Worksheet 10: Nomograph Method for Determining Capture Efficiency of Harvest and Use BMPs

Part 1: Calculate the EIATA and the effect of upstream HSCs				
1a	Landscape area irrigated with harvested water	LA=		acres
1b	Area-weighted landscape coefficient (typically 0.7 for active turf, 0.35 for conservation landscape design)	K_L=		
1c	Irrigation efficiency (typically 0.90)	IE		
1d	Enter DMA area tributary to BMP (s), *A* (acres) (not including any self-retaining areas)	A=		acres
1e	Enter DMA Imperviousness, *imp* (unitless)	imp=		
1f	Effective Irrigated Area to Tributary Area ratio, EIATA = LA * K_L / (IE * imp * A)	EIATA		ac/ac
2	Enter capture efficiency corresponding to upstream HSCs (Worksheet 4) and locate on Figure E-8 or the figure within the worksheet below	Y_1=		%
3	Using Figure E-8 or the figure within the worksheet below, determine the cistern volume as a fraction of the DCV corresponding to the capture efficiency of the HSCs	X_1=		
Part 2: Calculate the DCV				
4	85th percentile, 24-hour design storm	d =		inches
5a	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=		
5b	Calculate the DCV= *(C x d x A x 43560 sf/ac x (1 ft/12 in))*	DCV=		cu-ft
Part 3: Calculate capture efficiency				
6	Storage Volume of BMP (cistern, vault, etc.)	V		cu ft
7	Storage Volume as a fraction of DCV, V_{frac} = V/CDV	V_{frac}		
8	Final equivalent volume as a fraction of DCV from combination of HSCs and harvest and use BMPs, $X_2 = X_1 + V_{frac}$	X_2		
9	Using Figure E-8 or the figure within the worksheet below, determine the capture efficiency of the harvest and use BMPs and any upstream HSCs	Y_2		%

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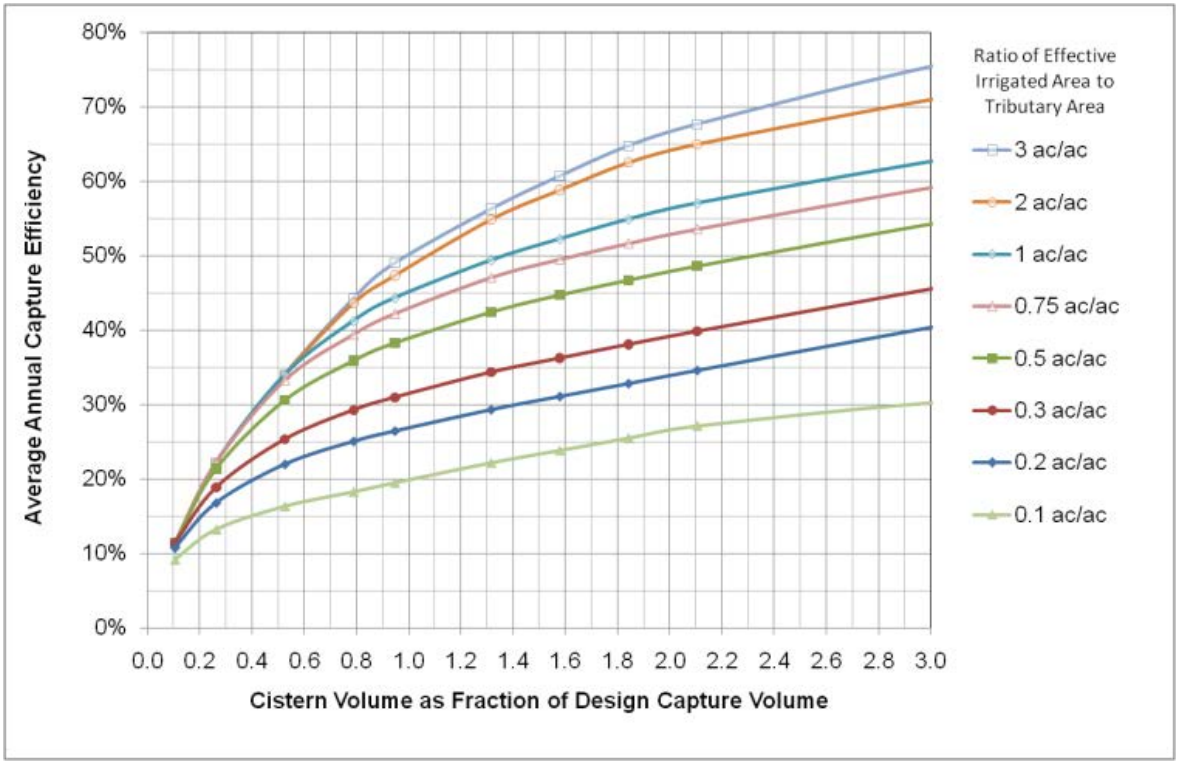
Supporting Calculations
Describe system:

Graphical Operations

Provide supporting graphical operations.