

Subpart K - Field Policy for Snow Survey, Snow Pack Telemetry(SNOTEL), Soil Climate Analysis Network (SCAN)

420.100 General

NRCS operates a cooperative snow survey and hydro meteorological data collecting network of manually read snow courses, aerial observed snow depth makers and automated telemetry snow, climate and soil moisture sites. Employees travel to remote locations by air or surface snow vehicle or on foot. The nature of the data gathering, site installation, and maintenance work under high-elevation wintertime conditions poses potentially unusual and possibly hazardous stress on the employee. Unique safety and health precautions must be taken.

(A) Only NRCS employees who are physically able and adequately trained to cope with the potential hazards involved are to be assigned to field snow survey, SNOTEL, and SCAN duties. SNOTEL and SCAN operation and maintenance activities include climbing antenna and/or meteorological towers.

(B) Snow surveyor's, SNOTEL, and SCAN maintenance personnel who travel to data collection sites in remote areas shall be trained in first aid, survival in snow, search and rescue procedures, avalanche avoidance, snowshoeing and/or skiing, and in operating over snow vehicles as prescribed by the program manager, the Data Collection Office supervisors, or Supply Specialist. First-aid training for snow surveyors and data site technicians will include the Red Cross multimedia standard first-aid course or equivalent and training on cardiopulmonary resuscitation (CPR), blood-borne pathogens, and hantavirus.

(C) NRCS employees traveling to remote areas during snow pack season for the purpose of snow surveys, SNOTEL, and SCAN maintenance activities shall always work in parties of no fewer than two people. They will be equipped with the authorized personal protective and safety gear and trained in winter travel, safety, and survival.

(D) NRCS employees traveling into remote areas during the snow-free season to perform data collection, operation, maintenance, and installation duties may perform solo tower climbing only when equipped with effective cellular or satellite phone service. The NRCS employee shall notify a designated office that NRCS SNOTEL and SCAN employees are going to perform maintenance work on the tower and the approximate time the work will take. After completing the work, the employee will notify the designated office that he or she is off the tower. The designated office will have in place an emergency plan that outlines the required rescue activities to perform if the employee does not report in on schedule.

(E) NRCS State Conservationists, the NWCC Program Manager, and the National Safety and Occupational Health Manager shall ensure that the safety and health program elements for all snow survey, SNOTEL, and SCAN personnel are met. NRCS will obtain the required equipment (excluding physical fitness equipment) and provide or pay for the required annual physical examination for participation in snow survey, SNOTEL, and SCAN activities.

420.101 Physical Fitness for Duty

(A) An annual physical examination shall be taken by each employee assigned to field snow survey, SNOTEL, and SCAN program duties in remote areas. Physical examinations must be completed and medical clearance received before an employee participates in field operation duties. The purpose of this examination is to determine the employee's physical condition as it relates to performing assigned duties of the snow survey program. The job can be physically stressful and involve vigorous exertion in high altitude and/or extremely cold environments. The examining physician shall be given an explanation of the requirements of the employee's duties, and the physician will determine the intensity of an employee's physical examination and the specific medical tests to be included in that examination. Consideration will be given to the employee's age, medical history and previous exam results, physical condition and general health. Subsequent examinations will generally be less intensive than a first baseline examination, and will involve fewer tests or procedures. The following medical tests and evaluations cover health

and performance areas that the physician may consider for inclusion in an examination of an employee:

- (1) Current or past medical condition should be reviewed to determine if any condition might be recurrent or aggravated by the conditions of the work.
- (2) Cardiovascular fitness. An EKG should be performed for all employees receiving this physical examination for winter snow surveying activities for the FIRST time. This will provide baseline data. Subsequent EKGs may be performed at the physician's discretion.
- (3) Back problems. Evaluate for current or potential back problems as determined by the physician.
- (4) Respiratory system. Perform a basic pulmonary test for all employees taking this physical examination for the FIRST time to establish baseline data. A more detailed pulmonary function test should be performed subsequently if the physician's evaluations of the current symptoms warrant such a test.

(B) Well adult care. NRCS strongly encourages active participation in some type of regular mild physical exercise; for example, vigorous walking three to four times a week for half an hour each session.

(C) It is difficult to ensure that an employee will not have a medical problem during the course of these duties. When an employee's health or fitness is suspect and/or the employee requires an intensive examination every year, consider placing a limit on that employee's assignments to field duties at remote sites.

420.102 West-Wide Snow Survey Training School

(A) The program manager, in cooperation with the National Employee Development Center, shall conduct an annual or as needed snow survey training school to teach snow-surveying techniques and appropriate survival skills. The Program Manager annually will determine the need for such training and decide whether there is enough need to conduct the training. The Program Manager will determine the need in consultation with the State Conservationists by November each year. If it is determined that there is insufficient NRCS participation to hold the West-Wide class, each State must provide training to NRCS personnel in snow surveying and survival skills before allowing them to conduct field snow surveys. Employees trained in State will be expected to attend the West-Wide Snow Survey Training School at the earliest offering. Participating States will provide the equipment and instructors required to conduct the training.

(B) An educational program using video instruction and other media should be established to supplement the training school. When appropriate, videos should be used as annual refresher training for snow surveyors. Videos could be used for the following subjects: first aid, hypothermia, shelter construction, winter vehicle operations, over-snow machinery, helicopter operations, snow sampling, summer survival (insect bites and heat strokes) and proper use and handling of pack animals and four-wheel, all-terrain vehicles (ATVs).

(C) All employees conducting snow surveys are required to receive refresher training at the West-Wide Snow Survey Training School or its equivalent once every 3 years.

