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PROJECT NAME

ANALYSIS OF AGENCY VERSUS CONTRACTOR COSTS FOR  
FIREFIGHTERS, EQUIPMENT, AND FACILITIES

WORK PERFORMED UNDER CONTRACT No. 53-9A72-1-1Q004  
Work Order No. 02-01

CONTRACTOR

FIRE PROGRAM SOLUTIONS LLC  
Estacada, Oregon

STUDY TEAM

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## Executive Summary

This study was commissioned by the USDA Forest Service national Aviation and Fire Management Staff to obtain information to be used regarding the implementation of a future workforce strategy. Accurate data was needed for the agency cost of operating firefighting modules as Government hired and staffed resources. Accurate data was also needed for the cost of contracted resources.

The key objective of the study was to create a method to display and compare costs of providing agency versus contract personnel and resources, using some general resource types. This study obtained actual cost data for a Type 6 engine module, a prevention unit, a twenty (20) person Type II hand crew, and a ten (10) person hand crew. These costs were collected from modules operated in fiscal year 2001 on the Coronado National Forest in Region 3, the Cleveland National Forest in Region 5, and the Wenatchee National Forest in Region 6.

The study team was not able to find any locations that contracted for a prevention unit in 2001. The Sawtooth National Forest contracted four Type 6 engine modules from one contractor, the Okanogan National Forest contracted for one Type 6 engine module, and the Wallowa-Whitman National Forest contracted two Type 6 engine modules from two separate contractors. The Willamette forest contracted for two ten (10) person hand crews and the Wallowa-Whitman forest contracted for five (10) person hand crews. The Willamette forest contracted for one twenty (20) person hand crew. Daily costs for these contracted resources were used in this study.

The study methodology and the cost categories were developed using standard Federal Government wide cost comparison techniques prescribed in Office of Management and Budget Circular A-76. The annual cost to operate similar modules by the Forest Service and by contractors is shown in the following table. The costs shown are the total costs obtained by using the Circular A-76 process and methodology. The costs include actual expenditures, overhead assessments, and other A-76 charges to the Forest Service and the contractor costs in order to make valid cost comparisons under Circular A-76.

Module Annual Operating Costs\*

Module Type	Type 6 Engine	10-Person Hand Crew	20-Person Hand Crew
Government Provided	\$182,139.04	\$201,061.55	\$547,563.42
Contract Provided	\$148,382.39	\$314,353.71	\$509,226.92
Potential Cost Savings	\$33,756.65	(\$-113,292.16)	\$38,336.50

\*Costs are based on and normalized to a 120-day fire season and availability period.

The results from this study indicate that the Government could obtain Type 6 engine modules for preparedness activities from contractors at a cost savings to the Government. Based on a very small sample of twenty person hand crews, contractors may be able to provide some of those modules at a cost savings to the Government. The small sample of ten person hand crews indicates that Government operation would be more cost effective.

## **Introduction**

This study was commissioned by the USDA Forest Service national Aviation and Fire Management Staff in order to obtain information to be used regarding the implementation of a future workforce strategy and facilities needed to support that desired future organization. To assist with the objective of ensuring that a range of alternatives and costs are considered in this effort, accurate data was needed for the total agency cost of operating firefighting modules as Government hired and staffed resources. Accurate data is needed for the total cost of personnel, equipment, and facilities for both contracted resources and Government operated modules. This study was performed in fulfillment of Work Order No. 02-01 of Contract No. 53-9A72-1-1Q004.

The intent of this study was to:

1. Create information that will assist in a determination of the balance between agency employee hires and contract hires necessary to provide an adequate initial attack wildland fire suppression force, a large fire suppression support force, and maintain an adequate agency workforce that provides replacements as attrition takes place.
2. Create a method to display and compare costs of providing agency versus contract personnel and resources, using some general resource types.
3. Provide an effects report from three national forests regarding a proposed Forest Policy to shift facilities costs onto functional accounts responsible for construction and maintenance of Forest Service owned facilities.

This study obtained actual cost data for a Type 6 engine module, a prevention unit, a twenty (20) person Type II hand crew, and a ten (10) person hand crew. These costs were collected from modules operated in fiscal year 2001 on the Coronado National Forest in Region 3, the Cleveland National Forest in Region 5, and the Wenatchee National Forest in Region 6. Field visits were made to each forest by the study team to collect actual module cost data.

