## **CEF Fact Sheet**

Date of Estimate:	October 1, 1998
FEMA Region:	III
Preparer(s):	Tom Rathburn (FEMA) and Beth Ingalls (State)
Applicant Name:	St. Joseph's College
Project Title:	Repairs to Dam
Damaged Facility:	Lundberg Dam
<b>Declaration Number:</b>	FEMA-1234-DR-MD
Project Number:	5697
PA ID No.:	955-91000
Date of Inspection:	September 20, 1998
Event Date(s)	September 15, 1998
Work Category:	D
Type of Work:	Repair
(Enter New, Repair, etc.)	
Scope:	Floodwaters overtopped concrete and earth fill dam. Scour removed 104 LF of concrete (cross section: 17 ft wide at base; 7 ft high at d/s end; 12 ft high at u/s end) and approx 600 CY of structural fill. The remainder of the dam, including the sluice gate, were not damaged. Remove concrete debris from stream and dispose. Construct coffer dam u/s and d/s of breach using steel sheet piling driven to 15 ft depth (4200 SF of sheet piling required). Replace 600 CY of Class X concrete. Replace 600 CY of structural fill.

## **CEF Notes**

Damaged Facility:		Lundberg Dam
Applicant Name:		St. Joseph's College
Project Number:		5697
Date of Estimate:		October 1, 1998
Preparer(s):		Tom Rathburn (FEMA) and Beth Ingalls (State)
Part A Notes:	A.1 -	A contractor has been retained to complete all work, but
		construction has not yet begun. Construction bid costs are used
		for the repair work.
	A.2 -	Construction bid costs are used for the coffer dam.
Part B Notes:		Construction bid costs are used for Part A costs. Additional
		costs for General Requirements are already included in the
		construction bid costs.
	B.2 -	Construction bid costs are used for Part A costs. Additional
		costs for General Conditions are already included in the
		construction bid costs.
Part C Notes:	C. 1 -	As with Part B, bid costs used; not applicable.
1 alt 0 140165.		Bid costs used; not applicable.
		Bid costs used; not applicable.
		Not applicable for this project.
Part D Notes:		A contractor has been retained to complete all work, but
r art B Hotes.	٥.,	construction has not yet begun. Construction bid costs are used
		for the repair work.
	D2-	Contractor's insurance and bond costs are included in the
	٥.2	construction bid costs used in Part A.
	D.3 -	Contractor's profit is included in the construction bid costs used in
		Part A.
Part E Notes:	E.1 -	Bid costs used; not applicable.
Part F Notes:	F.1 -	Plan review costs based on Montgomery County, MD
		requirements.
	F.2 -	Construction permit costs based on Montgomery County, MD
		requirements.
Part G Notes:	G.1 -	Standard CEF factor used for Change Orders.
Part H Notes:	H.1 -	- · · · · · · · · · · · · · · · · · · ·
		Phase.
		Standard CEF factor used for A/E Design Contract costs.
	н.3 -	Standard CEF factor used for Project Management -
Missellenssus		Construction Phase.
Miscellaneous		
Notes &		
Comments: Use mouse to		
Activate Cursor:		
Activate Cursor:		

