

APPENDIX B - TABLES

TABLE 1- DRAINAGE AREA SUMMARY

FAIRGO BASIN

Area	Acreage	Existing CN	Ultimate CN	t_c (hrs.)
1.	113.60	62.0	64.1	.46
2.	55.01	72.6	81.0	.14
3.	62.13	78.0	82.5	.20
4.	11.91	72.4	78.6	.21
5.	15.05	79.9	82.0	.17
6.	8.49	76.9	83.5	.25
7.	11.40	79.8	90.0	.09
8.	31.52	77.2	81.9	.22
9.	23.94	72.9	88.2	.17
Total Acreage	335.34			
Weighted CN		71.1	76.4	

TABLE 2-FAIRGO STRUCTURES

Structure No.	Location	Description	From Surveys	From Field Reconnaissance
	<u>Main Stream</u>			
1.	Fairgrounds Road	36" RCP	X	
2	Fairgrounds Road	36" RCP	X	
3	Baltimore & Ohio Railroad	3.5' x 6' Box	X	
4	Station 22+10	24" RCP	X	
5	Station 26+70	27" RCP	X	
6	Pershing Street	54" x 36" CMPA	X	
7	Yuma Street	54" x 39" CMPA	X	
8	Poppy Street	39" x 27" CMPA	X	
9	U.S. Route 220	5.1' x 5.7' Box	X	
10	Station 43+10	63" Steel Pipe	X	
11	Station 47+15	29" Steel Pipe	X	
12	Crocus Street	53" x 36" CMPA	X	
13	Ginger Street	66" x 50" CMPA	X	
14	Mulberry Street	52" x 30" CMPA	X	
15	Cresap Street	62" x 42" CMPA	X	
	<u>Tributary No. 1</u>			
16	U.S. Route 220	24" RCP		X
17	Marigold Street	15" CMP		X
18	Kite Street	18" RCP		X
19	Station 14+30	24" RCP		X
20	Station 15+10	24" RCP		X
21	Alley	24" CMP		X
22	Heather Street	13" CMP		X
23	Cresap Street	24" RCP		X
24	Station 25+50	18" Steel Pipe		X

TABLE 3

FAIRGO BASIN

Computed Water Surface
Elevations for Each Cross Section

SECTION	EXISTING DEVELOPMENT CONDITIONS					ULTIMATE DEVELOPMENT CONDITIONS					Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₁₀₀	WSEL ₁₀₀
39.0	139	631.0	356	631.5	660	632.0	203	631.1	459	631.6	790	632.1		
39.1		633.1		633.7		634.3		633.3		633.9		634.5		
39.2		635.2		636.1		636.4		635.6		636.1		636.5		
39.3		636.1		636.6		636.9		636.2		636.7		637.1		
40.1		636.6		637.1		637.7		636.8		637.3		637.9		
40.2		636.6		637.2		637.7		636.8		637.4		637.9		
41.0		636.7		637.1		637.8		636.8		637.4		638.0		
42.0		641.4		642.7		643.4		642.0		643.0		643.6		
42.1		643.1		644.5		644.6		644.5		644.5		644.8		
42.2		645.1		645.3		645.6		645.1		645.4		645.7		
43.1		645.4		645.7		646.1		645.5		645.9		646.2		

MAIN STREAM

TABLE 3

FAIRGO BASIN

SECTION	Computed Water Surface Elevations for Each Cross Section										Q in cfs; WSEL in feet			
	EXISTING DEVELOPMENT CONDITIONS					ULTIMATE DEVELOPMENT CONDITIONS					Q ₁₀		Q ₁₀₀	
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀
43.2	139	645.4	356	645.8	660	646.1	203	645.6	459	645.9	790	646.3		
44.1	169	647.2	454	649.9	815	650.2	256	648.1	577	650.1	960	650.2		
44.2		651.5		653.3		653.1		651.5		653.3		653.1		
46.0		651.9		653.3		653.1		651.9		653.3		653.1		
46.1		652.3		653.2		653.2		652.5		653.2		653.3		
46.2		653.1		653.5		653.8		653.3		653.6		653.9		
46.3		665.8		666.8		667.5		666.1		667.1		667.7		
46.4		666.4		667.5		668.3		666.8		667.8		668.5		
47.5		668.4		668.9		669.2		668.6		669.1		669.3		
47.6		669.1		669.7		670.2		669.3		669.8		670.2		
49.0		669.5		670.2		670.8		669.7		670.5		671.0		
49.1		672.0		672.0		672.1		672.0		672.0		672.1		
49.2		672.0		672.0		671.9		672.0		672.0		671.9		

