

5 Training & Qualifications

It is BLM policy that only personnel who are certified as being fully qualified will be assigned duties in wildland fire suppression or prescribed fire. It is also BLM policy to work jointly with other Federal, State, and local agencies, through the National Wildfire Coordinating Group (NWCG), to establish minimum fire qualification standards acceptable to all agencies. Interagency standards allow a cost-effective exchange of personnel and resources and reduce duplication among the agencies. It is BLM policy to adopt the NWCG standard. BLM also participates with other Interior agencies through the Department of the Interior Fire Coordination Committee (IFCC). Standards for Interior agencies, which may exceed the minimum standards established by NWCG, are coordinated through IFCC. Such additional standards will be approved by the Director, Office of Fire and Aviation, and implemented through the Incident Qualification and Certification System (IQCS).

Policy

Certification & Record Keeping

The BLM Manual Section 9215, Fire Training and Qualifications, identifies the training and experience requirements for Bureau personnel to perform jobs associated with the fire management program. The Manual Section also establishes State and Field Office responsibility for maintaining fire qualification records and position certification.

Instruction Memorandum 95-2001 established the Incident Qualification and Certification System (IQCS) as the Department of the Interior's fire qualifications and certification record keeping system. The Master File Report provided by the IQCS meets the Bureau requirement for maintaining fire qualification records. The system is designed to provide managers at the local, state, and national levels with detailed qualification, experience, and training information needed to certify employees in wildland and prescribed fire positions. The Unit Fire Management Officer (FMO) will review employee's experience, training, and completed task books prior to approving a certification for a position.

Field Office Managers are responsible for the certification of personnel to serve in wildland and prescribed fire positions. Agency Certification is issued in the form of an incident qualification card (Red Card) certifying that the individual is qualified to perform in a specified position. The Red Card must be reviewed for

accuracy by the approving official. The Red Card becomes valid only after review, signature by the approving official, and is valid for one year from the date of signature. Red Cards will be issued to all BLM employees assigned to wildland and prescribed fire activities. Red Cards will be issued annually at the beginning of the fire season. All Red Cards will be printed using the DOI Shared Application Computer System (SACS) Incident Qualification and Certification System (IQCS).

Each State Director will designate an employee as the State Fire Qualifications Administrator. This person is responsible to see that all the fire experience, fire training, and completed task books for employees in their state are accurately recorded in the IQCS. Records should be modified as changes occur. All records must be updated annually.

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Qualification System

BLM minimum qualification standards in wildland and prescribed fire are developed jointly with other Federal and State agencies through NWCG. These qualification standards are published in the NWCG Wildland Fire Qualification Subsystem Guide 310-1 and NWCG Wildland Fire Qualification Subsystem Guide, Part 2 – Prescribed Fire.

Annual Refresher Training

The BLM Manual Section 9215.22 Refresher Training requires all personnel participating in fire suppression or prescribed fire duties to receive annual safety refresher training which includes, at a minimum, training in the 10 Standard Fire Orders; 18 Watch Out Situations; Lookouts, Communications, Escape Routes, and Safety Zones (LCES); and hands-on fire shelter inspection and deployment practice. It is also recommended that refresher training include The Common Denominators to Tragedy Fires, Principles for Downhill Line Construction, Urban-Wildland Firefighter Safety, Snag Safety, and discussion reviews of local entrapments, near entrapments, and deployments and findings from safety research efforts such as the "Wildland Firefighter Safety Awareness Study." Managers must ensure that such personnel can correctly apply this information on wildland fires.

Non-NWCG Agencies

Personnel from other agencies who do not subscribe to NWCG qualification standards may be used on BLM-managed fires. BLM fire managers must ensure these individuals are only assigned to duties commensurate with their abilities and agency qualifications.

Position Task Books

As the employees' designated manager, the local office has the responsibility for implementation of the Position Task Books (PTB). These responsibilities are stated in the Task Book Administrator's Guide, PMS 330-1. They are:

- Select trainees, based on the needs of the local office and agreements with cooperators.
- Ensure that trainees have prerequisite training and experience as stated in the 310-1 or 310-1 Part 2.
- Issue and explain the PTB.
- Ensure that the trainee has the opportunity to acquire the skills/knowledge necessary to perform the position.
- Provide opportunities for non-incident task evaluation, for position performance assignments on local incidents, and/or make the trainee available for assignments to large incidents. The local office must provide an evaluator for local incidents.
- Track the progress of the trainee.
- Review and confirm the completion of the PTB and make determination of certification.
- Issue proof of certification as required by 310-1 or 310-1 Part 2. This proof is normally an incident qualification card (red card) issued by utilization of the IQCS.

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The employee also has responsibilities in the utilization of PTB. These responsibilities are stated in the Task Book Administrator's Guide, PMS 330-1. They are:

- Review and understand the instruction in the PTB.
- Identify goals and objectives for an assignment.
- Ensure that they are ready to perform the tasks of the position.
- Provide background information (training and experience) to an evaluator.
- Complete the PTB within a three-year time limit.
- Make sure that a qualified evaluator initials all tasks as they are completed and completes the appropriate evaluation record.
- Safeguard the PTB.
- Provide a copy of the completed PTB to the local office. The original is kept in the trainee's personal records.

Qualification and Certification Committee

A Qualification and Certification Committee should be established for each field office with fire management responsibilities. In those areas with cooperative fire protection with other Federal, State, or local agencies, an interagency qualification and certification committee is appropriate with representation from each unit. These qualification and certification committees provide management oversight and review of the wildland and prescribed fire positions under their jurisdiction. These tasks are accomplished through the committee by:

- Certifying that qualifications generated by IQCS or other agency systems for employees are valid, by reviewing the training and experience of each employee.
- Determining if each employee possesses the personal characteristics necessary to perform the wildland and prescribed fire positions entrusted to them in a safe, efficient, and effective manner.

