

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Office of Fire and Aviation
3833 South Development Avenue
Boise, Idaho 83705

April 15, 2002

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To: State Directors

From: Director, Office of Fire and Aviation

Subject: Career Training Opportunity -Technical Fire Management
(TFM) 2002-2004

DD: 05/10/02
05/24/02

The National Office of Fire and Aviation is offering an educational opportunity for fire management candidates to attend Technical Fire Management sponsored by Washington Institute and Colorado State University. This educational opportunity is designed to improve the technical proficiency of fire specialists beyond the level that may be attained through on-the-job training. The subject matter includes statistics, fire ecology, fire behavior, fuels management, data analysis, economics and finance.

TARGET AUDIENCE: This training is for current career and career conditional employees occupying positions such as assistant fire management officer, fuels specialist and suppression specialists at the GS 6 through 11 levels who intend to pursue a career in fire management. The full benefit of the course can only be realized by those who have experience in fire management and fuels management. It is not intended for people with four-year resource or fire degrees or a significant number of credits in these fields to satisfy the GS-401 job classification series.

COMMITMENTS: This program is demanding and is approximately 19 months long. It is divided into five two-week modules, a one-week module, and a final project report. It is estimated that the completion of the final project alone will require between 250-500 hours. Students can expect to devote extra time to the course work, outside normal working hours, in order to satisfactorily complete the course.

Each student's final TFM project will be agreed upon between the home unit manager, the student, and Fire Management Officer. The final project is a written report culminating the learning process and is often the most challenging part of the program. This project is accomplished by systematically describing, analyzing and solving a problem of choice mutually determined by the student, the student's supervisor and Washington Institute. The final project report will be reviewed by a panel and then the student is required to make an oral presentation before a panel of interagency representatives to defend the decision criteria used in the analysis and solving the problem. This project must be completed within the time frames established.

Tuition and per diem for this program is approximately \$18,000 per student. After a student is accepted, the cancellation fee for withdrawal without identifying a replacement before 7/31 is \$2,500. If the student is a no-show in Module I, full tuition (\$8,400) will be billed to the appropriate funding code.

PREREQUISITES: Selectees **MUST** have completed S-390. In addition, the following skills are required: Technical writing course or the equivalent, basic algebraic manipulation, basic personal computer skills (WIN95 with Microsoft Office or equivalent), and proficient in the use of the BEHAVE program.

Selectees may also want to acquire the following skills: Knowledge of NEPA, field sampling and measurement, agency budgeting processes, KCFAST, WIMS, knowledge of NFDRS processes.

PROGRAM INFORMATION: The following information provides the tentative dates for each of the modules.

Module I, Math Fundamentals	Oct. 14-18, 2002
Module II, Statistics	Nov. 4-15, 2002
Module III, Economics	Jan. 6-17, 2003
Module IV, Fuels Management	Mar. 3-14, 2003
Module V, Fire Ecology	May 5-16, 2003
Module VI, Fire and Land Management	Sept. 22-Oct. 3, 2003
Module VII, Final Presentation and Review	April 12-16, 2004

Most of the modules will be held in Bothell, Washington (near Seattle), but some modules may be held at other locations.

SERVICE AGREEMENT: Selectees will be required to sign an agreement to complete the training. **Failure to complete the seven training modules may require repayment of the training costs.**

PROGRAM CREDITS: It has been determined that successful completion of this program will qualify the candidate for 18 of the 24 hours required to qualify for the General Biological Science (GS-401) series. BLM Personnel Offices require students to present a certificate from Washington Institute in order to obtain this credit. The certificate will only be issued after completion and presentation of the final project. The student must complete all modules and earn a passing score of 70 percent on the mid-terms and final examinations.

The participant has the option of buying credits (three per module) through Colorado State University. The rate is \$165.00 per module for Modules II through VII or \$990.00 for the full program. Module I is not accredited with Colorado State University. This cost is borne by the trainee; BLM will not pay for these credits. Colorado State University credits do not need to be purchased in order for TFM credits to be applied toward qualification in the 401 series.

