

Equal Annual Cost Equations

EAC_Pareto_Cli computation

BMP	Cest_org	CM	EAC_Pareto_org_cli
CR	42.3	na	$= \text{EAC_Pareto_org} * \text{Cest_cli} / \text{Cest_org}$
RG	35.9	na	$= \text{EAC_Pareto_org} * \text{Cest_cli} / \text{Cest_org}$
CC	56.4	na	$= \text{EAC_Pareto_org} * \text{Cest_cli} / \text{Cest_org}$
AA	2564.8	na	$= \text{EAC_Pareto_org} * (\text{Cest_cli} * \text{CRF_ni} + \text{CRV}) / (\text{Cest_org} * \text{CRF_ni} + \text{CRV})$
CW	2700.000	0.105218	$= \text{EAC_Pareto_org} * (0.05 * \text{Cest_cli} * \text{CRF_ni} + \text{CM} + 0.05 * \text{CRV}) / (0.05 * \text{Cest_org} * \text{CRF_ni} + \text{Cm} + 0.05 * \text{CRV})$
DWM	161.631	1.200	$= \text{EAC_Pareto_org} * (\text{Cest_cli} * \text{CRF_ni} + \text{CM}) / (\text{Cest_org} * \text{CRF_ni} + \text{CM})$
BR	133.000	0.991	$= \text{EAC_Pareto_org} * (\text{Cest_cli} * \text{CRF_ni} + \text{CM}) / (\text{Cest_org} * \text{CRF_ni} + \text{CM})$
SB	140.2	1.200	$= \text{EAC_Pareto_org} * (\text{Cest_cli} * \text{CRF_ni} + \text{CM}) / (\text{Cest_org} * \text{CRF_ni} + \text{CM})$
FS	500.000	na	$= \text{EAC_Pareto_org} * (\text{Cest_cli} * \text{CRF_ni} + \text{CRV}) / (\text{Cest_org} * \text{CRF_ni} + \text{CRV})$

EAC_Sim computation

BMP	Cest_Client	CM	EAC_sim
CR	Cest_clina	na	$= \text{MO} * \text{TPVC_ni} * \text{CRF_ni}$
RG	Cest_clina	na	$= \text{MO} * \text{TPVC_ni} * \text{CRF_ni}$
CC	Cest_clina	na	$= \text{MO} * \text{TPVC_ni} * \text{CRF_ni}$
AA	Cest_clina	na	$= \text{MO} * (\text{CRF_ni} + \text{CRV} / \text{Cest_cli})$
CW	Cest_cli	0.105218	$= \text{MO} * (\text{CRF_ni} + 20 * \text{CM} / \text{Cest_cli} + \text{CRV} / \text{Cest_cli})$
DWM	Cest_cli	1.200	$= \text{MO} * (\text{CRF_ni} + \text{CM} / \text{Cest_cli} + \text{CRV} / \text{Cest_cli})$
BR	Cest_cli	0.991	$= \text{MO} * (\text{CRF_ni} + \text{CM} / \text{Cest_cli} + \text{CRV} / \text{Cest_cli})$
SB	Cest_cli	1.200	$= \text{MO} * (\text{CRF_ni} + \text{CM} / \text{Cest_cli} + \text{CRV} / \text{Cest_cli})$
FS	Cest_cli	na	$= \text{MO} * (\text{CRF_ni} + \text{CRV} / \text{Cest_cli})$

Note:

TPVC_nyr = 14.7098374175206; for n = 1 to 20 and i = 0.035

CRF_{ni} (capital recovery factor) = $(0.035 \cdot (1.035)^{20}) / (-1 + 1.035^{20})$; n = 20 and i = 0.035

WSA (watershed area): WSA_{bd} = 10638.6 ha; WSA_{blc} = 12336.2 ha

HTA (hactre to acre) = 2.471054

CRV (Cash rent value); CRV_{bd} = 169.2; CRV_{blc} = 270.7 (\$/acre)

RL (Revenue loss factor); RL_{bd} = CRV_{bd} * HTA * WSA_{bd} = 4,448,023.52028; RL_{blc} =

CRV_{blc} * HTA * WSA_{blc} = 8,251,860.80724