INTRODUCTION TO PATROLLING

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CHAPTER 1: INTRODUCTION

Course Objectives

Vision: Introduction to Patrolling is designed to introduce patrol candidates to the basics of patrolling outside of the OEC program. This is an optional NSP course available to ski areas and/or NSP registration units and should be managed and monitored by the Patrol Director/Representative to ensure the outcomes desired by area management. Presented as a modular approach, this course should be supplemented by area-specific training in policy, procedure, practice, and equipment. The basic course includes Chapters 1-8, which provide course materials appropriate for all disciplines, followed by discipline-specific tracks. The content in the basic course should be completed by all disciplines, followed by completion of the appropriate discipline-specific track. Completion of this course does not imply or constitute employment or membership on any patrol. Any current NSP instructor may serve as Instructor of Record with the approval of the appropriate patrol director or patrol representative. Instructors may:

- Tailor the chapter content to fit the needs of local patrols (Alpine, groomed Nordic, Backcountry, Bike, other).
- Select the tracks that fit the needs of the local patrols.
- Deliver each chapter over the course of a single day or spread over several days or weeks.
- Include subject matter experts from various disciplines (OET, Avalanche, Instructor Development, MTR, Nordic/Backcountry, Area Management, Medical Advisors, and others) to contribute.

The course is not a substitute for in-depth training in any discipline; rather, it helps orient new patrollers to essential operations and to the opportunities for further NSP training.

Overview

- **Course content**
  - The curriculum introduces fundamental skills needed to perform entry-level patrolling duties according to local needs and protocols. By design, the Introduction to Patrolling curriculum should be flexible to adapt to the needs of local patrols. The following list, far from exhaustive, includes just some of the many possible topics that may be suitable focus areas for Introduction to Patrolling clinics. Chapters and selected tracks may include any or all of the following:
    - The History and Organization of the NSP
    - Risk Management
    - The National Ski Patrol, Ski Area Management, and the Role of the Patroller
    - Guest Services

        - Scene Management
        - Adapting to the Outdoor Environment
        - Introduction to Rope and Belay Skills
        - Introduction to Outdoor Emergency Transportation
        - Introduction to the Incident Command System
            - FEMA on-line course ICS 100 (latest version)
                - https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c
        - Nordic/Backcountry Skills
        - Bike Patrols

    Instructors may tailor the specific content of each chapter and track to meet the needs of the patrol, for example adapting lessons to alpine, groomed nordic, backcountry, or bike settings. Chapter and track content should be supplemented by area-specific training in policy, procedure, practice, and equipment.

- **Resources required** – This course requires permission from local area management or land-use entity regarding what is acceptable related to runs and utilization of the local area's equipment. The local area patrol representative must be supportive and staffed to permit other on-the-hill patrollers to participate without compromising area coverage. All participants must sign the NSP Event/Training Release Form prior to participating in the course [See Appendix A]. The hosting site may require an additional release document for participation.
    - **Instructors** – To maintain a safe, effective learning environment, NSP recommends a minimum instructor/student ratio of one instructor for every five students, with a class size no larger than twenty students, or other class size requirements as appropriate for the course content. Instructors should hold current discipline-specific instructor credentials or be topic experts. See specific chapter requirements.
    - **Helpers** – See specific chapter requirements
    - **Equipment** – See specific chapter requirements
    - **Venues** – Classroom portions may be conducted indoors or outdoors as is appropriate. Adequate facilities must be available, including restrooms, access to instructional equipment, lighting, seating, and writing surfaces as appropriate.
- **Course registration**
    - Any fully accredited NSP instructor from any discipline may register the course on the NSP website by selecting www.nsp.org, select the NSP Center for Learning button, open the red Instructor of Record course registration tab and complete the course registration form. Submit the completed form according to the instructions. Each course should be audited by a program Instructor Trainer designated when the course is registered with the NSP. The IT should evaluate both the overall course and individual instructor performance.
    - NSP members will register for the course by logging on to www.nsp.org, selecting the NSP Center for Learning button, Browse Catalog, in the

search box type in Introduction to Patrolling, select the blue "enroll" button and launch. Follow the instructions to continue.
    - At the completion of the course, the instructor of record will close the course according to the NSP Center for Learning instructions. The IOR and IT must maintain copies of the course records. The release forms must be kept for at least seven years unless division's policy directs differently.
    - Course feedback forms should be provided to each student in order to solicit the effectiveness of the course and feedback from the participants [Appendix B].
- Course Prerequisites
    - FEMA ICS 100 course. Students will provide course completion verification prior to the course (or by completion of this course at the discretion of the IOR).
    - Attendees need not be members of the NSP.
    - All attendees must sign an NSP Event/Training Release Form prior to participating in the event. [Appendix A]. The hosting site may require an additional release document.
    - Minimum age of 15 years of age.
- Evaluation format
    - As this course is an introduction to patrolling activities, there is no evaluation exercise that accompanies the course. Each resort can tailor the use of an evaluation process to meet their individual needs.
- Risk management considerations
    - Instructors must permit anyone who is not comfortable attempting any portion of the training to elect to opt out of specific activities. All participants must sign an NSP Event/Training Release Form prior to participating in the event [Appendix A]. The hosting site may require an additional release document.
- Conflict resolution
    - Conflicts should be resolved at the lowest possible level in the NSP management hierarchy. Conflicts are resolved in a case-by-case basis, using guidelines contained within the NSP Policies and Procedures and applicable Division and Region Bylaws. Resolution of a conflict does not require that all parties agree with the outcome. Involvement by other officers is appropriate only if resolution requires interpretation of NSP policy or procedure or if there exists an unavoidable or unimaginable conflict of interest at a lower level.

Chapter 2: The History and Organization of the National Ski Patrol

Chapter Objective

At the completion of this chapter the learner will be able to:

Identify the founder of the National Ski Patrol.
Identify the NSP motto.
Identify the number of divisions in the NSP.
Describe the leadership hierarchy of the NSP: National, Division, Region, Local.
Describe the purpose of Strategic Plan.
List the two types of members.
List two governing documents of the NSP.

Educational Materials and Related Resources

Introduction to Patrolling Manual, current edition, at www.nsp.org

The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org

National Ski Patrol History

Since it was founded in 1938, the National Ski Patrol (NSP) has evolved from a few hundred ski patrollers into the world's largest civilian rescue organization, which supports, participates in, and influences the outdoor recreation community at large.

In 1936, Charles Minot "Minnie" Dole was skiing at Stowe, Vermont with his wife, Jane, and their friends, Frank and Jean Edson, when he fell and severely broke his ankle. He was unable to help himself, so the ladies skied off to find some help. They found two folks who brought a piece of corrugated tin roofing which they fashioned into a makeshift rescue toboggan and hauled Dole off the mountain. His determination to help improve emergency care for skiers solidified a few months later when Frank Edson was killed in a ski race. At the suggestion of Roland Palmedo, president of the Amateur Ski Club of New York, Dole was put in charge of a ski safety committee for the club. In March 1938, Dole organized a volunteer ski patrol for the National Downhill Races at Stowe. Roger Langley, president of the National Ski Association (NSA), was so impressed with the patrol that he asked Dole to organize a similar patrol on a national basis. Thus, the National Ski Patrol was born, originally as a subcommittee of the NSA. The timeline that follows illustrates the highlights of the history of the National Ski Patrol to present day.

March 1938 Minnie Dole organizes a volunteer ski patrol for the National Downhill Races at Stowe, Vermont.

1938 Roger Langley, president of the National Ski Association (NSA) asks Dole to organize a similar patrol on a national basis. **THE NSP IS BORN.**

1938 Dr. L.M. Thompson of the American Red Cross wrote the first edition of ***Ski Safety and First Aid*** especially for the NSP. While acting as the first medical advisor, He wrote the original edition of ***Winter First Aid Manual.***

1941 Seven divisions have been created across the country and a total of 89 patrols have been registered with more than 1500 patrollers

1941 The first National Ski Patrol Manual is published, outlining the basic NSP structure that still exists today. By now, there are 189 patrols registered with 4000 patrollers. Women were welcomed into the NSP for the first time.

1942 When the U.S. entered WWII, Minnie Dole convinced the War Department to create a winter warfare unit, the 87th Mountain Infantry Regiment, which later became the U.S. Army's famed 10th Mountain Division, recruiting 7000 volunteers with the help of the NSP.

1942 The NSP is becoming well-known throughout the world with several countries using the NSP model to create their own patrols.

1945 Following WWII, skiing resumed its phenomenal growth with the country's renewed desire for recreation. As a result, many new ski areas were developed, some founded by veterans of the 10th Mountain Division.

1947 The NSP is incorporated in New York as a non-profit, philanthropic organization.

1948 By the 10th anniversary of the NSP, there were 193 ski patrols with more than 4500 patrollers. The first NSP rust-colored Parka was introduced by White Stag Manufacturing Company.

1949 With the U.S. Forest Service, the NSP commissioned Swiss avalanche expert Andre Roche to develop the first Avalanche training course.

1949 The NSP national office is moved from New York City to Denver, Colorado when Edward Taylor, a Rocky Mountain Division patroller, accepted the job of National Director.