- Making recommendations to the appropriate Agency Administrator for signature. The Agency Administrator or designee is responsible for final signature.
- Developing interagency training requirements and sponsoring courses that can be completed locally.

Physical Fitness

Our concern for employee safety and health has prompted screening procedures to make sure only the fit are assigned to physically demanding fire management activities. Unfit persons can quickly become a hazard to themselves and to their co-workers.

Field Office Managers are responsible for ensuring the overall physical fitness of the firefighters. By evaluating regular and project work assignments and overall crew physical condition the Manager may authorize employees available and serving in wildland or prescribed fire positions requiring a physical fitness rating of arduous one hour a day for fitness conditioning as needed. **Furthermore, individuals who have a position with an arduous physical requirement may be periodically tested during the fire season to insure they are retaining the required level of fitness and conditioning.**

Since 1975 federal wildland management agencies have used a step test (or 1.5 mile run) to screen wildland firefighter's fitness level. In 1994 the Missoula Technology & Development Center (MTDC) was assigned to review test procedures and revise training materials to insure compliance with new laws, regulations, and recent research findings. MTDC conducted an extensive review of the scientific literature and legal precedents related to employee selection, revised the wildland firefighter job task analysis, and compiled field comments to determine satisfaction or problems with the existing tests. The results of the review called for revisions of the current fitness tests.

The National Wildfire Coordinating Group (NWCG) has approved the Work Capacity Tests to replace the Step Test and 1.5 mile run. The Work Capacity Tests has been adopted by the BLM as the official method of assessing wildland firefighters fitness level.

Field Office Managers are also responsible for ensuring that the Health Screen is administered prior to initiating a physical training program and/or the Work Capacity Fitness Test. Work Capacity Tests are administered annually to all employees who will be serving in wildland or prescribed fire positions requiring a fitness score. The Work Capacity Tests must be administered and passed at the appropriate level prior to assigning the employee to wildland or prescribed fire duty. Accurate documentation including the Health Screen and Work Capacity Test Record must be accomplished for all employees. This documentation must be retained until the next testing. Test results must also be entered in the IQCS annually to update the fitness score and fitness date that will appear on the Red Card. Physical fitness dates entered in IQCS will reflect the date the employee passed the fitness test.

5 Work Capacity Test Administration

Instructions Studies of wildland firefighting clearly show the link between fitness and work performance. Fit workers can do more work with less fatigue and still have a reserve to meet unforeseen emergencies. They perform better in a hot environment and recover faster from adverse firefighting conditions like long shifts and reduced rest. In short, fitness is the most important factor in work capacity.

Job-related Work Capacity Tests (WCTs) are used to determine a firefighter's level of fitness for the National Wildfire Coordinating Group's *Wildland Fire Qualifications Subsystem*, 310-1. The 310-1 defines four fitness levels- Arduous, Moderate, Light and None. The Arduous, Moderate, and Light fitness levels require an individual to demonstrate their ability to perform the fitness requirements of the position.

Work Capacity Test

Work Category	Test	Distance	Weight	Time
Arduous	Pack Test	3 miles	45 lb.	45 min.
Moderate	Field Test	2 miles	25 lb.	30 min.
Light	Walk Test	1 mile	none	16 min.

Arduous – Duties involve field work requiring physical performance calling for above average endurance and superior conditioning. These duties may include an occasional demand for extraordinarily strenuous activities in emergencies under adverse environmental conditions and over extended periods of time. Requirements include running, walking, climbing, jumping, twisting, bending, and lifting more than 50 pounds; the pace of work typically is set by the emergency conditions. (Ref. NWCG 310-1.)

Moderate – Duties involve field work requiring complete control of all physical faculties and may include considerable walking over irregular ground, standing for long periods of time, lifting 25 to 50 pounds, climbing, bending, stooping, twisting, and reaching. Occasional demands may be required for moderately strenuous activities in emergencies over long periods of time. Individuals usually set their own work pace. (Ref. NWCG 310-1.)

Light – Duties mainly involve office type work with occasional field activity characterized by light physical exertion requiring basic good health. Activities may include climbing stairs, standing, operating a vehicle, and long hours of work, as well as some bending, stooping, or light lifting. Individuals almost always can govern the extent and pace of their physical activity. (Ref. NWCG 310-1.)

Test Administration

- 1 Job Hazard Analysis (JHA) shall be developed and approved for each Field Office prior to administering the Work Capacity Test. A generic JHA is attached for your consideration.
- 2 A Health Screen will be administered prior to initiating a physical training program and/or the Work Capacity Fitness Test with the following objectives:
 - To identify, prior to the work capacity testing, (at risk) personnel
 - To identify existing injuries or illness and minimize the probability of new injuries
 - To establish the need for a medical evaluation
- 3 Administer the test using this guide.
- 4 Documentation is accomplished by utilizing the Health Screen and Work Capacity Test Record (both included in this package). These documents must be retained until the next testing.

Personnel The number of individuals needed to administer the test will depend on the course lay out, testing conditions, and the number of candidates to be tested. In some cases one person will fill multiple roles (e. g., administrator, timer, first responder, course monitor). All persons involved in the testing must understand the instructions and safety considerations, as well as their individual roles and responsibilities. A pre-test briefing for the test administration personnel is recommended. The following personnel may be necessary for test administration:

Test Administrator – The person in charge of the administration of the test at the test site must understand test procedures, Job Hazard Analysis (JHA) and local medical/evacuation plan. Responsible for monitoring participants and stopping the test if appropriate.

