

FY 2021 CRC Calculation

(May 2019)

FY2021

Step 1	BFBB	Basin Fund Beginning Balance (\$)	\$117,508,000	← Projected beginning balance for FY2021 per financial cash flow analysis
	BFTB	Basin Fund Trigger Balance*	\$70,504,800	← Basin Fund Trigger Balance = BFBB x 0.60, per Tier Table
	PAR	Projected Annual Revenue (\$) w/o CRC	\$190,628,000	← Per financial cash flow analysis plus projected additional revenue from rate adjustment
	PAE	Projected Annual Expense (\$)	\$249,187,000	← Per financial cash flow analysis
	NR	Net Revenue (\$)	(\$58,559,000)	← =PAR-PAE
	NB	Net Balance (\$)	\$58,949,000	← =BFBB + NR
Step 2	EA	SHP Energy Allocation (GWh)	5,135.00	← SHP energy allocation excluding project use
	HE	Forecasted Hydro Energy (GWh)	4,459.00	← Projected generation from the most current 24-month study, does not include project use
	FE	Forecasted Energy Purchase (GWh)	676	← Forecasted Energy Purchase (GWh) from the most current 24-month study
Price	FFC	Average price per MWh for purchased power	\$30.57	← Average price = FX / (FE x 1000)
	FX	Forecasted Energy Purchase Expense (\$)	\$20,665,320	← Estimated purchased power costs based upon most current 24-month study
Step 3	FA1	Basin Fund Balance Factor (\$)	\$9,109,520	← If NB is greater than BFTB then use FA1=FX, if NB is less than BFTB then use FX-(BFTB-NB) Formula is: =IF(NB>BFTB,FX,FX-(BFTB-NB))
	FA2	Revenue Factor (\$)	\$9,109,520	← If NR is greater than -40% of BFBB then FX, if NR is less than -40% of BFBB then, FX+(NR+(40% * BFBB)) Formula is: =IF(NR>-(0.40*BFBB),FX,FX+(NR+(0.40*BFBB)))
	FA	Funds Available (\$) (Lesser of FA1 or FA2)	\$9,109,520	← Funds available for firming purchases
	FARR	Additional Revenue to be Recovered (FX-FA)**	\$11,555,800	← =FX-FA
Step 4	SLIP	SLIP Energy Rate	\$0.00	← SLIP Energy Rate
	NRATE	Difference between Market Price and SLIP Rate	\$0.00	← =Price - SLIP
Step 5	WL	Waiver Level (GWh)	4,757	← Equals the lesser of SHP or HE + (FE * (FA / FX))
	WLP	Waiver level percentage of full SHP	93%	← Percent of waiver level to full SHP
	CRCE	CRC Energy GWh (EA-WL)	378	← = EA-WL (Does not include losses projected at 7.81%)
	CRCEP	CRC level percentage of full SHP	7%	← Percent of CRCE to full SHP or CRCE/EA
	CRC	Cost Recovery Charge (mills/kWh)	2.25	← =FARR / (EA * 1000)
	RIC	Reduction in SHP Capacity	7%	← =CRCEP

Note: [Cash flow projections May 2019](#)
[May 2019, 24-month study](#)

* See CRC tier criteria below: Under CRC Tier iii, the allowable decrease is -40%, where BFBB is less than \$120,000,000 but greater than \$90,000,000

** The CRC formulas are set up so that the maximum amount recovered is never greater than the purchase power expense.

CRC Based on the Tiers Below

Tier	Criteria, if the BFBB is:	Review
i	Greater than \$150 million, with an expected decrease to below \$75 million	Annually
ii	Less than \$150 million but greater than \$120 million, with an expected 50-percent decrease in the next FY	
iii	Less than \$120 million but greater than \$90 million, with an expected 40-percent decrease in the next FY	
iv	Less than \$90 million but greater than \$60 million, with an expected 25-percent decrease in the next FY	(May / November)
v	Less than \$60 million but greater than \$40 million, with an expected decrease to below \$40 million in the next FY	Monthly

FY 2021 CRC Calculation

(May 2019)

