



## Cost Share Agreement Methodologies

### 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 accounting code.

Negotiating cost share agreements has been delegated to the respective Agency Administrators who are party to the Statewide Cooperative Fire Protection Agreement. Cost Share Agreements will be negotiated between agencies involved in specific on-the-ground fire suppression activities. **These agreements are mandatory when more than one agency is responsible for fire protection in the fire's location.** The agreement will not affix liability for fire cost payment by either Agency based upon responsibility for the fire origin. The designated representatives of each Agency with protection responsibility will complete and sign the agreement. See the related provisions in the Statewide Cooperative Fire Protection Agreement.

Changes to the original agreement will be added and numbered consecutively. Small revisions to this agreement may be completed on a single page, describing the change to the original agreement, and obtaining new signatures from those involved, or pen/ink changes may be made and then initialed by the original signing officials.

The Northern Rockies Cost Share and Decision Document Templates can be found at: [NRCG Business Committee Toolbox](#).

The cost share method should be discussed immediately among all protection entities during the strategy development. If there are any disagreements among the protection entities on the strategy and tactics employed by the lead agency, this must be documented and resolved immediately.

### Methodologies:

#### I. Cost Share by Acre

Criteria: Direct resources utilized across all direct protection areas (DPA) 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 DPA: 36,888 or 65% of total acres burned  
 Acres burned within Forest Service DPA: 19,700 or 35% of total acres burned  
 These percentages (65% and 35%) are applied to the total actual costs of the fire.

**II. Cost Share by Effort**Effort Method 1:

Criteria: Use e-ISuite 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 e-ISuite costs. If e-ISuite 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 e-ISuite Costs for fire = \$500,000

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

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

Tribal share = .65\*.47 = 31%

State share = .65\*.53 = 34%

e-ISuite 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 e-ISuite 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 e-ISuite 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 e-ISuite cost estimates for the 3-day cost share period are \$701,910, while total e-ISuite cost estimates for the fire are \$950,000. See table below.

Date	State Percentage of DPA Acres in each Division each day			Daily Costs of DPA Resources Used in each Division			Total Daily DPA Cost Estimates	Total Daily Incident Cost Estimates During Cost Share Period	State Share of DPA Costs	Apply State Share of DPA Costs to Total DPA Costs During Cost Share Period
	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 e-ISuite 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 e-ISuite costs for the fire of \$950,000 = 3.73%, which would be the final state percentage 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 percentage 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 agencies will negotiate the definition of high/moderate/low and the weights of the effort for each category. An example could be: 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 BIA	Actual Miles DNRC	Actual Miles USFS	Weighted Miles BIA	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
<b>Total</b>			<b>156.41</b>	<b>114.59</b>	<b>47.85</b>	<b>78.50</b>	<b>30.05</b>	<b>30.66</b>	<b>56.16</b>	<b>27.77</b>
<b>Percent of Total</b>					<b>30.59</b>	<b>50.19</b>	<b>19.21</b>	<b>26.76</b>	<b>49.01</b>	<b>24.23</b>



<b>Control Line Effort Percents and Aviation Effort Percents Merged to Calculate Weighted Final Percents</b>					
A. Total Fire Cost in e-ISuite - 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%			
		<b>DNRC</b>	<b>CSKT/BIA</b>	<b>LNF/FS</b>	
E. Agency Share of Control Line Effort		<b>49%</b>	<b>27%</b>	<b>24%</b>	
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		<b>63%</b>	<b>14%</b>	<b>23%</b>	
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 (2/3 DNRC, 1/3 FS)		\$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
<b>K. Agency Weighted % (Including Direct Air Operations) (J/A)</b>		<b>51%</b>	<b>25%</b>	<b>24%</b>	
<b>Notes:</b>					
A. Based on e-ISuite report dated 9/19 covering period 7/31 to 9/10 + Suppression Rehab Costs					
B. Cost Share Team met with air ops & used fire records to assign direct a/c operations costs to agency jurisdictions					
D. An additional \$495,410 in indirect air operations in included.					
E. Line Effort % based on GIS map of control lines reviewed & weighted by ops reps 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 7/30 to 9/09					

### III. 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 Doe	\$360
	E-80 Acme 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

#### IV. 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.**

#### **Final Agency Apportionment:**

Agency accounting systems are unable to separate final costs by the actual cost share period. Thus, a final percentage for each agency is determined through the appropriate methodology. This final percentage will be applied to the total actual cost of the fire (except for the You-Order, You-Pay and Flat Amount methodologies).