

**L Pit Diversion, divert runoff from
small disturbed area into Jeffway
Pond**
10 year, 24 hour event

Jim Mattern

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General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	10 yr - 24 hr
Rainfall Depth:	1.400 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Channel	#1	==>	End	0.000	0.000	L Pit Diversion

#1
Chan'l

Structure Summary:

	Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#1	26.000	26.000	0.89	0.18

Structure Detail:

Structure #1 (Erodible Channel)

L Pit Diversion

Triangular Erodible Channel Inputs:

Material: Graded silts to cobbles when colloidal

Left Sideslope Ratio	Right Sideslope Ratio	Slope (%)	Manning's n	Freeboard Depth (ft)	Freeboard % of Depth	Freeboard Mult. x (VxD)	Limiting Velocity (fps)
2.0:1	2.0:1	4.3	0.0300	1.60			4.0

Erodible Channel Results:

	w/o Freeboard	w/ Freeboard
Design Discharge:	0.89 cfs	
Depth:	0.38 ft	1.98 ft
Top Width:	1.50 ft	7.90 ft
Velocity:	3.14 fps	
X-Section Area:	0.28 sq ft	
Hydraulic Radius:	0.168 ft	
Froude Number:	1.28	

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	26.000	0.156	0.000	0.000	73.000	M	0.89	0.176
Σ		26.000						0.89	0.176

Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	2. Minimum tillage cultivation	19.09	135.00	707.00	2.180	0.090
		8. Large gullies, diversions, and low flowing streams	4.55	70.00	1,539.00	6.390	0.066
#1	1	Time of Concentration:					0.156