		FY2021		
Step 1	BFBB	Basin Fund Beginning Balance (\$)	\$117,508,000	Projected beginning balance for FY2021 per financial cash flow analysis
	BFTB	Basin Fund Trigger Balance*	\$70,504,800	Basin Fund Trigger Balance = BFBB x 0.60, per Tier Table
	PAR	Projected Annual Revenue (\$) w/o CRC	\$190,628,000	Per financial cash flow analysis plus projected additional revenue from rate adjustment
	PAE	Projected Annual Expense (\$)	\$249,187,000	Per financial cash flow analysis
	NR	Net Revenue (\$)	(\$58,559,000)	=PAR-PAE
	NB	Net Balance (\$)	\$58,949,000	=BFBB + NR
Step 2	EA	SHP Energy Allocation (GWh)	5,135.00	SHP energy allocation excluding project use
	HE	Forecasted Hydro Energy (GWh)	4,459.00	Projected generation from the most current 24-month study, does not include project use
	FE	Forecasted Energy Purchase (GWh)	676	Forecasted Energy Purchase (GWh) from the most current 24-month study
Price	FFC	Average price per MWh for purchased power	\$30.57	Average price = FX / (FE x 1000)
	FX	Forecasted Energy Purchase Expense (\$)	\$20,665,320	Estimated purchased power costs based upon most current 24-month study
Step 3	FA1	Basin Fund Balance Factor (\$)	\$9,109,520	If NB is greater than BFTB then use FA1=FX, if NB is less than BFTB then use FX-(BFTB-NB) Formula is: =IF(NB>BFTB,FX,FX-(BFTB-NB))
	FA2	Revenue Factor (\$)	\$9,109,520	
	FA	Funds Available (\$) (Lesser of FA1 or FA2)	\$9,109,520	If NR is greater than -40% of BFBB then FX, if NR is less than -40% of BFBB then, FX+(NR+(40% * BFBB)) Formula is: =IF(NR>-(0.40*BFBB),FX,FX+(NR+(0.40*BFBB)))
	FARR	Additional Revenue to be Recovered (FX-FA)**	\$11,555,800	
Step 4	SLIP	SLIP Energy Rate	\$12.19	Funds available for firming purchases =FX-FA
	NRATE	Difference between Market Price and SLIP Rate	\$18.38	SLIP Energy Rate =Price - SLIP
Step 5	WL	Waiver Level (GWh)	4,506	Equals (SHP minus ((SHP divided by Revenue Requirement)divided by 1000) =(EA-((FARR/NRATE)/1000))
	WLP	Waiver level percentage of full SHP	88%	Percent of waiver level to full SHP = EA-WL (Does not include losses projected at 7.81%)
	CRCE	CRC Energy GWh (EA-WL)	629	Percent of CRCE to full SHP or CRCE/EA
	CRCEP	CRC level percentage of full SHP	12%	=FARR / (EA * 1000)
	CRC	Cost Recovery Charge (mills/kWh)	2.25	=CRCEP
	RIC	Reduction in SHP Capacity	12%	

Note: [Cash flow projections May 2019](#)
[May 2019, 24-month study](#)

* See CRC tier criteria below: Under CRC Tier iii, the allowable decrease is -40%, where BFBB is less than \$120,000,000 but greater than \$90,000,000

** The CRC formulas are set up so that the maximum amount recovered is never greater than the purchase power expense.

CRC Based on the Tiers Below

Tier	Criteria, if the BFBB is:	Review
i	Greater than \$150 million, with an expected decrease to below \$75 million	Annually
ii	Less than \$150 million but greater than \$120 million, with an expected 50-percent decrease in the next FY	
iii	Less than \$120 million but greater than \$90 million, with an expected 40-percent decrease in the next FY	
iv	Less than \$90 million but greater than \$60 million, with an expected 25-percent decrease in the next FY	(May / November)
v	Less than \$60 million but greater than \$40 million, with an expected decrease to below \$40 million in the next FY	Monthly

