

State of Utah DEPARTMENT OF NATURAL RESOURCES POLICIES AND PROCEDURES	REF. NR-04-C-20	PAGE 1 of 11
	EFFECTIVE DATE: 04-01-2004	
	REVISION DATE: 03-22-2010	
SUBJECT: Physical Fitness for Law Enforcement		
Michael R. Styler, Executive Director		

I. PURPOSE

The Department of Natural Resources recognizes its employees as its most important asset and the importance of encouraging and assisting its employees in attaining peak effectiveness and healthy lifestyles. Physical fitness can enhance a positive public image, reduce the need and expense of sick leave, improve employee health, decrease disabilities and enhance job performance.

Physical fitness has been demonstrated to be a bonafide law enforcement occupational qualification. To provide that department officers are capable of responding to the rigorous demands of law enforcement, an ongoing system of medical evaluation, scenario and periodic fitness testing is established to provide the following goals:

- A. Reduce risk of injury when participating in required training at the basic police academy and periodic in-service training.
- B. Reduce lost work time from illness and disability.
- C. Increase the ability to absorb emotional and physical stress by increasing mental alertness and reducing tension.
- D. Recognize the significant need for a total wellness program.
- E. Provide mechanisms for periodic physical fitness evaluations.
- F. Assist officers to have the physiological readiness to perform their maximum physical effort when required.
- G. Provide the expected protection of the citizens and visitors in the State of Utah.

II. DEFINITIONS

- A. "Physical Fitness" means the ability to perform daily tasks with vigor and alertness, without undue fatigue and with ample energy to meet unforeseen emergencies.

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- B. "Cardiovascular Endurance or Aerobic Power" is defined as the maximum amount of oxygen one's body is capable of using in a given time. It is determined by the heart's ability to pump large quantities of oxygen enriched blood and by the ability of the peripheral muscles to extract that oxygen from the blood and use it to produce energy. The current and preferred test is a timed 1.5 mile run. The bike test can be used as an alternative with a doctor's approval.
- C. "Strength" means muscular endurance and the ability to exert muscular effort repeatedly or continuously over a period of time. Upper body muscular endurance is measured by push-ups and trunk strength is measured by sit-ups.
- D. "Leg Strength and Explosive Power" defines the ability to push objects and perform other tasks involving range of motion. This is measured by vertical jump.
- E. "Flexibility" defines the range of motion of a joint with the ability to prevent injuries and to maintain good posture and muscle balance. This is measured by sit and reach.

III. POLICY

- A. Law enforcement officers are encouraged to participate in a **voluntary** physical fitness testing activity to determine their physical fitness level. The current testing categories and measurements are:
 1. Cardiovascular endurance/aerobic-power (1.5 mile run) **or bike test with a doctor's approval**
 2. Muscular strength and endurance (push-ups and sit-ups)
 3. Leg strength/explosive-power (vertical jump)
 4. Flexibility (sit and reach)

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- B. Officers who excel will qualify for an incentive award based on performance at the 75th percentile in each testing category of the Cooper Institute of Aerobic Fitness Age and Gender Standards (see Attachment #1).
1. "Superior Fitness": (75th Percentile or better in each category) shall receive a pin to be worn on their uniform and may receive a \$99.00 incentive award.
 2. No more than two "Superior Fitness" incentive awards may be given in one calendar year.
- C. Officers may be granted up to 3 hours each work week for exercising. Officers choosing to participate in the voluntary physical fitness testing activities must complete a law enforcement "Request for Exercise Release Time Form." (Attachment #3) Participants authorized to exercise shall be reimbursed up to \$99.00 for athletic footwear annually. The reimbursement shall be made from the officer's assigned unit number.
- D. Officers who are injured or have occupational diseases arising from participation in the Physical Fitness program will be reported in the same manner as other on-the-job injuries.
- E. Officers are encouraged to participate in the "Healthy Utah Program" to receive counseling, healthy life style programs and wellness training related to cholesterol, blood pressure, weight loss, smoking cessation, stress management and diet etc.
- F. Individuals may participate twice a year, once in the fall and once in the spring.

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IV. PROCEDURES

Fitness assessment testing environment.

- A. All testing should be administered in safe weather. Testing will not be conducted when the actual course temperature is below +30 degrees F, above +90 degrees F or during excessive wind, rain or snow conditions.
- B. Testing will not be attempted at an altitude higher than 6,500 feet above sea level.
- C. All components of the fitness testing battery will be completed as outlined in Attachment #1.

Fitness testing criteria

- A. Individuals must complete a health questionnaire to participate in the testing assessment. (Attachment #2).
- B. Individuals should be deferred from testing when under medical attention which would contra-indicate participation.
- C. Individuals should be well rested and not participate after an arduous workday or emotional trauma.
- D. Testing should be at least two hours after eating a meal, using tobacco or caffeine and 12 hours after ingesting any medication which may have an adverse effect on performance.
- E. All testing will be done by law enforcement training coordinators who are currently certified in CPR or someone certified in CPR will be present during all testing.
- F. Reliable, immediate communication with emergency medical assistance must be available at all times during and immediately following testing.

