

TABLE A-3
MANNING COEFFICIENT

<u>CONDUIT MATERIAL</u>	<u>MANNING COEFFICIENTS</u>
Closed conduits	
PVC (color white) *	.013
Cast iron pipe	.013
Concrete pipe	.013
Cast-in-place concrete pipe	.013
Corrugated metal pipe	.013
Plain	.024
Paved invert	.020
Fully paved	.013
Vitrified clay	.013
HDPE	.013
Open channels	
Lined channels	
Asphalt	.015
Concrete	.015
Rubble or riprap	.030
Vegetal	.040
Excavated or dredged	
Earth, straight and uniform	.030
Earth, winding, fairly uniform	.040
Unmaintained	.100
Natural channels (minor streams)	
Fairly regular section	.050
Irregular section with pools	.100

(Adapted for Table XIV, ASCE Manual No. 37, 1970).

ENGINEERING DEPARTMENT		CITY OF MERCED, CA.	
STORM DRAIN DESIGN REFERENCE DATA			SD-23
DRAWN: KGE	APPROVED BY:	DATE	
DATE: 8/91	<i>David L. Tucker</i>	<i>11/15/04</i>	
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			SHEET OF