Medical Assistance – A person currently qualified for first aid and CPR will be on site to provide assistance, if needed, and to observe candidates during the test.

Course Monitor – The test administrator will determine the number needed to monitor candidates during the test.

Lap Counter(s) – if needed to record laps completed by each candidate.

Timer – to keep the time during the test.

For small groups, two people may be able to administer the test. For larger groups or when course monitoring is difficult, three or more will be needed.

The Course The Course must be essentially level and have a firm, relatively smooth walking surface. Course length must be accurate: double-check measurements. Use a measuring wheel or a calibrated bicycle computer. Vehicle odometers are not sufficiently accurate.

Loop or out-and-back courses are preferable. Avoid one-way courses where unfavorable conditions (wind, grade) are not offset. A moderate grade (2-3%) is acceptable, if the course starts and finishes at the same place. Have lap counters available for multi-loop courses. Use course monitors when needed.

Candidates must be informed of the course layout. (Use a map or sketch of the course.) Use distance markers to aid candidates. Use hazard and traffic markers as needed.

Equipment

Packs – Agency will provide the appropriate pack at the test site. The participant may use their own pack, if desired.

Safety Vests/Route Markers – As needed.

Distance Markers – Use mile and mid-point markers so candidates can maintain proper pace.

Stop watches – Utilize two watches to provide back-up timing.

Vehicle – Bicycle or other vehicle, as needed, to monitor candidates on the course.

Radios/C-Phones – As needed for monitoring and safety

Scale – An accurate scale is required for weighing packs.

Forms – Health Screen & Work Capacity Test Record

Notify candidates 6-8 weeks in advance of test date if possible to enable them to prepare. Send the Work Capacity Test Brochure to explain the test and provide suggestions for training, clothing, and health screening.

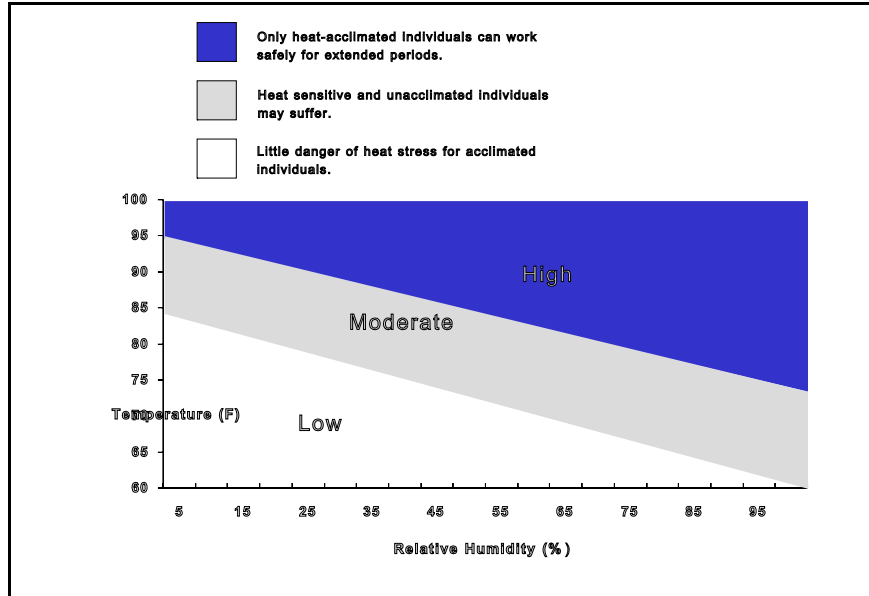
Candidates will be briefed to insure that all are informed concerning the test, the course, safety and other site-specific information. The test will be halted if any of the following signs are observed:

- Discomfort, pressure, or pain in the chest
- Dizziness, light headedness, sudden loss of coordination
- Difficulty breathing or shortness of breath
- Abnormal heart activity (fluttering, irregular beats or sudden drop in rate)

5*Testing Tips*

- Weigh packs before test. Check weight after the test, if necessary.
- Group or staggered starts can be used. Some candidates will benefit from the support provided by the group start.

Environmental Conditions Administer the test in moderate environment conditions; do not test new recruits when the temperature is high or when the temperature and humidity combine to create high heat stress conditions. (See heat stress chart, from page 29, *Fitness and Work Capacity*, Second Edition). If necessary; test early in the day to avoid high temperature/humidity combinations; avoid high winds that may affect performance.



Hydration If the weather is hot, encourage candidates to drink fluids prior to the test and provide fluid replacement at the mid-point in the course. Candidates may carry a water bottle (not part of the pack weight).

Altitude Use the altitude correction chart, page 51, *Fitness and Work Capacity*, Second Edition to adjust for test administration above 4,000 ft.

Altitude (Feet)	1-mile Walk Test (Seconds)	2-mile Field Test (Seconds)	3-mile Pack Test (Seconds)
4000	10	20	30
5000	15	30	45
6000	20	40	60
7000	25	50	75
8000	30	60	90

Add the correction to the required test time.

The altitude adjustment assumes that the candidate has had an opportunity to acclimate to the altitude of the test site. If a candidate doesn't meet the required standard, even with the adjustment, they should be encouraged to train at the altitude and retake the test.

Testing Considerations

Clothing – Candidates may select the clothing worn during the test. “T” Shirts and shorts are acceptable. Footwear will be determined by the JHA.

Safety – Brief candidates on the test, the course, and safety considerations. Tell candidates to terminate the test if they experience major physical problems or discomfort, or feel the need to stop for any other reason. The test administrator may also terminate the test if the candidate falls well behind the required pace and/or shows significant signs of fatigue.

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Warm-up – Encourage candidates to stretch (calves, hamstrings, lower back) and warm-up before the test.

