## **DRIFTWOOD RIVER**

## POSSIBLE SOLUTIONS

		Curre	nt Conditio at 500 Ye				Cost &	Benefits o	f Possible So	olution		
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
Front Door West/	Floodproofing	<10	20	<10	25	\$400 K**	(0/ 0/ 15)	0	N	-	-	Non-residential structures so no FEMA cost share for buyouts
Westhill (11)	Levee/ Floodwall	<10	20	<10	25	\$650 K*	20	25	N	-	-	
Front Door East/ Jonathan Moore	Floodproofing	<10	20	<10	30	\$500 K**	(0/ 0/ 20)	0	N	-	-	Non-residential structures so no FEMA cost share for buyouts
Pike (10)	Levee/ Floodwall	<10	20	<10	30	\$4.1 M*	20	30	N	-	-	
Tellman Camp Road (15)	Floodproofing/ Voluntary Buyout of Structures	<10	35	<10	50	\$950 K**	(5/30/0)	0	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

- NC Cost not calculated
- \* Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.
- \*\* Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.
- \*\*\* Estimate is for only the excavation portion of the construction costs
- \*\*\*\* Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.

## **OPOSSUM CREEK**

## **POSSIBLE SOLUTIONS**

		Curre		n Flood Pot ear Levels	ential		Cost 8	Benefits o	f Possible S	olution		
		Struc	cture	Inacces	sibility							
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
Opossum Creek	Off-line Detention	500	2	<10	35	>>\$2.3 M***	2	35	N	Y	-	Would allow access from west to Southside Elementary School during flood event, cost is excessive for the benefit
	Bridge Replacement	500	2	<10	10	NC	0	access allowed to additional areas	N	Y	-	Raise west approach to CCR 200 S bridge, increase flow capacity under the road to provide flood free access to Southside Elementary School
CR 200 South (7)	2-Stage Ditch Channel Improvement	500	2	<10	10	NC	2	access allowed to additional areas	N	Y	-	300° wide shelf reduced flood elevations at the bridge negligibly so the road still overtops below the 50 year flood level
	Floodproofing/ Voluntary Buyout of Structures	500	2	<10	10	\$20 K**	2/0	0	N	Y		Protection of structures from rare flooding is not a high priority
	Levee/ Floodwall	500	2	<10	10	\$550 K*	2	access allowed to additional areas	N	Y	-	Construct east of CR 130 W to prevent backwater from entering subdivision and flooding CR 150 W
Shadow Creek Farms (6)	Bridge Replacement	>500	0	>100	25	NC	0	access allowed to additional areas	N	-		Replace SR 11 & RR to reduce backwater, then CR 150 W may or may not also need additional capacity in order to allow flood free access. To be addressed with a separate roads discussion, rather than floodprone areas.

Solution did not meet the criteria for selection as a Promising Solution.

NC Cost not calculated.

<sup>\*</sup> Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.

<sup>\*\*</sup> Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.

<sup>\*\*\*</sup> Estimate is for only the excavation portion of the construction costs

<sup>\*\*\*\*</sup> Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.