Contractor provided module cost data was collected from the Sawtooth National Forest in Region 4, and the Okanogan, Willamette and Wallowa-Whitman National Forests in Region 6. The study team was not able to find any locations that contracted for a prevention unit in 2001. The Sawtooth National Forest contracted for four Type 6 engine modules from one contractor, the Okanogan National Forest contracted for one Type 6 engine module, and the Wallowa-Whitman National Forest contracted for two Type 6 engine modules from two separate contractors. Daily cost data for four contracted engine modules was obtained from the forests and the contractors involved and used in this study. The Willamette forest contracted for two ten (10) person hand crews and the Wallowa-Whitman forest contracted for five (10) person hand crews. Daily costs for five ten (10) person hand crews was used in this study. The Willamette forest contracted for one twenty (20) person hand crew.

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A complete discussion of the cost study methodology and data collection procedures is found in Appendix E-1. The appendix describes how actual cost data was collected and how certain cost categories were developed using standard Federal Government wide cost comparison techniques prescribed in Office of Management and Budget Circular A-76. The expenditure and cost data collected for the Type 6 engine modules is found in Appendix A. Spreadsheets were developed that contain all the actual fiscal year 2001 expenditures and the other costs that have been developed using the cost comparison process found in Circular A-76. The engine module on the Cleveland National Forest analyzed was a Type 3 engine with five (5) persons seven days per week coverage. In order to make this engine comparable to a Type 6 engine module, some of the expenditures for staffing were taken out in order to make this module cost comparable to a Type 6 engine staffed with three (3) persons seven days per week as described on page four of Appendix E-1.

The expenditure and cost data collected for the ten and twenty person hand crews is located in Appendix B. The hand crew analyzed on the Coronado National Forest was a nine (9) person hand crew operated five days per week. In order to make this hand crew comparable to a ten (10) person hand crew operated seven days per week, expenditures for five additional seasonal employees was added based on the prorated cost of the original four seasonals on the crew.

The expenditure and cost data for the prevention units analyzed is found in Appendix C. The study team was unable to locate any contract provided prevention units in fiscal year 2001. The module costs of the Government operated prevention units will be presented in this report, but a cost comparison with contractor provided modules was not possible.

The cost data that was collected for all contracted modules has been summarized in Appendix F-1. Appendix G contains the spreadsheets where all of the cost data has been summarized and prepared for discussion and display in the report. These spreadsheets will be used to display the results of the cost comparison.

### **Type 6 Engine Module Cost Comparison**

The costs to operate Government operated Type 6 engines were obtained from a sample of three engines staffed on three national forests in 2001. The detailed spreadsheets that were filled out are in Appendix A-1, A-2, A-3, and A-4. The total cost by major cost category to operate these engines is shown in Appendix G-2 and in Table No. 1. The daily cost is also shown in Table No. 1. An adjustment was made to the Type 3 engine costs on the Cleveland National Forest engine 34 to make it comparable in personnel to a Type 6 engine.

Table No. 1

Government Operated Average Costs			
Type 6 Engine Cost Comparison	Coronado	Cleveland	Wenatchee
3 persons 7 days per week	Engine 53	Engine 34	Engine 501
Days Staffed	120	130	110
Cost Category			
1. PERSONNEL	\$81,531.92	\$123,910.75	\$93,703.56
2. MATERIAL AND SUPPLY	\$1,700.00	\$2,219.98	\$15,772.00
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$12,300.81	\$23,520.31	\$11,058.70
4. OVERHEAD	\$23,537.25	\$31,447.72	\$26,250.02
5. ADDITIONAL	\$33,162.08	\$33,212.08	\$33,212.08
6. TOTAL IN HOUSE COST	\$152,232.06	\$214,310.84	\$179,996.36
Daily Cost in FY 2001	\$1,268.60	\$1,648.54	\$1,636.33

In order to obtain average costs for the three sample engines by the major cost categories, a normalized fire season of 120 days was used. It was assumed in this study that the engine modules would be staffed for this period of time out of preparedness WFPR funds. The daily cost based on the number of days staffed in 2001 was obtained and then multiplied by 120 which is the number of days in the length of fire season chosen for this study. This normalized average cost was used to conduct the cost comparison between the Government operated engines and the Contract engines. The normalized fire season costs by major cost category is shown in Appendix G-2 and Table No. 2. The values in the average costs column of Table 2 were used to perform the cost comparison with contract engines over the same 120-day hypothetical fire season.

