**CITY OF CEDAR RAPIDS, IOWA
CEDAR RIVER FLOOD CONTROL SYSTEM (FCS) MASTER PLAN**

# CHAPTER V: FINANCIAL PLAN



##

**Financial Plan**

The Flood Control System (FCS) Master Plan reflects the design and policy needs of the planned FCS and consists of four main funding components:

1. Federal – US Army Corps of Engineers (USACE) East Side Funding = $117 million
2. State of Iowa Flood Mitigation Funds (IFM) = $267 million (max)
3. Grants = $15 million (as of 2018)
4. Local Funding = Total project costs less federal, state and grant participation

Assuming the State of Iowa funds are fully achieved and no additional grants are received, the estimated local balance of funds is $351 million needed to complete a total $750 million project. As of 2018, the City has funded approximately $9 million in local funds, leaving a balance of approximately $342 million to fund and complete the full FCS project. The sooner this project can be completed, the less construction inflation will affect the project costs.

The City has looked at several scenarios to fund the $342 million local gap and concluded that the funding plan should include the following:

* *Accelerate construction to reduce inflationary costs risk to the local funding component.* Project implementation to date has emphasized acquisition of necessary land for the FCS, clearing environmental and cultural resource obstacles, developing project designs that can be bid individually or in combination with other bid packages depending upon projected cash-flows. Design and implementation teams are mindful and focused on completing designs in a timely manner.
* *Continue to seek grant funds.* Several elements of the FCS are conducive to leveraging outside funds. The proposed 8th Avenue Bridge replacement project, proposed trails and related amenities, exhibit characteristics that are consistent with several identified federal and state competitive grants. Pursuing these funding opportunities leverages additional unanticipated funds and enables the City to commit flood-specific funding for flood related improvements.
* *Continue to identify and implement appropriate cost reductions.* The City has outlined its expectations that the FCS be accredited by FEMA and provide protection to the 2008 flood elevation. Consistent with this direction, several notable changes have been made to reduce costs but not the level of protection. Among the changes are removal of gates at select areas as well as replacing walls and demountable systems with levees.
* *Sell local municipal bonds to partially fund the remaining local share.* The recommended local funding source is to sell municipal bonds to fund a portion of the local share of FCS project costs. Bonding is limited to the City’s debt capacity and any large increase in bonding may result in a property tax increase for properties located inside City limits.

The schedule below provides a funding plan that is mindful of current city operational needs, yet maintains a reserve for unforeseeable capital needs. Issuance of bonds also enables the City and potential partners to leverage funding over a shorter term, resulting in reduction in the inflationary impacts.

After FY 2029 the local funding gap will be approximately $78 million assuming construction inflation has not outpaced initial estimates. This local funding gap will be reviewed to determine what options are available to complete the construction of the flood control system.

**Table V - 1: Municipal Bond Financing FY20-29**

\*For purposes of this document the current bonding of $8 million assumes property tax valuation growth will average 2.5% over the next ten years. This is in line with the previous ten-year growth pattern for Cedar Rapids.

## Project Costs

As planning and design has advanced, the projected costs for the FCS project have been updated to include all elements in the Master Plan and all updated costs based on the revisions to the Master Plan. These revisions include pump station sizing, wall or levee revisions, gate revisions and elevated transportation elements. The estimated budget cost for the FCS is $550 Million based on 2017 dollars**.** The total project with inflation over the 20 year life of the project is estimated at $750 Million.

Initial cost estimates were developed for the 2015 FCS Master Plan. In 2017, a comprehensive system wide cost estimate was completed. This update used prices from projects that had been completed to apply actual costs to plan elements. The estimate also reflects further development of designs. The following is a listing of the project elements that are included in the FCS budget cost:

* Project Costs
	+ Construction Costs
	+ Design Engineering and Outreach
	+ Environmental and Cultural
	+ Construction Engineering
	+ Administration and Management
* Acquisition Costs
	+ Right-of-Way Required for the Flood Control System
	+ Lease Purchase Agreement for a Previously Constructed Project

While these estimates were updated from the original master plan in 2015, many of these project costs are based on a cost per linear foot and pump station estimates.