1950 Olympian Dick Durrance is instrumental in bringing the International Ski Federation (FIS) Alpine Ski Championships to the U.S. In Aspen, for the first time, the NSP provided a ski patrol for a major international meet with 10 volunteer and 8 paid patrollers.

1952 Taylor establishes the Junior Program, recognizing the potential value of young patrollers. The European Division was established.

1952 The 1952 edition of ***The Ski Patrol Manual*** reiterates the NSP position on the equality of women in the NSP. During this period, the NSP also helped recruit and screen potential candidates for the Army's Mountain and Cold Weather Training Command.

1953 The Alaska Division is formed and the NSP is incorporated in Colorado.

May 1956 The first meeting of all division chairmen takes place in Aspen.

1956 William Judd becomes the first elected national director. There are 358 ski patrols and 5229 NSP members.

1958 The NSP becomes an affiliate member of the NSAA.

1959 NSP establishes national advisory Committees on release bindings, ski equipment and ski safety.

1960 NSP publishes the country's first comprehensive report on ski accident statistics, ***Sitzmarks or Safety***. The booklet presented ski safety measures for ski areas and advice on preconditioning exercises for skiers. Also, the National Skier Research Foundation was created to study ski accident causes and prevention methods.

1960 Ninety members selected from across the U.S. forms the first all-volunteer ski patrol to ever serve at the Winter Olympics.

1960's Formal classroom and field-teaching avalanche program begins and an avalanche instructor's outline is created.

1962 The first ***NSP Supply and Equipment Catalog*** was issued. The Safety on Skis program was developed to promote ski safety and raise funds.

1962 The ski patroller classification was established.

1962-1968 Unprecedented growth in the NSP

is underway, with the number of patrols jumping from 370 to 782 and the number of patrollers increasing from 5527 to 14149.

1963 ***The Ski Patrol Manual*** is rewritten. The **NSP bylaws** are created. The European Division is formed. The National First Aid Committee and National Training and Testing Committee is formed.

1964 The NSP adopted the gold cross as its official emblem.

1966 The Auxiliary and Certified Patroller classifications were developed.

1967 The first NSP's Executive Director, Ed Ericson, was hired.

1968 The first NSP National Treasurer was hired.

1970 The candidate classification was established. The NSP first published a magazine that was sent to all patrollers, now called ***Ski Patrol Magazine.***

1971 Two new divisions were created – the Far West Division and the Southern Division. An 18% membership increase occurred bringing the membership number to 22,629.

1972 The structure of the national board was changed from 10 division directors to incorporate proportional voting, which meant the addition of 11 members.

1972 The first annual Junior Training Seminar was held in Montana.

1973 Junior patrollers are now permitted to wear the rust parka at division option.

1973 As a substitute for the American Red Cross Advanced First Aid, the NSP began accepting the EMT Course developed by the American college of Orthopedic Surgeons. Supplemental training in Winter First Aid is still required.

1974 The national Nordic program is established.

1974 The NSP adopted the new ARC Standard First Aid and Personal Safety Course and NSP's Winter First Aid Course. Senior and Certified patrollers were required to take the new Advanced First Aid and Emergency Care Course.

1975 NSP published the first ***Lift Evacuation Technical Manual*** in conjunction with ski area operators and others.

1977 All NSP members are required to take the ARC's CPR course.

1976-78 The NSP Alumni Association was created for retired patrollers. Also, the second edition of the ***NSPS Winter First Aid Manual*** and a revised edition of ***The Ski Patroller's Manual*** were published.

1978 The first Joint Statement of Understanding was established between the

NSP and the National Ski Areas Association. This is a formal statement regarding the relationship between NSP volunteer members and ski areas establishing lines of responsibility for ski areas and NSP volunteers.

1980 Congress issued the NSP a coveted Federal Charter in recognition of its civic contributions.

1980 The NSP again provided volunteer ski patrol services at the 1980 Lake Placid Winter Olympics.

1980 The ***Ski Mountaineering Manual*** was published.

1982 The Lift Evacuation Manual was revised and published.

1983 The patroller exchange program was instituted to foster on-hill patrol experience with other countries, especially South America.

1982-1986 Skier safety programs were implemented. A broad-base strategic action plan was instituted. Commercial sponsorships/suppliers were obtained for NSP projects. The rust and blue parka becomes the official uniform.

1984 ***Ski Patrol Magazine*** was introduced. The ***NSP Officer's Handbook*** (now the NSP Policies and Procedures) was published.

1985 The curriculum for a patrol-oriented emergency care course of EMT level, ***Winter Emergency Care*** (WEC), was drafted.

1985 NSP joined forces with NSAA, SIA and PSIA to campaign for skier safety awareness.

1986 Annual ski and toboggan refreshers became mandatory.

1987 The national office moved to its current location.

1987 WEC was adopted as the NSP's "emergency care standard", meaning that it became a national requirement and the new text was published in 1988.

1988 340 patrollers, family and friends gathered in Boston to celebrate the NSP's 50th anniversary.

1989 An updated Senior program emphasizing accident site management and problem management was adopted.

1989 The NSP's first Ski Safety Team was organized to share ski safety ideas and promote skiing etiquette.

1989 NSP secured liability insurance for members participating in educational programs, training, and certification programs. Day-to-day patrolling duties were left to the area management.

1990 ***The Ski Patroller's Manual*** and the ***NSP Officer's Handbook*** were updated.

1990 The NSP and PSIA consolidated their offices and administrative services under the same executive director in the NSP building.

1991 The NSP's first code of conduct was adopted.

1991 The Junior classification was changed to Student classification, recognizing that the duties, responsibilities, and privileges were the same. The Outstanding Junior Ski Patroller award was renamed Outstanding Student Ski Patroller award.

1992-93 The new Senior program was fully implemented, including WEC, skiing, and toboggan skills and included a requirement of a clinic refresher every three years; and eliminated age and service requirements. An accompanying textbook was published by the national office.

1992 The NSP adopted "universal precautions" in response to the AIDS epidemic and OSHA requirements.

1992 The NSP placed new emphasis on the NSP's role as an educational organization and promoted a new Skier Enhancement Seminar to help patrollers improve their skiing skills, as well as a Ski Trainer's Workshop that focused on identifying sound skiing techniques for trainers.

1992 The NSP's strategic planning process was strengthened with an emphasis placed on developing and implementing programs that tied directly to meeting the goals of the strategic plan.

1993 The joint statement of understanding between the NSP and the NSAA was rewritten. The NSAA signed a lease with the NSP for office Space in the NSP building, providing an opportunity for a closer relationship with the NSAA, which remains today.

1994 The NSP and PSIA built a new warehouse building to provide adequate shipping and storage capacity for both organizations.

1993 The first Powderfall event took place at Snowbird, Utah.

1993 The Outstanding Instructor Award was instituted. The Senior Auxiliary program was adopted along with the Patroller Enrichment Seminar.

1993 The second edition of ***Outdoor Emergency Care*** was published. The ***Winter Emergency Care Instructor's Manual*** was released.

1994 A new NSP mission statement and strategic plan was developed that solidified the operational process of the NSP and member use of support and training from the NSP.

1994 Snowboard patrollers were allowed to participate in NSP training for the first time and performance requirements were published in the new ***Ski and Toboggan Training Manual***.

1994 WEC was renamed Outdoor Emergency Care. Outdoor First Care is introduced, a one-day course to train people

how to cope with outdoor emergencies until emergency medical personnel arrive.

1994 NSP in coordination with the National Off-Road Bicycle Association (NORBA) included OEC for certification of bike patrollers and Outdoor First Care (OFC) for certification of bike ambassadors.

1995 ***Mountain Travel and Rescue*** text published and covered both basic and advanced mountaineering courses.

1995 The NSP instructor newsletter, ***Pointers***, was created to address specific needs of NSP instructors.

1996 The NSP's homepage made its debut on the Web in the summer, providing another communications tool for its members. A new NSP email address and fax number were created.

1996 The national advisors were reorganized into a national educational committee and renamed them program directors. Instructor Development was expanded to a national-level advisory and emphasis placed on the standardization of teaching NSP courses and simplifying delivery and administration of programs.