APPLICANTS AND SUPERVISORS: This program requires a total commitment on the part of both employees and supervisors in terms of time and support to satisfactorily complete the 19-month program. Those applicants selected to attend will be required to sign a service agreement; supervisors must provide adequate support to employees involved in the program. The successful completion of previous final projects have required between 250-500 working hours. The amount of normal duty time allocated to each student for the completion of this project should be determined and agreed upon between the candidate and the supervisor. Any additional time required to complete the program will be on the students own time.

NUMBER OF POSITIONS: BLM has asked for eleven of the 40 available TFM student slots for the upcoming session. Tuition, travel, and per diem (base salaries and overtime pay for travel excluded) for up to two students will be paid for by the National Office of Fire and Aviation. Positions will be allocated in the following manner:

Arizona	1
New Mexico	1
Alaska	1
California	1
Colorado/Wyoming	1
Idaho	1
Nevada	1
Montana	1
Oregon/Washington	1
Utah	1
NIFC	1
Total	11

APPLICATION PROCESS: All personnel from Field Offices and State Offices will apply for the program via their own State Fire Management Officer by the due date (5/10/02). BLM NIFC employees will apply directly to the BLM Training Group, NIFC. State FMOs will gather applications for their area and rate and rank applicants. States will then forward this information to the BLM Training Group, NIFC, indicating their selections for allocated positions at that time. These materials should be at NIFC no later than May 24, 2002. State Fire Management Officers with combined allocations (e.g., Colorado/Wyoming have one slot for two states) must mutually agree on the priority selection from their area before forwarding information to NIFC. Upon request, the BLM Training Group, NIFC, will forward materials to the State Offices that will assist in the rating and ranking process.

The position allocated to NIFC (above) will not automatically be filled by a NIFC employee; that is one possibility, but that slot could also go to any state having an applicant with merit. That slot plus one other (probably from a State lacking ability to pay for a student) will be funded by the National Office of Fire and Aviation. The National Office will not fund any students from BLM states who have sent students to TFM who have failed to complete the program.

HOW TO APPLY: Applicants should submit the following in the order listed (documents stapled in the upper left corner; and please, no covers or fancy presentation packages):

1. SF-171, OF-612 or résumé, including training records and/or college transcripts.
2. Application Statement, Recommendation, and Approval For Technical Fire Management Form bearing the appropriate signatures.
3. Response to the Evaluation Criteria, not to exceed two pages for all criteria.
4. TFM Program Agreement bearing appropriate signatures.
5. Response to TFM Entrance Examination.

Necessary forms and selection criteria are included as attachments to this memorandum.

All materials need to be received by the appropriate State Offices no later than May 10, 2002.

State Offices should, **no later than May 24, 2002**, forward all selection information and application materials to:

Bureau of Land Management Training Group (FA-230)
National Interagency Fire Center
3833 S. Development Ave.
Boise, Idaho 83705

Attention: Ted Mason

If you have questions, please contact Ted Mason by telephone (208-387-5336) or e-mail (Ted_Mason@nifc.blm.gov).

Signed by:
Timothy M. Murphy
Acting Director
Office of Fire and Aviation

Authenticated by:
Pat Lewis
Supervisory Mgmt. Asst.
Office Services

4 Attachments:

- 1 - Selection Criteria for Technical Fire Management
- 2 - Technical Fire Management Application Statement, Approval, and Recommendations
- 3 - Technical Fire Management Program Agreement
- 4 - Technical Fire Management Entrance Examination

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SELECTION CRITERIA FOR TECHNICAL FIRE MANAGEMENT

Please submit a narrative statement addressing the following criteria when applying to attend the Technical Fire Management program. Be sure to address all listed items specifically; limit your response to no more than a total of two pages, single-spaced.