Pace – Demonstrate to candidates how they should hike (power walk) the course and give split times for required pace. The heel of one foot must make contact before the opposite toe leaves the ground. Jogging or running will invalidate results and require a retest.

Accommodations – Candidates may use padding to make the pack more comfortable. A candidate-provided walking staff may be used during the test.

Competition – Candidates will be advised that the Work Capacity Test is not a competitive event. There is no benefit to exceeding the required time for fitness ratings.

Essentials of Good Testing

- An accurately measured flat course with good surface.
- Proper weight packs. Verify pack weight with a calibrated scale. If alternative packs are used, candidates are responsible for proper adjustments.
- Duplicate and accurate timing. Give candidates split times along the course.
- Candidates should be rested and well informed about the course and the need to maintain a fast pace.
- Favorable environmental conditions. Avoid adverse conditions.
- Complete the Health Screening Questionnaire.

Safety

- A locally developed and approved Job Hazard Analysis and safety/medical evacuation plan must be prepared for the course.
- Test administrator must be familiar with the safety plan.

- An individual trained and qualified in first aid who knows the symptoms of physical distress and appropriate CPR procedures must be on site during the test.
- Avoid use of roads and intersections where traffic is a problem or concern.
- Check to see that candidates are wearing proper footwear.
- Encourage candidates to stretch and warm up prior to the test.
- Do not test tired or injured individuals or test during conditions that could compromise health or safety.
- Test administrator shall maintain visual contact and monitor candidates to identify those having difficulties and terminate the test if necessary.
- Encourage fluid intake and replacement and provide fluids en route when heat stress conditions (temperature/humidity) exist.
- Encourage a cool down with an easy walk after the test. Monitor the recovery of candidates, especially those who appear distressed.

Health Screen Questionnaire The purpose is to identify individuals who may be at risk in taking the work capacity test and recommend an exercise program and/or medical evaluation prior to the work capacity test.

Prior to taking the Work Capacity Test (WCT) employees are required to answer the following questions. The questions were designed, in consultation with Occupational Health Physicians, to identify individuals who may be at risk in taking the work capacity test. The information on this health screen is considered confidential and must be filed appropriately.

Solicitation of this information is authorized by Title 5 U.S. Code Section 3301, which provides for a determination of an individual's fitness-for-duty.

Yes No

- 1) During the past 12 months have you at any time (during physical activity or while resting) experienced pain, discomfort or pressure in your chest?
- 2) During the past 12 months have you experienced difficulty breathing or shortness of breath?
- 3) Are you currently under a doctor's care for a heart or lung related condition?
- 4) Have you ever been diagnosed with, and are you currently being treated for, high blood pressure?
- 5) Do you have a blood pressure with systolic (top #) greater than 140 or diastolic (bottom #) greater than 90?
- 6) Do you have a resting pulse greater than 100 beats per minute?
- 7) Do you have a bone or joint condition that could be made worse by a change in your physical activity?
- 8) Do you know of any other medical or physical reason you should not take the work capacity test?
- 9) Do you have asthma, diabetes, epilepsy or elevated cholesterol?

A yes answer will only mean that a physical and/or functional fitness evaluation is required prior to administering the test. The doctor will then make a determination regarding the administration of a Work Capacity Test.

I understand that, if I need to be evaluated, it will be based on the fitness requirements of the position(s) for which I am qualified.

Participant _____ Administrator _____ Date _____

Questions and Answers Regarding the Health Screen

- Q. Can I administer the questionnaire to a group of people at one time?
- A. The health screen contains personal information. It is important the answers be kept confidential. Administering it one-on-one will ensure the highest level of accuracy in responses; however, you may pass the form out and have the participants fill it out and turn it in for your review prior to administering the test.
- Q. Will a yes answer on the questionnaire prevent the participant from taking the work capacity test?
- 5 A. The yes answer will only mean that a physical and/or functional fitness evaluation is required. The doctor will make a determination regarding the Work Capacity Test. (WCT)
- Q. What if I suspect the participant is not answering truthfully?
- A. You are not responsible for the participant's honesty. Participants are accountable and responsible for their own health. If they choose to answer a question dishonestly, they will not receive the agency provided medical evaluation that might identify or eliminate a condition or problem.
- Q. Should the Health Screen be done prior to beginning a fitness program?
- A. Yes, this is especially important when an employee is considered to be at risk or engaged in a fitness program on work time in preparation for the WCT.
- Q. Should overweight people take the work capacity test?
- A. Persons who fall within the obese or extremely obese categories identified on page 27 of the Fitness and Work Capacity publication should consult their physician prior to beginning any fitness program.
- Q. As a Test Administrator, how do I determine whether to administer the WCT?
- A. You must review the questionnaire for completeness and assure all questions are answered either yes or no. Only administer the WCT to individuals who answer NO to all questions.

Work Capacity Test Record Units will utilize this Work Capacity Test Record for documenting administration of the Work Capacity Tests to all job applicants and employees. This documentation must be retained until the next Work Capacity Test is administered. Units will also be requested to provide data

from these records to assist in the evaluation of the Work Capacity Testing process.

The information on this Work Capacity Test Record is considered confidential and must be filed appropriately. The identity of the individual must be protected.

Solicitation of this information is authorized by Title 5 U.S. Code Section 3301, which provides for a determination of an individual's fitness-for-duty.