1997 NSP membership has grown to 28,000 members.

1997 The Kane v. NSP found the NSP liable in a $1.4 million wrongful death judgement

2001 The Kane judgement against NSP was reversed on appeal, clearing the NSP of liability

2002 The NSP website was developed

2003 A new Federal Directive required all Federal agencies to adopt NIMS, National Incident Management System

2005 Members voted to amend the By-laws to allow every eligible traditional member to vote in National Board elections.

2007 NSP hired its first full-time Executive Director not shared with PSIA.

2007 NSP/Canadian Ski Patrol MOU signed

2008 NSP Safety Team was re-established

2011 ***OEC 5th edition*** was published

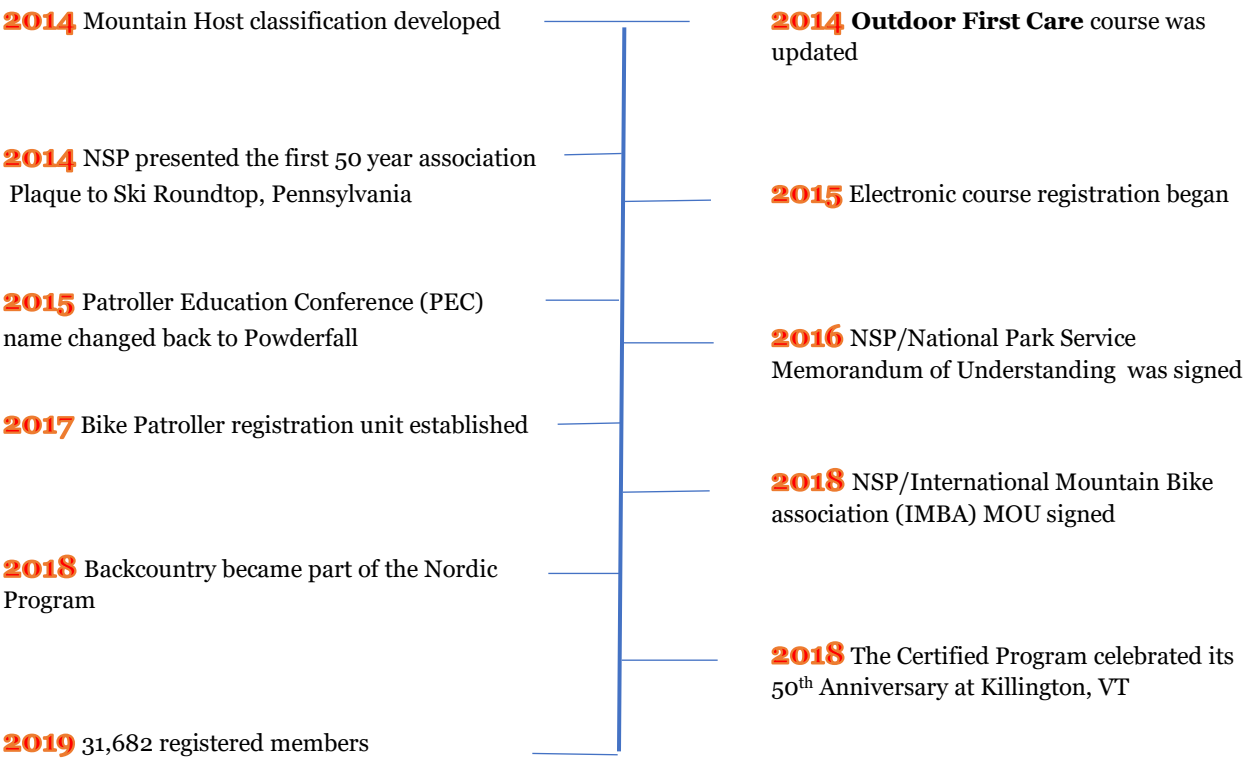
2011 The Women's Program became a national program

2012 Dedication of the NSP bench in Stowe, VT as part of the NSP 75th Anniversary celebration

2013 February, Denver, CO, 75th Anniversary Celebration

2013 NSP Hall of Fame created as part of the 75th Anniversary celebration. The first inductees included Charles Minot "Minnie" Dole, Roger Langley, Harry Pollard, Warren Bowman, Gretchen Besser

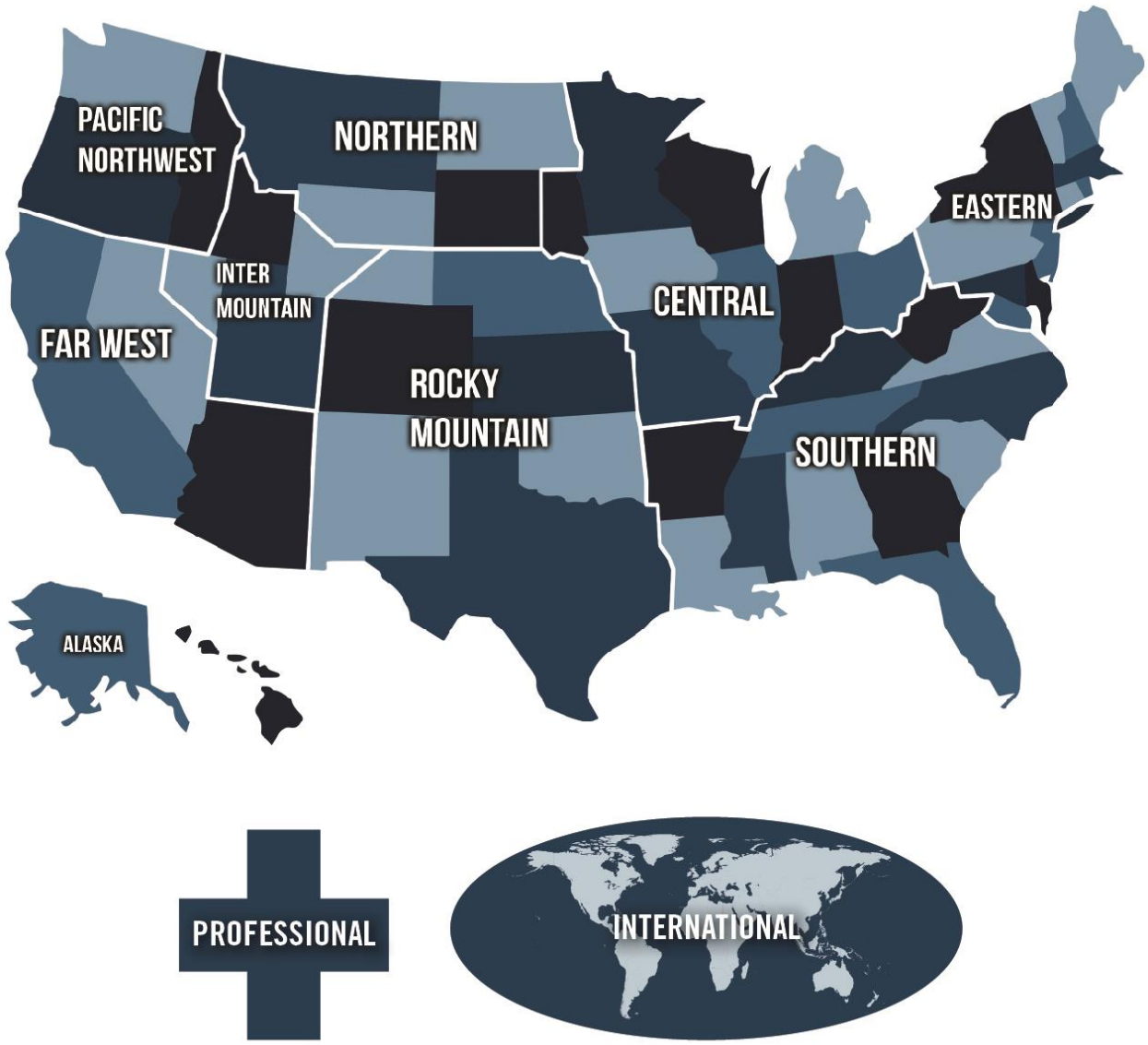
2014 On-line learning education courses rolled out.



Organization of the NSP "Service and Safety"

Divisions

1. Alaska
2. Central
3. Eastern
4. Far West
5. Intermountain
6. International
7. Northern
8. Pacific Northwest
9. Professional
10. Rocky Mountain
11. Southern



- **NSP leadership**
    1. National level
        a. National Chair – Elected by the National Board of Directors (BOD), the chief elected officer of the NSP.
        b. Assistant National Chair – Appointed by the Chair, assists the National Chair.
        c. Executive Committee – Members are the Board Chair, Assistant Board Chair and the National Treasurer
        d. National Board of Directors – Governing body of the NSP, elected by the membership.

e. Chief Executive Officer – Manages the National Office and hired by the BOD.
f. National Program Directors – Chair the discipline-specific curriculum based national program committees.
g. National Program Advisors – Chair the non-curriculum based Interest Groups
h. National Treasurer – The Chair of the Finance Committee and appointed by the National Chair.
i. National Legal Advisor – Appointed by the National Chair – provides advice and other legal services on behalf of the NSP.