420.103 Emergency Preparedness Procedures.

(A) Each State conducting snow survey, SNOTEL, and SCAN operations shall develop a General Manual Supplement that establishes State policy for monitoring activities in remote areas and procedures for initiating and conducting medical evacuation or rescue operations when necessary.

(B) When NRCS personnel are called upon by responsible local officials for emergency rescue assistance in saving a life, they should respond and notify the appropriate NRCS line officer as soon as practical. Such activity should be considered part of their assigned duty. It is suggested that an advisory meeting be held with local responsible officials emphasizing that NRCS will become involved only in life-threatening situations and where NRCS expertise and equipment are specifically required to augment normal rescue arrangements. NRCS equipment will be operated only by NRCS employees. It is suggested that local responsible officials and NRCS SNOTEL line

officers meet annually in updating any new procedure or practice or changes that may have occurred through the year.

420.104 Safety Procedures

(A) When working in remote areas, safety procedures shall include the following:

- (1) An itinerary listing planned travel route(s), travel dates, destination, and estimated time of departure and arrival.
- (2) Check-out and check-in system.
- (3) Names of employees.
- (4) Emergency phone numbers/communication system and contact point.
- (5) A working satellite or cellular phone shall be carried by the employee at all times while the employee is at the field work site.

(B) If employees fail to call in or return on schedule, the supervisor shall take the necessary action to determine the whereabouts and well-being of the employees.

420.105 Personal Protective Equipment

(A) All equipment furnished to conduct snow surveys or installation and maintenance activities shall be uniform in function and quality for comparable conditions program-wide. This applies to over snow vehicles, skis, snowshoes, radio communications equipment, and avalanche rescue beacons (transceivers).

(B) The personal protective equipment to be furnished snow surveyors shall be based on the most severe climatic conditions anticipated. It shall include but is not limited to such items as ski boots, snow packs, parkas, pants, mittens or gloves, and goggles or comparable protective clothing. Survival equipment shall be provided if trip conditions warrant. All personal protective equipment supplied by the Federal Government will remain the property of the Federal Government and is for official use only.

(C) When operating or riding on over-snow vehicles without an enclosed cab, operators and passengers must wear an appropriately sized, proper-fitting helmet that bears the Department of Transportation label, the American Standards Institute label (ANSI), or the Snell Memorial Foundation label. This helmet may be either full or open face. NRCS will provide helmets. For enclosed cab operations, hearing protection will be worn.

420.106 Personal Protective Equipment (Tower Climbing)

(A) Personal Fall-Arrest Systems consist of an appropriate ANSI-approved harness, rope lanyard, anchorages, “D” rings, snap hooks, shock-absorbing lanyards, and a vertical lifeline retention system.

(B) An industry-approved hardhat shall be worn by all personnel involved at the site anytime that work is being performed overhead.

(C) Footwear with reinforced soles is recommended. (Tennis shoes and running shoes are not appropriate or permitted).

(D) Leather gloves must be used for hand protection.

420.107 Tower Climbing

(A) NRCS employees, other Federal employees, and contract personnel who climb towers for NRCS must be certified as qualified to climb. To be certified, the individual must successfully complete an approved training course in which the individual has demonstrated proficiency in climbing and has learned about the equipment and hazards associated with tower climbing and rescue techniques. The trainer must confirm that the individual has met these requirements, and the trainer and the individual's supervisor must concur.

(B) Refresher training courses are required every (3) years, and all certified personnel must conduct practice rescue sessions at least annually.

420.108 Tower Climbing Procedures

(A) Maintain a written history for each climbing lanyard. The history shall include:

- (1) Date of purchase;
- (2) Type and date placed in service; and
- (3) Usage record (where, when, exposure, inspection date and comments)/list items.

(B) Replace climbing lanyards every three (3) years or more frequently if needed.

(C) Follow manufacturer's guidelines for inspection and replacement of climbing equipment.

(D) Review a program approved safety checklist before climbing.

(E) Inspect all climbing equipment before to each day's use to determine that the equipment is in safe working condition.

(F) A personal fall-arrest system shall be used when work is performed at more than 6 feet (2) above ground.

420.109 Tower Inspections

(A) A trained individual must:

- (1) Conduct a safety inspection of the towers and must certify them as safe to climb before any climbing takes place and
- (2) Document the inspection in the site maintenance log.

(B) If a tower needs of emergency repairs, determine if an experienced certified climber can safely climb and accomplish the repairs. If it is determined that a safe climb cannot be accomplished, do not allow personnel or contractors to ascend the tower. The tower must be replaced or repaired by qualified NRCS personnel or professional a contractor. Employees must not climb the tower until the emergency repairs are completed and the tower is determined to be safe to climb.

420.110 Safety Practices

(A) Inspect climbing equipment and tower(s).

(B) Test communications equipment.

(C) Provide a designated safety office with a written check list of emergency operations outlining what NRCS employees should do in an emergency. At a minimum, the phone numbers of local rescue official and directions to the remote data site must be included in each plan.

(D) Tower climbing activities at remote sites during the snow-pack season shall consist of no fewer than two trained persons.

(E) Tower climbing at remote sites during the snow-free season may be conducted by one person. A solo climber must never attempt a climb without a working cellular or satellite phone on his/her person.

420.111 Rescue

Rescue procedures, to provide for the prompt rescue of a worker who is working in an elevated position, or in the event of a fall. These procedures shall ensure that rescue techniques are readily available.

420.112 Climbing Without Equipment

Climbing without safety and effective working communications equipment is not permitted.

420.113 Air Transportation

If air transportation is required for field work, GM-360, Part 420.110 - 420.115, Subpart L shall be followed.

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