Fire Fitness Outline

Before beginning any physical fitness program, the participant should undergo a physical and obtain their physician's approval prior to participation.

Good health and physical conditioning are essential requirements for public safety personnel. They reach and sustain near maximal heart rates for long periods of time while performing work-related tasks and are required to use strength, agility, and flexibility on a daily basis. Educating personnel in physical training and maintenance, injury prevention, and nutrition will enable them to maintain a healthy lifestyle throughout their careers.

To ensure the physiological readiness of all sworn and certified personnel, a physical agility test is administered in the hiring process. The physical agility test is conducted by the Cobb County Fire and Emergency Services Training Division. The test consists of 11 stations that measure the candidate's ability to perform the tasks in a given amount of time. Dress for the test consists of a t-shirt, belt-looped long pants, and closed toed shoes.

This is a very physically demanding test and you need to be prepared. We strongly recommend that you attend one of the practice sessions. You need to be in good physical condition, be actively involved in a regular exercise program, be in good cardiovascular shape, sleep well the night before the test, and have a positive attitude.

A well-rounded exercise program that consists of cardiovascular endurance, muscular strength, muscular endurance, and flexibility training will help you to prepare for this physical ability test.

At the beginning of each workout session always begin with a warm up of walking, jump roping, or push ups to get the blood flowing and to warm your muscles at a low intensity before you challenge them at a higher load and intensity later in the workout. Also, when ending your workout, always cool down with walking, slow jogging, or stretching to help slow down your heart rate and blood pressure to a resting level. A good warm up and cool down will help in the recovery process and injury prevention.

Cardiovascular endurance is defined as the ability to perform large muscle, dynamic, moderate to high intensity exercise for prolonged periods. This would include any kind of aerobic exercise where oxygen is utilized to create energy such as running, cycling, swimming, stair climbing, and walking.

Muscular Strength is the maximal force that can be generated by a specific muscle or muscle group. Weight lifting would be included here. It is how much weight you can lift.

Muscular Endurance is the ability of the muscle to execute repeated contractions over a period of time sufficient to cause muscular fatigue or to maintain a specific percentage of the maximum voluntary contraction for a prolonged period of time. This is more about the endurance of the muscle and not its absolute strength. Examples are how many sit ups, how many push ups, how many pull ups, or how long you can hold the hydraulic spreader in the abilities test.

Flexibility is the ability to move a joint through its complete range of motion. Stretching is a very important component of exercise. It helps in the recovery process and injury prevention process. Muscles cannot perform at their maximum potential if they are not capable of reaching their full range of motion.

Each of these areas needs to be addressed to prepare for the abilities test.

For the cardiovascular endurance we recommend a running program. You have to walk before you can run. Try to work up to running at least 3 miles comfortably. If you cannot run 3 miles easily, begin with running and walking intermittently for 30 – 60 minutes. Each week increase the amount that you run by 10 percent until you can cover the entire course running.

Once a week, visit a high school stadium or any stairwell and run up the stairs or stadium steps while stepping on each step as fast as you can. Try to run 20 steps 10 times as fast as you can.

When developing your muscular strength, start small and progress slowly. You want to implement the overload principle. Your muscles will adapt to the load that is placed on them. With the last set of each exercise, try and work until failure (you cannot perform another repetition). Begin with 3 sets

of 10 repetitions. Once you have mastered the exercise with good form, progress to 3 sets of 12 repetitions. Make sure that you go to failure on the last set of each exercise.

The Cobb County abilities test requires that you condition your entire body. It is your overall physical condition on test day that will determine your outcome.

Below are descriptions of the 11 different stations of the agility test. With each description we have offered a simulation exercise. When performing the exercises you will need to wear heavy leather work gloves, a construction helmet, and a 40 pound weighted vest.

Station #1 - The Dry Hose Advance

The male end of an uncharged 3 inch line will be moved forward for the distance of 100 feet.

Primary muscles utilized:
This event affects the aerobic and anaerobic energy systems, upper body muscular endurance, middle and lower body strength and endurance, balance, and agility. The major muscle groups used are: lower back, abdominals, latissimus dorsi, deltoids, gluteals, quadriceps, hamstrings, and calves. This event will improve aerobic capacity, lower back muscular strength and endurance, lower body muscular endurance, and balance.