## **EAST FORK WHITE RIVER**

## **POSSIBLE SOLUTIONS**

		Curre	at 500 Ye	n Flood Pot ar Levels Inacces			Cost &	Benefits of	f Possible S	olution		
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
Huffman Drive/ WWTP (8)	Floodproofing/ Voluntary Buyout of Structures	<500	5	<10	10	\$50 K**	(5/0)	0	N	-	-	
Garden City (9)	Floodproofing/ Voluntary Buyout of Structures	<10	110	<10	110+	\$2.3 M**	(50/60)	0	N	-	-	Commercial structures would not be eligible for the FEMA buyout program
	Floodproofing/ Voluntary Buyout of Structures	50	20	50	20	\$420 K**	(10/10)	0	N	-	-	Cost doesn't include buyout or floodproofing of Mariah facilities (depths are greater than recommended for floodproofing
Mariah/ Reo Street (30)	Voluntary Buyout of all Impacted Structures	50	20	50	20	\$620 K**	(0/20)	20	N	-	-	Cost doesn't include buyout or floodproofing of Mariah facilities (depths are greater than recommended for floodproofing
	Levee/ Floodwall	50	20	50	20	\$2.3 M*	19	19	N	-	-	Additional levee required around Mariah for its protection
SR 11 South (5)	Floodproofing/ Voluntary Buyout of Structures	<10	40	<10	55	\$800 K**	(20/20)	0	N	-	-	Protected structures still will be inaccessible during flood event due to SR 11 flooding
3K 11 30utii (3)	Voluntary Buyout of all Impacted Structures	<10	40	<10	55	\$1.7 M**	(0/55)	55	N	-	-	
Rothol Village (4)	Floodproofing/ Voluntary Buyout of Structures	<10	140	<10	200	\$2.6 M**	(80/60)	0	N	-	-	Protected structures would still be inaccessible due to Deaver Road flooding
Bethel Village (4)	Voluntary Buyout of all Impacted Structures	<10	140	<10	200	\$6.0 M**	(0/200)	200	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

NC Cost not calculated.

<sup>\*</sup> Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.

<sup>\*\*</sup> Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.

 $<sup>\</sup>ensuremath{^{***}}$  Estimate is for only the excavation portion of the construction costs

<sup>\*\*\*\*</sup> Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.

## **DENIOS CREEK**

## **POSSIBLE SOLUTIONS**

		Curre	nt Conditio at 500 Ye				Cost 8	Benefits o	f Possible S	olution		
	Possible Solutions	Struc	ture	Inacces	sibility							
Floodprone Area (#)		Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
	2-Stage Ditch Channel Improvement	<10	45	<10	45	NC	0	0	N	-	•	Computer modeling showed a 300' wide shelf lowered the 100 and 50 year flood levels up to 1' which is not sufficient to prevent flooding of structures, alternative would do nothing to prevent East Fork White River flooding of the area
SR 11 South (5)	Floodproofing/ Voluntary Buyout of Structures	<10	45	<10	45	\$950 K**	(20/25)	0	N	-	-	Still inaccessability issues along SR 11 and Dawson Street
	Voluntary Buyout of all Flooded and Inaccessible Structures	<10	45	<10	45	\$1.0 M**	(0/45)	45	N	-	-	
	Combination: Levee & Voluntary Buyout	<10	45	<10	45	\$1.9 M*	45	0	N	-	-	Consists of levee & buyout of the 5 structures outside of the floodway (assumed permitable levee location), protected area would still be inaccessible during flood event due to SR 11 flooding
	2-Stage Ditch Channel Improvement	<10	160	<10	200	NC	0	0	N	-		Computer modeling showed a 300' wide shelf lowered the 100 and 50 year flood levels up to 1' which is not sufficient to prevent flooding of structures, alternative would do nothing to prevent East Fork White River flooding of the area
	Floodproofing/ Voluntary Buyout of Structures	<10	160	<10	200	\$2.8 M**	(100/60)	0	N	-	,	Remaining structures would still be inaccessible during flood events on Denios Creek and East Fork White River
Bethel Village (4)	Voluntary Buyout of all Flooded and Inaccessible Structures	<10	160	<10	200	\$6.0 M**	(0/200)	200	N	-	-	
	Combination: Levee & Voluntary Buyout	<10	160	<10	200	\$3.3 M*	160	0	N	-	-	Levee & buyout of 10 structures in floodway (assumed permitable location), requires continuation of RR as levee
Shadow Creek Farms (6)	Bridge Replacement	>500	0	50	>60	NC	0	>60	N	-		Replacement of CR 150 W would allow access to areas north and give all but a few inaccessible structures within Shadow Creek Farms an exit to the south. To be addressed with a separate roads discussion, rather than floodprone areas.

Solution did not meet the criteria for selection as a Promising Solution.

NC Cost not calculated.

