

2024 Bond Flood Protection & Storm Drainage Subcommittee

Updates, Feedback and Funding Scenarios

The logo of the City of Dallas, featuring a stylized white 'D' with a leaf inside, set against a dark blue background with a fine grid pattern.

City of Dallas

Matt Penk, P.E., Assistant Director
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Dallas Water Utilities
August 22, 2023

Overview



- Updates
- Feedback from Last Meeting
- Recap of Large-Scale Projects
- Recommended Projects – Additional Funding Scenarios
- Next Steps
- Questions and Discussion





Updates

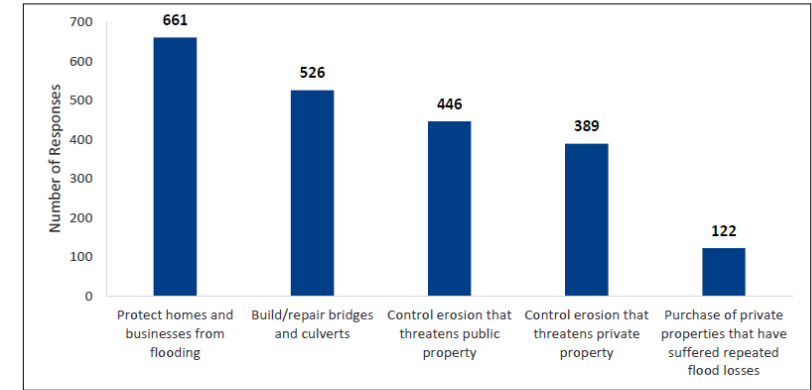


Updates



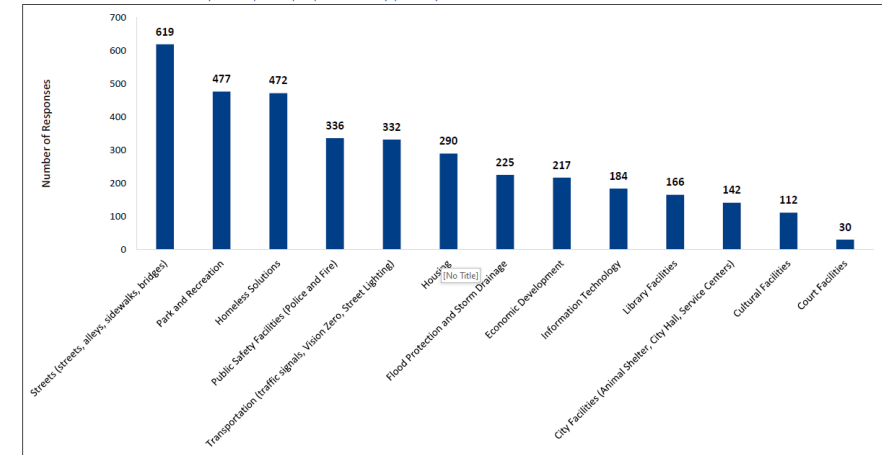
- **Community Bond Program Requests**
 - List received on 8/16/23 and under review
 - 1,021 requests received (all propositions)
- **2024 Bond Online Survey Report**
 - 18 questions, 819 responses
 - Available to public June 6 – July 7, 2023
 - Questions 5 & 17 applicable
- Recommendations to Task Force moved to 9/19
- Bond Office wants subcommittee chairs to present 3 funding scenarios – low, medium and high

Question 5: Please select the top three priorities for the flood protection and drainage proposition:



- A total of 803 Dallas residents responded to this question. However, please note that this question allows multiple selections.
- The largest number of residents, 661 (82.3%), favored protecting homes and businesses from flooding.
- Build/repair bridges and culverts was the second most selected priority with 526 (65.5%) respondents.

Question 17: Please rank your top five propositions by priority.



Community Feedback



- Based upon recommendation from the CBTF, BCM is conducting additional community input.
- A similar poll for Bond allocations is open to the community.
- Allocation Poll to the public through August 25th.
- Will provide results to CBTF and council for they use in developing their program.