Simulation exercise:
Tie a rope to a 50 - 70 pound bag of sand, weights, clothes, etc. and drag for 100 feet.

Station #2 - The Hose Couple

The candidate will couple the male and female ends of sections of two 3-inch hoses.

Primary muscles utilized:
This event utilizes the muscles of the wrist and forearm.

Simulation exercise:
Take a male and female 3 inch PVC coupling, and practice coupling and uncoupling the two all the way.

Station #3 - Equipment Carry/Stair Climb/Forced Entry

The candidate will pick up and carry a power saw to the 4th story of the Cobb County Fire Training Tower. Two simulated cuts will be made by placing the blade of the saw onto a plywood sheet at a height of 5 feet and moving the saw in a downward direction while maintaining contact with the board during each simulated cut. The saw will then be carried down to the starting position. When ascending and descending stairs, the candidate must step on every stair. The saw may not be rested on the floor or ground during the entire task.

Primary muscles utilized:
This event affects the aerobic energy system, lower body muscular endurance, balance, and coordination. The major muscle groups used are lower back stabilizers, gluteals, quadriceps, hamstrings, and calves. This event will improve aerobic capacity and help increase the endurance level in the muscles of the lower body.

Simulation exercise:
Carry a 30 pound dumbbell up 4 flights of steps and back down again.

Station #4 - The Line Crawl

The candidate will go to the 3rd floor of the Cobb County Fire Training Tower and enter the attic area. On hands and knees in a crawling position, the candidate will grasp a rope with one hand (this hand must maintain contact with the rope) and advance a 1.75 inch section of rolled hose a distance of 35 feet. Candidate will then turn around and grasp the rope with the opposite hand and advance a 1.75 inch section of rolled hose a distance of 35 feet returning to the starting point, placing the hose in the outlined area.

Primary muscles utilized:
This event affects the aerobic energy system, lower body muscular endurance, balance, and coordination. The major muscle groups used are lower back stabilizers, gluteals, quadriceps, hamstrings, and calves. This event will improve aerobic capacity and help increase the endurance level in the muscles of the lower body.

Simulation exercise:
Climb 3 flights of stairs then, while sliding a backpack weighted with 20 pounds, crawl on hands and knees 35 feet out and 35 feet back. Then go back down 3 flights of stairs.

Station #5 - Victim Rescue

A weighted rescue mannequin weighing 140 pounds is placed on the ground in a supine position. The candidate will move the victim a distance of 100 feet.

Primary muscles utilized:
This event affects the aerobic and anaerobic energy systems, upper body muscular endurance, middle and lower body strength and endurance, balance, and agility. The major muscle groups used are: lower back, abdominals, latissimus dorsi, deltoids, gluteals, quadriceps, hamstrings, and calves. This event will improve aerobic capacity, lower back muscular strength and endurance, lower body muscular endurance, and balance.

Simulation exercise:
Fill a duffel bag with 140 pounds of weight and, utilizing the handles, drag the bag 100 feet.

Station #6 - Ladder Carry & Mount

The candidate will remove a roof ladder from ladder mounts and carry it a distance of 85 feet and place it on the ground in a designated area. The candidate will raise and lower a 24 foot extension ladder that is secured in an upright position. The fly section on the extension ladder should be extended fully and retracted without losing control. Candidate will pick up the roof

ladder and return it to its original site, placing it on the ground beneath the ladder mounts.

Primary muscles utilized:
This event affects the aerobic and anaerobic energy systems, upper and lower body muscular endurance, and balance, as well as grip strength and endurance. The major muscle groups used are: biceps, triceps, trapezius, upper back, deltoids, abdominals, lower back stabilizers, gluteals, and quadriceps. This event will improve anaerobic and aerobic capacity, upper body endurance, grip endurance, balance, and stability.

Simulation exercise:
Carry two 25-pound dumbbells 85 feet. Set the dumbbells down. Using a cable extension machine with 30 pounds of weight, perform 10 single hand tricep extensions, alternating hands with each repetition. Pick up the two 25- pound dumbbells and carry 85 feet.