	EA		FE	FX	FA	FARR	CRC Calc	WL	CRC Energy	Amt Recovered
	Total SHP	% SHP	Forecasted Purchase	Purchase Expense	Funds Available	to recover	FARR/EA	\$18.38		2.25
	5,135,000		676,000.0	\$30.57	\$9,109,520.00	\$11,555,800.00		4,506,284	628,716	\$11,553,750.00
A's	61,620	1.20%	8,112.0	\$247,983.84	\$109,314.24	\$138,669.60	\$2.250	54,075	7,545	\$138,645.00
Astros	426,205	8.30%	56,108.0	\$1,715,221.56	\$756,090.16	\$959,131.40	\$2.250	374,022	52,183	\$958,961.25
Brewers	133,510	2.60%	17,576.0	\$537,298.32	\$236,847.52	\$300,450.80	\$2.250	117,163	16,347	\$300,397.50
Cardinals	318,370	6.20%	41,912.0	\$1,281,249.84	\$564,790.24	\$716,459.60	\$2.250	279,390	38,980	\$716,332.50
Cubs	164,320	3.20%	21,632.0	\$661,290.24	\$291,504.64	\$369,785.60	\$2.250	144,201	20,119	\$369,720.00
Diamondba	261,885	5.10%	34,476.0	\$1,053,931.32	\$464,585.52	\$589,345.80	\$2.250	229,820	32,065	\$589,241.25
Dodgers	451,880	8.80%	59,488.0	\$1,818,548.16	\$801,637.76	\$1,016,910.40	\$2.250	396,553	55,327	\$1,016,730.00
Giants	51,350	1.00%	6,760.0	\$206,653.20	\$91,095.20	\$115,558.00	\$2.250	45,063	6,287	\$115,537.50
Mariners	374,855	7.30%	49,348.0	\$1,508,568.36	\$664,994.96	\$843,573.40	\$2.250	328,959	45,896	\$843,423.75
Mets	210,535	4.10%	27,716.0	\$847,278.12	\$373,490.32	\$473,787.80	\$2.250	184,758	25,777	\$473,703.75
Nationals	25,675	0.50%	3,380.0	\$103,326.60	\$45,547.60	\$57,779.00	\$2.250	22,531	3,144	\$57,768.75
Orioles	241,345	4.70%	31,772.0	\$971,270.04	\$428,147.44	\$543,122.60	\$2.250	211,795	29,550	\$543,026.25
Rangers	349,180	6.80%	45,968.0	\$1,405,241.76	\$619,447.36	\$785,794.40	\$2.250	306,427	42,753	\$785,655.00
Red Sox	513,500	10.00%	67,600.0	\$2,066,532.00	\$910,952.00	\$1,155,580.00	\$2.250	450,628	62,872	\$1,155,375.00
Rockies	400,530	7.80%	52,728.0	\$1,611,894.96	\$710,542.56	\$901,352.40	\$2.250	351,490	49,040	\$901,192.50
Royals	189,995	3.70%	25,012.0	\$764,616.84	\$337,052.24	\$427,564.60	\$2.250	166,733	23,262	\$427,488.75
Tigers	112,970	2.20%	14,872.0	\$454,637.04	\$200,409.44	\$254,227.60	\$2.250	99,138	13,832	\$254,182.50
Twins	277,290	5.40%	36,504.0	\$1,115,927.28	\$491,914.08	\$624,013.20	\$2.250	243,339	33,951	\$623,902.50
White Sox	92,430	1.80%	12,168.0	\$371,975.76	\$163,971.36	\$208,004.40	\$2.250	81,113	11,317	\$207,967.50
Yankees	477,555	9.30%	62,868.0	\$1,921,874.76	\$847,185.36	\$1,074,689.40	\$2.250	419,084	58,471	\$1,074,498.75
Totals	5,135,000	100.00%	676,000.0	\$20,665,320.00	\$9,109,520.00	\$11,555,800.00	\$2.250	4,506,284	628,716	\$11,553,750.00

WL	1,869,140	36.40%	\$246,064.00	\$7,522,176.48	\$3,315,865.28	\$4,206,311.20		\$1,640,287.38	\$228,852.62	\$4,205,565.00
CRC	3,265,860	63.60%	\$429,936.00	\$13,143,143.52	\$5,793,654.72	\$7,349,488.80		\$2,865,996.63	\$399,863.37	\$7,348,185.00