2. **Division Level**

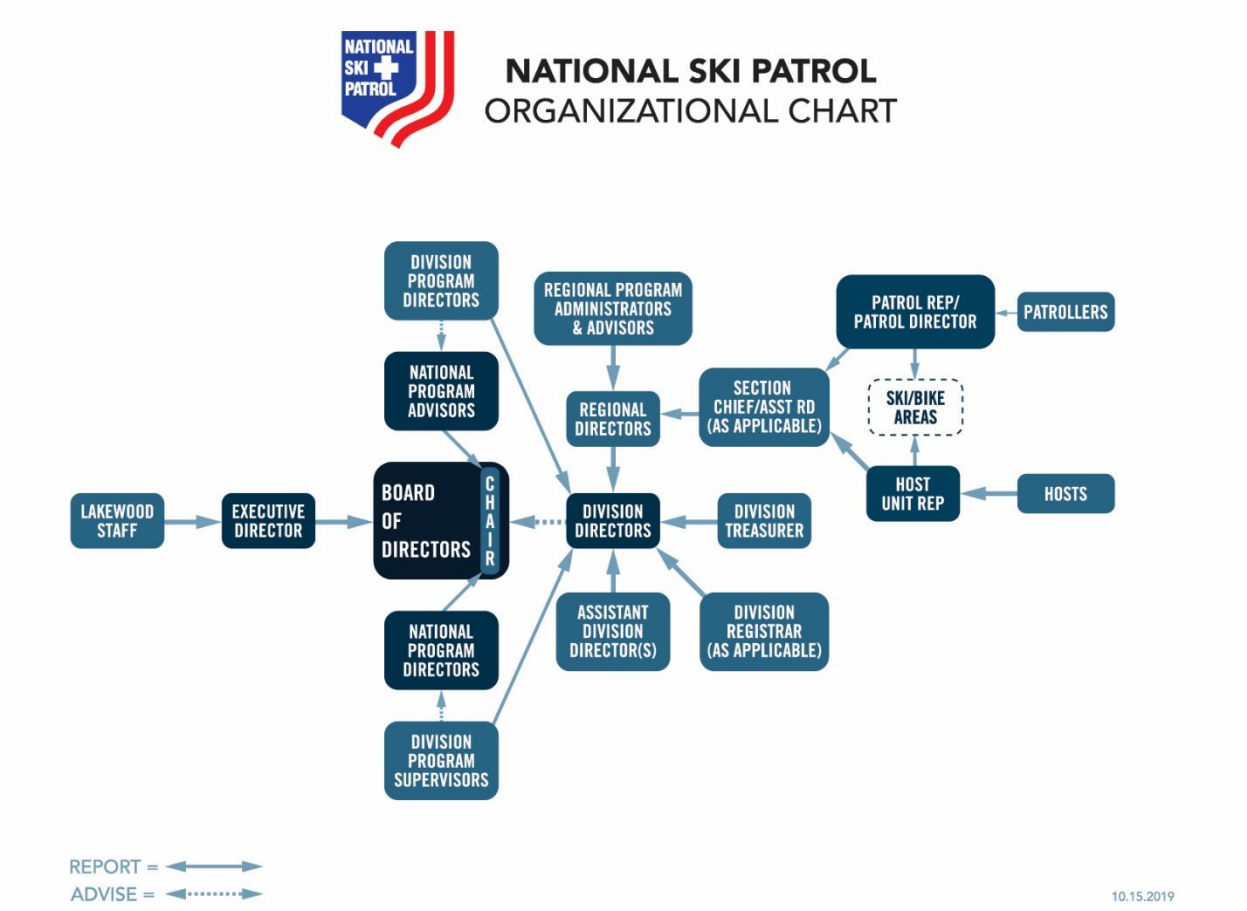
a. Division Board of Directors – Made up of the Region Directors and others according to Division By-Laws, and governs the Division.
b. Division Director – Elected by and chairs the Division BOD, administers all activities and program delivery in the division.
    i. Division Executive Board – Made up of Region Directors (some Divisions).

3.**Region Level**

a. Region Director – Elected by the members of the region or elected or appointed according to Division By-Laws, responsibilities designated by Division By-Laws and policy.
b. Region Board of Directors – made up of Patrol Directors/Patrol Representatives (in some Divisions) who govern the Region.
c. Section Chief (in some Divisions) – elected by the members of the Region or elected or appointed according to Division By-Laws, responsibilities designated by Division By-Laws.

4.**Local Level**

a. Patrol Director/Patrol Representative – selection process is the prerogative of area management or public lands administrator and may be appointed or elected by the NSP registration unit in accordance with Division or Region By-Laws.



- **National Office Staff:**
    1. Executive Director – Manages the National Office and hired by the BOD
    2. Education Director
        a. Education Manager
        b. Education Records Specialist
    3. Finance and Operations Director
        a. Staff Accountant
    4. Member Services Director
        a. Alumni and Awards Manager
        b. Customer Services and Registration Specialist
        c. Member Services Specialist
    5. Marketing and Communications Director
    6. Sales, Partnership, and Marketing Director
        a. Warehouse Manager
        b. Warehouse and E-commerce Specialist

- **Strategic Plan:** Current version available for review at **www.nspserves.org,** click on the three parallel lines in the upper right corner, select "About us", "About NSP"
    1. The National Ski Patrol has a formal strategic plan that describes the association's purpose, how the NSP fulfills that purpose, and direction it plans to go. It is vital to the ongoing administration of the NSP because of its role in helping the association's leaders forecast and determine how to respond to issues that may affect NSP members. Consequently, the plan is under constant revision. The foundation of the plan is the vision, mission and strategic objectives and core values.
    2. **Vision**: The vision describes *why* the association exists in terms of the impact it has in the world.
    3. **Mission:** The mission is the keystone of the strategic plan. It defines *who* the association serves as well as its *primary purposes*. It also provides a foundation for the organization's goals and direction.

- **Registration classifications:** Broken into two types of members:
    1. **Traditional Members [See Appendix D]**
        a. Candidate
        b. Patroller
        c. Senior Patroller
        d. Alpine Patroller
        e. Alpine Senior
        f. Alpine Certified
        g. Nordic Patroller
        h. Nordic Senior
        i. Nordic Master
        j. Physician Partner
        k. Alumni
        l. Bike Patroller
        m. Young Adult Candidate
        n. Young Adult Patroller
        o. Young Adult Alpine Patroller
        p. Young Adult Nordic/Backcountry Patroller
        q. Young Adult Bike Patroller
    2. **Associates** - non-voting members of the NSP having the need or desire to be associated with the NSP and may participate and be credentialed in any NSP training or education program.
        a. Hosts
            i. Mountain Host
            ii. Bike Host
        b. Other/General Associate
- **Service types:**
    1. Paid

2. Volunteer

Governing Documents

The governing documents of the NSP can be found on the NSP national website at www.nsp.org under the Governance tab and include the following:

- United States Federal Charter
- New York Incorporation
- Colorado Incorporation
- NSP By-Laws
- NSP Policies and Procedures
- National Ski Areas Association (NSAA)/NSP Joint Statement of Understanding
    1. Defines the relationship between ski area management and its local NSP registration units.
- United States Forest Service Memorandum of Understanding
    1. Defines the relationship between land management authority and its NSP registration units.
- National Park Service General Agreement
    1. Defines the relationship between land management authority and its NSP registration units.

Chapter 3: Risk Management

Chapter Objective

At the completion of this chapter the learner will be able to:

Demonstrate basic knowledge of risk management concepts, techniques and information that assists the individual in assessing risks, hazards and control methods of the activities associated with skiing/riding and/or cycling and performing the duties of a ski or bike patroller.

Educational Materials And Related Resources	***Introduction to Patrolling Manual***, current edition, at www.nsp.org
	The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org
	National Ski Areas Association website at www.nsaa.org/safety
	Federal Volunteer Protection Act 1997, Public Law 105-19
	Local operational plans, policies, guidelines and procedures
	Local post-incident and other report forms, logs and records
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

Course Content

Risk management is often defined as the process of identifying, evaluating, mitigating/eliminating and/or transferring exposures to injury or loss. Risk management typically involves performing activities in two specific arenas; pre-loss (before the loss occurs) and post-loss (after the loss occurs).

Essential Knowledge/General Concepts

- Define "Inherent Risk(s)" with respect to skiing/snowboarding:
  - Inherent risks are those (risks) that due to the nature of the activity and the environment in which it is performed cannot be eliminated.
  - Identify such inherent risks:
    - variations in terrain
    - snow or ice conditions
    - bare spots
    - rocks

        - trees and stumps
        - forest growth or debris
        - freestyle terrain
        - lift towers
        - light poles
        - posts
        - fences
        - closure ropes
        - sign posts
        - snow making equipment
        - other man-made objects
        - buildings
        - structures and components
        - collisions with such objects
        - other skiers or other persons
        - falling and/or becoming injured
        - loading/boarding, riding and unloading/disembarking lifts and conveyances
- Understand and apply the concepts of "inherent risk(s)" in a non-snow environment (hiking/biking/etc.) as applicable.
- Define the concept of the Assumption/Acceptance of Risk:
    - May be statutory and/or common law (may differ state-to-state).
    - The concept that a person's voluntary participation in an activity that contains inherent risk, does so under the premise that by that voluntary participation, those risks which inhere to (are an integral part of) that activity are and must be assumed/accepted by the participant.
- Define "safe":
    - The (complete) absence of, being protected from, or not exposed to danger or risk.
- Define "reasonably safe":
    - Given the inherent risks involved in participating in the sport of skiing/snowboarding (nature of the activity and environment in which it is performed), some level of exposure to danger or risk is and must remain a component of participation.
- Understand the concept of "reasonably safe", as opposed to (simply) safe, as it applies to the sport of skiing/snowboarding or biking:
    - As the ski area operator, land manager or bike park operator, the legal duty placed upon it is to provide a "reasonably safe' operation and premises.
- Understand the concept of the "shared responsibility" (between the ski area operator, land manager or bike park operator and the skier/snowboarder or biker) for skiers'/snowboarders' or bikers' voluntary participation in the sport of skiing or biking:
    - Which party has "control" over which aspect(s) of the sport.
    - Typically assigned by statute, e.g., "ski area operator must" … and the "skier must".
        - May not be addressed by statute or be as well defined in the sport of biking.

