IRIS Solar Complex - 5/15/14

Drainage Catchment	Total Drainage Area (Acres)	IID Drain Accepting Runoff[1]	Existing Condidtions 100-year Flow Discharges Q=CIA (cfs)	Proposed Condidtions 100-year Flow Discharges Q=CIA (cfs)	Difference Proposed - Existing (cfs)	% Increase
ISF(N)	188.1	Wisteria Drain	214	277	62	23
ISF(S)	332.7	Wisteria Drain	379	495	116	23
FSF(N)	204	Wisteria Drain	233	299	66	22
FSF(S)	163.1	Wisteria Drain	186	239	53	22
RSF(N)	170.7	Kubler Road	195	250	55	22
RSF(S)	225.5	Wisteria Drain	257	338	81	24
LSF	138.4	Geeson Wash	158	212	55	26
			0			
			0			
			0			
			0			
			0			

Figure 819.2A

Runoff Coefficients for Undeveloped Areas

Watershed Types

	Extreme	High	Normal	Low
Relief	.28 -.35 Steep, rugged terrain with average slopes above 30%	.20 -.28 Hilly, with average slopes of 10 to 30%	.14 -.20 Rolling, with average slopes of 5 to 10%	.08 -.14 0.09 Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	.12 -.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	.08 -.12 0.08 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	.06 -.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	.04 -.06 High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	.12 -.16 No effective plant cover, bare or very sparse cover	.08 -.12 Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	.06 -.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	.04 -.06 0.04 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover
Surface Storage	.10 -.12 Negligible surface depression few and shallow; drainageways steep and small, no marshes	.08 -.10 0.09 Low; well defined system of small drainageways; no ponds or marshes	.06 -.08 Normal; considerable surface depression storage; lakes and pond marshes	.04 -.06 High; surface storage, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes

Given An undeveloped watershed consisting of;
1) rolling terrain with average slopes of 5%,
2) clay type soils,
3) good grassland area, and
4) normal surface depressions.

Solution:

Relief	0.14	0.09
Soil Infiltration	0.08	0.08
Vegetal Cover	0.04	0.04
Surface Storage	0.06	0.09
C=	0.32	0.30

Find The runoff coefficient, C, for the above watershed.

For 100-year event C=1.25X0.30 = 0.38