineering design for this project. Following a selection process incorporating Federal guidelines, Freese & Nichols, Inc. was selected to perform project management for all the City's large Hurricane Matthew repair projects and WK Dickson was selected to perform the engineering design work for the Devonwood Lower Dam. The firms are prepared to begin design work as soon as the project is approved.

**Issues/Analysis:**

The lake bed behind this dam, like all dams within the City, is subject to jurisdiction by the Army Corps of Engineers under rules pertaining to waters of the United States. Under this jurisdiction, the Army Corps of Engineers provides a 2-year time limit in which to perform repairs on a failed dam before the lake bed is declared a protected wetland. If declared a wetland, the City would be required to pay additional costs for wetland mitigation in order to complete the project. Wetland mitigation costs are estimated at \$600,000 for this particular site. It is anticipated that if the City can show progress toward completion of the project, such as submission of a design to the Army Corps of Engineers, an extension of the 2-year time limit may be granted. If, however, no action is taken before the expiration of the 2-year time limit, there is no expectation of any opportunity for an extension. The City staff is recommending to begin design work on the project and start coordination

with the Army Corps of Engineers.

Staff will continue to seek an affirmation from FEMA of their commitment to reimburse the City for this permanent repair of damage caused by Hurricane Matthew. Failing to complete the repairs identified by North Carolina Dam Safety Office could result in a directive to repair or breach the dam. That breach activity would be at the City's cost as the City's ownership and maintenance responsibility for this dam is well established.

**Budget Impact:**

If not reimbursed by FEMA, this project would be paid for out of the General Fund.

**Options:**

1. Approve the execution of the contracts for project management and design of the Devonwood Lower Dam.
2. Do not approve the execution of the contracts for project management and design of the Devonwood Lower Dam and provide further direction to staff.

**Recommended Action:**

Staff recommends that Council move to approve the execution of the contracts for project management and design of the Devonwood Lower Dam as presented with the full understanding that the City MAY NOT be reimbursed for this additional work by FEMA.

**Attachments:**

- Capital Project Ordinance 2017-52 (Devonwood Lower Dam Reconstruction)
- Devonwood Lower Dam Condition Letter (initial evaluation from October 2016)
- Devonwood Lower Dam Engineering Report (10/10/2017 evaluation requested by FEMA)
- Project Management Contract with Freese & Nichols
- Engineering Design Contract with WK Dickson