The contract Type 6 engine daily costs and the days that they were on contract in 2001 are shown in Appendix G-1 and in Table No. 3. The average daily cost to operate contract engines was \$846.83. This cost was obtained from averaging the cost of four engine contracts. The cost to operate a contract engine over a 120-day season is \$101,619.60. The detailed cost comparison procedures are described in Appendix E-1 in the cost category 7 through 13 descriptions. This cost comparison process is patterned after the Federal Government policy guidelines contained in Circular A-76. The process requires that a cost of contract supervision be added to the actual contract costs.

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Table No. 2

	Normalized Fire Season of 120 days			
Type 6 Engine Cost Comparison	Coronado	Cleveland	Wenatchee	Average
3 persons 7 days per week	Engine 53	Engine 34	Engine 501	Costs
Days Staffed	120	120	120	
Cost Category				
1. PERSONNEL	\$81,531.92	\$114,379.15	\$102,222.07	\$99,377.71
2. MATERIAL AND SUPPLY	\$1,700.00	\$2,049.21	\$17,205.82	\$6,985.01
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$12,300.81	\$21,711.06	\$12,064.04	\$15,358.63
4. OVERHEAD	\$23,537.25	\$29,028.66	\$28,636.39	\$27,067.43
5. ADDITIONAL	\$33,162.08	\$30,657.30	\$36,231.36	\$33,350.25
6. TOTAL IN HOUSE COST	\$152,232.06	\$197,825.39	\$196,359.67	\$182,139.04
Daily Cost in FY 2001	\$1,268.60	\$1,648.54	\$1,636.33	\$1,517.83

Table No. 3

Contract Resources Daily Cost Summary			
Type 6 engine	Engine		Days on
	Cost/day		Contract
Sawtooth N.F.	885.00		87
Okanogan N.F.	825.41		106
Wallowa-Whitman N.F. 1	868.77		59
Wallowa-Whitman N.F. 2	808.15		69
Total	3387.33		
Average	\$846.83		

The cost of supervision used is the same cost level that was included in the supervision cost category in the module cost spreadsheets in Appendix A-1 through A-4. Supervision costs were included in the total Government provided module costs being used in this cost comparison. The average supervision cost contained in the Government operated engines is shown in Appendix G-10 and Table No. 4.

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Table No. 4

Government Operated Average Costs							
				Normalized Fire Season of 120 days			
Type 6 Engine Cost Comparison	Coronado	Cleveland	Wenatchee	Coronado	Cleveland	Wenatchee	Average
3 persons 7 days per week	Engine 53	Engine 34	Engine 501	Engine 53	Engine 34	Engine 501	Costs
Days Staffed	120	130	110	120	120	120	120
Cost Category							
<b>Supervision</b>	\$8,185.84	\$10,555.96	\$8,326.29	\$8,185.84	\$9,743.96	\$9,083.23	\$9,004.34
Daily Cost in FY 2001	\$68.22	\$81.20	\$75.69	\$68.22	\$81.20	\$75.69	\$75.04

The same fire season normalization process that was used for determining Government operated engine module costs was used to obtain the average cost of supervision, which is \$9,004.34. When added to the contract cost, the total contract engine costs is \$110,623.94. The total contract cost is calculated using the cost comparison process and the results are shown in Appendix G-6 and Table No. 5.

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Table No. 5

Cost Comparison - Type 6 Engine

Cost

IN-HOUSE PERFORMANCE

1. Personnel	\$99,377.71
2. Material and Supply	\$6,985.01
3. Other Specifically Attributable	\$15,358.64
4. Overhead	\$27,067.43
5. Additional	\$33,350.25
6. Total In-house	\$182,139.04

CONTRACT OR ISSA PERFORMANCE

7. Contract/ISSA Price	\$110,623.94
8. Contract Administration	\$28,633.64
9. Additional	\$0.00
10. One-time Conversion	\$0.00
11. Gain on Assets	(\$0.00)
12. Federal Income Taxes	(\$812.96)
13. Total Contract or ISSA	\$138,444.62

DECISION

14. Minimum Conversion Differential	\$9,937.77	10% of line 1
15. Adjusted Total Cost of In-house Performance	\$182,139.04	
16. Adjusted Total Cost of Contract or ISSA Performance	\$148,382.39	
17. Decision - Line 16 minus Line 15	-\$33,756.65	
18. Cost Comparison Decision: Accomplish Work In-House (+) Contract or ISSA (-)		