Hackett,
Thomas:
Rounding
Difference

	EA		FE		FX	FA	FARR	CRC Calc	WL	CRC Energy	
	Total SHP	% SHP	Forecasted	Purchase	Purchase Expense	Funds Available	to recover	FARR/EA	\$18.38		2.25
	5,135,000		676,000.0		\$30.57	\$9,109,520.00	\$11,555,800.00		4,506,284	628,716	\$11,553,750.00
A's	61,620	1.20%	8,112.0		\$247,983.84	\$109,314.24	\$138,669.60	\$2.250	54,075	7,545	\$138,645.00
Astros	426,205	8.30%	56,108.0		\$1,715,221.56	\$756,090.16	\$959,131.40	\$2.250	374,022	52,183	\$958,961.25
Brewers	133,510	2.60%	17,576.0		\$537,298.32	\$236,847.52	\$300,450.80	\$2.250	117,163	16,347	\$300,397.50
Cardinals	318,370	6.20%	41,912.0		\$1,281,249.84	\$564,790.24	\$716,459.60	\$2.250	279,390	38,980	\$716,332.50
Cubs	164,320	3.20%	21,632.0		\$661,290.24	\$291,504.64	\$369,785.60	\$2.250	144,201	20,119	\$369,720.00
Diamondbacks	261,885	5.10%	34,476.0		\$1,053,931.32	\$464,585.52	\$589,345.80	\$2.250	229,820	32,065	\$589,241.25
Dodgers	451,880	8.80%	59,488.0		\$1,818,548.16	\$801,637.76	\$1,016,910.40	\$2.250	396,553	55,327	\$1,016,730.00
Giants	51,350	1.00%	6,760.0		\$206,653.20	\$91,095.20	\$115,558.00	\$2.250	45,063	6,287	\$115,537.50
Mariners	374,855	7.30%	49,348.0		\$1,508,568.36	\$664,994.96	\$843,573.40	\$2.250	328,959	45,896	\$843,423.75
Mets	210,535	4.10%	27,716.0		\$847,278.12	\$373,490.32	\$473,787.80	\$2.250	184,758	25,777	\$473,703.75
Nationals	25,675	0.50%	3,380.0		\$103,326.60	\$45,547.60	\$57,779.00	\$2.250	22,531	3,144	\$57,768.75
Orioles	241,345	4.70%	31,772.0		\$971,270.04	\$428,147.44	\$543,122.60	\$2.250	211,795	29,550	\$543,026.25
Rangers	349,180	6.80%	45,968.0		\$1,405,241.76	\$619,447.36	\$785,794.40	\$2.250	306,427	42,753	\$785,655.00
Red Sox	513,500	10.00%	67,600.0		\$2,066,532.00	\$910,952.00	\$1,155,580.00	\$2.250	450,628	62,872	\$1,155,375.00
Rockies	400,530	7.80%	52,728.0		\$1,611,894.96	\$710,542.56	\$901,352.40	\$2.250	351,490	49,040	\$901,192.50
Royals	189,995	3.70%	25,012.0		\$764,616.84	\$337,052.24	\$427,564.60	\$2.250	166,733	23,262	\$427,488.75
Tigers	112,970	2.20%	14,872.0		\$454,637.04	\$200,409.44	\$254,227.60	\$2.250	99,138	13,832	\$254,182.50
Twins	277,290	5.40%	36,504.0		\$1,115,927.28	\$491,914.08	\$624,013.20	\$2.250	243,339	33,951	\$623,902.50
White Sox	92,430	1.80%	12,168.0		\$371,975.76	\$163,971.36	\$208,004.40	\$2.250	81,113	11,317	\$207,967.50
Yankees	477,555	9.30%	62,868.0		\$1,921,874.76	\$847,185.36	\$1,074,689.40	\$2.250	419,084	58,471	\$1,074,498.75
	5,135,000	100.00%	676,000.0		\$20,665,320.00	\$9,109,520.00	\$11,555,800.00	\$2.250	4,506,284	628,716	\$11,553,750.00
WL	1,869,140	36.40%	246,064.0		\$7,522,176.48	\$3,315,865.28	\$4,206,311.20		1,640,287	228,853	\$4,205,565.00
CRC	3,265,860	63.60%	429,936.0		\$13,143,143.52	\$5,793,654.72	\$7,349,488.80		2,865,997	399,863	\$7,348,185.00
	5,135,000	100.00%	676,000.0		\$20,665,320.00	\$9,109,520.00	\$11,555,800.00		4,506,284	628,716	\$11,553,750.00