English (United States) ▾

Bond & Construction Management

2024 Capital Bond Program Funding Allocation Poll

Using all the options below how would you spend a total of \$1000 Bond Dollars Somewhere else?
We want to hear from you!

Please note your final selection must equal \$1000, also this Poll is for discussion purposes only.

Encuesta En Español <https://forms.office.com/g/jov7vU5MkM>

* Required

1. For the upcoming 2024 Bond, as a planning exercise, if you had \$1,000 to invest, how would you distribute the money using the categories and dollar amounts below?

	\$25	\$50	\$100	\$150	\$200	\$250	\$500
Streets & Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parks and Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Project/Location Inquiries



- Military Parkway @ Urbandale – added to Needs Inventory (total score – 56)
- Bar ditches (7000-7500 Lovett and Toland; N/S connectors) – Public Works maintenance
- Turtle Creek @ Stonebridge Bridge – FY27/28 Capital Plan
- White Rock Dredge & Shore Erosion – Parks Needs Inventory
- Trammel Drive – unimproved street, Public Works Needs Inventory
- Kiest Valley Parkway/Five Mile
 - 3742 Kiest Valley Parkway Erosion in Needs Inventory and \$200M Scenario
 - Kiest Valley @ Kiest Knoll Erosion (scored and cost estimate added to Needs Inventory)
 - 3968 Kiest Valley Drainage (scored and cost estimate added to Needs Inventory)
 - 3975 Kiest Valley Drainage (to be evaluated for Needs Inventory)
- 6226 Pemberton – Needs Inventory as 6231 Pemberton; being re-evaluated for technical score
- 10732 Haven Creek Court – part of 2017 Bond using reallocated funds by CD 10
- 7107 Elmridge – evaluation being completed by staff



Project/Location Inquiries (cont.)



- 7340 Skillman (erosion)
 - Oaks on Bend and Huntington Lakes addressed erosion threatening Bldg. 12 (2019)
 - Service requests in 2023 for Oaks on Bend units 800, 1001, and 1012 didn't qualify for Needs Inventory due to large distance from creek bank
 - Jackson Branch Channel Improvements from Huntington Lake Apt. Bridge to Church on Needs Inventory for Flood Management – scores too low for \$200M scenario
- Buna Drive – unimproved street, Public Works Needs Inventory
- 2712 Dorrington – recent repair to pipe and headwall; being evaluated for stabilization of headwall only since structure is far from bank
- Should Trinity River Channel be changed to Citywide? Yes, updated
- Gateridge & Cliffbrook – FY 26/27 Capital
- 7900 Northaven Drainage Relief – total score of 54 & too low for \$200M scenario; FY 32/33 Capital
- Reinhart Branch Flood Management Study & 5 other projects – added to Needs Inventory





Feedback from Last Meeting



Subcommittee Feedback



- Hold at the \$200M scenario for recommended needs
- Prefer to see projects that “move dirt”
- Include large scale projects that can't fund in annual budget
- Consider ratio of needs in districts as close as possible
- Value in planning/engineering not to create future flooding problems
- Only large projects option will not be supported by council from past experience – need balance



Subcommittee Feedback (cont.)



- Give CBTF what is needed for flood protection and drainage
- Collaborate between subcommittees
- Keep erosion control in recommendations; protect single family homes
- Stress importance/risk of flood protection in making recommendations
- At \$100M big projects may have to be removed