## **CEF Part A Estimate**

				1		ı		
Item No.	Item Description Title / Component Description	Div. # or Cost Code	Qty	Units	Unit Price	City Adj Factor	-	Total Cost
Complet	ted							
	Permanent							
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
			Co	mplet	ed - Perman	ent Total	\$	-
	Non-Permanent							
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
			Comple	eted - I	Non-Perman	ent Total	\$	-
Uncomp	oleted							
	Permanent							
	Concrete Removal							
1	Concrete removal and disposal	Bid	600.00	CY	\$ 90.00	1.00	\$	54,000.00
	Repairs to Dam							
2	Structural backfill, 150' haul, sand & gravel from existing stockpile	Bid	600.00	CY	\$ 1.50	1.00	\$	900.00
3	Plate compact in place, 12" lifts, 2 passes	Bid	600.00	CY	\$ 0.62	1.00	\$	372.00
4	Concrete poured as grade wall, reinforced, 5' wide, with forms	Bid	600.00	CY	\$ 650.00	1.00	\$	390,000.00
	e mas, marronne				\$ -		\$	-
					\$ -		\$	-
			Unco	mplet	ed - Perman	ent Total	\$	445,272.00
	Non-Permanent						•	
	Coffer Dam							
5	Sheet piling - 15" deep excavation, drive, extract and salvage	Bid	4,200.00	SF	\$ 10.50	1.00	\$	44,100.00
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
					\$ -		\$	-
			Uncomple	eted - I	Non-Perman	ent Total	\$	44,100.00
		TOTAL	PART A BA	SE CC	NSTRUCTION	ON COST	\$	489,372.00