To be completed by employee:

Name (Last, first): _____ Where employed: _____

Date of birth: _____ Height: _____ Weight: _____

Date test taken: _____ Test administered by: _____
(print name)

ICS position for which test is required (highest needed) _____

Performance level needed (circle one): Arduous Moderate Light

Type of test taken (circle one): Pack Test Field Test Walk Test

Work Capacity Test Descriptions:

	Pack Test	Field Test	Walk Test
Pack weight:	45 lbs	25 lbs	none
distance:	3 miles	2 miles	1 mile
time:	45 minutes	30 minutes	16 minutes


To be completed by test administrator:

Test result time: _____

Employee passed test (circle one): yes / no

I certify that the pack test was administered according to Bureau guidelines.

(Signature of Test Administrator) (Title) (Date)

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	Page 1 of 4	Reviewed by: (Safety Mgr)
	Supervisor:	Qual, Trng, Experience Req'd:

This JHA must be reviewed, approved, and signed by the Agency Administrator:

Name: _____ Title: _____ Date: _____

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
Work Capacity Testing	Physical Overexertion	1. Follow testing procedures provided in BLM instruction memorandum.
		2. Provide prospective test subjects information about the test and describe how to prepare for it.
		3. Test subjects complete the Health Screen. Only appropriate responses of the prospective subjects to the Health Screen will result in administering the Work Capacity Test.
		4. Brief test subjects about the test just prior to the test -- answer questions concerning the test. Make them understand they are to quit and get help from one of the Test Administrators on the course if they begin to feel ill during the test.
		5. Test Administrators monitor subjects for distress during test. Test Administrator is to terminate test if indicated by level of subject distress.
		6. Provide prospective test subjects official time for fitness training where policy permits.
Work Capacity Testing	Physical Overexertion	7. Schedule tests when environmental conditions are most favorable.

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
		8. Have a person currently qualified in first aid and CPR on site when testing is done with first aid supplies and equipment.
		9. Have unit medivac plan and make sure Test Administrators know how to activate it.
		10. Make sure test subjects do not exceed a walking pace.
		11. Ensure test subjects are properly hydrated.
Work Capacity Testing	Strains and Sprains	1. Provide information to prospective subjects describing how to get into shape for the tests.
		2. Provide prospective subjects official time for fitness training where policy permits.
		3. Brief subjects about the test just prior to beginning.
		4. Monitor subjects for indications of distress and terminate the test for them.
		5. Ensure test subjects have comfortable footwear that provides adequate support and protection to feet and ankles.
		6. Give subjects time to adjust packs for comfort prior to beginning the test.
		7. Provide time prior to starting the test for subjects to warm up and stretch.
		8. Have subjects cool down and stretch after the test.
		9. Make sure the test subjects do not exceed a walking pace.
Work Capacity Testing	Heat Stress	1. Make sure Test Administrators understand the effects of exercising in heat, can recognize the symptoms of heat stress and know how to treat it.
Work Capacity	Heat Stress	2. Where possible, schedule tests for the most

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
Testing		favorable environmental conditions. Use the Heat Stress chart, page 29 of <i>Fitness and Work Capacity</i> , Second Edition. Avoid the "High" range.
		3. Inform prospective test subjects they need to dress for the conditions and include the information in the pre-test briefing.
5		4. Make sure test subjects are aware of the need for acclimatization. Provide time for employees to become acclimatized if conditions of their employment permit.
		5. Test Administrators include heat stress information in the test briefing if appropriate.
		6. Provide water at key points along the test course if conditions dictate.
		7. Test Administrators monitor all test subjects for signs of heat stress, terminate test if indicated, and be prepared to provide treatment needed.
Work Capacity Testing	Cold Temperature	1. Make sure Test Administrators know symptoms of cold-related physical effects and are prepared to treat them.
		2. Inform prospective test subjects the need to dress for the conditions and include information in the pre-test briefing.
		3. Locate an indoor facility suitable for testing if conditions warrant.
		4. Postpone testing if conditions warrant.
Work Capacity Testing	Slippery Course Conditions (ice, snow, mud)	1. Locate a suitable test surface. Consider indoor facility, plowed airport, plowed road or other safe area.
		2. Postpone testing if conditions warrant.

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
		3. Test subjects wear footwear with good traction.
Work Capacity Testing	Traffic	1. Select test course without traffic.
		2. Arrange for traffic control to eliminate traffic hazard.
Work Capacity Testing	Traffic	3. Make sure test subjects are briefed about traffic hazard and controls implemented prior to the test.
Work Capacity Testing	Pack Rubbing, Chafing, or Straining Subjects	1. Make sure test subjects have practiced with a pack and have become work hardened to carry a pack.
		2. Recommend upper body clothing that protects from pack rubbing.
		3. Make sure subjects have an opportunity prior to testing to adjust and try out the pack.
		4. Terminate testing for subjects struggling to carry the pack or maintain a pace adequate to complete the test successfully.
		5. Permit subjects to use a self-provided pack that meets the applicable weight requirement.

Physical Training

Fitness conditioning periods may be identified and structured to include aerobic and muscular exercises. Team sports are not authorized for fitness conditioning. *Fitness and Work Capacity*, Second Edition, chapters 7, 8, and 9 provides excellent guidance concerning training specifically for the Pack Test, Aerobic Fitness Programs, and Muscular Fitness Training.

Medical Examinations

Establishing medical qualification programs, as stated in 5 CFR 339, provides **uniform** and **consistent** medical standards in order "to safeguard the health of employees whose work may subject them or others to significant health or safety

risks due to occupational or environmental exposure or demands." A DOI sponsored multi-disciplinary team of medical, safety, human resources and wildland fire experts will establish a consensus medical standard for wildland and prescribed firefighters. This standard will be developed as a comprehensive program designed to be consistent and defensible with all current Federal regulations. A draft standard is to be developed by September 15, 1998, with implementation by the summer of 1999. The purpose of the following is to establish interim policy and associated guidance until Department or Inter-Departmental policy is provided.