Recap of Large-Scale Projects

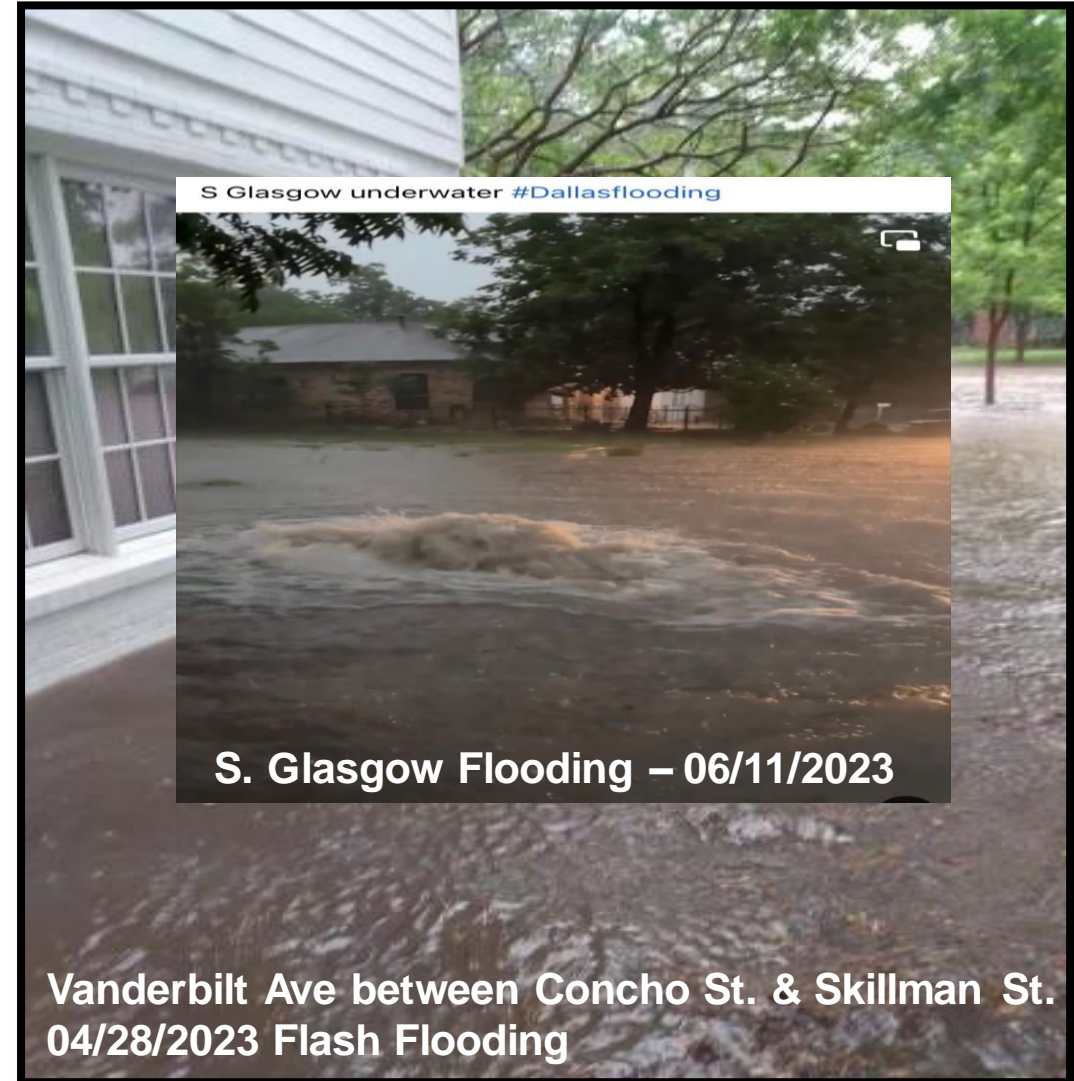


Mill Creek/Peaks/East Peaks (Next Steps)



- Improvements needed above tunnel up to Mockingbird within Mill Creek and Peaks Branch watersheds
- Costs estimated at ~ \$339M in 2026 dollars
- Planning and engineering in 2024 Bond to get a head start and fund construction in future bond and capital program - \$33.9M
- **Highest rated projects in the Needs Inventory**
- **Citywide project to capitalize on current investments**