The results of this analysis indicates that the government could contract for preparedness Type 6 engines and realize a cost savings of \$33,756.65 per year per engine. The dollar amount that this study identified as the unfunded retirement, health insurance, and life insurance benefits that are paid by the Government to retired employees is \$33,112.08 per engine module per year (Appendix A-1, 3, 4). The unfunded liabilities that are not readily known by managers are a large part of the difference between contract provided engines and Government provided engines. The results of this study indicate that Type 6 preparedness engines can be obtained from contractors at a less total cost to the Government. This study resulted in what appears to be a good representative sample of engine contract costs as well as a good representative sample of Government operated engine costs.



## **Ten (10) Person Hand Crew Cost Comparison**

The costs to operate a Government operated ten (10) person hand crew were obtained from a sample of one hand crew staffed on the Coronado National Forest in 2001. The detailed spreadsheets that were filled out are in Appendix B-1 and B-2. The total cost by major cost category to operate this ten-person hand crew is shown in Appendix G-3 and in Table No. 6. The daily cost is also shown in Table No. 6. An adjustment was made to the nine person five day per week hand crew costs on the Coronado National Forest to make it comparable to a ten-person hand crew operated seven days per week. This adjustment is documented in Appendix B-2. Appendix B-1 contains the cost of operating the nine-person hand crew five days per week.

In order to obtain the costs for the ten (10) person hand crew by the major cost categories, a normalized fire season of 120 days was used. It was assumed in this study that the hand crew would be staffed for this period of time out of preparedness WFPR funds. The daily cost based on the number of days staffed in 2001 was obtained and then multiplied by 120 which is the number of days in the length of fire season chosen for this study. This normalized average cost was used to conduct the cost comparison between the Government operated ten (10) person hand crew and the contract ten (10) person hand crews. The normalized fire season costs by major cost category is shown in Appendix G-3 and Table No. 6. The values in the average costs column of Table 6 were used to perform the cost comparison with contract ten (10) person hand crews over the same 120 day hypothetical fire season.

The contract ten (10) person hand crew daily costs and the days that they were on contract in 2001 are shown in Appendix G-1 and in Table No. 7. The average daily cost to operate contract ten (10) person hand crews was \$2,233.83. This cost was obtained from averaging the cost of five crew contracts. The cost to operate a contract ten (10) person hand crew over a 120 day season is \$268,059.60. The detailed cost comparison procedures are described in Appendix E-1 in the cost category 7 through 13 descriptions. This cost comparison process is patterned after the Federal Government policy guidelines contained in Circular A-76. The process requires that a cost of contract supervision be added to the actual contract costs. The cost of supervision used is the same cost level that was included in the supervision cost category in the module cost spreadsheets in Appendix B-1 and B-2. Supervision costs were included in the total Government provided module costs being used in this cost comparison. The average supervision cost contained in the Government operated ten-person hand crew is shown in Appendix G-11 and Table No. 8.

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Table No. 6

Government Operated Average Costs		Normalized Fire Season of 120 Days	
10 Person Hand Crew Cost Comparison	Coronado	Coronado	Average
10 persons 7 days per week	Crew 51	Crew 51	Costs
Days Staffed	130	120	120
Cost Category			
1. PERSONNEL	\$132,695.16	\$122,487.84	\$122,487.84
2. MATERIAL AND SUPPLY	\$2,500.00	\$2,307.69	\$2,307.69
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$19,505.49	\$18,005.07	\$18,005.07
4. OVERHEAD	\$38,131.97	\$35,198.74	\$35,198.74
5. ADDITIONAL	\$24,984.06	\$23,062.21	\$23,062.21
6. TOTAL IN HOUSE COST	\$217,816.68	\$201,061.55	\$201,061.55
Daily Cost in FY 2001	\$1,675.51	\$1,675.51	\$1,675.51

Table No. 7

10 Person Hand Crew	Crew		Days on
	Cost/day		Contract
Wallowa-Whitman Burnt Powder FZ	\$2,419.10		62.5
Wallowa-Whitman LaGrande FZ	\$2,331.38		53
Wallowa-Whitman Wallowa Mts. FZ	\$2,868.25		65
Willamette Middle Fork R.D. 1	\$1,830.40		41.5
Willamette McKenzie R.D. 3	\$1,720		27.1
Total	\$11,169.13		
Average	\$2,233.83		
five crews			

