

**CAPITAL IMPROVEMENT PROGRAM**  
**City of Missoula CIP Project Request Form FY 2017-2021**

Program Category:	Project Title:		15 Project #	16 Project #	17 Project #
Community Service	Geotechnical Levee Inspection for Maintenance and Certification Retention				CS-14

**Description and justification of project and funding sources:**

The City operates two Army Corps of Engineers-built levees on the Clark Fork River and privately-built levees on Grant Creek and Pattee Creek. This levee system is comprised of about 9,253 lineal feet of levees and 907 lineal feet of floodwall. These structures are recognized by the National Flood Insurance Program (NFIP) and modify base flood elevation determinations affecting the Flood Insurance Rate Map for Missoula County. In addition, the levees are currently recognized by the Rehabilitation and Inspection Program (PL 84-99), under which the Corps has authority to supplement local efforts to repair flood control structures after they are damaged during a flood. The City must maintain these structures at an acceptable level to bolster public safety and protect residential and commercial community property in case of a flood, as well as to maintain certification to prevent increased flood insurance costs or mandatory purchase of flood insurance for affected Missoula citizens and businesses. The City has been performing two visual inspections of the levee system each year and performing minimal maintenance on the levees. If a comprehensive geotechnical inspection reveals that structural maintenance or reconstruction projects are required, funding will be needed to complete these projects.

Is this equipment prioritized on an equipment replacement schedule?

Yes

No

NA

x

Is there ongoing Operating and/or Maintenance costs upon completion of project?

Yes

No

NA

**Are there any site requirements:**

N/A

**How is this project going to be funded:**

Revenue	Funding Source	Accounting Code	FY17	FY18	FY19	FY20	FY21	Funded in Prior Years
	Storm Water Utility	Not yet established		50,000	100,000			
			-	50,000	100,000	-	-	-

**How is this project going to be spent:**

Expense	Budgeted Funds	Accounting Code	FY17	FY18	FY19	FY20	FY21	Spent in Prior Years
	A. Land Cost							
	B. Construction Cost							
	C. Contingencies (10% of B)							
	D. Design & Engineering (15% of B)							
	E. Percent for Art (1% of B)							
	F. Equipment Costs							
	G. Other							
			-	50,000	100,000	-	-	-
			-	50,000	100,000	-	-	-

**Does this project have any additional impact on the operating budget:**

Operating Budget Costs	Expense Object	Accounting Code	FY17	FY18	FY19	FY20	FY21	Spent in Prior Years
	Personnel							
	Supplies							
	Purchased Services							
	Fixed Charges							
	Capital Outlay							
	Debt Service							
			-	-	-	-	-	-

Description of additional operating budget impact:

Responsible Person:	Responsible Department:	Date Submitted to Finance	Today's Date and Time	Preparer's Initials	Total Score
John Wilson	Public Works - Storm Water Utility	4/1/2016	4/21/2016 12:55	LAH	46

# CAPITAL IMPROVEMENT PROGRAM

## Project Rating

(See C.I.P. Instructions For Explanation of Criteria)

Program Category:	Project Title: <b>Geotechnical Levee Inspection for Maintenance and Certification Retention</b>		10 Project # <b>CS-14</b>	
<b>Qualitative Analysis</b>		<b>Yes</b>	<b>No</b>	<b>Comments</b>
1. Is the project necessary to meet federal, state, or local legal requirements? This criterion includes projects mandated by Court Order to meet requirements of law or other requirements. Of special concern is that the project be accessible to the handicapped.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	44 CFR part 65.10 states, "For levees to be recognized by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided." Regular inspections can reveal much of the maintenance tasks needed to ensure compliance; however, Missoula's levees have never undergone extensive testing to ensure the stability of the structures that can't be readily seen in a visual inspection.
2. Is the project necessary to fulfill a contractual requirement? This criterion includes Federal or State grants which require local participation. Indicate the Grant name and number in the comment column.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	For the Corps-built levees, Public Law 738 states, "...no money appropriated under authority of this Act shall be expended on the construction of any project until States, political subdivisions thereof, or other responsible local agencies have given assurances satisfactorily to the Secretary of War that they will . . . maintain and operate the flood control works after completion in accordance with regulations prescribed by the Secretary of War." Under these conditions, City of Missoula resolution numbers 2334 and 2555 assume the obligations of local cooperation and the operation and maintenance of the levees.
3. Is this project urgently required? Will delay result in curtailment of an essential service? This statement should be checked "Yes" only if an emergency is clearly indicated; otherwise, answer "No". If "Yes", be sure to give full justification.		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Although the Army Corps of Engineers inspects structures every other year, and City engineers inspect them twice each year, current funding levels do not allow for extensive geotechnical inspections to be completed. If the Corps finds any structure's maintenance to be deficient, that structure could be removed from the PL 84-99 program. Removal from the program would leave the City financially liable for the entire cost of rebuilding the damaged structure.
4. Does the project provide for and/or improve public health and/or public safety? This criterion should be answered "No" unless public health and/or safety can be shown to be an urgent or critical factor.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Maintaining levees at a performance level that will handle heavy rainfall or storm runoff is critical to preventing flooding of areas around and downstream of levees. A levee breach would be detrimental to public safety and possibly also to public health. An extensive inspection is needed to ensure the levee system is structurally sound and appropriately maintained.
<b>Quantitative Analysis</b>		<b>Raw Score Range</b>	<b>Comments</b>	
5. Does the project result in maximum benefit to the community from the investment dollar?		(0-3)  <input checked="" type="checkbox"/>	The Corps' PL 84-99 program provides for 100% rehabilitation funding for federal flood control projects and 80% for non-federal flood control projects. Projects must be in good repair prior to the flood event in order to be eligible for assistance. Periodic maintenance is much less costly than rebuilding a flood control structure that has been damaged, and an extensive inspection will better ensure the health of the City's levee system.	
6. Does the project require speedy implementation in order to assure its maximum effectiveness?		(0-3)  <input type="checkbox"/>	The Corps inspects the structures every other year. If any structure is not sufficiently maintained, the structure could be removed from the PL 84-99 program, leaving the City financially liable for the entire cost of rebuilding the damaged structure. Also, identifying and addressing maintenance needs in the short term is more cost effective than performing extensive maintenance at a later time.	
7. Does the project conserve energy, cultural or natural resources, or reduce pollution?		(0-3)  <input type="checkbox"/>	Various cultural resources are protected by these flood control works, such as Caras Park, Missoula's downtown area, and the Rocky Mountain Elk Foundation.	
8. Does the project improve or expand upon essential City services where such services are recognized and accepted as being necessary and effective?		(0-2)  <input type="checkbox"/>	Although the City performs inspections on the flood control structures twice every year and has been able to identify areas that need some level of maintenance, the time is approaching when more substantive maintenance efforts will be required not only to ensure PL84-99 compliance but also to further safeguard human life and property. A more extensive inspection would reveal any further maintenance needs.	
9. Does the project specifically relate to the City's strategic planning priorities or other plans?		(0-3)  <input type="checkbox"/>	Flood protection directly relates to the strategic goal of community livability by providing safety measures and an economically sound means of rebuilding flood control structures should it become necessary.	
Total Score				46

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CS-14	Geotechnical Levee Inspection for Maintenance and

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