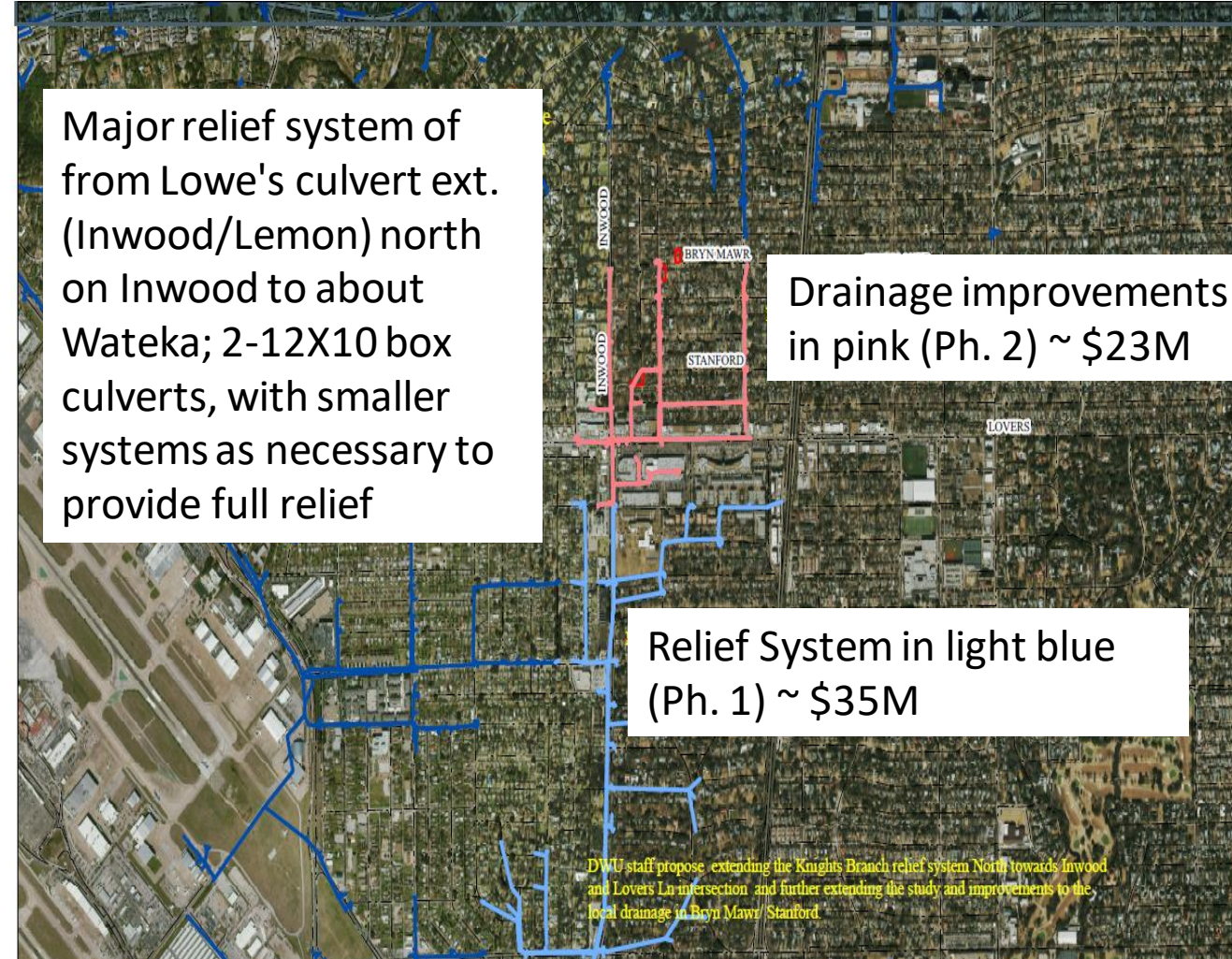
- **Properties protected ~ 1,710 (est. > 5,000 people)**
- **Property values > \$585M (based on 2009-2015 values); likely in excess of \$878M forecasting to 2023 values**



Knights Branch Upper Relief System



- Major relief system from Inwood/Lemmon to south of Lovers and neighborhood improvements to Preston Park (Bryn Mawr)
- Costs estimated at ~ \$58M in 2026 dollars (**2 phases**)
- \$35M in 2024 Bond to complete planning/engineering and first phase (relief system); \$18.3M to Ph. 2
- **Highly rated project in the Needs Inventory; benefits districts 2,6,13**