Agency Administrators and supervisors are responsible for the occupational health and safety of their employees performing wildland and prescribed fire activities. They may require a medical examination at any time. At a minimum, the Bureau interim policy requires:

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1. All employees who participate in wildland or prescribed fire activities requiring a fitness level must answer the questions on the Health Screen prior to taking their Work Capacity Test. If indicated, a medical exam will be required prior to administration of the test.
2. All Permanent, Career Seasonal, and Student Career Experience Program employees, 40 years of age and older, who participate in wildland or prescribed fire activities requiring a fitness level of **arduous** must have a physical every three years or as indicated by the Health Screen. The physical will include a stress EKG.
3. All newly hired temporary employees who participate in wildland or prescribed fire activities requiring a fitness level of **arduous** must have a pre-employment physical to determine their suitability prior to their initial entry on duty. Rehires over 40 years of age who participate in wildland or prescribed fire activities requiring a fitness level of arduous will receive a physical exam every three years.

Medical examinations are a diagnostic tool that can give an early warning to employees involved in wildland or prescribed fire activities about potential health problems. By providing specific guidance in this area, the Bureau will not only be providing for the well being of valued employees, but also meet the Bureau's need to determine an individual's capacity for arduous work.

The determination of an individual's capacity to perform arduous work, in itself, does not furnish a complete evaluation of Bureau employee wellness or risk potential. In addition to the traditional medical examination, a Health Screen Form, a comprehensive Health/Fitness Assessment including both Fitness Testing Components and Personal Lifestyle Assessment are crucial to evaluating the overall physical condition of individuals and thus providing for a safe and effective fire management program.

Medical Examination Components

Medical History	Vision
Hearing	Heart and Blood Vessels
Nose, Mouth, and Throat	Teeth
Lungs	Abdomen
Genitourinary/Metabolic	Spine
Extremities	Nervous System
Skin	Other Defects

Health/Fitness Assessment

Completion of a Health Screen Form is intended to obtain relevant information about an individual's health that will assist in evaluation as well as developing a fitness program. This form must be filled out prior to participating in the Fitness Testing Component.

Fitness Testing Component includes measurement of:

- Resting Heart Rate
Should be counted through the use of a stethoscope for 1 minute.
- Blood Pressure
With individual sitting upright, blood pressure is measured with a sphygmomanometer.
- Body Composition
Skinfold calipers are used to measure the thickness of skin and subcutaneous fat at specified location on the body. Results are compared to norm tables.
- Flexibility
Trunk flexibility is measured with the individual seated on the floor, legs flat. The individual bends forward from the waist and reaches as far between the legs as possible. Three measurements are taken and compared to norm tables.
- Muscular Strength and Endurance
Bench Press Test: The individual is in the supine position on a bench. A 35 pound barbell for women and 80 pound barbell for men is pressed to the rhythm of a metronome for as many press movement repetitions as possible.
1-Minute Timed Sit-up Crunch: Sit-up Crunches are performed for one minute.
- Cardiovascular Fitness
A stationary bicycle is used for this test. The individual's heart rate is measured at 2, 3, and 4 minute intervals of three increasing bicycle peddling workloads. Results are compared with norm tables.
- 15-Channel Blood Screening

Personal Lifestyle Assessment analyzes areas of information on:

(recommended option, not mandatory)

- Exercise and Fitness
- Nutrition
- Stress
- Disease Prevention
- Weight Management

The following Certificate of Pre-appointment Medical Examination for Firefighter may be used to supplement the SF-78 for arduous temporary and permanent positions.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

**CERTIFICATE OF PRE-APPOINTMENT MEDICAL EXAMINATION FOR
FIREFIGHTER**

(Supplements SF-78 for arduous temporary and permanent positions)

Part A. TO BE COMPLETED BEFORE EXAMINATION BY APPOINTING OFFICER

OFFICE CODE:	POSITION TITLE:
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BRIEF DESCRIPTION OF WHAT POSITION REQUIRES EMPLOYEE TO DO

W i l d l a n d F i r e f i g h t i n g T a s k s	Energy cal/min	Cost mL/kg · min	
Using a handtool (for instance, digging or chopping with a Pulaski, combitool, McLeod, or brush hook)	7.5	22.5	

Lifting and carrying light loads (examples are clearing loose brush or trees, deploying or repositioning hose, throwing dirt with a shovel, firing operations, or structure protection)	6.8	20.0
Chain sawing (felling, bucking, limbing)	6.2	18.0
Packing heavy loads (pumps, hose packs, 5-gallon water bags)	7.5 flat 10.0 hill	22.5 29.4
Hiking with light loads (field pack and tools)	6.5	19.0
Performing under adverse conditions (including long work shifts; rough, steep terrain; heat, cold, altitude, smoke; insufficient food, fluid replacement, sleep)	6.5-10+	19-30
Emergency responses (fast pull-out to safety zone, rescue or evacuation assistance to others)	10.0+	29.4
Chopping wood	7.5	21.4
Tree felling (ax)	8.5	25.0
Stacking wood	5.8	17.0
Shoveling	6.8	20.0

Part B. TO BE COMPLETED BY APPLICANT
(typewrite or print in ink)

NAME (last, first, middle)	SOCIAL SECURITY NO.	SEX ___ MALE ___ FEMALE	DATE OF BIRTH
DO YOU HAVE ANY MEDICAL DISORDER OR PHYSICAL IMPAIRMENT WHICH WOULD INTERFERE IN ANY WAY WITH THE FULL PERFORMANCE OF THE DUTIES SHOWN ABOVE IN PART A? ___ YES ___ NO (If your answer is "YES" explain to the physician performing the examination)		I CERTIFY THAT ALL THE INFORMATION GIVEN BY ME IN CONNECTION WITH THIS EXAMINATION IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF (Signature of Applicant)	

Part C. TO BE COMPLETED BY EXAMINING PHYSICIAN.