1. How have you been able to demonstrate, during your career to date, your ability to communicate both orally and in writing?
2. Describe your knowledge of fire management program planning, including the following specific items:
 - C Budgeting
 - C Preparedness
 - C Prevention
 - C Fire Management Activity Planning
3. Describe your knowledge of fire-related effects and how that knowledge was gained, including the following specific subject areas:
 - C Fire ecology
 - C Fuels management
 - C Prescribed fire management
 - C Smoke management
4. What is your level of ability with regard to the use of computer hardware and software? Describe your experience and skill level using the following programs or other applications related to fire management and the hazardous fuels reduction program:
 - C BEHAVE, CONSUME
 - C NFDRS, KCFAST, WIMS
 - C Word Processing (e.g., Microsoft Word, WordPerfect, etc.)
 - C Database/Spreadsheet (e.g., Quattro Pro, Lotus, dBase, etc.)
 - C Operating Systems (e.g., Unix, Windows '95, Windows 3.1, etc.)
5. What is your assessment of your math skills? Have you received instruction in advanced algebra or statistics since graduating from high school?
6. Briefly describe your knowledge and experience in fire operations, including fire line experience, Incident Management Team qualifications and hands-on experience in fire program management on a daily basis.

TECHNICAL FIRE MANAGEMENT
APPLICATION STATEMENT, APPROVAL, AND RECOMMENDATIONS

STUDENT: Discuss why you wish to attend TFM, include how this program will help you achieve your short- and long-term career goals.

IMMEDIATE SUPERVISOR RECOMMENDATION: I approve candidate's attendance to TFM and will ensure necessary support is available to the student to successfully complete this program. I understand the time commitment for completion of the final project is estimated at 250-500 hours and have discussed appropriate duty time allocations with this candidate.

Comments:

Signature – Immediate Supervisor

Date

DISTRICT FIRE MANAGEMENT OFFICER RECOMMENDATION: I approve candidate's attendance to TFM and will ensure necessary support is available to the student to successfully complete this program. Coordination has occurred between the District and State Office Fire Management staff regarding the appropriateness of this candidate and funding availability.

Comments:

Signature – District Fire Management Officer

Date

TECHNICAL FIRE MANAGEMENT PROGRAM AGREEMENT

1. All requirements for completion of the program must be completed within twelve months following the date of final project presentation (Module 7). If requirements are not met within this time frame, a Certificate of Completion will not be issued and the repayment of training costs may be required at the students expense.
2. Class attendance will occur during normal duty hours. However, study time will be required after hours, and the student is expected to meet this requirement. Time spent on the final project will require work time at the home unit and must be agreed upon between the supervisor and the student. The student should also expect to spend a considerable amount of their own time completing the final project. It is the home unit's responsibility to assist the student in meeting the project needs.
3. Each Module must be completed with a 70 percent overall score. If the student falls below the 70 percent level, then the student will need to demonstrate that efforts were made to achieve a passing grade. Special arrangements will be made if a student cannot pass a Module due to unforeseen circumstances. Due to the nature of this educational opportunity, a student who does not successfully complete the course and final project will be required to repay the amount expended.
4. For students sponsored by the Office of Fire and Aviation (OF&A) only: It is the student's responsibility to complete travel vouchers accurately and in a timely manner. Copies of travel vouchers involving expenditure of Office of Fire and Aviation funds must be forwarded to Ted Mason, BLM Training, NIFC. The OF&A will cover tuition, travel, and per diem expenses for OF&A sponsored students. Base salaries and overtime pay for travel to/from training is not covered by the OF&A and should be negotiated between the student and the local unit manager. Appropriate accounting codes will be identified by the Office of Fire and Aviation.