Trinity River Channel & White Rock Creek



Trinity River Channel

- Flood Management Project - \$23M
- Located in Districts 1, 2, 4, and 6
- Includes channel dredging, bank stabilization, tree removal, and other activities
- **Necessary to meet regulatory requirements**
- **Protects levees and ensures Corps certifies in good standing**
- **Keeps flood insurance rates low in Dallas**
- Ensures river channel can carry low and maximum flows



White Rock Creek Floodplain Study

- Flood Management Project - \$1M
- **Citywide Project; tied for 3rd highest score in selected projects**
- Study flood management options within watershed
- Update of 1989 study extended into entire watershed





Recommended Projects – Additional Funding Scenarios



Priorities for Funding Scenarios Below \$200M



- Reduce lowest scored projects to meet amount? ✓
- Retain Citywide and multiple district projects? ✓
- Reduce spending for erosion control? ✗ ✓
- Match by ratio of needs in districts as close as possible?
- Reduce/remove larger cost projects? 
- Remove projects in 10-year capital plan first (earliest planned projects first)? 



Additional Funding Scenario - \$150M (Opt. A)



- Same proportion – 20% erosion control, 80% flood/storm
 - ~ \$30M for erosion control
 - ~ \$120M for flood/storm
- Remove lowest priority projects first (by score)
- Results in ~\$10M reduction for erosion control
 - 45 projects (54 in \$200M option)
- Results in \$40M reduction for flood/storm
 - 11 projects selected (18 in \$200M option)
 - Reduce funding in Knights Branch by \$7.1M to balance (phase 2)
- No Citywide or multiple district projects removed
- Retains Citywide and multiple district projects
- Maintains balance of projects
- Ratio of CD will be more challenging



Additional Funding Scenario - \$150M (Opt. A)



Erosion Control - \$30.1M

Projects will prevent current and future erosion at 45 locations throughout the City.



Storm Drainage Relief - \$83.3M

Projects will include upgrading & replacing existing storm drainage lines and installing new lines at 6 locations throughout the City.



Flood Management - \$36.6M

Projects to prevent flooding and relieve properties that suffer repetitive flood loss at 5 locations throughout the City.



Alternative Approach - \$150M (Opt. B)



- Same proportion – 20% erosion control, 80% flood/storm
 - ~ \$30M for erosion control
 - ~ \$120M for flood/storm
 - Results in ~\$10M reduction for erosion control
 - 45 projects (54 in \$200M option)
 - Remove Knights Branch Ph. 2 - \$18.3M (in 10-year CIP)
 - Remove Trinity River Channel - \$23M (prioritize in CIP)
 - Keep rest of projects
- Removes 2 large projects
 - Still large Mill Creek and KB Ph. 1 projects and district projects retained
 - Ratio of CD may be easier



Additional Funding Scenario - \$150M (Opt. A&B)



- All Erosion Control projects below 902, 906 Stevens Wood Court on \$200M list removed ~ total scores below 60