(INSTRUCTIONS TO PHYSICIAN: The duties of firefighter positions require sustained, arduous physical exertion under rigorous conditions. Persons will be subject to extreme

environmental conditions and to irregular and protracted hours of work. This form lists some specific physical requirements for these positions. Please review the physical condition of this individual on every item listed on this form. Record any comments you may have on conditions which may limit the applicant's ability to safely perform this job on the reverse side of this form. It is essential that you review your patient on every item listed and that we have all of the following information recorded here.)

Weight: (lbs)	Height: (in)	Blood Pressure:	Pulse:	Uncorrected Distant Vision: R20/ L20/	Corrected Distant Vision: R20/ L20/	
DOES THE APPLICANT MEET THE REQUIREMENTS FOR THE FOLLOWING FUNCTIONS?					YES	NO
<p>EYESIGHT:</p> <p>a) Uncorrected distant vision at least 20/100 Snellen in one eye and 20/200 in the other</p> <p>b) Corrected distant vision at least 20/30 Snellen in one eye and 20/40 in the other</p> <p>c) Evidence of acute or chronic eye disease (<u>not time limited</u>)</p> <p>d) Corrected near vision; can read typewritten materials</p> <p>e) Can distinguish basic colors</p> <p>f) Peripheral vision</p>						
EARS: No evidence of acute or chronic disease of external, middle or internal ear. Without hearing aid; no loss greater than an average in either ear of more than 40 dB at 500, 1000, and 2000 Hz)						
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HEART & BLOOD VESSELS: (Based on medical history and in-office examination) No evidence of organic heart disease, valvular disease, coronary heart disease, cardiac enlargement, angina pectora, cardiac arrhythmia or irregularity other than sinus arrhythmia. Blood pressure, regulated or not, less than 160/90. Pulse rate at rest less than 100.						

NAME OF

FOLLOWING FUNCTIONS ARE WITHIN NORMAL LIMITS	YES	NO
NOSE, MOUTH & THROAT: No evidence of acute or chronic disease or other nasopharyngeal conditions which interfere with distinct speech or free breathing.		
TEETH: No evidence of gross dental problems that would be expected to affect the ability to carry out the work.		
LUNGS: No evidence of acute or chronic lung disease which impairs physical functioning or might limit the applicant's ability to perform the functions of the position (45mL/kg VO ₂ max)		
ABDOMEN: No evidence of acute or chronic diseases; significant enlargement of the liver or spleen; hernia which would interfere with lifting, stretching or bending; or conditions that would otherwise affect the ability of the applicant to perform the requirements of the position.		
GENITOURINARY/METABOLIC: (Based on macroscopic and microscopic urine analysis) No evidence of acute or chronic genitourinary disease which would affect work. Individuals with a diagnosis of diabetes require individual evaluation by the agency.		
FOLLOWING FUNCTIONS ARE WITHIN NORMAL LIMITS	YES	NO
SPINE: No problems with the spine or back that would affect the ability of the applicant to perform the requirements of the position.		
EXTREMITIES: No problems with the extremities that would be expected to affect work. No loss of limbs, hands, or feet.		

<p>NERVOUS SYSTEM: No evidence of neurological or psychiatric disorders likely to interfere with the performance of duties. A history of epilepsy or other seizure disorders requires an evaluation of pertinent treatment records by the agency MRO.</p>		
<p>SKIN: No evidence of excessive scarring or debilitating acute or chronic skin disease which would interfere with performance.</p>		
<p>OTHER DEFECTS: No evidence of diseases of defects not mentioned above which would interfere with performance of position.</p>		

CONCLUSIONS: Summarize below any medical findings which, in your opinion, would limit this person's physical ability to perform job duties and/or could create an imminent hazard to himself/herself or others. If none, so indicate.

 _ No limiting conditions for this job

 Potentially limiting conditions and recommended work restrictions.

 Limiting conditions as follows:

NAME OF APPLICANT:

EXAMINING PHYSICIAN'S NAME AND ADDRESS (Type or print and include ZIP code):

SIGNATURE OF EXAMINING PHYSICIAN

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IMPORTANT: After signing, return the form to:

**Part D. TO BE
COMPLETED BY
AGENCY
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OFFICER**

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AGENCY PERSONNEL OFFICER (type or print)	SIGNATURE	DATE
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New NWCG ICS Position

Incident Commander Type 5 (ICT5)

This position was adopted by the National Wildfire Coordinating Group, (NWCG) and will be included in the Wildland Fire Qualification Subsystem Guide (PMS 310-1).

The Type 5 incident has the following characteristics:

- Resources required normally vary from two to six firefighters.
- The fire is generally contained within the first burning period and often within a few hours after arrival.
- Additional firefighting resources or logistical support is normally not required.

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Incident Commander Type 5 (ICT5)

REQUIRED TRAINING: "Look Up, Look Down, Look Around" (full 4-hour course, PMS 427)

SUGGESTED TRAINING: "Intermediate Fire Behavior" S-290 (may be substituted for required training, as it includes the entire "Look Up..." material. S-290 in its entirety would exceed the standard.)

EXPERIENCE: Satisfactory position performance (includes Position Task Book completion and prerequisite training) as an Advanced Firefighter/ Squad Boss (FFT1) on a wildfire incident

PHYSICAL FITNESS: Arduous

OTHER ASSIGNMENTS THAT

WILL MAINTAIN CURRENCY: Advanced Firefighter (FFT1)

The ICT5 position is not prerequisite to the NWCG Incident Commander Type 4 (ICT4) position. The NWCG qualification pathway for ICT4 remains unchanged.