	St. J	oseph'	s Colle	ege - Rep	oairs to [	Dam				
				Repair	\$ -	\$ -	\$ -	\$ -	Tota	al
PART A		"B:	ase Costs" f	or Construction	Work-In Trade	s				
A.1	Permanent Work (From Part A Estimate)								\$	-
A.2	Non-Permanent Job Specific Work (From Par	t A Estim	ate)						\$	-
		Pa	rt A Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
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PART B		Gen	neral Require	ements and Ger	neral Condition	S				
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B.1	General Requirements	Low to	High		Enter %	6 in Appropria	te Column	T		
	Safety & Security - Airports, Ports & Govt. Owned Marinas Temporary Services & Utilities	4.0% 0.0%	6.0% 1.0%							
	Quality Control	0.0%	1.0%							
	Submittals	0.0%	5.0%							
				\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
B.2	General Conditions (4.25%)									
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DA DT O			Canatau	ction Cost Conti					<u>l</u>	
PART C			Construc	tion Cost Contil	ngencies					
C.1	Design-Phase Scope Contingencies		nge		Entor 9	6 in Appropria	to Column			
0.1	Preliminary Engineering Analysis	15.0%	20.0%		Enter 7	о III Арргорна 	lie Column			
	Working Drawings	2.0%	10.0%							
				\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
C.2	Facility or Project Constructability				Enter %	6 in Appropria	te Column			
0.2	Facility or Project Type and Complexity	(See IG fr	or Values)			1				
				\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
C.3	Access, Storage & Staging Contingencies		nge o High		Enter %	6 in Appropria	te Column			
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	Staging Contingencies	1.0%	4.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
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C.4	Economies of Scale		0.0%							
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PART D		G	Seneral Con	tractor's Overhe	ad and Profit					
D.1	GC's Home Office Overhead		7.7%							
			111 70	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
D.O	GC's Insurance, Payment & Performance Bor	a do	0.00/	_	_	_	_	_		
D.2	GC'S insurance, Payment & Performance Bor	ius	3.3%	\$ -	\$ -	\$ -	\$ -	\$ -	\$	
	New C	onstruction	10.0%			project, and applical	ble bottom boxes to	apply the factor.	•	
		pair/Retrofit	10.0%	New Contructi	_	Repair/Retrofit				
D.3	General Contractor's Profit			6					6	
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			Repa	air	\$	-	\$	-	\$	-	\$ -		Total
PART E		Cos	t Escalation	on Fac	ctors								
	Months	Monthly											
	Months	Factor			1		1 .		1		T	<u> </u>	
E	Cost Escalation Factor		\$	-	\$	-	\$	-	\$	-	\$ -	\$	-
	PART A through E SI	JBTOTAL	\$	-	\$	-	\$	-	\$	-	\$ -	\$	_
PART F	Dian Parism Face	Plan Review	and Const	truction	Permit	Cost							
F.1	Plan Review Fees (List Individual Requirements Separately)				1		ı		ı		1	-	
	(List individual requirements deparately)											-	
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F.2	Construction Permit Fees												
	(List Individual Requirements Separately)												
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	PART A through F St	JBTOTAL	\$	-	\$	-	\$	-	\$	-	\$ -	\$	-
PART G		Applicant's	Reserve for	or Cha	nge Ord	ers							
G	Applicant's Reserve for Change Orders	7.0%										1	
			\$	-	\$	-	\$	-	\$	-	\$ -	\$	-
	PART A through G SI	JBTOTAL	\$	-	\$	-	\$	-	\$	-	\$ -	\$	-
	-										•		
PART H	Appli	cant's Projec	t Manage	ment	and De	sign Co	sts						
H.1	Applicant's Project Management - Design Phase	1.0%											
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H.2	A/E Design Contract Cost												
11.2	Above Average Complexity (Curve A)	0.0%	\$	_	\$	-	\$	_	\$	-	\$ -	-	
	Average Complexity (Curve B)	0.0%	\$	-	\$	-	\$	-	\$	-	\$ -		
	Basic Construction Inspection Services	3.0%	\$	-	\$	-	\$	-	\$	-	\$ - \$ -		
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H.3	Project Management - Construction Phase	6.0%											
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PART A		"B:	ase Costs" f	or Co	onstruction '	Work	c-In Trades						
A.1	Permanent Work (From Part A Estimate)			\$	445,272							\$	445,272
A.2	Non-Permanent Job Specific Work (From Par	t Δ Estin	nate)	\$	44,100	l -		1	I		<u> </u>	\$	44,100
					•				1		1		
		Pa	art A Total	\$	489,372	\$	-	\$ -	\$	-	\$ -	\$	489,372
PART B		Ger	neral Require	emen	its and Gen	eral (	Conditions						
		Ra	ınge										
B.1	General Requirements Safety & Security - Airports, Ports & Govt. Owned Marinas	4.0%	o High 6.0%				Enter %	in Appropria	te Colu	mn	1	l	
	Temporary Services & Utilities	0.0%	1.0%									l	
	Quality Control	0.0%	1.0%									l	
	Submittals	0.0%	5.0%	\$		\$		\$ -	\$		\$ -	\$	
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B.2	General Conditions (4.25%)					-						L	
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		Pa	art B Total	\$	-	\$	-	\$ -	\$	-	\$ -	\$	-
	PART A throu	ugh B Sl	JBTOTAL	\$	489,372	\$	-	\$ -	\$	-	\$ -	\$	489,372
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PART C			Construc	tion (	Cost Contin	ngend	cies						
C.1	Design-Phase Scope Contingencies		inge				Entor %	in Appropria	to Colu	mn		l	
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	Working Drawings	2.0%	10.0%									<u> </u>	
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C.2	Facility or Project Constructability						Enter %	in Appropria	te Colu	mn		l	
	Facility or Project Type and Complexity	(See IG t	for Values)								_	Ļ	
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C.3	Access, Storage & Staging Contingencies		o High				Enter %	in Appropria	te Colu	mn	I	l	
	Access Contingencies Storage Contingencies	1.0%	4.0%									l	
	Staging Contingencies	1.0%	4.0%									Ļ	
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C.4	Economies of Scale		0.0%									Ļ	
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		Pa	art C Total	\$	-	\$	-	\$ -	\$	-	\$ -	\$	-
	PART A throu	uah C Sl	JBTOTAL	. \$	489,372	\$		\$ -	\$	_	\$ -	\$	489,372
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PART D			Seneral Cont	tracto	or's Overhea	ad ar	nd Profit						
D.1	GC's Home Office Overhead		7.7%	ļ								l	
				\$	-	\$	-	\$ -	\$	-	\$ -	\$	-
D.2	GC's Insurance, Payment & Performance Bor	nds	3.3%	, j								l	
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		onstruction air/Retrofit	10.0% 10.0%	11	w Construct			roject, and applicat Repair/Retrof		boxes to	apply the factor.	l	
D.3	General Contractor's Profit			r								l	
				\$	-	\$	-	\$ -	\$	-	\$ -	\$	-
		Pa	art D Total	\$	-	\$	-	\$ -	\$	-	\$ -	\$	
	B.B				105								
	PART A throu	ugn D Sl	RIOIAL	\$	489,372	\$	-	\$ -	\$	-	\$ -	\$	489,372