				LF of erosion protection							
TWM000063	Stevens Wood Court 902, 906	New	Erosion Control	Unnamed Trib to Coombs - Private - Type I, 2 homes slightly threatened, 175' of gabion wall 7' tall	1	49.1	44	10	6	60	\$
PB175078	Guadalupe 3033	New	Erosion Control	Five Mile Creek - Private - Type I, slight threat to townhouse, erosion over gas pipeline, possibly short gabion wall - nearest home 30' from erosion, requires 50 LF of 16' gabion wall on creek bank, or combination flowable fill and lower wall near pipe	3	53.3	47	10	2	59	\$
PB1603	Coppertowne 8439	New	Erosion Control	Jackson Branch - Private - 2 condos, erosion 35 feet from structure, type I - gabion mattress 100'X15'X2', repair headwall	10	53.12	47	8	4	59	\$
FP22E02	Havencreek Ct 10732	New	Erosion Control	Dixon Branch - Private - Type 1 home threatened, 31' from bank 27' deep. Approx. 90 LF of erosion protection.	10	54.03	48	8	2	58	\$
FP19E5	Driftway Drive 2415 & 2421	New	Erosion Control	Stream 5B5 - Private - Type I, 2 homes threatened, ~17-20' from structure, ~16-17' deep, approximately 252 LF of erosion protection	7	51.28	46	8	4	58	\$
PB175065	Mediterranean Circle 8567	New	Erosion Control	Dixon Branch - Private - Type I, house threatened, 40' from creek bank, 110 LF of 20' gabion wall	10	53.18	47	8	2	57	\$
FP20E07	Forston Ave 18503	New	Erosion Control	McKamy Branch - Private - Type 1, one home threatened, approx. 6' from bank and 9' deep. Approx. 45 LF of gabion wall	12	59	53	4	0	57	\$
PB16589	Poplar Springs Lane	New	Erosion Control	Estes Branch - Private - Design and construction of ~700 LF gabion mattress at 3:1 slope w/conc. toe wall to protect 12 homes adjacent to filled-in channel - 3300 and 3400 block	7	49.82	44	8	4	56	\$
TWM000109	Creekspan Drive 12209	New	Erosion Control	Audelia Branch - Private - Type 1 - 1 home, approx. 30' from bank 20' deep. Approx. 100 LF of gabion wall	10	49.33	44	8	4	56	\$
FP20E14	Woody Branch Erosion Control - Glen Oaks Blvd & Hunters View Group 5	New	Erosion Control	Woody Branch - Private, Type 1/II. Design of erosion control measures to protect the homes of Glen Oaks Blvd and Hunter View Ln.	4	49.05	44	8	4	56	\$
TWM000021	Lullwater Drive 8223, 8235	New	Erosion Control	Park Branch - Private - Type I, duplex properties threatened, 25' from bank, creek is 16' deep, 75 LF of gabion - design and construction	9	57.96	52	2	2	56	\$



Additional Funding Scenario - \$100M (Opt. C)



- Same proportion – 20% erosion control, 80% flood/storm
 - ~ \$20M for erosion control
 - ~ \$80M for flood/storm
- Remove lowest priority projects first (by score)
- Results in ~\$21M reduction for erosion control
 - 27 projects (54 in \$200M option)
- Results in \$80M reduction for flood/storm
 - 7 projects selected (18 in \$200M option)
- 1 Citywide project removed; 1 multiple district project removed
 - Knights Branch Ph. 2 - \$18.3M
 - Trinity River Channel - \$23M (alternative to keep if KB Ph. 1 deleted)
- Removes some large projects but keeps Mill Creek and Knights Branch Ph.1
- Still large projects and some district projects
- Ratio of CD will be challenging



Additional Funding Scenario - \$100M (Opt. C)



Erosion Control - \$18.8M

Projects will prevent current and future erosion at 27 locations throughout the City.



Storm Drainage Relief - \$70.2M

Projects will include upgrading & replacing existing storm drainage lines and installing new lines at 4 locations throughout the City.



Flood Management - \$13.1M

Projects to prevent flooding and relieve properties that suffer repetitive flood loss at 3 locations throughout the City.



Alternative Approach - \$100M (Opt. D)



- Same proportion – 20% erosion control, 80% flood/storm
 - ~ \$20M for erosion control
 - ~ \$80M for flood/storm
- Results in ~\$21M reduction for erosion control
 - 27 projects (54 in \$200M option)
- Remove Knights Branch construction Ph. 1 & 2, Trinity River Channel, and reduce remaining by \$5.2M
- Keeps more projects, cuts CW and multiple district project
- Removes large projects but keeps Mill Creek
- More district projects and less big projects.
- Ratio of CD will be easier



Additional Funding Scenario - \$100M (Opt. C&D)



All Erosion Control projects below 2227 Elmwood on \$200M list removed ~ total scores below 63