State Directors and Field Office Managers must ensure that all fires are managed in a safe and efficient manner. On incidents that meet the above criteria, an Incident Commander Type 5 may be assigned. However, Field Office Managers will maintain close oversight of incidents and make quick and effective adjustments to the management level when required.

Bureau Specific Positions

Initial Attack Dispatcher (IADP)

Qualification, training, and performance standards for the Initial Attack Dispatcher positions are currently being addressed by the Interagency Initial Dispatch Work Group. The qualification, training, and performance standards listed below are Interim Standards and are subject to change.

Initial Attack Dispatcher (IADP)

REQUIRED TRAINING: Local Dispatch Orientation Training; Basic ICS (I-200); Firefighter Training (S-130); Introduction to Fire Behavior (S-190); Entry Level Dispatch (modules 1,2,3,4,5,7,9); Dispatch Recorder (D-110); & Basic Computer Training

EXPERIENCE: Working knowledge of radio, telephone, fax, computers and other types of communication equipment, including typing/data entry skills.

PHYSICAL FITNESS: None

OTHER ASSIGNMENTS THAT

WILL MAINTAIN CURRENCY: None

Engine Operator (ENOP)

The Wildland Fire Qualifications Subsystem Guide (NWCG 310-1) produced by NWCG developed the qualification standards and task book for Single Resource Boss, Engine. The Bureau recognizes and utilizes this standard for Engine Boss (ENGB). The Bureau has established a lower-level position of Engine Operator (ENOP) to meet the need at the local initial attack level. This bureau position serves as a path of progression to the NWCG Engine Boss position. Refer to Chapter 7, Engines.

Engine Operator (ENOP)

REQUIRED TRAINING: Firefighter Training (S-130) 32 hours; Introduction to Fire Behavior (S-190) 6 hours; & Driving for Fire Service (S-216) 40 hours or equivalent training

EXPERIENCE: Satisfactory position performance as an Advanced Firefighter/Squad Boss (FFT1) on a wildland fire incident.

PHYSICAL FITNESS: Arduous

OTHER ASSIGNMENTS THAT

WILL MAINTAIN CURRENCY: Firefighter

Prescribed Fire Qualifications

Qualifications

The National Wildland fire Coordinating Group issued the Wildland Fire Qualification Subsystem Guide, Part 2 – Prescribed Fire (PMS 310-1 Part 2) in February 1995. This guide is the BLM's standard for prescribed fire qualifications. All BLM personnel assigned to prescribed fire operations will meet the minimum qualifications outlined in the subsystem guide. This will include personnel assigned to assist other agencies even though the other agency may have established its own (lower) qualifications.

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The Qualification and Certification System does not separate prescribed fire qualifications by fuel type. The local units are responsible for insuring that Prescribed Fire Burn Boss and Ignition Specialist qualifications and training are appropriate for the fuel type(s) that they will be working in. "Management has the ultimate responsibility and is accountable for failures resulting from inappropriate use of personnel in unfamiliar fuel types, regardless of their Red Card rating."

Prescribed Fire Burn Boss 3 (RXB3)

As a supplement to the qualifications system the BLM has identified an additional position. This position would be identified as a "Prescribed Fire Burn Boss 3" (RXB3). The intent of the position is to qualify a person to supervise prescribed fire operations that are of "Low Complexity." These types of operations typically would have only a few personnel assigned, they would have a very low threat of escape, and they would present a minimal risk to the people involved in the operation. Examples of these types of operations would be; burning of piled slash, the burning of landings, ditch burning, debris burning, and small broadcast burns with a minimal chance for escape. (Note: These types of operations still require a signed prescribed fire plan.)

Prescribed Fire Burn Boss 3 (RXB3)

REQUIRED TRAINING: Intermediate Fire Behavior S-290

SUGGESTED TRAINING: Fire Supervision S-201

EXPERIENCE: Successful position performance as an Incident Commander Type 5 (ICT5).

PHYSICAL FITNESS: Arduous

OTHER ASSIGNMENTS THAT

WILL MAINTAIN CURRENCY: Advanced Firefighter (FFT1)

Prescribed Fire Physical Fitness Requirements

The prescribed fire qualifications systems does not establish physical fitness levels. The following are the physical fitness levels established by the BLM for each prescribed fire position.

Arduous All holding and ignition personnel, Ignition Specialist 2 (RXI2), Ignition Specialist 1 (RXI1), Prescribed Fire Behavior Specialist (RXFS), Prescribed Fire Behavior Monitor (RXFM), and Prescribed Fire Burn Boss 3 (RXB3).

Moderate Prescribed Fire Burn Boss 2 (RXB2), and Prescribed Fire Behavior Analyst (RXFA).

Light Prescribed Fire Burn Boss 1 (RXB1).

None Prescribed Fire Manager 1 (RXM1), and Prescribed Fire Manager 2 (RXM2).

Prescribed Fire Currency Requirements

The prescribed fire qualifications system does not establish currency requirements to maintain prescribed fire qualifications. The currency requirement is set at five years.

References

For more detailed information regarding Qualification and Certification refer to the following publications:

Wildland Fire Qualification Subsystem Guide, PMS 310-1, October 1993, NFES 1414

Wildland Fire Qualification Subsystem Guide, Part 2 - Prescribed Fire, (Part 2), PMS 310-1 , February, NFES 2479

Task Book Administrator's Guide, PMS 330-1, 1993, NFES 1556

U.S. Department of the Interior, Bureau of Land Management, Prescribed Fire Management Handbook, H-9214-1

The Wildland Fire Suppression Curriculum: Some Questions and Answers (1996), NFES 2403

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