	St. J0	sepn	2 Colle	ge	- кер	airs to	Dam							
					Repair	\$ -	\$	-	\$	-	\$	-		Total
PART E			Cost	Esc	alation Fact	ors								
		Months	Monthly											
Е	Cost Escalation Factor		Factor	\$		\$ -	\$		\$	_	\$	_	\$	
_	-					T *							_	
	PART A throu	igh E SI	UBTOTAL	\$	489,372	\$ -	\$	-	\$	-	\$	-	\$	489,372
PART F			Plan Review	and C	Construction	Permit Cost								
F.1	Plan Review Fees													
	Dam Safety Review Fees, Montgomery County, MD			\$	4,197									
							-							
				\$	4,197	\$ -	\$	_	\$	_	\$	-	\$	4,197
F.2	Construction Permit Food													
Г.2	Construction Permit Fees  Local Building Permit, Montgomery County, MD			\$	8,393								ł	
	Ecodi Ballaling Fernik, Workgomery County, WD			Ψ	0,000									
				\$	8,393	\$ -	\$	-	\$	-	\$	-	\$	8,393
		Р	art F Total	\$	12,590	\$ -	\$	-	\$	-	\$	-	\$	12,590
	DART A share	F 01	UDTOTAL	_	504.000									=0.4.000
	PART A throu	ign r Si	UBIUIAL	Ъ	501,962	\$ -	\$	-	\$	-	\$	-	\$	501,962
PART G			Annlicant's	Rese	rve for Chan	ge Orders								
G	Applicant's Reserve for Change Orders		6.3%		<b>▽</b>						П			
_			0.070	\$	31,769	\$ -	\$	-	\$	-	\$	-	\$	31,769
				_			1.							
	PART A throu	gh G S	OBIOIAL	\$	533,731	\$ -	\$	-	\$	-	\$	-	\$	533,731
PART H		Appli	cant's Project	t Mar	nagement a	nd Design (	`nete							
H.1	Applicant's Project Management - Design Pha		1.0%		ragement a ✓	Ind Design C	703t3		Г		Г			
	Applicant of Tojoot management Doorgin File	-	1.0 /0											5,337
				\$	5,337	\$ -	\$	-	\$	-	\$	-	\$	
				\$		\$ -		-	\$	-	\$	-	\$	
H.2	A/E Design Contract Cost		_				\$	-		-		-	\$	
	Above Average Complexity (Curve A)		8.4%	\$	5,337	\$ -	\$	-	\$	-	\$	-	\$	
			8.4% 6.8% 3.0%				\$ \$ \$	- - - -		-		- - -	<b>\$</b>	
	Above Average Complexity (Curve A) Average Complexity (Curve B)	~	6.8%	\$	5,337	\$ - \$ -	\$ \$ \$ \$		\$		\$		\$	36,467
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services	~	6.8% 3.0%	\$ \$	5,337 - 36,467 -	\$ - \$ -	\$ \$ \$	-	\$ \$	-	\$ \$	-	\$	36,467
	Above Average Complexity (Curve A) Average Complexity (Curve B)	~	6.8%	\$ \$	5,337 - 36,467 - 36,467	\$ - \$ - \$ -	\$ \$ \$	-	\$ \$ \$	-	\$ \$ \$	-	\$	36,467
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services		6.8% 3.0% 5.0%	\$ \$	5,337  - 36,467 - 36,467  V 31,784	\$ - \$ - \$ - \$ -	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-	\$ \$ \$	-	\$ \$ \$ \$	- - - -	\$	31,784
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services		6.8% 3.0%	\$ \$	5,337 - 36,467 - 36,467	\$ - \$ - \$ - \$ -	\$ \$ \$ \$	-	\$ \$ \$	-	\$ \$ \$ \$	-	\$ \$	-
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services	Pa	6.8% 3.0% 5.0%	\$ \$ \$	5,337  - 36,467 - 36,467  V 31,784	\$ - \$ - \$ - \$ - \$ -	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	-	\$ \$ \$	-	\$ \$ \$ \$	- - - -	\$ \$ \$	31,784
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services  Project Management - Construction Phase	Pa	6.8% 3.0% 5.0%	\$ \$ \$	5,337  - 36,467  - 36,467  - 31,784  73,589	\$ - \$ - \$ - \$ - \$ -	\$ \$ \$ \$ \$ \$ \$ \$ \$	-	\$ \$ \$ \$	- - - -	\$ \$ \$ \$	- - - -	\$	31,784 73,589
H.2	Above Average Complexity (Curve A) Average Complexity (Curve B) Basic Construction Inspection Services  Project Management - Construction Phase  PART A through	Pagh H St	6.8% 3.0% 5.0%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	5,337  - 36,467  - 36,467  - 31,784  73,589  607,320	\$ - \$ - \$ - \$ \$ - \$	\$ \$ \$ \$ \$ \$ \$ \$ \$	-	\$ \$ \$ \$	- - - -	\$ \$ \$ \$	- - - -	\$	31,784 73,589