Patrolling

- Weather, snow surface and other conditions (trail density, variability of conditions, etc.)
- Provision of emergency care and transport
    - Quality - initial and ongoing training to mitigate risk
    - Standard of Training versus Standard of Care
        - Understanding expectations for response
        - Awareness of and/or Compliance with local protocols for Standard of Care
    - Awareness of personal limitations
        - Operate within your personal limits
        - Be prepared for the unexpected
        - Clothing, equipment, redundancies
        - Food/water
        - Weather
- Insurance
    - NSP provides liability insurance coverage during educational courses and/or registered NSP events.
    - Area management's general liability insurance provides coverage for ski patrolling or bike patrolling activities.
    - Area management's workers' compensation insurance provides coverage for employees injured while in the course of their employment*.

      *Depending upon the State in which the ski area or bike venue is located, workers' compensation coverage may or may not provide coverage for non-paid (volunteer) patrollers or emergency responders.

- Area/Resort Responsibilities
    - NSAA/NSP Joint Statement of Understanding [www.nsp.org, member services, governance]
    - Land manager Memoranda of Understanding (if any)
    - Bike area operating agreements (if any)
    - Operations
    - Qualification, screening, selection and training of patrollers
    - Area requirements
        - Training and skill maintenance
        - Establish local standard of care/specific procedure requirements
        - Duty requirements
        - Benefits/privileges
        - Uniforms
        - Helmet use
    - Legal or regulatory affairs
    - Area guests
- NSP responsibilities
    - Education and training
    - National membership
    - Course credentials
    - Standardized education courses
- Personal Risk Management

- A working understanding of the duties and responsibilities of a ski/bike patrol (and ski/bike patroller) while patrolling at the patroller's home area.
    - Training
    - Providing qualified and recognized services (OFC/OEC/OET/BLS/AED)
        - Operating within training guidelines
    - Basic signage/rope line/fencing placement and management
    - Basic hazard identification, mitigation and marking
    - Trail opening and closing procedures and trail checks
    - Customer interface-education information
    - Post-incident investigation
    - Lift evacuation (as applicable)
    - Awareness of snowmaking/grooming and/or trail maintenance activities
    - Race and/or event/competition course assignments/responsibilities
    - Assist other mountain departments/operations as assigned
    - Other duties as assigned
    - Documentation of patrolling activities and post-incident

Chapter 4: The National Ski Patrol, Area Management and The Role of the Patroller

Chapter Objectives:

At the completion of this chapter the learner will be able to:

Discuss the benefits of NSP membership.

Discuss patrollers' responsibilities to area management or land management/owner.

Discuss the National Ski Areas Association/National Ski Patrol Joint Statement of Understanding.

Discuss the US Forest Service/NSP Memorandum of Understanding.

Discuss the National Park Service/NSP General Agreement.

Describe the responsibility of the NSP to its members.

Describe proper radio use and local protocol.

Program Structure

Resources

Educational Materials And Related Resources	**Introduction to Patrolling Manual** (current edition) at www.nsp.org **The National Ski Patrol Patroller's Manual** (current edition) at www.nsp.org
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

COURSE CONTENT

- Benefits of NSP Membership
  - Esprit de corps
  - Exceptional educational programs
  - Dynamic communication
  - Outstanding membership support services
  - Energetic interagency relations
  - Strong financial position

- Benefits to area management/land owners
    - Economic impacts on area management
    - Interagency agreements
        - NSP/NSAA Joint Statement of Understanding
            - Patrollers operate as agents of the resort/public lands authority when acting within the scope of their assigned duties.
            - NSP agreement to complete the training and educational requirements established by the NSP.
                - OEC/refreshers
                - Lift evacuation
                - Incident investigation and documentation
                - Host training
        - NSP/NPS General Agreement
            - Conduct activities that enhance emergency services through improved emergency medical care, search and rescue operations and safety messaging through the National Park service.
            - NSP will provide formalized training programs to NPS SAR personnel and public safety education.
            - Allow NSP training on Park lands.
        - NSP/USFS Memorandum of Understanding
            - Promote public safety and enjoyment of the National Forest.
            - Collaborate to raise public awareness of safety issues in the backcountry.
        - Bike Patrol/Land Manager Agreements
            - Varies among locations
            - Provides guidance for areas of responsibilities
            - Outlines expectations and other guidance
    - NSP national training standard
    - Other
- NSP Code of Conduct/Harassment Policy
- Youth Protection Policy
- Membership requirements
    - Outdoor Emergency Care
        - Basic course availability
        - Challenge Courses
        - Modified challenge for EMT's
        - Refresher requirements
    - BLS/AED
    - Outdoor First Care
    - ICS 100
- Radio use protocols and considerations
    - Radio communications play an essential role in the work of a ski/bike patroller to communicate information:
        - Dispatch to investigate reported accidents or hazards
        - Need for additional personnel and/or equipment at the scene
        - Coordinate transportation of the patient off the hill
        - Request additional resources

                - Search and rescue
                - Aeromedical or ground transport
                - Medical care
            - Lift evacuation coordination
            - Other
    - Radio signals travel line-of-sight and may be blocked by topographical obstructions, such as canyons or ridges.
        - This may create “dead spots” where signals are blocked, creating the need for messages to be relayed by a third party or dispatcher.
        - “Repeaters” (specialized base stations) may be used to automatically relay radio signals from one radio to another over a wide area.
    - Frequencies are licensed by the Federal Government.
        - Licensees are area management and/or NSP.
            - Responsible to ensure operation of the radio system is in compliance with Federal Communications Commission regulations.
    - Radio equipment types
        - Portable – “Walkie-talkie”
        - Mobile – ATV, Groomer, or other vehicles
        - Base – Dispatch
        - Single type or all three may be used, depending on local protocol
    - Radio channels may be shared with other departments or used alone.
    - Radio protocols and procedures
        - General
            - Radios are professional-grade tools to be used in a professional manner.
                - Do not use profanity.
                - Do not use for personal matters.
                - Channels may be monitored by others, so be careful what you say.
                - Use clear English instead of specialized codes (unless local protocol states otherwise). Specialized codes may not have the same meaning to everyone.
        - Local
    - National Ski Patrol Radio Best Practices
        - A radio antenna is NOT a handle. Pulling on the antenna may cause it to break internally.
        - Radios work best when their antennas are vertical.
        - DO NOT SHOUT into your radio. It does not increase the range – it only distorts your voice.
        - After pressing the transmit button, wait a moment before starting to speak. Otherwise, your first words may not be heard.
        - Speak “across” the front of the radio – not directly into it.
        - If you think you are in a “dead spot”, try moving a few feet in any direction to see if your signal improves. Also, facing the location you’re trying to talk to may help.

        - A radio needs a full charge to work properly. Charging time depends on your charger, but 8 hours is a good starting point for rapid chargers.
        - Turn your radio OFF while charging.
        - New batteries need to be fully charged before being placed into service.
        - Don't take a radio out of the charger, use it for 5 minutes, then put it back into the charger. You will reduce the life of the battery.
        - If you are operating multi-shift, your battery will not last from 7AM until 11PM. You need to change batteries.
        - Do not leave the radio on your belt or in your pack, press the transmit button, and talk loudly, hoping the radio will pick up your voice. The radio should be an inch or so from your mouth.
        - If you do not want to lift the radio off your belt, use a speaker-mike.
        - Keep the radio under your parka to keep the battery warm, and snow or rain off your radio.
        - If the radio gets wet, turn it off, remove the battery, and let it dry out. Don't put it in the microwave!
    - Contact your Training Officer, Patrol Director or divisional Telecommunications Advisor for questions or issues with radios.
- Others

CHAPER 5: Guest Services

Program Objective

At the completion of this chapter the learner will be able to:

Discuss opportunities to enhance guest experience.

Discuss services available at the ski area.

Discuss services available during special events, bike venues, bike trails, if applicable.

Discuss positive approaches to skier education and other methods to encourage responsible conduct on the hill.

Discuss reasons why guests might not return to the area or venue.

Resources

Educational Materials And Related Resources	**Introduction to Patrolling Manual** (current edition) at www.nsp.org **The National Ski Patrol Patroller's Manual** (current edition) at www.nsp.org
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

COURSE CONTENT

- The patrollers' roles in guest services
  - Visible representatives of the resort on the hill/trails
    - Talking to/assisting guests
    - Recognizing needs
    - Asking questions
    - Lift lines
    - Setting an example
    - Bike etiquette
- Quality service
- Guest relations
  - Warm welcomes/secure feelings
  - Instrumental in fostering return business
  - Safety education
- Resort services
  - Food
  - Rental shop
  - Ski school
  - Patrol headquarters

- Ski shop
- Aid room
- Sales
- Reservations
- Travel
- Lift lines
- Ticket sales
- Trail maps
- Resort development
- Restroom facilities
- Security

CHAPTER 6: Scene Management

Program Objective

At the completion of this chapter the learner will be able to:

Explain and demonstrate how to safely approach an incident scene with an unloaded toboggan or other transportation method and safely secure the toboggan properly to prepare for loading an injured guest.