- \* Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.
- \*\* Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.
- \*\*\* Estimate is for only the excavation portion of the construction costs
- ${}^{****} \quad \text{Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.}$

## **SLOAN BRANCH**

## **POSSIBLE SOLUTIONS**

		Curre		n Flood Pot ear Levels			Cost 8	Benefits o	f Possible S	olution		
		Struc	Structure		Inaccessibility							
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
Sloan Branch	Off-line Detention	<10	95	<10	280	\$20.5 M	95	280	Y	Y	-	Lutheran Home is in this area but access not structure flooding is its issue, (cost estimate based on \$25,000/ ac-ft of storage required)
	Bypass/ Diversion	<10	65	<10	250	>\$2.2 M***	60	240	N	Y	-	Lutheran Home access is provided, Talley road overtopping is reduced to 1', may still be some residual flooding of less than $1/2$ '
Madison/ Grant/	2-Stage Ditch Channel Improvement	<10	65	<10	250	\$1.5 M	30	5	N	Y	-	Lutheran Home is in this area, combining this alternative with a small berm may make this alternative have the same benefits as the bypass alternative (very close to 100 year protection is provided without the extra berm)
Flintwood (26)	Floodproofing/ Voluntary Buyout of Structures	<10	65	<10	250	\$720 K**	(58/0/7)	0	N	N	-	Access to structures would still be an issue
	Levee/ Floodwall	<10	65	<10	250	\$350 K*	60	190	N	Y	-	Lutheran Home access would be protected by this alternative
Eastridge Manor	Bypass/ Diversion	10	30	10	30	> \$1.2 M*** plus cost of 2 bridges	25	30	N	-	-	Also requires large crossings added on Talley Road and CR 250 N
	Floodproofing/ Voluntary Buyout of Structures	10	30	10	30	\$400 K**	(25/ 5/ 0)	0	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

- NC Cost not calculated.
- \* Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.
- \*\* Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.
- \*\*\* Estimate is for only the excavation portion of the construction costs
- \*\*\*\* Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.

## **CLIFTY CREEK**

## **POSSIBLE SOLUTIONS**

		Current Condition Flood Potential at 500 Year Levels					Cost &	Benefits of	f Possible S	olution		
	Possible Solutions	Struc	ture	Inacces	sibility							
Floodprone Area (#)		Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
	Bridge Replacement	500	10	100	60	NC	undeter- mined	undeter- mined	Y (US 31)	-		US 31 - would require upstream and downstream channel improvement to provide much of any reduction in flood elevations
Sandy Hook/ Clifty	2-Stage Ditch Channel Improvement	500	10	100	60	> \$13.4 M***	10	25	Y (US 31)	-	-	All structures become accessible if this is done in conjunction with the channel improvement for Area 24, cost is excessive for benefit
Crossing (25)	Floodproofing/ Voluntary Buyout of Structures	500	10	100	60	\$100 K**	10	0	N	-	-	Protection of only structures from rare flooding is not high priority
	Levee/ Floodwall	500	10	100	60	\$1.4 M*	10	60	N	-	-	
	Bridge Replacement	50	110	50	140	NC	50	70	N	Y	-	Road is already flood free during 500 year event but adding capacity sufficient to remove surcharge created by the bridge could provide protection for the approximately 50 structures upstream of SR 46 flooded during the 100 year event
Wehmeier/ Columbus East (24)	2-Stage Ditch Channel Improvement	50	110	50	140	> \$16.9 M***	0	0	N	Y	-	Lowers elevations enough that increases the number of structures that could be floodproofed for 500 year protection, provides 100 year protection, cost is excessive for benefit
Columbus East (24)	Floodproofing/Voluntary Buyout of Structures	50	110	50	140	\$2.4 M**	(45/64/1)	0	N		-	Would not address accessibility issues
	Levee/ Floodwall	50	110	50	140	\$1 M*	85	90	N	Y	-	
	2-Stage Ditch Channel Improvement	<500	2	>50	50		0	0	N	-	-	Area 24 & 25 channel improvement does reduce (not eliminate) road flooding here but it is substantial cost for little benefit.
Regency Drive (28)	Floodproofing	<500	2	>50	50	\$20 K**	2	0	N	-	-	Protection of only structures from rare flooding is not high priority
	Levee/ Floodwall	<500	2	>50	50	\$510 K*	2	50	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

NC Cost not calculated

<sup>\*</sup> Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.