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Table No. 8

Government Operated Average Costs			
		Normalized Fire Season of 120 days	
Ten (10) Person Hand Crew	Coronado	Coronado	Average
10 persons 7 days per week	Crew 51	Crew 51	Costs
Days Staffed	130	120	120
Cost Category			
<b>Supervision</b>	\$8,185.84	\$7,556.16	\$7,556.16
Daily Cost in FY 2001	\$62.97	\$62.97	\$62.97

The same fire season normalization process that was used for determining Government operated ten (10) person hand crew module costs was used to obtain the average cost of supervision, which is \$7,556.16. When added to the contract cost, the total contract ten-person hand crew cost is \$275,615.76. The total contract cost is calculated using the cost comparison process and the results are shown in Appendix G-7 and Table No. 9.

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Table No. 9

Cost Comparison - Crew 10	
In House Vs. Contract or ISSA Performance	Cost
IN-HOUSE PERFORMANCE	
1. Personnel	\$122,487.84
2. Material and Supply	\$2,307.69
3. Other Specifically Attributable	\$18,005.07
4. Overhead	\$35,198.74
5. Additional	\$23,062.21
6. Total In-house	\$201,061.55
CONTRACT OR ISSA PERFORMANCE	
7. Contract/ISSA Price	\$275,615.76
8. Contract Administration	\$28,633.64
9. Additional	\$0.00
10. One-time Conversion	\$0.00
11. Gain on Assets	(\$0.00)
12. Federal Income Taxes	(\$2,144.48)
13. Total Contract or ISSA	\$302,104.92
DECISION	
14. Minimum Conversion Differential	\$12,248.78 10% of line 1
15. Adjusted Total Cost of In-house Performance	\$201,061.55
16. Adjusted Total Cost of Contract or ISSA Performance	\$314,353.71
17. Decision - Line 16 minus Line 15	\$113,292.16
18. Cost Comparison Decision: Accomplish Work	
In-House (+)	
Contract or ISSA (-)	

The result of this analysis indicates that the government provided ten (10) person hand crew would cost \$113,292.16 less per year than contracting the same resource. This cost comparison is based on only one sample point. If one half the cost of the Wenatchee twenty (20) person hand crew is used as another sample point and the average of the two are used in the cost comparison, the contract option would only be approximately \$75,000 more costly. It would be prudent to obtain cost data from 3-4 additional ten-person hand crews to determine if this result is in the expected range or is at the low or high end of the spectrum.

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## **Twenty (20) Person Hand Crew Cost Comparison**

The costs to operate a Government operated twenty (20) person hand crew were obtained from a sample of one hand crew staffed on the Wenatchee National Forest in 2001. The detailed spreadsheet that was filled out is in Appendix B-3. The total cost by major cost category to operate this twenty-person hand crew is shown in Appendix G-4 and in Table No.10. The daily cost is also shown in Table No. 10.

In order to obtain the costs for the twenty (20) person hand crew by the major cost categories, a normalized fire season of 120 days was used. It was assumed in this study that the hand crew would be staffed for this period of time out of preparedness WFPR funds. The daily cost based on the number of days staffed in 2001 was obtained and then multiplied by 120 which is the number of days in the length of fire season chosen for this study. This normalized average cost was used to conduct the cost comparison between the Government operated twenty (20) person hand crew and the contract twenty (20) person hand crew. The normalized fire season costs by major cost category is shown in Appendix G-4 and Table No. 10. The values in the average costs column of Table 10 were used to perform the cost comparison with contract twenty (20) person hand crews over the same 120 day hypothetical fire season.

The contract twenty (20) person hand crew daily costs and the days that the crew was on contract in 2001 are shown in Appendix G-1 and in Table No. 11. The average daily cost to operate a contract twenty (20) person hand crew was \$3,440.00. This cost was obtained from the one crew contract sampled in this study. The cost to operate a contract twenty (20) person hand crew over a 120-day season is \$412,800. The detailed cost comparison procedures are described in Appendix E-1 in the cost category 7 through 13 descriptions. This cost comparison process is patterned after the Federal Government policy guidelines contained in Circular A-76. The process requires that a cost of contract supervision be added to the actual contract costs. The cost of supervision used is the same cost level that was included in the supervision cost category in the module cost spreadsheet in Appendix B-3. Supervision costs were included in the total Government provided module costs being used in this cost comparison. The average supervision cost contained in the Government operated twenty-person hand crew is shown in Appendix G-12 and Table No. 12.