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- G. Water for drinking will be available to all participants.
- H. Participants shall be allowed a warm-up and cool-down period before, during and after testing.
- I. Individuals who experience any of the following symptoms should cease participation and seek medical attention:
 - 1. Distressed breathing
 - 2. Staggering or unsteadiness
 - 3. Dizziness or near fainting
 - 4. Chest, arm or throat pain
 - 5. Intolerable pain in legs
 - 6. Mental confusion
 - 7. Excessive pallor
 - 8. Unusual fatigue
 - 9. Nausea

V. REVIEW DATE

This policy shall be reviewed on or before May 31, 2012.

ATTACHMENT #1

PHYSICAL FITNESS TESTING PROCEDURES AND SCORING

TESTING

The following is the procedure and sequencing of physical fitness testing for law enforcement officers in the Department of Natural Resources. The sequencing is based on the recommendations from the Utah Peace Officers Standards and Training and the Cooper Institute.

The suggested test battery is as follows:

- Vertical Jump
- One Minute Sit-up
- Push-up
- Sit and Reach
- 1.5 Mile Run

PROCEDURE

The procedure and order for testing is recommended as follows:

1. Warm up for 3 minutes, perform the Vertical Jump test and rest for 2 minutes.
2. Perform the One Minute Sit-up test and rest for 5 to 10 minutes.
3. Perform the Maximum Push-up test, then rest for 5 to 15 minutes.
4. Perform the Sit and Reach
5. Do cardio–warm up for 2 to 3 minutes, then perform the 1.5 Mile Run and a cardio–cool down for 5 minutes.

Vertical Jump Test (inches)

The subject stands under the vertical jump measuring device. The person places their hands together with fingers together and extends their arms upward as high as they can reach. The bottom slat on the measuring device touches the fingertips. One foot is placed directly under the device and the other foot may be moved as the person jumps as high as possible to touch the measuring device slats. The score is the highest slat touched on the measuring device. Measurement is in inches.

Vertical Jump	Age 20-29	Age 30-39	Age 40-49	Age 50-59+	Percentile SCORE%
MALE	20.0	18.6	15.5	13.5	40%
	20.5	19.5	16.0	14.0	50%
	22.5	21.0	18.0	16.0	70%
	23.0	21.0	18.0	16.5	75%
	25.0	23.0	19.5	18.0	85%
FEMALE	14.0	12.0	9.6	4.0	40%
	15.2	12.5	10.0	4.0	50%
	16.3	14.9	12.3	4.0	70%
	17.0	15.0	12.7	4.0	75%
	18.0	15.5	13.0	4.0	85%

Muscular endurance: Bent-knee Sit-ups/men and women

The subject lies on the back with the knees flexed at a right angle. A partner kneels at the subject's feet and presses down on the subject's insteps to keep the heels in contact with the floor. The hands must remain in contact with the head and the fingers cupped behind the ears. When ready, the signal "go" is given and the subject sits up to touch the knees with the elbows breaking the vertical plane. Without pause, the subject returns to the starting position just long enough for the shoulders to touch the mat and immediately sits up again. The score is the number of sit-ups that can be completed in the allotted time period. Norms have been computed for a one minute period for men and for women.

Sit-up 1 minute	Age -20	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60 +	Percentile SCORE%
MALE	41	38	35	29	24	19	40%
	44	40	36	31	26	20	50%
	48	45	41	32	27	22	70%
	50	46	42	37	33	28	75%
	53	49	45	40	36	31	85%
FEMALE	32	32	25	20	14	6	40%
	34	34	27	22	17	8	50%
	36	41	32	27	22	12	70%
	42	40	33	28	22	14	75%
	49	45	37	32	26	20	85%

Strength Test: Push-ups

The subject assumes a front-leaning position with the hands placed where they are most comfortable. The back, buttocks and legs must be straight from head to heels. Begin the push-up by bending the elbows and lowering the entire body until the tops of the upper arms, shoulders and lower back are aligned and parallel to the floor. (A fist may be placed under the subject's sternum and should not be touched.) Return to the starting position by locking the elbows. During the test the subject cannot rest the body on the ground. It is possible to rest, but one cannot relieve pressure from the upper body while in the resting position. If the subject does not keep the body straight or lock the elbows completely, that repetition does not count. The score is the number of push-ups completed in one minute.