<sup>\*\*</sup> Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.

<sup>\*\*\*</sup> Estimate is for only the excavation portion of the construction costs

<sup>\*\*\*\*</sup> Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.

## **FLATROCK RIVER**

# **POSSIBLE SOLUTIONS**

				n Flood Pot ear Levels	ential		Cost 8	Benefits o	f Possible S	olution		
		Struc	ture	Inacces	sibility		Approximate	Approximate				
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
	Bridge Replacement	>10	5	>10	2	NC	3	2	Y (US 31)	-	-	US31 appears to have been replaced since the FIS, based on plans the 100 year water surface is lowered by 0.6' with the new bridge, additional capacity would reduce flood levels more
Riverside Drive	2-Stage Ditch Channel Improvement	>10	5	>10	2	>\$12 M***	1	1	Y (US31)	-		This is part of the channel improvement that is described for areas 21 & 22, also will benefit upstream part of 16, reduction is 1' or less so is excessive cost for the benefit even to protect from more frequent floods (would protect only about 2 structures in the 100 year flood)
North (45)	Floodproofing/ Voluntary Buyout of Structures	>10	5	>10	2	\$90 K**	(3/ 2/ 0)	0	N	-	-	
	Levee/ Floodwall	>10	5	>10	2	\$1.4 M*	5	2	N	-	1	
	Bridge Replacement	100	3	50	10+	NC	3	10+	Y (US31)	-	-	US 31 has been replaced since the FIS data. Based on plans, the 100 year water surface elevation is lowered by 0.6' with the new bridge. Bridge would need additional capacity to make structures in this area accessible and free from flooding
Long Road (22)	2-Stage Ditch Channel Improvement	100	3	50	10+	> \$12 M***	0	0	Y (US31)	-	-	This is part of the channel improvement that is described for areas 21 and 45, also will benefit upstream part of 16, reduction is however 1/2' or less (for 500 and 100 year floods) just upstream of US 31 where most of the flooded structures are located
	Floodproofing	100	3	50	10+	\$60 K**	(0/ 0/ 3)	0	N	-	-	Structures are not residential so no FEMA cost share available for buyout
	Levee/ Floodwall	100	3	50	10+	\$2.5 M*	3	10+	N	-	-	Requires compensatory measures
Commerce Park	2-Stage Ditch Channel Improvement	500	5	< 50	15	>\$12 M***	3	0	Y (US31)	-	-	This is part of the channel improvement that is described for areas 22 and 45, also will benefit upstream part of 16, reduction is 1' for the 500 year and less for the 100 year so is excessive cost for the benefit especially if buildings are elevated more than what the DEM elevations show
(21)	Floodproofing/ Voluntary Buyout of Structures	500	5	< 50	15	\$100 K**	5	0	N	-	-	Commercial structures, protection of structures from rare flooding is not a high priority
	Levee/ Floodwall	500	5	< 50	15	\$1.1 M*	5	15	N	-	•	Requires compensatory measures
Indianapolis Road	Levee/ Floodwall	50	25	10	45	\$6.9 M*	20	40	N	-	large scale	Significant mitigation for lost floodplain storage may be reequired to negate adverse impacts on flood elevations
(16)	Raise Road	50	25	10	45	NC	0	0	Y (Ind. Road)		economic dev. area	Indianapolis Road and individual structure access roads west of Indpls. Road could be made passable during flood events by raising the road and providing culverts etc. under the road to allow connection between river and flooplain storage areas
Washington Street	Floodproofing/ Voluntary Buyout of Structures	< 50	135	< 50	135	\$3.2 M**	(45/ 90/ 0)	0	N	-	-	
(17)	Levee/ Floodwall	< 50	135	< 50	135	\$1.5 M*	135	135	N	-	-	
	Floodproofing/ Voluntary Buyout of Structures	50	55	50	55	\$1.6M**	(35/ 20/ 0)	0	N	-	-	
Noblitt Falls (18)	Levee/ Floodwall	50	55	50	55	\$3.0 M*	55	55	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

- NC Cost not calculated.
- \* Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed
- \*\* Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.
- \*\*\* Estimate is for only the excavation portion of the construction costs
- \*\*\*\* Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.
- Notes: Results for alternatives are for 500 year protection. Comments regarding impacts of alternative at other frequencies are noted where applicable.