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Table No. 10

Government Operated Average Costs			
		Normalized Fire Season of 120 Days	
20 Person Hand Crew Cost Comparison	Wenatchee	Wenatchee	Average
20 persons 7 days per week	Entiat Crew	Entiat Crew	Costs
Days Staffed	110	120	120
Cost Category			
1. PERSONNEL	\$307,501.55	\$335,456.24	\$335,456.24
2. MATERIAL AND SUPPLY	\$40,068.00	\$43,710.55	\$43,710.55
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$23,370.18	\$25,494.74	\$25,494.74
4. OVERHEAD	\$80,825.28	\$88,173.03	\$88,173.03
5. ADDITIONAL	\$50,168.12	\$54,728.86	\$54,728.86
6. TOTAL IN HOUSE COST	\$501,933.13	\$547,563.41	\$547,563.41
Daily Cost in FY 2001	\$4,563.03	\$4,563.03	\$4,563.03

Table No. 11

20 Person Hand Crew	Crew	Days on
	Cost/day	Contract
Willamette Middle Fork R.D. 2	\$3,440.00	25.8
Total	\$3,440.00	
Average one crew	\$3,440.00	

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Table No. 12

Government Operated Average Costs			
Normalized Fire Season of 120 Days			
Twenty (20) Person Hand Crew	Wenatchee	Wenatchee	Average
20 persons 7 days per week	Entiat Crew	Entiat Crew	Costs
Days Staffed	110	120	120
Cost Category			
<b>Supervision</b>	\$34,420.89	\$37,550.06	\$37,550.06
Daily Cost in FY 2001	\$312.92	\$312.92	\$312.92

The same fire season normalization process that was used for determining Government operated twenty (20) person hand crew module costs was used to obtain the average cost of supervision, which is \$37,550.06. When added to the contract cost, the total contract twenty-person hand crew cost is \$450,350.06. The total contract cost is calculated using the cost comparison process and the results are shown in Appendix G-8 and Table No. 13.

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Table No. 13

Cost Comparison - Crew 20	
In House Vs. Contract or ISSA Performance	Cost
IN-HOUSE PERFORMANCE	
1. Personnel	\$335,456.24
2. Material and Supply	\$43,710.55
3. Other Specifically Attributable	\$25,494.74
4. Overhead	\$88,173.03
5. Additional	\$54,728.86
6. Total In-house	\$547,563.42
CONTRACT OR ISSA PERFORMANCE	
7. Contract/ISSA Price	\$450,350.06
8. Contract Administration	\$28,633.64
9. Additional	\$0.00
10. One-time Conversion	\$0.00
11. Gain on Assets	(\$0.00)
12. Federal Income Taxes	(\$3,302.40)
13. Total Contract or ISSA	\$475,681.30
DECISION	
14. Minimum Conversion Differential	\$33,545.62 10% of line 1
15. Adjusted Total Cost of In-house Performance	\$547,563.42
16. Adjusted Total Cost of Contract or ISSA Performance	\$509,226.92
17. Decision - Line 16 minus Line 15	-\$38,336.50
18. Cost Comparison Decision: Accomplish Work	
In-House (+)	
Contract or ISSA (-)	

The results of this analysis indicates that the government could contract for preparedness twenty (20) person hand crews and realize a cost savings of \$38,336.50 per year per crew. This cost comparison is based on only one sample point. If two times the cost of the Coronado ten (10) person hand crew is used as another sample point and the average of the two are used in the cost comparison, the contract option would be approximately \$102,000 more costly than Government operation. It would be prudent to obtain cost data from 3-4 additional twenty-person hand crews to determine if this result is in the expected range or is at the low or high end of the spectrum.



### Prevention Module Cost Comparison

The costs to operate Government operated prevention modules were obtained from a sample of three prevention units staffed on three national forests in 2001. The detailed spreadsheets that were filled out are in Appendix C-1, C-2, and C-3. The total cost by major cost category to operate these prevention units is shown in Appendix G-5 and in Table No. 14. The daily cost is also shown in Table No. 14.