Sample of Astros, Dodgers, Red Sox and Yankees take Waiver Level

	EA		FE		FX	FA	FARR	CRC Calc	WL	CRC Energy	Amt Recovered
	Total SHP	% SHP	Forecasted	Purchase	Purchase Expense	Funds Available	to recover	FARR/EA	\$18.38		2.25
	3,265,860			429,936.0	\$30.57	\$5,793,654.72	\$7,350,561.73		2,865,938	399,922	\$7,348,185.00
A's	61,620	1.89%		8,112.0	\$247,983.84	\$109,314.24	\$138,669.60	\$2.250	54,074	7,546	\$138,645.00
Astros											
Brewers	133,510	4.09%		17,576.0	\$537,298.32	\$236,847.52	\$300,450.80	\$2.250	117,161	16,349	\$300,397.50
Cardinals	318,370	9.75%		41,912.0	\$1,281,249.84	\$564,790.24	\$716,459.60	\$2.250	279,384	38,986	\$716,332.50
Cubs	164,320	5.03%		21,632.0	\$661,290.24	\$291,504.64	\$369,785.60	\$2.250	144,198	20,122	\$369,720.00
Diamondbacks	261,885	8.02%		34,476.0	\$1,053,931.32	\$464,585.52	\$589,345.80	\$2.250	229,816	32,069	\$589,241.25
Dodgers											
Giants	51,350	1.57%		6,760.0	\$206,653.20	\$91,095.20	\$115,558.00	\$2.250	45,062	6,288	\$115,537.50
Mariners	374,855	11.48%		49,348.0	\$1,508,568.36	\$664,994.96	\$843,573.40	\$2.250	328,952	45,903	\$843,423.75
Mets	210,535	6.45%		27,716.0	\$847,278.12	\$373,490.32	\$473,787.80	\$2.250	184,754	25,781	\$473,703.75
Nationals	25,675	0.79%		3,380.0	\$103,326.60	\$45,547.60	\$57,779.00	\$2.250	22,531	3,144	\$57,768.75
Orioles	241,345	7.39%		31,772.0	\$971,270.04	\$428,147.44	\$543,122.60	\$2.250	211,791	29,554	\$543,026.25
Rangers	349,180	10.69%		45,968.0	\$1,405,241.76	\$619,447.36	\$785,794.40	\$2.250	306,421	42,759	\$785,655.00
Red Sox											
Rockies	400,530	12.26%		52,728.0	\$1,611,894.96	\$710,542.56	\$901,352.40	\$2.250	351,483	49,047	\$901,192.50
Royals	189,995	5.82%		25,012.0	\$764,616.84	\$337,052.24	\$427,564.60	\$2.250	166,729	23,266	\$427,488.75
Tigers	112,970	3.46%		14,872.0	\$454,637.04	\$200,409.44	\$254,227.60	\$2.250	99,136	13,834	\$254,182.50
Twins	277,290	8.49%		36,504.0	\$1,115,927.28	\$491,914.08	\$624,013.20	\$2.250	243,334	33,956	\$623,902.50
White Sox	92,430	2.83%		12,168.0	\$371,975.76	\$163,971.36	\$208,004.40	\$2.250	81,111	11,319	\$207,967.50
Yankees											
CRC	3,265,860	100.00%		429,936.0	\$13,143,143.52	\$5,793,654.72	\$7,349,488.80	\$2.250	2,865,938	399,922	\$7,348,185.00
WL	1,802,528	36.40%		246,064.0	\$7,522,176.48	\$3,315,251.21	\$4,206,925.27	\$2.334	1,640,287	228,853	\$4,205,565.00
CRC+WL	5,068,388			676,000.0	\$20,665,320.00	\$9,108,905.93	\$11,556,414.07		4,506,226	628,774	\$11,553,750.00

Sample of Astros, Dodgers, Red Sox and Yankees take Waiver Level

Total SHP is reduced by the allocations of those taking the waiver level

Forecasted Purchase reduced because we don't need full allocation for all

Funds available reduced because those accepting WL used a portion of the funds in the initial calc

When you back out those taking the WL, the amount to collect is reduced.