## **Total Project Summary**

		Con	npleted	Un	completed		Total
PART A	"Base Costs" for Construction Work In Trades	\$	-	\$	489,372	\$	489,372
	A.1 Permanent Work	\$	-	\$	445,272	\$	445,272
	A.2 Non-Permanent Job Specific Work (From Part A Estimate)	\$	-	\$	44,100	\$	44,100
PART B	General Requirements and General Conditions	\$	-	\$	-	\$	-
	B.1 General Requirements	\$	-	\$	-	\$	-
	B.2 General Conditions	\$	-	\$	-	\$	-
PART C	Construction Cost Contingencies (Design and Construction)	\$		\$		\$	
PARTC	C.1 Standard Design-Phase Scope Contingencies	\$		\$		\$	
	C.1 Standard Design-Priase Scope Contingencies  C.2 Facility or Project Constructability	\$	<u> </u>	\$		\$	
	C.3 Access, Storage, and Staging Contingencies	\$		\$		\$	
	C.4 Economies of Scale in New Construction	\$		\$		\$	
	C.4 Economies of Scale in New Construction	Ψ		ļΨ		Ψ	
PART D	General Contractor's Overhead and Profit	\$	-	\$	-	\$	-
	D.1 General Contractor's Home Office Overhead Costs	\$	-	\$	-	\$	-
	D.2 General Contractor's Insurance, Payment, and Performance Bonds	\$	-	\$	-	\$	-
	D.3 Contractor's Profit	\$	-	\$	-	\$	-
PART E	Cost Escalation Allowance	\$	-	\$	-	\$	-
PART F	Plan Review and Construction Permit Costs	\$	-	\$	12,590	\$	12,590
	F.1 Plan Review Fees	\$	-	\$	4,197	\$	4,197
	F.2 Construction Permit Fees	\$	-	\$	8,393	\$	8,393
PART G	Applicant's Reserve for Construction	\$	-	\$	31,769	\$	31,769
PART H	Applicant's Project Management and Design Costs	\$	-	\$	73,589	\$	73,589
	H.1 Applicant's Project Management - Design Phase	\$	-	\$	5,337	\$	5,337
	H.2 Architecture & Engineering Design Contract Costs	\$	-	\$	36,467	\$	36,467
	H.3 Project Management - Construction Phase	\$	-	\$	31,784	\$	31,784
	Complete Project Total for Completed and Uncompleted Work	\$		\$	607,320	\$ _	607,320
	Complete 1 Toject Total for Completed and Oncompleted Work	Ψ		Ψ	007,320	Ψ	007,320