Table No. 14

Government Operated Average Costs			
Prevention Unit	Coronado	Cleveland	Wenatchee
1 person 7 days per week	Prevention 51	Prevention 22	Prevention
Days Staffed	130	200	90
Cost Category			
1. PERSONNEL	\$24,818.02	\$52,184.57	\$13,287.19
2. MATERIAL AND SUPPLY	\$0.00	\$1,055.00	\$0.00
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$5,692.98	\$7,639.04	\$5,234.47
4. OVERHEAD	\$7,525.65	\$12,788.01	\$4,033.94
5. ADDITIONAL	\$8,328.02	\$8,294.69	\$8,294.69
6. TOTAL IN HOUSE COST	\$46,364.67	\$81,961.31	\$30,850.29
Daily Cost in FY 2001	\$356.65	\$409.81	\$342.78

In order to obtain average costs for the three sample prevention units by the major cost categories, a normalized fire season of 120 days was used. It was assumed in this study that the engine modules would be staffed for this period of time out of preparedness WFPR funds. The daily cost based on the number of days staffed in 2001 was obtained and then multiplied by 120 which is the number of days in the length of fire season chosen for this study. This normalized average cost is documented here and was not used to conduct any cost comparison between Government operated prevention modules and contract prevention units. The normalized fire season costs by major cost category is shown in Appendix G-5 and Table No. 15.

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Table No. 15

	Normalized Fire Season of 120 days			
Prevention Unit	Coronado	Cleveland	Wenatchee	Average
1 person 7 days per week	Prevention 51	Prevention 22	Prevention	Costs
Days Staffed	120	120	120	120
Cost Category				
1. PERSONNEL	\$22,908.94	\$31,310.74	\$17,716.25	\$23,978.65
2. MATERIAL AND SUPPLY	\$0.00	\$633.00	\$0.00	\$211.00
3. OTHER SPECIFICALLY ATTRIBUTABLE	\$5,255.06	\$4,583.42	\$6,979.29	\$5,605.93
4. OVERHEAD	\$6,946.75	\$7,672.81	\$5,378.59	\$6,666.05
5. ADDITIONAL	\$7,687.40	\$4,976.81	\$11,059.59	\$7,907.93
6. TOTAL IN HOUSE COST	\$42,798.16	\$49,176.79	\$41,133.72	\$44,369.55
Daily Cost in FY 2001	\$356.65	\$409.81	\$342.78	\$369.75

No further analysis was completed for prevention modules due to the lack of contact cost data.

## Discussion

The current administration is proposing a legislative initiative to require agencies to pay the full Government share of the cost of the Federal Employees Health Benefits (FEHB) beginning in FY 2003. The Federal Employment Management Reform Act of 2001 was introduced in the Senate on November 6, 2001. This means that instead of merely recognizing an imputed cost for FEHB on their books, agencies will be required to actually remit those costs to OPM (OPM Benefits Administration Letter No. 02-302, January 14, 2002). These costs have apparently been paid out of OPM appropriations in the past, and not agency appropriations. It also appears that if the OPM appropriation is reduced, then the agencies appropriations would be increased a like amount. Whether this "realignment" process works is difficult to predict. The Presidents budget submitted to Congress for FY 2003 contains this proposal. The Forest Service wildland fire management Presidents proposed budget contains an estimate of 12 million dollars for benefits for former employees.

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After looking at the costs of operating various preparedness modules by the Government and looking at actual contract costs for similar resources, it appears that there might be alternative workforce configurations that merit further analysis and evaluation. In most situations, there is usually no one answer to any complex question or one best way to accomplish work. Historically, all preparedness staffing has been by Government employees with very little contract provided staffing. The answer is probably not for all preparedness staffing to be provided by Government employees any more than should all preparedness staffing be provided by contracts. Each end of the spectrum has definite benefits and costs associated with the position.

One critical benefit that can be derived from having some portion of preparedness modules staffed by Government employees is that there are entry-level positions for fire management personnel. There are also career ladder positions created where an individual can spend a few years working at the lowest level of the field fire fighting organization, work their way up to a module leader, and then into ADFMO, DFMO, and forest level fire management positions. There is not other way to obtain firefighting experience than to do it over a number of years. There is a critical need to fill fire management positions with experienced personnel who understand firefighter safety, fire suppression, and fire as an ecological process. Filling the necessary fire management leadership positions does not mean that all Most Efficient Level (MEL) preparedness resources need to be Government provided. Contract resources could provide some portion of the MEL preparedness organization. There are potential cost savings to the Government by using contract preparedness resources.