Push-up	Age 17-21	Age 22-26	Age 27-31	Age 32-36	Age 37-41	Age 42-46	Age 47-51+	Percentile SCORE%
MALE	22	20	20	18	17	13	12	40%
	32	30	28	23	22	18	17	50%
	52	50	48	43	42	36	32	70%
	57	55	53	48	47	41	37	75%
	67	65	63	58	57	51	47	85%
FEMALE	10	9	8	8	6	6	6	40%
	13	11	10	10	8	7	7	50%
	26	26	24	22	18	17	13	70%
	33	31	29	27	23	20	16	75%
	43	41	39	37	33	30	26	85%

Sit and Reach (Flexibility: Using flexibility box)

The subject assumes a sitting position on the floor with the legs extended directly in front and the back of the legs pressed firmly against the floor and subject's feet pressed against the front of the flexibility box. The subject should bob forward three times and then push the mark with both hands held together as far forward as possible on the top of the box and hold. The subject should not knock or push the mark forward further than the tops of his/her fingers will reach.

Flexibility	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60 +	Percentile SCORE%
MALE	16.5	15.5	14.5	13.5	12.5	40%
	17.5	16.5	15.5	14.5	13.5	50%
	19.5	18.5	17.5	16.5	15.5	70%
	20.0	19.0	18.0	17.0	16.5	75%
	21.0	20.0	19.5	18.5	18.0	85%
FEMALE	19.5	18.5	17.5	17.0	15.5	40%
	20.0	19.0	18.0	18.0	16.5	50%
	21.5	20.5	20.0	19.5	17.5	70%
	22.0	21.0	20.00	20.0	18.0	75%
	23.0	22.0	21.5	21.0	19.5	85%

Cardiovascular Endurance: 1.5 mile run

The test involves measuring the time spent in running 1.5 miles. The distance covered in a specific amount of time is then used to determine the fitness category of the individual. This test requires a nearly exhaustive effort. It is assumed that the individual has had the proper medical examination and has been cleared for an exercise program.

On the day of the testing, it is recommended that the participant should abstain from smoking or eating for a minimum of two hours preceding the test. It is advisable to allow adequate time prior to the test for stretching and warm-up exercises. An important consideration at the end of the run is the "cool down" period. The participants should be cautioned about standing around immediately after the run, to prevent pooling of the blood in the lower extremities, which reduces the return of the blood to the heart. An

additional walk for at least five minutes after the test should be sufficient for the cool down period.

1.5 Mile Run	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60 +	Percentile SCORE%
MALE	12:51	13:36	14:29	15:26	16:43	40%
	12:12	12:51	13:53	14:55	16:07	50%
	10:47	11:34	12:34	13:45	14:53	70%
	10:42	11:18	11:49	13:22	14:24	75%
	9:45	10:16	11:18	12:20	13:22	85%
FEMALE	15:26	15:57	16:58	17:54	18:44	40%
	14:55	15:26	16:27	17:24	18:16	50%
	13:53	14:24	15:16	16:27	16:58	70%
	13:22	14:08	14:57	16:05	16:27	75%
	12:20	13:06	14:06	15:29	15:57	85%

ATTACHMENT #2

Physical Readiness and Informed Consent for Law Enforcement Officers in the Division of Wildlife Resources, Division of Parks and Recreation and Division of Forestry, Fire and State Lands

Physical Readiness

- | Yes | No | |
|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor? |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Do you feel pain in your chest when you do physical activity? |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. In the past month, have you had chest pain when you were not doing physical activity? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Do you lose your balance because of dizziness or do you ever lose consciousness? |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Do you have a bone or joint problem (i.e. back, knee or hip that could be made worse by a change in your physical activity)? |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Is your doctor currently prescribing drugs (i.e. water pills) for your blood pressure or heart condition? |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Do you know of any other reason why you should not do physical activity? |

Informed Consent

1. I have read the policy on Physical Fitness for Law Enforcement and understand the nature, purpose and risks of these tests.
2. I have read the questions regarding physical readiness to participate in strenuous physical activity.
3. I believe I have the ability to voluntarily participate in these testing criteria.
4. I assume the responsibility and release the Department of Natural Resources from liability for injuries sustained in testing that result from physical or mental disorders other than covered by policy.

Signature: _____
Name: _____
Date: _____

Attachment #3

**UTAH DEPARTMENT OF NATURAL RESOURCES
LAW ENFORCEMENT REQUEST FOR EXERCISE AND HEALTH ACTIVITY
RELEASE TIME**

In accordance with the Department of Natural Resources exercise release time, I request permission to utilize release time to participate in exercise activities. Any officer authorized to utilize release time for exercise shall be required to participate in the testing activities. The following are suggested time periods for exercise:

Day of Week Exercise Start/End Time

____:____ - ____:____
____:____ - ____:____
____:____ - ____:____

(Please note: significant modifications to the schedule shall require a new authorization form signed by the immediate supervisor.)

(Please check here if your exercise time is outside your normal work hours)

I certify that I have read the department policy and agree to abide by all of its terms, present and future.

Employee Signature Date

Immediate Supervisor Date