FP23E03	Caracas Dr 5828	New	Erosion Control	25' from creek bank, would require 150 LF of 15' gabion wall Red Bird Branch - Private - detached garage threatened, 30' from bank 19' deep. Approx. 40 LF of erosion protection	3	57.95	52	8	4	64	\$
PB175139	Elmwood 2227	New	Erosion Control	Elmwood Branch - Private - Type I, house threatened, 20' from bank, 75 LF of 8' gabion wall	1	52.68	47	10	6	63	\$
FP20E11	Woody Branch Erosion Control - Glen Oaks Blvd & Hunters View Group 2	New	Erosion Control	Woody Branch - Private, Type I/II. Design of erosion control measures to protect the homes of Glen Oaks Blvd and Hunter View Ln.	4	54.24	48	10	4	62	\$
PB172773	Glencairn 460	New	Erosion Control	Herring Branch - Private - 70 LF gabion wall, 15' height, Type I, house threatened, difficult access	8	53.88	48	10	4	62	\$
FP22E08	Richardson Branch Trail 8505	New	Erosion Control	Richardson Branch - Public - Type I, roadway threatened, 15' from bank 14' deep, approx. 285lf of erosion protection	10	62.8	56	4	2	62	\$
TWM000003	Cedarhurst 3411, 3421	New	Erosion Control	Five Mile Creek - Private - Type I, two homes threatened, 39' from bank, creek is 22' deep, approx. 190 LF of gabion - design and construction	3	53.41	48	10	4	62	\$
PB175132	Ravinia S. 326 and 406	New	Erosion Control	Coombs Creek - Private - Type I, two houses threatened, 35' from bank, 120 LF 18' gabion wall	1	53.23	47	8	6	61	\$
PB175136	Cripple Creek 3744, 3750, 3758	New	Erosion Control	Red Bud Branch - Private - Type I, three houses threatened, 30' from bank, 300 LF of 15' gabion wall	4	53.18	47	8	6	61	\$
PB175133	Edgemont 1631	New	Erosion Control	Little Cedar Creek - Private - Type I, house threatened, 30' from bank, 75LF of 15' gabion wall	4	53.18	47	8	6	61	\$
PB175134	Lockridge Circle 3216, 3222, 3226	New	Erosion Control	Five Mile Creek - Private - Type I, three houses threatened, 20' from bank, 250 LF of 10' gabion wall	3	53.18	47	10	4	61	\$
PB174648	Stevens Wood Court 914	New	Erosion Control	Coombs Creek - Private - Slight threat to home; 80 LF gabion wall, 10' height	1	50.7	45	10	6	61	\$
FP23E06	W Red Bird Lane 1117 & 1207, Boca Chica 1104, Matagorda 1409	New	Erosion Control	Red Bird Branch - Public/Private - Roadway and 3 homes threatened. 5-24' from bank, 14-17' deep. Approx. 435 LF of erosion protection	3	55.14	49	8	4	61	\$



Summary of Funding Scenarios



	\$200M	\$150M		\$100M	
		Option A	Option B	Option C	Option D
Mill Creek (\$33.9M)	✓	✓	✓	✓	✓
Knights Branch Ph. 1 (\$35M)	✓	✓	✓	✓	✗
Knights Branch Ph. 2 (\$18.3M)	✓	✓ **	✗	✗	✗
Trinity River Channel (\$23M)	✓	✓	✗	✗	✗
Flood/Storm	18 projects - \$162.3M	11 projects - \$119.9M	16 projects - \$121M	7 projects - \$83.3M	15 projects - \$80.8M
Erosion Control	54 projects - \$37.7M	45 projects - \$30.1M	45 projects - \$30.1M	27 projects - \$18.8M	27 projects - \$18.8M

** Funding reduced by ~ \$7.1M to \$11.2M





Next Steps



Selected Projects



- Follow-up on new projects being evaluated for needs inventory and obtain overlay/equity scores
- Revise recommended projects based on tonight's feedback
- Present revised project list scenarios in committee packet for next meeting
 - \$200M – high
 - \$150M – medium
 - \$100M – low
- Develop Citywide/Multiple District Project Brochures



Future Meetings



September 5, 2023

- Present final version of projects - each scenario
- Present brochures for Citywide Projects
- Final changes incorporated as needed

September 19, 2023

- Chair and DWU to provide recommendations to Bond Task Force
- Invites sent to all committee members

October (TBD)

- Reconvene after townhalls to adjust recommendations





Questions?



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