TABLE 3

FAIRGO BASIN

Computed Water Surface
Elevations for Each Cross Section

SECTION	EXISTING DEVELOPMENT CONDITIONS				ULTIMATE DEVELOPMENT CONDITIONS				Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀
48.1	169	672.0	454	672.1	815	672.3	256	672.0	577	672.1	960	672.4
48.2		672.0		672.1		672.4		672.1		672.2		672.5
50.0		672.0		672.1		672.4		672.0		672.2		672.5
51.0		676.7		678.1		678.8		677.5		678.4		679.0
51.1		679.1		680.8		680.8		680.2		680.8		681.2
51.2		679.3		681.5		681.9		683.2		681.6		682.0
52.1		682.4		682.2		682.8		683.2		682.4		683.0
52.2		682.4		682.3		682.9		683.2		682.5		683.1
53.0		682.9		683.5		683.9		683.1		683.6		684.0
54.0		686.0		686.7		687.3		686.3		687.0		687.5
54.1	156	689.1	412	689.0	735	689.0	236	689.1	525	689.0	868	689.1
54.2		689.8		690.1		690.6		689.8		690.3		690.6

TABLE 3

FAIRGO BASIN

Computed Water Surface
Elevations for Each Cross Section

SECTION	EXISTING DEVELOPMENT CONDITIONS					ULTIMATE DEVELOPMENT CONDITIONS					Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₁₀₀	WSEL ₁₀₀
55.1	156	690.1	412	690.8	735	691.3	236	690.3	525	691.0	868	691.6		
55.2		690.4		691.2		691.7		690.7		691.4		691.9		
56.0		690.4		691.0		691.6		690.7		691.2		691.9		
57.0	160	699.3	408	700.8	718	701.6	238	700.2	515	701.1	844	701.8		
58.0		705.6		707.1		709.5		705.6		707.9		710.4		
58.1		706.0		710.4		710.2		706.7		711.3		713.6		
59.0	124	707.2	321	712.01	571	715.4	190	708.7	414	713.4	679	715.4		
60.0		713.2		713.6		715.5		713.2		713.9		715.5		
60.1		719.0		721.2		722.1		719.8		722.0		722.1		
60.2		719.8		723.6		724.7		720.5		724.1		725.1		
60.3		722.6		724.3		726.8		723.4		726.4		727.0		
60.4		723.7		729.1		727.7		725.9		729.1		728.0		

TABLE 3

FAIRGO BASIN

SECTION	EXISTING DEVELOPMENT CONDITIONS				ULTIMATE DEVELOPMENT CONDITIONS				Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀
61.0	124	727.3	321	729.0	571	729.2	190	727.9	414	729.0	679	729.4
62.0		731.8		733.3		734.1		732.4		733.7		734.4
63.1		736.2		736.7		737.3		736.4		736.8		737.5
63.2		736.5		737.1		737.6		736.8		737.3		737.8
63.3		740.6		740.9		741.2		740.7		741.0		741.2
63.4		740.8		741.4		741.8		741.1		741.6		742.0
63.0		741.3		742.1		742.8		741.7		742.4		743.0
64.0	54	751.8	157	752.7	305	753.6	97	752.2	223	753.1	383	754.0
65.1		753.1		754.5		756.4		753.6		755.4		757.2
65.2		753.9		759.7		760.3		756.7		760.0		760.5
67.0		755.4		759.7		760.5		757.1		760.1		760.7
68.0		767.1		768.0		768.9		767.5		768.5		769.5