I have read and understand the above agreement:

Applicant Signature

Date

Supervisor Signature

Date

TECHNICAL FIRE MANAGEMENT ENTRANCE EXAMINATION

Name: _____

Agency: _____ Unit: _____

PREREQUISITES

1. I use a laptop personal computer:

- a. daily b. frequently c. occasionally d. never

2. My knowledge of the Windows operating system is:

- a. expert b. working c. get by d. weak

3. I use Microsoft Office - Word:

- a. daily b. frequently c. occasionally d. never

4. I use Microsoft Office - Excel:

- a. daily b. frequently c. occasionally d. never

5. I use Microsoft Office - PowerPoint:

- a. daily b. frequently c. occasionally d. never

6. I have attended (circle highest level):

- a. S-290 b. S-390 c. S-490 d. S-590

7. I have completed (circle the highest grade):

- 9 10 11 12 13 14 15 16 17 18 19 20 21

8. I have the following diplomas:

- a. GED b. High school c. AA or AS d. BA or BS e. MS f. MA g. PhD

MATHEMATICS AND STATISTICS

Lightning Fire Occurrence	
Year	Fires
1	55
2	49
3	43
4	26
5	20

9. Given the data table, the median value is:

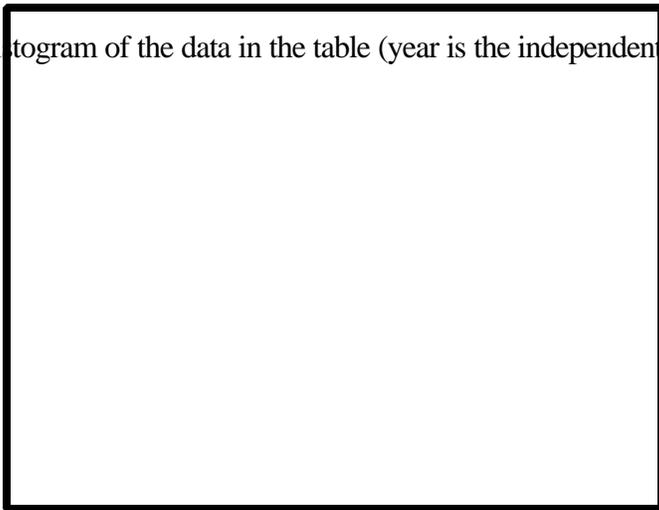
- a. 51.40 b. 43.00 c. 38.60 d. 28.00

10. Given the data table the mean value is:

- a. 51.40 b. 43.00 c. 38.60 d. 28.00

11. Given the data table the range of the data is:

12. Draw a histogram of the data in the table (year is the independent variable):



13. Interpret the following expressions (in words):

a. $A = B$

b. $X \dots Y$

c. $M > N$

d. $Z \leq Q$

14. In the fraction, $\frac{2}{3}$, the 2 is the _____

15. In the fraction, $\frac{2}{3}$, the 3 is the _____

16. The reciprocal of 4 is _____

17. In the expression 2^4 , 2 is called the base and the 4 is called the _____

18. What is the value of the expression in 17 above _____

19. Evaluate the following radicals:

a. $\sqrt{9}$

b. $-\sqrt{25}$

c. $\sqrt[3]{27}$

20. What is the decimal equivalent of $\frac{7}{8}$: _____

21. Calculate the percent moisture of a sample of duff that weights 40 grams when collected and 35 grams when completely dry? _____

22. Evaluate the following:

$5 \frac{1}{5} \times 7 \frac{2}{3} =$ _____

$\frac{1}{2} \times 2 \times \frac{1}{3} =$ _____

23. Convert 238, 500 to scientific notation: _____

B

E

36. Using the enclosed nomogram for Fuel Model 3, calculate rate of spread, flame length, and heat per unit area for a dead fuel moisture of 6%, midflame windspeed of 4 mph, no slope, and a live fuel moisture of 70%:

37. Use any release of BEHAVE and calculate the same variables as 36 above:

38. Why is there a difference? _____

39. In the term heat per unit area (Heat/Area), what does the word Unit mean?

40. What is NEPA designed to do:

a. analyze projects

b. disclose effect of government actions

c. disclose affects of government actions

e. provide administrative review of government decisions

End-