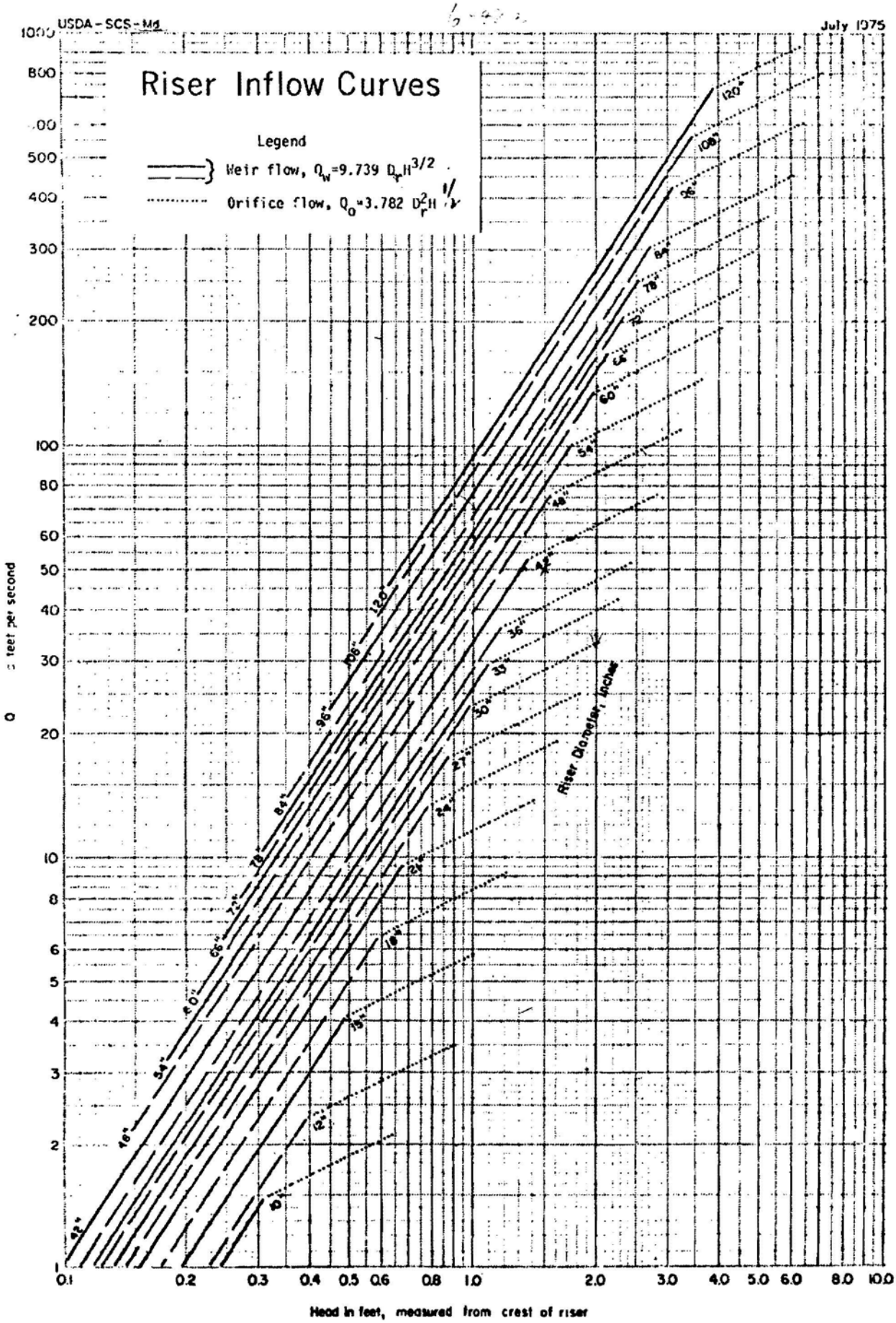
USDA-SCS-Md
July 1975
Riser Inflow Curves
Legend
Weir flow, $Q_w = 9.739\ D_r H^{3/2}$
Orifice flow, $Q_o = 3.782\ D_r^2 H^{1/2}$
Q feet per second
Riser Diameter, Inches
Head in feet, measured from crest of riser

6-42b.

Table 4/Values of $S^{1/2}$

S	b	1	2	3	4	5	6	7	8	9
.00	—	.0316	.0447	.0548	.0632	.0707	.0775	.0837	.0894	.0949
.01	.10	.1049	.1095	.1140	.1183	.1225	.1265	.1304	.1342	.1378
.02	.1414	.1449	.1483	.1517	.1549	.1581	.1612	.1643	.1673	.1703
.03	.1732	.1761	.1789	.1817	.1844	.1871	.1897	.1924	.1949	.1975
.04	.20	.2025	.2049	.2074	.2098	.2121	.2145	.2168	.2191	.2214
.05	.2236	.2258	.2280	.2302	.2324	.2345	.2366	.2387	.2408	.2429
.06	.2449	.2470	.2490	.2510	.2530	.2550	.2569	.2588	.2608	.2627
.07	.2646	.2665	.2683	.2702	.2720	.2739	.2757	.2775	.2793	.2811
.08	.2828	.2846	.2864	.2881	.2898	.2915	.2933	.2950	.2966	.2983
.09	.30	.3017	.3033	.3050	3066	.3082	.3098	.3114	.3130	.3146
.10	.3162	.3178	.3194	.3209	.3225	.3240	.3256	.3271	.3286	.3302

Note: numbers across top represent third decimal place e.g. if given slopes are .002 ft/ft and .034 ft/ft then respective $S^{1/2}$ values are .0447 and .1844.

Table 5/Summary of Roughness Coefficients—Manning's "n" Based on Test Results

Pipe Diam. (in)	Corrugation Configuration & Construction						
	¼ x 1½ Helical *	½ x 2⅔ Helical *	½ x 2⅔ Annular *	1 x 3 Helical *	1 x 6 Annular *	1 x 6 Helical *	2½ x 9 Annular **
6	.010						
8	.013						
10	.016						
12		.010	.026				
15		.012	.025				
18		.014	.025				
21		.016	.025				
24		.017	.025				
30		.018	.025	.019			
36		.019	.025	.020	.025		
42		.020	.024	.020	.024		
48		.020	.024	.020	.024	.020	
54		.020	.024	.021	.024	.020	
60		.021	.024	.021	.024	.021	.035
66		.021	.024	.021	.024	.021	.035
72		.021	.024	.021	.024	.021	.034
78		.021	.024	.021	.024	.021	.034
84		.021	.024	.022	.024	.021	.034
90		.021	.024	.022	.024	.021	.034
96		.021	.024	.022	.024	.021	.034
102				.022	.023	.021	.034
108				.022	.023	.022	.033
114				.022	.023	.022	.033
120				.022	.023	.022	.033
126-162							.033
168-246							.032
252							.031

from * St. Anthony Falls Hydraulic Laboratory, Minn.
** Corps of Engineers