## **HAW CREEK**

# **POSSIBLE SOLUTIONS**

		Curre	at 500 Ye	n Flood Pot ear Levels Inacces			Cost 8	Benefits of	Possible S	olution		
Floodprone Area (#)	Possible Solutions	Frequency at Which Structure Flooding Begins	Approximate Number of Flooded Structures	Frequency at Which Roads Start To Flood and Prevent Access to Structures	Approximate Number of Structures Inaccessible During 500 Year Flood	Estimated Construction Cost	Approximate Number of Flooded Structures Protected (floodproof/ buyout/ commercial floodproof)	Approximate Number of Inaccessible Structures That Would Become Accessible During 500 Year Flood	Reduction in Flooding of Major City Transportatio n Route (Yes/No)	Protects At- Risk Population **** (Yes/No/ Maybe)	Compat- ibility With/ Contribution to Other City Priorities	Comments
North Haw Creek (44)	Bridge Replacement	>500	0	<10	10	NC	0	allows access to additional areas	Y (450 N)	-	-	Road could be made passable by raising floodprone segments and adding additional flow capacity to allow continued access to floodplain storage and conveyance
	2-Stage Ditch Channel Improvement	>100	15	>100	25	\$16.7 M*					-	Channel improvement from National Road to Marr Road benefitting Area 40 as well, 100 year flood would still flood almost the same area as current conditions
Sycamore Bend/ Arrowood (42)	Floodproofing/Voluntary Buyout of Structures	>100	15	>100	25	\$150 K**	(15/0/0)	0	N	-	-	
	Levee/ Floodwall	>100	15	>100		\$1.0 M*	15	15	N	-	-	
	2-Stage Ditch Channel Improvement	<50	370	<50	400+	\$16.7 M*			N	-	-	Channel improvement from National Road to Marr Road benefitting Area 40 as well, 100 year flood would still flood almost the same area as current conditions
Northbrook/	Floodproofing/ Voluntary Buyout of Structures	<50	370	<50	400+	\$5.3 M**	(290/80/0)	0	N	-	-	
Candlelight (41)	Levee/ Floodwall	<50	370	<50	400+	\$1.9 M*	370	400+	N	-	-	
	Voluntary Buyouts	<50	370	<50	400+	NC	# purchased	no longer an issue for the # purchased	N	-	-	Approximately 140 houses and 230 mobile homes flooded in the area. If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that are flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
	2-Stage Ditch Channel Improvement	<50	85	<50	85+	\$16.7 M*			Y (Marr Road 1.7')	-	-	channel improvement from National Road to Marr Road benefitting Area 40 as well, 0.2' reduction at the south end varying to 2' reduction at the north end meaning that most of the strcutures north of Victoria Avenue would be protected but they only flood in the 500 year anyway, those structures with more frequent flooding would not be protected
Windsor Place/ Hillcrest (40)	Floodproofing/ Voluntary Buyout of Structures	<50	85	<50	85+	\$1.2 M**	(70/ 15/ 0)	0	N	-	-	
Hillicrest (40)	Levee/ Floodwall	<50	85	<50	85+	\$1.6 M*	85	85+	N	-	-	May still be flooding from overflow of the tributary north of Rocky Ford Road
	Voluntary Buyouts	<50	85	<50	85+	NC	# purchased	no longer an issue for the # purchased	N	-	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
Cedar Ridge (39)	Levee/ Floodwall	>500	0	100	25	\$600 K*	0	25	N	-	-	Cost is excessive for protection of access to a few residences for a short period of time on an infrequent basis
Evenes d Doub	Floodproofing/ Voluntary Buyout of Structures	50	180	<50	190+	\$3.2 M**	(110/70/0)	0	N	-	-	
Everoad Park West/ Eastbrook (38)	Levee/floodwall	50	180	<50	190+	\$4.3 M*	180	190+	N	-	-	
(33)	Voluntary Buyouts	50	180	<50	190+	NC	# purchased	no longer an issue for the # purchased	N	-	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
