



Northern Rockies Cost Share Methodologies 2008

Background:

Federal and state accounting systems cannot isolate costs by a cost share period. The following methodologies were developed to calculate a cost share agreement that will result in percentages that will be applied to the final actual costs of the fire. Thus, within the designated billing periods identified in the statewide agreement, final costs will be tallied by each agency for their respective charge code (P code for the FS, 2821HU for BLM, fire code with 92310 for BIA, fire code with E11 for NPS, SABHRS accounting code for MT, PCA number with program code for Idaho, project code for Peoplesoft accounting system for North Dakota).

Methodologies:

Cost Share By Acre:

Criteria: Direct resources utilized across all direct protection areas are considered equal for the entire fire. This methodology is based on percentage of acres burned within each direct protection area.

Example:

Total acres burned: 56,588

Acres burned within state direct protection area: 36,888 or 65% of total acres burned

Acres burned within forest service direct protection area: 19,700 or 35% of total acres burned

These percentages (65% and 35%) are applied to the total actual costs of the fire.

Cost Share by Effort:

Effort Method #1.

Criteria: Use I-Suite Costs within the Cost Share Period to reflect the cost of effort and apply the percentage of acres burned within each protection area for the cost share period. Efforts prior to, during, and after the cost share period are equal. Note: This method is based on using I-Suite costs. If I-Suite was not available prior to and following the cost share period, this method cannot be used.

Example:

Date	7/28	7/29	7/30	7/31	Total
Tribal Acres Burned	25	62	3,889	5,390	9,366
State Acres Burned	418	2,061	2,589	5,495	10,563
Daily I-Suite Costs	\$30,000	\$75,000	\$100,000	\$120,000	\$325,000

Total acres burned on fire = 50,000

Acres burned during the cost share period: 19,929 = 40% of total (19,929/50,000)

Daily acres burned within tribal direct protection area: 9,366 or 47%

Daily acres burned within state direct protection area: 10,563 or 53%

Total I-Suite Costs for fire = \$500,000

I-Suite costs prior to the cost share period (Tribal protection): \$50,000 = 10% (50,000/500,000)

I-Suite costs during cost share period: \$325,000 = 65% (325,000/500,000)

Tribal share = $.65 \times .47 = 31\%$

State share = $.65 \times .53 = 34\%$

I-Suite costs after the cost share period (State protection): \$125,000 = 25% (125,000/500,000)

To calculate final percentage:

Tribe: $10\% + 31\% = 41\%$

State: $34\% + 25\% = 59\%$

These percentages (41% and 59%) are applied to the total actual costs of the fire to calculate the cost share for this incident.

Effort Method #2

Criteria: This methodology factors in resources that are updated on an Incident Action Plan (IAP) in each division by Operations and whose costs can be estimated. An agency's share of daily direct protection costs in the cost share period will be identified using I-Suite costs. That agency sum is then divided by the total direct protection costs within the cost share period to get a ratio that is then applied to the total I-Suite costs within the cost share period. That dollar amount would then be divided by total Fire I-Suite costs, to arrive at a final percentage to apply to all actual fire costs.

Example: Assume there are two Divisions, X, and Y, in which the state has no direct protection acres. The State does have partial protection responsibility in Division Z. Assume the total direct protection costs for each day and division are as shown below, and that total I-Suite cost estimates for the 3 day cost share period are \$701,910, while total I-Suite cost estimates for the fire are \$950,000. See table below.

		State Percentage of Direct Protection Acres in each Division each day			Daily Costs of Direct Protection Resources Used in each Division			Total Daily Direct Protection Cost Estimates	Total Daily Incident Cost Estimates During Cost Share Period	State Share of Direct Protection Costs	Apply State Share of Direct Prot Costs to Total Direct Prot Costs During Cost Share Period
Date	Div X	Div Y	Div Z	Div X	Div Y	Div Z	Total Div X, Y, & Z	(Includes facilities, support, etc)	(Daily State % x Daily Direct Prot Costs)	(To get State % of Direct Prot Costs)	
8/6	0	0	33%	\$50,000	\$100,000	\$24,666	\$174,666	\$227,381	.33 x \$24,666 = \$8,140		
8/7	0	0	33%	\$50,000	\$100,000	\$27,734	\$177,734	\$233,607	.33 x \$27,734 = \$9,152		
8/8	0	0	33%	\$50,000	\$100,000	\$28,837	\$178,837	\$240,922	.33 x \$28,837 = \$9,516		
Totals				\$150,000	\$300,000	\$81,237	\$531,237	\$701,910	\$26,808	\$26,808 / \$531,237 = 5.05%	

Then, take the 5.05%, apply it to the total I-Suite costs within the C/S period (.0505 x \$701,910) = \$35,446.