TABLE 3

FAIRGO BASIN

Computed Water Surface
Elevations for Each Cross Section

SECTION	EXISTING DEVELOPMENT CONDITIONS					ULTIMATE DEVELOPMENT CONDITIONS					Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₁₀₀	WSEL ₁₀₀
68.1	54	769.1	157	770.6	305	772.3	97	769.8	223	771.4	383	773.0		
68.2		771.4		773.4		777.7		772.1		777.3		777.9		
70.0		772.8		774.6		777.7		773.4		777.3		777.9		
71.0		784.7		786.1		787.2		785.4		786.7		787.7		
72.1		789.6		791.3		793.3		790.4		792.3		794.0		
72.2		789.8		793.7		796.9		792.0		795.2		796.9		
72.3		791.8		793.8		796.9		792.6		795.2		796.9		
72.4		793.1		794.8		796.9		793.9		795.6		796.9		
73.0		795.8		797.3		798.0		796.4		797.8		798.2		
74.0	20	804.6	95	805.2	205	805.7	27	804.7	110	805.2	226	805.8		
74.1		807.3		808.7		810.1		807.5		808.9		810.3		
74.2		808.1		809.7		812.5		808.3		810.0		812.6		
76.0		810.7		811.3		812.5		810.8		811.8		812.6		

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FAIRGO BASIN

Computed Water Surface
Elevations for Each Cross Section

SECTION	EXISTING DEVELOPMENT CONDITIONS				ULTIMATE DEVELOPMENT CONDITIONS				Q in cfs; WSEL in feet			
	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀	Q ₂	WSEL ₂	Q ₁₀	WSEL ₁₀	Q ₁₀₀	WSEL ₁₀₀
TRIBUTARY NO. 1												
57.1	37	723.6	89	724.1	131	724.5	49	723.7	105	724.2	150	724.7
57.2	29	764.5	70	764.9	118	765.2	37	764.6	81	765.0	132	765.3
57.4	10	814.8	27	815.0	49	815.1	16	814.9	36	815.0	59	815.1
57.5	3	853.5	9	854.1	16	854.3	5	853.8	12	854.2	20	854.4

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FAIRGO BASIN
TABLE 4 -FLOOD DAMAGE ESTIMATES EXISTING CONDITIONS

* ITEMIZED LOSSES	* 2-YEAR STORM * EXISTING CONDITONS	* 10-YEAR STORM * EXISTING CONDITIONS	* 100-YEAR STORM * EXISTING CONDITIONS
* PRIVATE LOSSES	*	*	*
* -STRUCTURES	* \$ 12,331	* \$ 30,023	* \$ 43,393
* -CONTENTS	* 5,323	* 15,616	* 23,536
* -EXTERIOR PROPERTIES	* 1,950	* 6,500	* 11,050
* -VEHICLES	* 3,500	* 14,000	* 28,000
* TOTAL PRIVATE LOSSES	* \$ 23,104	* \$ 66,139	* \$ 105,979
* PUBLIC LOSSES	*	*	*
* -EMERGENCY POLICE SERVICES	* \$ 290	* \$ 290	* \$ 500
* -CITY CLEAN-UP SERVICES	* 944	* 944	* 2200
* -UTILITIES REPAIR SERVICES	* 600	* 600	* 1200
* TOTAL PUBLIC LOSSES	* \$ 1,834	* \$ 1,834	* \$ 3,900
* ABSTRACT LOSSES	*	*	*
* LOST WAGES	* \$ 720	* \$ 1,560	* \$ 3,120
* -EXTRA MILEAGE COST	* 0	* 0	* 0
* TOTAL ABSTRACT LOSSES	* \$ 720	* \$ 1,560	* \$ 3,120
* TOTAL OF ALL LOSSES	* \$ 25,658	* \$ 69,533	* \$ 113,007
* AVERAGE ANNUAL DAMAGES = .45(2-YEAR TOTAL)+.245(10-YEAR TOTAL)+.055(100-YEAR TOTAL)= \$ 34,801			
* PRESENT VALUE OF THE AVERAGE ANNUAL DAMAGES (TAKEN FOR 30 YEARS AT AN INTEREST RATE OF 8%)= \$ 391,788			