Position a toboggan using appropriate anchoring and setup procedures.

Explain how to inspect a toboggan prior to use.

Identify key elements of securing, organizing and controlling the emergency care scene.

Describe the similarities and differences between a ski patrol rescue leadership system and an incident command system.

Demonstrate a safe approach to a summer scene (bike trail, downhill mountain bike venue, backcountry biking).

Resources

Educational Materials And Related Resources	***Introduction to Patrolling Manual***, current edition, at www.nsp.org
	The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org
	Outdoor Emergency Transportation: Principles of Toboggan Handling, current edition, at www.nsp.org
	Local operational plans, policies, guidelines and procedures
	Local post-incident and other report forms, logs and records
	Incident Command Flowchart
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

Course Content

- Approaching the incident site
  - Scene safety
    - Presence of dangers or hazards
  - First impression

    - Reconstruction of clues found at the incident scene
        - Witnesses
        - Numbers of injured and responsiveness of each
        - Nature of the incident
        - Mechanism of injury
        - Extrication needs
        - Personnel and equipment needs
        - Securing the scene and the toboggan
- Organize the emergency scene
    - Fill immediate needs
    - Personnel and equipment needs
    - Identify witnesses
    - Recognize and recruit potential helpers
        - Other patrollers
        - Bystanders
        - Witnesses
- Controlling the emergency scene
    - Establish a team leader
    - Identify injuries
    - Recognize potential risk management issues
    - Establish order of treatment
    - Extrication and transport plan
- Positioning injured in the toboggan or other extrication device
- Preparing for transport
- Review FEMA Introduction to Incident Command System (ICS 100)

CHAPTER 7: Adapting to the Outdoor Environment

Program Objective

At the completion of this chapter the learner will be able to:

List, describe and give examples of how the body produces heat.

List, describe and give examples of how the body loses heat.

Explain the consequences of heat imbalance.

Recognize personal requirements for temperature control.

Compare and contrast commonly used materials for layering clothes.

Explain the differences in clothing construction and features.

Discuss layering, venting and other dressing strategies.

Explain basics of proper footwear and foot care.

Discuss problems associated with high altitudes (over 8,000 feet).

Resources

Helpers	Mountain Travel and Rescue instructors or others knowledgeable in clothing systems for the mountain environment.
Equipment	A variety of outdoor clothing and footwear
Educational Materials And Related Resources	***Introduction to Patrolling Manual*** (current edition) at www.nsp.org ***The National Ski Patrol Patroller's Manual***, current edition, at www.nsp.org ***Mountain Travel and Rescue Manual*** (current edition) The Mountaineers Books, Seattle. ***Mountain Travel and Rescue Instructor's Manual*** (available on the NSP website www.nsp.org ***Mountaineering: Freedom of the Hills*** (latest edition), Mountaineers Books, Seattle.

Instructors Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

Course Prerequisites None

COURSE CONTENT

- Heat Gain
    - Metabolism: nutrition and hydration
    - Muscular activity
    - External heat sources
- Heat Loss
    - Conduction
    - Convection, including wind chill on exposed skin
    - Evaporation
    - Radiation
    - Respiration
- Control of body temperature
    - Heat balance
        - Hypothermia
        - Hyperthermia
        - Frostbite protection
    - Body activity levels
- Altitude considerations
    - Problems associated with high altitudes (over 8,000 feet): Acute Mountain Sickness (AMS), High-Altitude Cerebral Edema, High-Altitude Pulmonary Edema.
    - Acclimatization strategies: Spend at least one night at intermediate altitude, "climb high, sleep low," descend if AMS persists.
- Personal requirements
    - Health
    - Level of fitness
    - Attitude
    - Basic metabolic rate
- Clothing materials
    - Fibers and fabrics: wool and synthetics versus cotton
    - Waterproof-breathable fabrics and durable water repellency
    - Wind protection
    - Construction features
    - Fit
    - Color and fashion
    - Cost
- Dressing strategies
    - Layering
        - Base layer
        - Insulation layer
        - Weather-proof outer shell layer
        - Extra "puffy" insulating layer for extreme conditions
    - Venting
        - Why?
        - How to vent

- Special clothing and care
    - Head
    - Eyes
    - Hands
    - Feet

Further coursework

- Mountain Travel and Rescue Fundamentals
- Mountain Travel and Rescue 1
- Mountain Travel and Rescue 2.

CHAPTER 8: Introduction to Rope and Belay Skills

Chapter Objective

At the completion of this chapter the learner will be able to:

Describe safety measures to manage hazards on sloping terrain.

Understand the proper use and care of a harness and belay device.

Describe and compare static rope, dynamic rope, cordage, and tubular webbing.

Discuss storage, care and inspection of ropes, cordage and webbing.

Describe and demonstrate eight knots (listed below) and their uses.

Describe and demonstrate how to build an anchor on a tree or other fixed object.

Demonstrate lowering from an anchor.

Demonstrate belaying from an anchor.

Chapter Structure

Terrain NSP does not teach high angle rescue. Instructors and learners must demonstrate the skills in this chapter on slopes less than 60 degrees in steepness, with no significant hazards from rock fall, tree fall, unstable footing, avalanches, or lightning. See the *Mountain Travel and Rescue Instructor's Manual* for detailed terrain guidelines.

Resources

This chapter requires permission of local area management or land-use management and a patrol representative to use mountain terrain and equipment. The chapter also requires instructor staffing sufficient in number and expertise to deliver an effective, high-quality learning experience.

Helpers Mountain Travel and Rescue instructors or others knowledgeable in rescue rigging in appropriate patrol settings.

Equipment Harnesses, ropes and cordage, webbing, D- and pear-shaped locking carabiners, belay devices.

Educational Materials And Related Resources

Introduction to Patrolling Manual, current edition at www.nsp.org

The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org

	Mountain Travel and Rescue Manual, current edition, The Mountaineers Books, Seattle. ***Mountaineering: Freedom of the Hills*** (latest edition), Mountaineers Books, Seattle. ***Mountain Travel and Rescue Instructor's Manual*** (available on the NSP website www.nsp.org Local operational plans, policies, guidelines and procedures. Local post-incident and other report forms, logs and records. www.animatedknots.com
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.

Risk Management Considerations

See the ***Mountain Travel and Rescue Instructor's Manual*** for detailed terrain guidelines. Instructors must permit anyone who is not comfortable attempting any portion of the training to elect to opt out of specific activities. All participants must sign an NSP Event/Training release form prior to participating in the event. [Appendix A]. The hosting site may require an additional release document.

COURSE CONTENT

- Knots
  - Eight rescue knots (see table below)
  - Principles of knot tying: dressed and snug with 3-inch (hand's width) tails
- Equipment
  - Harnesses: their use and care
  - Locking and nonlocking D- and pear-shaped carabiners and their uses
  - Static rope, dynamic rope, cordage, and tubular webbing
  - Belay devices
- Assisting in rescues (on slopes under 60 degrees in steepness)
  - Safety
  - Uncoiling, stacking, and coiling a rope
  - Lowering and belaying systems: overview
  - Moving belays
  - Route selection and avoiding hazards (rock fall, tree fall, unstable footing, water hazards, avalanches, lightning)
- General rescue techniques
  - Building anchors using trees or other fixed objects such as lift towers
  - Belaying from an anchor using a belay device or Munter hitch
  - Lowering from an anchor using a belay device or Munter hitch
  - Raising from an anchor (optional at this level)

Knot	Typical Ski Patrol Uses	Attributes
Figure 8 on a Bight	Attaching a hard (non-slip) loop to an anchor.	Easier to learn and recognize than a bowline; easier to untie than an overhand knot on a bight.
Figure 8 Rewoven	Attaching a hard (non-slip) loop to a harness or a lift-evacuation seat.	Easier to learn and recognize than a bowline.
Figure 8 Bend or Flemish Bend	Connecting two rope ends having similar diameter.	Closely related to the Figure 8 Rewoven; easier to untie than alternatives such as the Double Fisherman's Bend.
Clove Hitch	Attaching a rope to a pole or a carabiner, for example when tying boundary cord to bamboo.	Easy to tie anywhere on the rope. Easily adjusted to provide a convenient-length connection to an anchor.
Munter Hitch	Belaying or lowering hitch attached to a pear-shaped locking carabiner.	Easy to tie anywhere on the rope. Easily converted from belaying to lowering.
Three-Wrap Prusik	Attaching a movable load to a fixed rope, often as part of a raising or lowering system.	Usable in progress-capturing or rope-ascending systems. A Prusik loops can be tied on cord with a Figure 8 bend.
Autoblock	Friction hitch used to back up a rappel.	Tied below the rappel device, this knot is much safer than a Prusik hitch tied above the rappel device.
Water Knot	Joining two pieces of 1-inch webbing in a hard knot.	Takes advantage of webbing's flat profile.