The preparedness funding level from Congress has historically been some where from 60% to 100% of the MEL preparedness resources. The high end has only been provided once in recent times. There is difficulty in managing a Government employed workforce with fluctuating budget levels. When individuals are hired under a career appointment, it is not usually desirable to reduce career employees through reduction in force (RIF) if the appropriated budget is not sufficient to fund all the positions. This process is costly, time consuming, and a morale breaker. It seems that there would be an opportunity to establish a workforce strategy that would entail a goal of providing 60-70% of the MEL preparedness organization using Government employees. The remaining preparedness resources could be contracted for in any given year based on the current year funding level provided by Congress. The number of modules could be increased or decreased from one year to the next rather easily. Having some base level of Government provided modules would ensure that essential career ladders are still intact.

Line officers in the Forest Service have dealt with this year-to-year budget uncertainty by keeping the pool of employees hired as seasonals as large as possible in order to not obligate the Government to 30 year career employees and lock in payrolls that have no flexibility other than they have to be paid. This practice has contributed to high turnover and a shortage of skilled and experienced personnel. Having a base level organization that can rely on a base level of funding over a long period of time would increase the experience level of the Government hired module personnel. Safety and supervision skills would be enhanced as well. The employees that would be hired by a contractor

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would have a very similar pay scale and as good as or better benefits depending on what the contractor provides the employees. Contracts contain required labor wage rates and other fringe benefits as contract requirements. Seasonal employees hired by the Forest Service have no retirement benefit other than Social Security, no health insurance benefits, and no life insurance benefits. They also have no survivor benefits. Contractors would have the freedom to provide these benefits and even establish 401K or other retirement plans if they choose. Of course, the more benefits the contractors provide the employees, the higher the resulting contract daily cost will become as well.

There are many issues that need to be thought about when contracting for preparedness resources in addition to cost. The issue of what is inherently Governmental when contract resources are performing initial attack is one area of concern. Whether contractors can make decisions to spend fire suppression funds by ordering retardant drops etc. when performing as initial attack Incident Commanders (IC). What liabilities might the Government be agreeing to in such situations etc? The discussion and resolution of these areas are outside the scope of this study objective.

The contract crews and engines that were analyzed in this study performed work just like any agency operated resource. They performed the same variety of preparedness work as agency resources. In some cases, the module leaders served as initial attack IC's until the fire was contained or additional resources and leadership was dispatched to the fire scene. Some of the resources were provided Government housing and worked and lived side by side with Government employed personnel. The units worked together regardless of who the employer was. Contract provided module managers face the same difficult employee performance and supervision tasks that Government managers face. Some employees are not reliable, do not show up, cause trouble or do any number of things that require discipline and or termination. It seemed that in the sample of contractors that were consulted with, it was far easier to terminate employees who were performing in an unsatisfactory manner by the private contractor than is possible with Government employed personnel.

Considering that 2001 was the first time that many of the contracted resources have performed preparedness type contracts with guaranteed dollar values of various kinds, there were minimal start up problems. It can take many years to work on contract specifications and through time develop standard contract guidelines and develop contract language to solve problems that might be experienced. Most of the contractors have been providing resources to large fire support using equipment rental agreements and other call when needed (CWN) type of agreements and contracts in previous years. Those typically do not have any guarantee and usually do not perform regular preparedness work. Some of the contractors have had experience in performing other woods work for Government agencies as well in the past.

**Anticipated WCF space assessments**

During the field visits, the study team collected the data on the amount of space that the forests own and that will be assessed a WCF charge of \$0.50 per square foot in FY 2003. The following table displays the amounts that fire management will be expected to provide funding for starting in FY 2003.

Table No. 16

Forest	Total Square Feet - FS Owned	Square Feet Fire Uses	WCF Charge @ \$0.50 per Sq. Ft.	Percentage Fire Uses of Forest Space
Coronado NF	19,428	7,375	\$3,687.50	38%
Cleveland NF	292,399	219,299	\$109,649.50	75%
Wenatchee NF	308,219	77,055	\$38,529.50	25%
Okanogan NF	154,834	38,709	\$19,354.50	25%

The above amounts are the best estimate that was available at the time of the field visits. The actual amounts fire will be responsible provide funding for may be different than the amounts estimated above once the actual rules and description on how to assess the space WCF rates are finalized and followed by the forests.