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FAIRGO BASIN
TABLE 5- FLOOD DAMAGE ESTIMATES ULTIMATE CONDITIONS

* ITEMIZED LOSSES	* 2-YEAR STORM * ULTIMATE CONDITONS	* 10-YEAR STORM * ULTIMATE CONDITIIONS	* 100-YEAR STORM * ULTIMATE CONDITIONS	*
* PRIVATE LOSSES	*	*	*	*
* -STRUCTURES	* \$ 13,911	* \$ 33,238	* \$ 47,888	*
* -CONTENTS	* 6,043	* 17,596	* 25,696	*
* -EXTERIOR PROPERTIES	* 1,950	* 6,500	* 11,050	*
* -VEHICLES	* 3,500	* 14,000	* 28,000	*
* TOTAL PRIVATE LOSSES	* \$ 25,404	* \$ 71,334	* \$ 112,634	*
* PUBLIC LOSSES	*	*	*	*
* -EMERGENCY POLICE SERVICES	* \$ 290	* \$ 290	* \$ 580	*
* -CITY CLEAN-UP SERVICES	* 944	* 944	* 2208	*
* -UTILITIES REPAIR SERVICES	* 600	* 600	* 1200	*
* TOTAL PUBLIC LOSSES	* \$ 1,834	* \$ 1,834	* \$ 3,988	*
* ABSTRACT LOSSES	*	*	*	*
* -LOST WAGES	* \$ 720	* \$ 1,560	* \$ 3,120	*
* -EXTRA MILEAGE COST	* 0	* 0	* 0	*
* TOTAL ABSTRACT LOSSES	* \$ 720	* \$ 1,560	* \$ 3,120	*
* TOTAL OF ALL LOSSES	* \$ 27,958	* \$ 74,728	* \$ 119,742	*
* AVERAGE ANNUAL DAMAGES = .45(2-YEAR TOTAL)+.245(10-YEAR TOTAL)+.055(100-YEAR TOTAL)=	* \$ 37,475	*	*	*
* PRESENT VALUE OF THE AVERAGE ANNUAL DAMAGES(TAKEN FOR 30 YEARS AT AN INTEREST RATE OF 8%)=	* \$ 421,889	*	*	*

Table 6. FLOOD MANAGEMENT ALTERNATIVES

FAIRGO BASIN

House ID Code	Base-ment	100-Year Flood Elevation in Relationship to 1st Floor Elevation	100-Year Flood Depth Around Foundation or Basement Equal To or Greater Than One Foot	ALTERNATIVES				Comments
				Flood Proof	Flood Insur.	Purchase Candidate	Structural Improvements	
P		-		X	X			FF above flood elevation Already purchased Already purchased
Q	X	8.0						
R	X	0	-					
S	X	-5	-	X	X			
T	X	-6.5	-	X	X			
U		-						Out of flood zone Out of flood zone Replace private 5.3' steel pipe with three 60" culverts (\$75,000). Not recommended. Out of flood zone Out of flood zone Out of flood zone Out of flood zone
V		-						
W	X	1		X	X			
X	X	0		X	X			
Y	X	1		X	X			
Z	X	-3.5	-	X	X			
AA	X	-	-					
AB		-5.5	-	X	X			
AC		-						
AD		-						
AE		-						
V-1	X	2	-			X	Rte. 220 and Trib. No. 1 48" drainage system (\$114,000). Requires improvement of State culvert along US Rte. 220 (\$173,000)	
V-2	X	-5.5	-	X	X			
V-3	X	-4	-	X	X			
V-4	X	1.5	-	X	X	X		
V-5	X	-4	-	X	X			
V-6	X	-8	-	X	X			FF above flood elevation
V-7		-						
B & O Railroad Overtopping		Railroad overtopping. Depth of 0.34 feet during 100-year storm. Not overtopped for 2 and 10-year storms.					Replace B&O Railroad culvert with 70 sq.ft. box culvert. (\$41,000)	Not economically justified, but may want to do for safety reasons.
Moss Avenue Flooding							Additional two 48" RCP's along Moss Avenue. For 2-year design (\$130,000)	Not economically justified
U.S. Route 220 Overtopping on Main Stream		Not overtopped during 2 and 10-year storm.					Replace U.S. Rte 220 culvert with two 7'x5' box culverts (\$53,000)	Not economically justified