Further coursework

The following NSP courses offer more in-depth training in knots, rope work, and rescue rigging:

- Mountain Travel and Rescue Fundamentals
- Mountain Travel and Rescue 1
- Mountain Travel and Rescue 2.

TRACK 1: ALPINE

A: Alpine Risk Management

Section Objective:

At the conclusion of this track, the learner will be able to:

Describe the elements of the YOUR RESPONSIBILITY CODE.

Describe other NSAA safety initiatives.

Skiing/Riding: NSAA Programs and Resources

- Your Responsibility Code (or the Skiers Responsibility code, or the Alpine Responsibility Code)
    - Always stay in control, and be able to stop or avoid other people or objects.
    - People ahead have the right of way. It is your responsibility to avoid them.
    - You must not stop where you obstruct a trail, or are not visible from above.
    - Whenever starting downhill or merging into a trail, look uphill and yield to others.
    - Always use devices to help prevent runaway equipment.
    - Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
    - Prior to using any lift, you must have the knowledge and ability to load, ride and unload safely.
- Freestyle Terrain (Park Smart Program)
    - START SMALL - Work your way up. Build your skills.
    - MAKE A PLAN – Every feature. Every time.
    - ALWAYS LOOK – Before you drop.
    - RESPECT – The feature and other users.
    - TAKE IT EASY – Know your limits. Land on your feet.
- Mountain Bike Responsibility Code and trail signage [Appendix F]
- Tree Well and Deep Snow Safety
- Collision Safety
- Lift Safety
- Lids on Kids program
- Kids on Lifts program

B: Outdoor Emergency Transportation

Section Objective

At the conclusion of this track, the learner will be able to:

Identify the types of toboggans used at the local ski area.

Describe how each toboggan component contributes to effective operation.

Inspect a toboggan using a systematic check of components for safety and function.

Identify the purpose, goal, and risks involved for each skill activity.

Demonstrate skiing maneuvers essential to effective toboggan operation without a toboggan on varying terrain/snow conditions progressing from easier to more difficult.

Demonstrate competent, safe empty toboggan handling on varying terrain/snow conditions.

Demonstrate competent, safe, smooth, controlled front operation of a loaded toboggan on varying terrain/snow conditions.

Demonstrate competent, safe, smooth, controlled toboggan handling on the tail of the loaded toboggan on varying terrain/snow conditions.

Demonstrate safe change of operator position from front to rear of toboggan on varying terrain/snow conditions.

Demonstrate a static belay from the tail position to control descent on difficult terain.

Section Structure

Venue Typically held on the hillsides of local ski areas or land-use entity.

Class Size In order to maintain a safe, effective learning environment, NSP recommends a minimum instructor/student ratio of 1-2 instructors for every four students, with a class size no larger than twenty students.

Instructor/student ratio

A recommended ratio of 1-2 instructors to 4 students for each toboggan.

Section Content

This course addresses toboggan equipment and operation through proper utilization of alpine snow sport equipment. The course applies fundamental skills maneuvers for proper, efficient and safe handling of rescue toboggans. Skiing and riding fundamental skills were updated in 2015 by PSIA following a long-planned update to the National Standards. This Skills Concept is based on the knowledge that rotational control, edge control and pressure control are integral and essential to all turns and maneuvers.

PSIA/AASI Five Fundamentals are the foundation of skiing:

1. Control the relationship of the center of mass to the base of support to direct pressure along the length of the skis or board.
2. Control pressure from ski to ski and direct pressure toward the outside ski.
   Riding: Control pressure through flexion and extension of the ankles, knees and hips in both legs independently or simultaneously.
3. Control edge angles through a combination of inclination and angulation.

4. Control the ski or board rotation (turning, pivoting, steering) with both feet and leg rotation, separate from the upper body.
5. Regulate the magnitude of pressure created through ski or board/snow interaction.

PSIA/AASI Six Fundamentals for snowboarding include:

1. Control the relationship of the center of mass to the base of support to direct pressure along the length of the board.
2. Control the relationship of the center of mass to the base of support to direct pressure along the width of the board.
3. Control the magnitude of pressure created through the board/surface interaction.
4. Control the board's pivot through flexion/extension and rotation of the body.
5. Control the torsional flex (twist) of the board through flexion/extension and rotation of the body.
6. Control the board's tilt through a combination of inclination and angulation.

The proper application of fundamental skills provides the on-the-hill patroller with the ability to handle the maneuvers for both the front and tail responsibilities of the rescue toboggan, and ski and ride most effectively in any terrain and all conditions with strength and confidence.

Resources

This module requires permission from both the local area management or land-use management and a patrol representative to use mountain terrain and equipment. The module also requires instructor staffing sufficient in number and expertise to deliver an effective, high-quality learning experience.

Helpers None required

Equipment Toboggans, additional tail ropes, bamboo poles, other gear as determined by instructors

Educational Materials And Related Resources

Introduction to Patrolling Manual at www.nsp.org, current edition

The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org

Outdoor Emergency Transportation Manual, current edition, at www.nsp.org

OET skills videos at www.nsp.org

PSIA-Alpine Technical Manual, current edition, at www.nsp.org

Instructors Toboggan Instructors, Trainer/Evaluators, Instructor Trainers with current instructor credentials

Section Outline

1. Equipment
    - Types of toboggans used at local area
    - Toboggan construction
    - Toboggan components
        - Braking device/chain
        - Handles and handle locks
        - Fins or runners
    - Toboggan storage, inspection, and setup procedures
        - Toboggan shelters, including locations
        - Toboggan inspection
    - Toboggan lift loading procedures
        - Carriers
        - Lap loads
        - Other
2. Toboggan operation
    - Skiing maneuvers for toboggan operation
        - Sideslip
        - Braking wedge
        - Transition turns/pivot slips
    - Alpine ski maneuvers essential for toboggan handling
        - Descent
            - Fall line descent
            - Traverse
            - Fall line sideslip
                - Forward
                - Backward
            - Falling leaf sideslip
            - Gliding wedge
            - Braking wedge
            - Wedge/step turn
            - Wedge turn
            - Parallel turns
            - Transition turns/pivot slips
            - Moving direction changes
                - Dynamic
                - Static
            - Skating
            - Hockey stops
            - Downhill sidestep
            - Emergency stop
        - Ascent
            - Uphill sidestep
            - Herringbone ascent
            - Ascending traverse
            - Board Hop/Walk

- Nordic ski maneuvers essential for toboggan handling
    - Kick turn without poles, varying terrain
    - Uphill sidestep
    - Downhill sidestep
    - Herringbone ascent
    - Diagonal stride
    - Fall line traverse
    - Fall line side slip
    - Falling leaf sideslip
    - Gliding wedge turn
    - Moving direction change
    - Stem/step turn from wedge
    - Parallel turn
    - Skating
    - Emergency stop
  - Operating the front of a loaded two-handled toboggan
    - General principles
    - Route selection
    - Traversing
    - Fall line descent
    - Moving direction change
    - Static direction change
    - Toboggan maneuvers in varying terrain
  - Operating the tail rope of a loaded two-handled toboggan
    - General principles
    - Rope management
    - Fall line descent and traverse
    - Moving direction change
    - Adapting to varying terrain
  - Operating a four-handled toboggan (if applicable)
    - General principles
    - Fall line traverse
    - Fall line descent
    - Moving direction change
    - Static direction change
    - Power stops
    - Create a platform and anchor toboggan for patient loading
    - Adapting to terrain and snow conditions
  - Operator position change
    - General principles
  - Static belay techniques
    - Alpine
      - Tail rope position for control of a loaded toboggan
    - Nordic
      - Raising and lowering
      - Moving belays – wide and narrow trail and across a side hill
  - Communication between toboggan handlers

- Clear communication between the front and rear handlers is critical to successful toboggan handling.
- Different methods are used, but it generally falls to the front handler to ensure the rear handler knows the planned route and can anticipate direction changes.

TRACK 2: Nordic/Backcountry Skills

Objectives

At the completion of this track the learner will be able to:

Describe ALAAST.

Describe the skills needed to be a Nordic/Backcountry Patroller.

Describe related NSP educational programs.

Identify the types of toboggans used at the local ski area.

Describe how each toboggan component contributes to effective operation.

Inspect a toboggan using a systematic check of components for safety and function.

Be able to help construct an expedient toboggan.

Be familiar with the Navigation; SAR; Field Repair; Rescue; Medical; Avalanche; and Survival aspects of N/BC Patrolling.

Be familiar with the Navigation; Knots; OEC; Toboggan; Incident Management; Helicopter; Rope Rescue; SAR; Local Protocols; and Survival skills of N/BC Patrolling.

Resources

This module requires permission from both the local area management or land-use management and a patrol representative. The module also requires instructor staffing sufficient in number and expertise to deliver an effective, high-quality learning experience.

