Iowa City Project Application

Executive Summary

Problem

Most of the Iowa City North Wastewater Treatment Plant was rendered inoperable by flooding of the Iowa River during the summer of 2008. The biological treatment and chemical disinfection operations of the plant were disabled for over 30 days. Significant efforts by staff and volunteers prevented the total loss of operation of the facility during the flood. Businesses, homes, and public infrastructure surrounding the plant were inundated with flood water. Wastewater that had only undergone brief detention was released downstream.

After the flood the Federal Emergency Management Agency (FEMA) took steps to address the recovery including the development of a long-term community recovery plan. Relocation of the operations of the North Wastewater Treatment Plant, expanding flood capacity, and redeveloping the existing site was identified as being vital to flood recovery.

Project/Solution

The first step of the flood mitigation project was the relocation of wastewater operations from the north plant to a newer plant located south of Iowa City and out of the flood plain. This involved designing the larger south facility, upgrading the south plant, and then expanding the south plant. Design was completed in early 2012 and the plant expansion expected to be completed in late spring/early summer 2014. Total cost of the first phase will be nearly $55 million.

The second step of the project is to demolish the flood prone north wastewater treatment facility. This would involve demolishing the entire site. The final step would be to create new flood capacity at the site. This would involve creating a 5 acre wetland in the southern portion of the north plant area and stream bank restoration along Ralston Creek where it meets the Iowa River.

Results

Sizable commercial and residential neighborhoods are located in the floodplain downstream from the north wastewater treatment plant. The project would remove their vulnerability to untreated effluent that may be released during future flood events. This project permanently removes multiple large structures from the floodplain, creates wetlands, and increases the area for flood water storage during a flood event. This lessens the flood impacts both upstream and downstream of the project area.

Cost

The relocation of the wastewater operations, demolition of the old plant, and development of park and wetlands is Iowa City's largest critical infrastructure flood recovery project. The total cost of the project will be over $63.4 million. $8,497,249 of sales tax revenues will be needed to complete the second and third parts of the project.

Economic Benefits

Iowa City has received grants from the Economic Development Administration, the EPA Smart Growth Program, and the Partnership for Sustainable Communities to move wastewater operations to the south plant and to

develop a plan to create economic opportunities in the Riverfront Crossings area while developing out of the flood plain. The proposed regional park is a core part of the Riverfront Crossings District Master Plan that is intended to be a catalyst for redevelopment in the area. The 2 economic impact areas immediately adjacent to the park, Park District and South Gilbert Street District, have over 1.3 million square feet of commercial, residential, and mixed uses available with a potential market value of over $183 million. Developers have stated they will begin development once the plant is demolished and a park developed.

Overall Strategy

The removal of structures from the flood plain, development of wetlands, and stabilizing stream banks are part of an overall strategy by the City of Iowa City for flood mitigation-make room for the river. The acquisition and demolition of 95 homes in the floodplain, elevation of Dubuque Street and the Park Road Bridge, and the removal of critical structures from the flood plain, such as the wastewater treatment plant, are steps that define this strategy.

Support

Many businesses and organizations have provided letters of support for the relocation of the wastewater facilities and demolition of north plant. Support has come from the Chamber of Commerce, the University of Iowa, Mercy Hospital, ACT, Proctor and Gamble, and may other businesses. 150 people attended Riverfront Crossings Area Master Plan meetings and voiced overwhelming support for decommissioning and demolishing the north plant and turning the property into a riverfront park. The Iowa City Flood Plains Manager and the Friends of the Iowa River also support the project. The strongest indicator of support came from the citizens of Iowa City who approved a local option sales tax for 4 years to help pay for this vital flood mitigation project.

Iowa City Project Budget

Executive Summary

Narrative of Proposed Project and Work to be Accomplished:

The first step of the flood mitigation project was the relocation of wastewater operations from the north plant to a newer plant located south of Iowa City and out of the flood plain. This involved designing the larger south facility, upgrading the south plant, and then expanding the south plant. Design was completed in early 2012 and the final plant expansion expected to be completed in late spring/early summer 2014.

The second step of the flood mitigation project is to demolish the flood prone north wastewater treatment facility. This would involve demolishing the entire site. All structures would be removed to two feet below ground level, have two feet of earth backfill placed over the demolished structures, and the land graded and seeded.

The final step would be to expand new flood capacity at the site. This would involve creating a 5 acre wetland in the southern portion of the north plant area and stream bank restoration along Ralston creek where it meets the Iowa River. Bank stabilization and improvement measures along Ralston Creek, adjacent to the wetlands area, will increase flood capacity and improve aesthetics and access to the creek and the downstream Iowa River. The stream bank restoration will be approximately 3000 linear feet.

Costs

The total cost of the project will be $63.4 million. A detailed budget sheet is attached. The cost for the first phase-moving operations of the wastewater treatment plant out of the floodplain-will be $54.945 million. $48,117,000 will be used for construction during the first phase, $5,958,000 will be used for engineering, $800,000 will be used for project management, and $70,000 will be used for environmental and historic reviews.

The cost for the second and third steps-demolition of the plant, creation of the wetland, and stream bank stabilization -will be just over $8.49 million. The cost estimates were provided by Stanley Consultants. The cost to demolish the north plant will be $4,390,450 to create the wetland $793,500 and the cost for stream bank stabilization will be $590,087.

The cost for construction in the second and third phases will be $5,239,467. The cost for engineering during these phases will be $246,399 and the cost for project management will be $288,171.

Financing costs for the second and third phases will be $2,723,212. This is based on using general obligation bonds at a 4% interest rate for 20 years.

Funding

Funding for the first phase came from many different sources. The Economic Development Administration provided $22 million, I-Jobs provided $6,345,293, and Supplemental Disaster Community Development Block Grant funds provided $13,011,800. The remaining $13,587,907 was provided by the City of Iowa from a local option sales tax designated for vital flood recovery projects and wastewater operations.

Sales Tax Increment Needed

$8,497,249 of sales tax increment revenues will be needed to complete the second and third phases of the flood mitigation project.