Station #7 - The Charged Hose Advance

The Candidate will pick up the nozzle end of a fully charged 1.75 inch hose and pull it through the ground level of the Cobb County Fire Training Tower where some obstacles will be encountered. The nozzle must clear the door on the opposite side of the tower to accomplish the task.

Primary muscles utilized:
This event affects the aerobic energy system, upper body muscular endurance, lower body muscular strength and endurance, and grip endurance. The major muscle groups used are: deltoids, biceps, trapezius, upper back, muscles in the forearm and hand, abdominals, lower back stabilizers, gluteals, quadriceps, and hamstrings. This event will improve aerobic capacity and upper and lower body muscular endurance.

Simulation exercise:
Tie a rope to a duffle bag with approximately 40 -50 pounds and drag approximately 40 feet traveling around and through obstacles.

Station #8 - Hydraulic Tool

The candidate will pick up the hydraulic spreader tool from a platform and carry it a distance of 25 feet to a designated area. The tool will then be held with the tip placed on top of the sawhorse, maintaining contact for a total of 30 seconds. The candidate will then return the tool to the platform. Once the tool is picked up, it may not be set down until the completion of the task.

Primary muscles utilized:
This event affects the aerobic and anaerobic energy system, upper body strength and endurance, middle body strength and endurance, lower body endurance, grip strength and endurance, and balance. The major muscle groups used are: trapezius and upper back, deltoids, biceps, triceps, latissimus dorsi, abdominals, lower back, gluteals, quadriceps, and hamstrings. This event will improve aerobic and anaerobic capacity, upper body muscular strength and endurance, middle body strength and endurance, lower body endurance, balance, and total body stability.

Simulation exercise:
Pick up one 45-pound dumbbell off a 4 foot high platform and carry it a distance of 25 feet. Set it down on the ground and pick it back up and place back on 4 foot platform.

Station #9 - Pike Pole

The candidate will remove a pike pole from its mounting bracket, stand within the boundary established by the equipment frame, and place the tip of the pole on the painted area of the hinged door in the ceiling. The candidate must fully push up the 60 pound hinged door in the ceiling with the pike pole 3 times. Then, the candidate will hook the pike pole to the 80 pound ceiling device and pull the pole down 5 times. Each set consists of 3 pushes and 5 pulls. This set must be repeated 4 times.

Primary muscles utilized:
This event affects the aerobic and anaerobic energy system, upper body strength and endurance, middle body strength and endurance, lower body endurance, grip strength and endurance, and balance. The major muscle groups used are: trapezius and upper back, deltoids, biceps, triceps, latissimus dorsi, abdominals, lower back, gluteals, quadriceps, and

hamstrings. This event will improve aerobic and anaerobic capacity, upper body muscular strength and endurance, middle body strength and endurance, lower body endurance, balance, and total body stability.

Simulation exercise:
Utilizing a tricep extension rope, perform shoulder flexion with 4 sets of 5 repetitions with a weight of 80 pounds. Utilizing a tricep extension rope, perform shoulder extension with 4 sets of 3 repetitions with a weight of 60 pounds.

Station #10 - Hose Uncouple

The candidate will uncouple the male and female ends of two 3-inch hoses.

Primary muscles utilized:
This event affects the flexibility and strength of the muscles of the wrist and forearm.

Simulation exercise:
Utilizing the male and female ends of two 3-inch PVC couplings, practice uncoupling.

Station #11 - Hose Roll

The candidate will roll a 3 inch section of rolled hose, four 50-foot laps for a total of 200 feet. Advance hose using a hand-over-hand motion while straddling the hose.

Primary muscles utilized:
This event affects the aerobic energy system, upper and lower body muscular endurance, agility, and balance. The major muscle groups used are: deltoids, pectoralis muscles, trapezius and upper back, latissimus dorsi, abdominal, lower back, gluteals, and quadriceps. This event will improve aerobic capacity as well as total body muscular endurance.

Simulation exercise:
Rolling a ball or wheel with approximately 53 inch circumference, using a hand-over-hand method with one hand on the ball/wheel at all times, roll the ball four 50-foot laps for a total of 200 feet.