A breakdown of project elements is presented in Table V - 2. Total project cost including remaining real estate acquisition is located in Table V – 3. The costs for the FCS are in 2017 dollars. It has been estimated that construction inflation will be 3.5% based on historic averages.

## Table V - 2: Cost Estimate (2017 $)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | Levee | Perm. | Demount. Wall [ft] | Gates | Total Length [ft] | Construction Cost | Design Engineering and Outreach8% | Management and Admin.10% | Env. And Cultural2% | Construction Engineering6% | Total Cost Excluding Real Estate (Round to nearest $1M) |
| [ft] | Wall | [ft] |
|   | [ft] |   |
| Reach 1: North Industrial | 1425 | 5,172 | 0 | 323 | 6,920 | $68,000,000  | $5,400,000  | $6,800,000  | $1,400,000  | $4,100,000  | $86,000,000  |
| Reach 2: Downtown | 0 | 2940 | 522 | 430 | 3,892 | $46,000,000  | $3,700,000  | $4,600,000  | $900,000  | $2,800,000  | $58,000,000  |
| Reach 3: New/Bo - Sinclair | 3723 | 693 | 0 | 175 | 4,591 | $18,000,000  | $1,400,000  | $1,800,000  | $400,000  | $1,100,000  | $23,000,000  |
| Reach 4: Cargill South | 0 | 2,725 |   | 160 | 2,885 | $18,000,000  | $1,400,000  | $1,800,000  | $400,000  | $1,100,000  | $23,000,000  |
| Pump Stations and Stormwater Improvements |   |   |   |   |   | $32,000,000  | $2,600,000  | $3,200,000  | $600,000  | $1,900,000  | $40,000,000  |
| **Total East Side** | 5,148 | 11,530 | 522 | 1,088 | 18,288 | $182,000,000  | $14,500,000  | $18,200,000  | $3,700,000  | $11,000,000  | $230,000,000  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Reach 1: Time Check | 6900 | 1,294 | 400 | 383 | 8,977 | $49,000,000  | $3,900,000  | $4,900,000  | $1,000,000  | $2,900,000  | $62,000,000  |
| Reach 2: Kingston Village | 0 | 269 | 1192 | 0 | 1,461 | $27,000,000  | $2,200,000  | $2,700,000  | $500,000  | $1,600,000  | $34,000,000  |
| Reach 3: Ingredion | 1,927 |   |   | 40 | 1,967 | $15,000,000  | $1,200,000  | $1,500,000  | $300,000  | $900,000  | $19,000,000  |
| Reach 4: Czech Village | 2177 | 521 | 0 | 76 | 2,774 | $15,000,000  | $1,200,000  | $1,500,000  | $300,000  | $900,000  | $19,000,000  |
| Pump Stations and Stormwater Improvements |   |   |   |   |   | $68,000,000  | $5,400,000  | $6,800,000  | $1,400,000  | $4,100,000  | $86,000,000  |
| **Total West Side** | 11,004 | 2,084 | 1592 | 499 | 15,179 | $174,000,000  | $11,718,064  | $9,765,053  | $1,953,011  | $10,400,000  | $220,000,000  |

## Table V - 3: Total Project Cost Estimate (2017 $)

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  West  |  East  |
|  **Walls and Levees** |  $ 135,000,000  |  $ 190,000,000  |
| **Pump Stations and Gatewells** |  $ 85,000,000  |  $ 40,000,000  |
| **Real Estate Acquisition** |  $ 20,000,000  |  $ 15,000,000 |
| **Sum** |  $ 240,000,000  |  $ 245,000,000 |
| **8th Avenue Bridge Replacement and****Edgewood Road Bridge Improvements** **(including real estate acquisition)** |  $ 65,000,000 |
|   |  **$ 550,000,000** |
| **Total with inflation at 3.5% for 2034 Completion** |  **$750,000,000** |