



DEVELOPMENT SERVICES DEPARTMENT

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To: Mayor and City Council
From: Jenah Thornborrow, Development Services Director
Subject: USACE Garden City General Investigation Study
Date: For January 8, 2024, Meeting

REQUESTED ACTIONS

None: This is an informational item.

UPDATE

The City has employed Quadrant Consulting to make suggestions as to potential solutions that could be inputted into the United States Army Corps of Engineers (USACE) model that was constructed for the General Investigation (GI) study. USACE is still modeling refinements to the suggestions. The initial results are included as an attachment to this memorandum.

BACKGROUND

The City entered into a Feasibility Cost Sharing Agreement (FCSA) with the Department of Army, specifically the USACE Walla Walla District, for a GI study to provide a plan for flood risk reduction along the Lower Boise River within Garden City, in August of 2022.

Garden City requested a GI as a mechanism to address flood risk in Garden City. The GI will identify and evaluate a full range of alternatives, including structural and nonstructural solutions, for flood risk management for Garden City. The study will result in a recommendation to Congress for a specific course of action. Congress may then authorize and fund a project for construction. There is no designated limit to the scale, extent or cost of development that can be proposed as a result of the study.

The need was identified subsequent a Federal Emergency Management Agency (FEMA), Flood Insurance Study (FIS) mapping update. The FIS model of the Lower Boise River identified several locations throughout Garden City that were thought to be protected from large floods but are actually prone to flooding. The modeling anticipates that 74 percent of Garden City's properties, 3,889 parcels¹, are either in the floodplain² or floodway, and

¹ Data is from the 205 study. The number of parcels may have changed due to subdivisions or property consolidations.

² The floodplain refers to the "100-year flood event" or "1% event" which is a flow of 16,600 cfs of the Boise River.

that there is a 76 percent chance of flooding these structures during a 70-year period. These vulnerabilities were reinforced during a minor flood event in 2017³ when several areas were affected by the increased flows.

Having three-quarters of the city identified as being in the floodplain creates a number of risks for Garden City. First, there is the actual hazard risk of damaging infrastructure, houses, and businesses, and life and safety concerns that come with flowing and standing water throughout the city. The estimated damages to structures and infrastructure from a 100-year flood would exceed \$315 million⁴.

During a flood, additional problems come with the reduced capacity of the City to function as a city and for vulnerable populations. Flood waters and sediment deposition would be expected to destroy public infrastructure, damage the City Center, block highways, damage bridges, isolate residents from critical services, limit emergency and repair services, and impact the wastewater collection system.

Finally, regardless of the actual risk, there are also significant potential economic impacts due to the FEMA regulatory map designations. All structures that have a federally backed mortgage are required to have flood insurance. While the city is currently in a seclusion⁵ designation, once this designation is removed, the current flood study notes that an additional 2,385 properties will be added to the floodplain or floodway (with an estimated 1,072 being removed)⁶. The FIS also indicates that many of the areas that are considered to be in the floodplain currently would have a lower base flood elevation (BFE). The addition of the properties to the floodplain or change to BFE could have significant impacts for property owners with regards to premiums that property owners are required to pay in the form of flood insurance. While this exact change in premiums is unknown, the amount would be substantial.

Garden City previously partnered with USACE in 2018 under a USACE Continuing Authorities Program, Section 205 (205 Study). During the feasibility study it was determined that the needs exceed the program's cost authority. Subsequently, the City of Garden City submitted a Letter of Intent seeking USACE assistance under the General Investigation (GI) authority.

The city is responsible for 50 percent of the cost of the study⁷. The agreement as entered into is \$1,600,000. Last January, USACE indicated that they believe that the actual cost of the study will be \$2,200,000. The city has not signed an amended agreement.

A future, secondary, Design Agreement may be necessary after the FCSA. The city will be responsible for 25-35 percent of Preconstruction, Engineering and Design (PED) costs.

³ The flood peaked at a river flow of around 9,500 cfs, which is just past flood stage of 7,000 cfs.

⁴ Based on information from USACE referencing an economic analysis conducted for the Boise River General Investigation Feasibility Study circa 2018

⁵ Seclusion allows for the previous FEMA flood model to be used for regulatory purposes.

⁶ Data is from 2016. The number of parcels may have changed due to subdivisions or property consolidations.

⁷ In kind work can be utilized as a component of the share.

Once the project has been identified, designed, and authorized and funded by Congress a new agreement will be entered into for the construction of the identified project. Should the USACE and city move forward with a project, the city is responsible for 35 percent of the construction costs, providing land requirements (land, easements, rights-of-way, relocations, and disposal areas necessary for the construction (LERRD)⁸), and operation and maintenance of the project after completion.

Attachments

Initial draft of Sponsor alternative model results

⁸ LERRDs can be utilized as part of the city's cost share if eligible.