To allow for acres burned outside the cost share period, this \$35,446 would be divided by the total I-Suite costs for the fire of \$950,000 = 3.73%, which would be the final state % to apply to all actual costs. (If there were no acres burned outside the cost share period, you would stop at the 5.05% and use that as the state % to apply to all actual costs.)

This computation represents using an agency’s share of direct protection costs and is figured based on effort by division by day, to arrive at a final ratio to apply to all actual costs.

Effort Method #3

Criteria: Negotiation between the cost share agencies would result in the identification of the miles of two categories of control line (road and equipment) within each protection area. The categories will be weighted on the amount of effort: high = weight of 1, moderate = weight of .67, and low = weight of .33. A map will need to be produced by the IMT that will be used to measure the miles of effort and then validated by the agencies involved.

Cost centers, such as aviation, can be separately calculated and then factored into the final percentage for cost sharing of the actual costs of the fire.

Example:

Cost Share Options										
Classification	Effort	Weight	Actual Total Miles	Weighted Total Miles	Actual Miles CS&KT	Actual Miles DNRC	Actual Miles USFS	Weighted Miles CS&KT	Weighted Miles DNRC	Weighted Miles USFS
Road	High	1	16.76	16.76	0.00	10.82	5.94	0.00	10.82	5.94
	Moderate	0.67	18.91	12.67	7.93	9.21	1.77	5.32	6.17	1.19
	Low	0.33	8.48	2.80	0.00	8.36	0.12	0.00	2.76	0.04
Equipment	High	1	29.47	29.47	0.00	12.16	17.31	0.00	12.16	17.31
	Moderate	0.67	75.23	50.41	35.81	34.51	4.92	23.99	23.12	3.29
	Low	0.33	7.55	2.49	4.11	3.44	0.00	1.36	1.14	0.00
Total			156.41	114.59	47.85	78.50	30.05	30.66	56.16	27.77
Percent of Total					30.59	50.19	19.21	26.76	49.01	24.23

Control Line Effort Percents and Aviation Effort Percents Merged to Calculate Weighted Final Percents			
A. Total Fire Cost in I-Suite - Direct Resources	\$12,430,936	100%	
B. Total Direct Air Costs Attributed to Agency Jurisdictions	\$1,475,050	11.90%	
C. Total Suppression Rehab Costs (DNRC & USFS ONLY)	\$154,852	1.20%	
D. Total to be Allocated using Line Effort (A - B - C)	\$10,801,034	86.90%	
E. Agency Share of Control Line Effort			
F. Agency Cost of Control Line Effort (D x E)	\$5,292,507	\$2,916,279	\$2,592,248
			\$10,801,034
G. Agency Share of Direct Air Operations			
H. Agency Cost of Direct Air Operations (B x G)	\$929,282	\$206,507	\$339,262
			\$1,475,050
I. Agency Share of Suppression Rehab (C x .50)	\$103,751		\$51,101
			\$154,852
J. Agency Total Cost (F + H + I)	\$6,325,539	\$3,122,786	\$2,982,611
			\$12,430,936
K. Agency Weighted % (Including Direct Air Operations) (J/A)	51%	25%	24%
Notes:			
A. Based on I-Suite report dated 9/19 covering period 7/31 to 9/10 + Suppression Rehab Costs			
B. Cost Share Team (Roberta) met with air operations personnel and used fire records to assign direct a/c operations costs to agency jurisdictions (An additional \$495,410 in indirect air operations in included in Line D.)			
E. Line Effort percentages are based on GIS map of control lines reviewed and weighted by operations representatives from each agency.			
I. USFS (1/3) & DNRC (2/3) Rehab Split			
K. These percentages would be applied to every dollar paid out. The cost share determination period is 7/307 to 9/09/07			

Cost Share By Flat Amount:

Criteria: This methodology can be used when the effort expended was limited in terms of resources and duration when the fire crosses into another party’s direct protection area.

Example: Agency A’s fire burns briefly onto Agency B’s protection area. Costs are captured for that identified period. Agency A will then bill Agency B \$14,601.

Date	Resources Assigned Per Operational Period	Estimated Cost
8/15 - Day	O-24 TFLD Jeff Scuzzy	\$360
	E-80 R There Constructions T6 Engine	\$1690
	E-82 Wildland Fire Chasers T6 Engine	\$1758
	Helicopter 62B, two bucket drops	\$1500
8/15 - Night	C-1 Hyper Hotshots	\$7175
8/16 – Day	O-7 TFLD Eric Poundstone	\$360
	E-82 Wildland Fire Chasers T6 Engine	\$1758
Total Costs		\$14,601

You-Order, You-Pay:

Criteria: Under the You-Order, You-Pay (YOYP) methodology, each agency is fiscally responsible for the resources they order, regardless of where they are used on the incident. **A Decision Document will be completed instead of a cost share agreement.**