	Floodproofing/ Voluntary Buyout of Structures	<50	55	<50	75	\$1.4 M**	(15/40/0)	0	N	-	-	Protects only a few structures and does not improve accessibility to the area during floods
Everoad Park East (37)	Levee/ Floodwall	<50	55	<50	75	\$1.8 M*	55	75	N	-	-	
	Voluntary Buyouts	<50	55	<50	75	NC	# purchased	no longer an issue for the # purchased	N	-	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
	2-Stage Ditch Channel Improvement	<100	30	<10	32				Y (25th Street 0.2')	М	-	Columbus Health & Rehabilitation is located in this area, results of computer modeling show reduction in 100 year water surface elevation of 0.3' with a channel improvement option in the available space
ani 1 (25)	Floodproofing/Voluntary Buyout of Structures	<100	30	<10	32	\$540 K**	(20/8/2)	0	N	Y	-	Columbus Health & Rehabilitation located in this area
Midway (36)	Levee/ Floodwall	<100	30	<10	32	\$1.3 M*	30	32	N	Y	-	Columbus Health & Rehabilitation located in this area
	voluntary buyouts	<100	30	<10	32	NC	# purchased	no longer an issue for the # purchased	N	Y	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
	Floodproofing/ Voluntary Buyout of Structures	>50	50	50	50	\$780 K**	(35/ 15/ 0)	0	N	-	-	
17th/ Keller (34)	Levee/ Floodwall	>50	50	50	50	\$900 K*	50	50	N	-	-	
	voluntary buyouts	>50	50	50	50	NC	# purchased	no longer an issue for the # purchased	N	-	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
10th / Control (32)	Floodproofing/ Voluntary Buyout of Structures	<10	170	10	185	\$3.7 M**	(70/100/0)	0	N	-	-	
10th/ Central (33)	voluntary buyouts	<10	170	10	185	NC	# purchased	no longer an issue for the # purchased	N	-	-	If protection is not provided by another alternative, voluntary buyouts could be pursued starting with those unprotected structures that would be flooded most frequently. (Buyout can be undertaken through FEMA grants with 25% of purchase price paid by the City.)
Tech Center/ Pleasant Grove (32)	Floodproofing/ Voluntary Buyout of Structures	<50	50	<50	50	\$1.0 M	(25/ 21/ 4)	50	N	-	-	Reasonable area to buyout since several homes have already been bought out after 2008 flooding, Cummins Childcare Center could be individually floodproofed, a floodwall has been constructed to protect CTC.
CEP/ 2nd Street (31)	Floodproofing	100	7	100	7	\$140 K**	(0/7)	7	N	-	-	Commercial structures that could be bought out or owners could consider a more major floodwall to protect each structure individually
Mariah/ Reo	Levee/ Floodwall	10	25	10	25	\$2.3 M*	24	24	N	-	-	Additional levee required to protect Mariah
Street (30)	Floodproofing/Voluntary Buyout of Structures	10	25	10	25	\$740 K**	(0/24/1)	24	N	-	-	

Solution did not meet the criteria for selection as a Promising Solution.

- NC Cost not calculated.
- \* Does not include costs for mitigation of negative impacts to flood elevations (such as channel improvements, compensatory floodplain storage, detention,...) that may be needed.
- \*\* Estimate for commercial structures based on \$20,000 City cost share for each floodproofed structure only. Estimate for residential structures based on \$10,000 City cost share for each floodproofed structure plus 25% City cost share of 120% of assumed average structure value of \$100,000 for each buyout structure assuming FEMA grant programs are used.
- \*\*\* Estimate is for only the excavation portion of the construction costs
- \*\*\*\* Includes apartment complexes, childcare centers, nursing homes, schools, and other similar facilities.
- Notes: Results for alternatives are for 500 year protection. Comments regarding impacts of alternative at other frequencies are noted where applicable.