Helpers None required

Equipment Standard Nordic/Backcountry Packs

Educational Materials and Related Resources

Introduction to Patrolling Manual, current edition, at www.nsp.org

The National Ski Patrol Patroller's Manual, current edition, at www.nsp.org

Mountaineering, The Freedom of the Hills, current edition, The Mountaineers Books, Seattle, WA 98134

NSP Policies & Procedures, current edition, at www.nsp,org

PSIA materials:

Cross Country Technical Manual, current edition, at the NSP Store
Telemark Technical Manual, current edition, at the NSP Store

Track Content:

Introduction

The Nordic/Backcountry (N/BC) Program is a discipline that matches in scope the alpine discipline. All Nordic/Backcountry patrollers have the same OEC training and CPR for the Professional Rescuer training that Alpine patrollers have. N/BC patrollers also have Outdoor Emergency Transportation (OET) training, but the N/BC training is broader in scope and includes additional aspects that the Alpine patroller does not have. A N/BC patroller knows how to stabilize a patient with only what they carry and must be able to care for them for extended periods of time, including overnight. N/BC patrollers also know how to construct their own toboggans in which to get patients back to patrol headquarters, or to more conventional transportation options.

The Nordic/Backcountry program teaches skills for backcountry and cross-country travel. Our Nordic/Backcountry patrollers learn how to travel safely and comfortably in the winter environment and become competent in Outdoor Emergency Care, Mountain Travel and Rescue as well as avalanche awareness. Our patrollers may be trained and certified to become part of search and rescue teams. Our patrollers excel in problem-solving: locating and accessing patients; assessment and stabilization of patients and then transporting those patients (LAAST).

All ski patrol responses can be looked at with the acronym ALAAST, which stands for Alert, Locate, Access, Asses, Stabilize, and Transport. Let's look at each of these components:

Alert- This critical component triggers the rest of the rescue operation. It can come from many sources (witnesses, patrollers on duty, agencies requesting assistance, the victim themselves, etc.) and take any number of forms of communication, many of which are affected by conditions and time. Anyone reporting an incident can be considered a potential witness and should be debriefed, and if possible kept available, for further information gathering.

Locate – This is where the patient needs to be found. Sometimes this is very straight-forward and other times it is the longest and hardest part of the event. It involves search and rescue, map, compass, and other navigational skills. Depending on the terrain, weather, length of search etc. there are many other skills that will come into play.

Access – With these skills we get to the patient. Again, sometimes this is a simple walk up, and other times it might involve getting yourself, your team, and equipment down an embankment. Often, this will involve ropes, knots, and anchors as well as the knowledge of how to utilize these in various combinations.

Assess – This is where your OEC skills come into play. A thorough patient survey will lead you towards a treatment plan and drive the stabilize and transport components as well as the urgency of the response. Become very good at this!

Stabilize – Continuing with your OEC training, once you have found the problem(s) in the assessment you will need to deal with them. Additional focus must be placed on the potential for extended care (X-OEC) in all weather conditions, and the need to improvise or fabricate splinting materials. Along with treatment of trauma and medical issues, you will also need to be able to provide shelter, hydration, and nutrition for yourself and the patient.

Transport – Having found, gotten to, surveyed, and treated the patient now you may need to move the patient towards definitive care. There are many strategies for doing this that are

dictated by regional preferences, terrain, ground conditions, time of day, etc. You will be trained on several options.

There are strong infrastructure and many people committed to helping you develop all of these skills and become a capable patroller. “How you practice is how you play.” It is important that you build kinesthetic memory by practicing things properly. “Practice makes permanent, not perfect.” Perfect practice leads to perfect performance, especially under the stress of a real-life, real-time rescue where time may be critical. None of these skill sets are particularly hard, but they do require combining elements in various ways. Your instructors will work with you on these until you feel comfortable, but they cannot learn them for you. You must invest the time and energy to own these for yourself.

A: Nordic/Backcountry Rescue & Toboggan Skill Sets

Section content:

Here is a list of the skill sets you will learn. Some of these skill sets and the elements that comprise them can be obtained or refined by taking other NSP courses including Mountain Travel & Rescue 1 & 2, Avalanche 1 & 2, and ski clinics with either NSP or PSIA. Many programs also offer enhancement clinics to further develop your skills and knowledge.

The following is an outline of the Nordic/Backcountry skill set objective-based critical performance indicators (CPIs) covered in this and other Nordic/Backcountry training courses in the NSP.

1. Navigation/basic map and compass skills. These skills are vital to ensure accurate travel if a global positioning system (GPS) is not available or batteries have failed.
    a. How to read a topographic map
    b. How to orient a topographic map
    c. Declination
        - The deviation of the compass from true north is an angle called "declination" (or "magnetic declination")
    d. Resectioning
        - The method of locating one’s position on a map by determining the grid azimuth to at least two well-defined locations that can be pinpointed on the map.
    e. Basic compass skills
        - Following a compass bearing
2. Navigation/grid coordinates
    a. Latitude/Longitude
        - Latitude and longitude are a system of lines used to describe the location of any place on Earth. Lines of latitude run in an east-west direction across Earth. Lines of longitude run in a north-south direction.
    b. National grid system
    c. Universal Transverse Mercator System (UTM)
        - The Universal Transverse Mercator (UTM) grid is a system of grid lines that are numbered from south to north and from west to east. Each line is 10 kilometers long. A UTM zone is a band of longitude that is 24 degrees wide.
    d. Township and Range Grid System

- **Townships** are rectangular blocks of land about 6 miles square. The squares are gridded and numbered according to their position north or south of the base-line.
- Ranges are columns of townships set side by side. They are numbered starting at the meridian that runs through the point of origin of each system. Ranges run east and west.

3. GPS skills
    a. Datum setting
    b. North setting
    c. Unit setting
    d. Waypoint entry
    e. Altering waypoint
    f. "Go to" function
4. Search and Rescue (SAR)
    a. Search and rescue plans
    b. Search specific skills
    c. Incident Command System (ICS)/National Incident Management System (NIMS)
        - ICS 100, 200, 700 courses
        - P6: Proper prior planning prevents poor performance
    d. Local response plan
    e. Mutual Aid
5. Equipment field repair
    a. How to repair ski poles and bindings in the field
    b. Contents of individual/team repair kits
6. Patient rescue
    a. Simple patient access and patient security
        - Steep terrain patient access
        - Ski anchors
        - Patroller harness
        - Patient diaper harness
        - Knots
            - Figure 8 family
            - Prusik
            - Double fisherman's knot
            - Water knot
            - Munter and Mule hitches
7. Improvised wilderness medical techniques
    a. Improvised splinting
    b. Extended patient care
    c. Hydration and nutrition
8. Emergency toboggan techniques
    a. How to construct an emergency toboggan, package a patient and haul the toboggan
        - Lashing
        - Trucker's hitch
        - Figure-8 on a bight
        - Patroller harness
        - Water knot

9. Survival fire building
    a. Fuel collection
    b. Fire starting
    c. Fire maintenance on snow
    d. Heat
    e. Melting snow for water
    f. Food
    g. Signaling
10. Sheltering
    a. Construction of expedient or overnight patient/rescuer shelter
        - Short-term vs. long-term
        - Improvised sheltering using skis, poles, parachute cord and tarp
        - Use of "mega light" or other commercial item if part of standard kit
11. Advanced Rope Rescue
    a. Advanced patient access and extrication, 25-40 degree angle required
        - Anchors
        - Knots
            - Water knot
            - Figure-8 family
            - Prusik
            - Double fisherman's knot
            - Munter and mule hitches
            - Load releasing hitch
        - Patient and patroller harnesses
        - Z-pulley raising system with belay backup
        - Lowering system with belay backup
        - Switching between systems
        - Safety considerations
    b. Helicopter protocols
        - How to prepare a landing zone
        - How to assist with landing
        - How to approach a helicopter
12. Avalanche skills
    a. Avalanche course level 1 module 1 minimum required
        - Training should be at the highest level appropriate to area of response

C: Nordic/Backcountry Skill Elements

The above is a list of skill sets. Each skill set has a number of elements that make up those skills. For example, the navigation skill set is made up of many elements including: setting declination on a compass; orienting the map using a compass; following a bearing in the field; and determining your position on a map using UTM. During training in Nordic/Backcountry skills we will break down each skill set into elements and go over each of those elements that make up each skill.

"Practice makes permanent, not perfect. Perfect practice makes perfect."

TRACK 3: Bike Patrolling

Track Objective

At the completion of this track the learner will be able to:

- Understand the types of bike patrols and the duties and responsibilities of bike patrollers
- Be self-sufficient while on the trail at a mountain resort, in the backcountry or the urban environment by knowing how to fix common bicycle mechanical issues
- Understand how to help or provide aid to others while patrolling
- Have a basic understanding of different bike types and methods of patient extrication
- Identify various methods of transportation/evacuation used by bike patrollers
- Describe the responsibility of bike areas, venues and land managers to their patrollers

Resources

This course requires permission of local area management or land-use management and a patrol representative regarding use of mountain terrain and equipment. The module also requires instructor staffing sufficient in number and expertise to deliver an effective, high-quality learning experience.

Educational Materials And Related Resources	***Introduction to Patrolling Manual*** (current edition) at www.nsp.org ***The National Ski Patrol Patroller's Manual*** (current edition) at www.nsp.org ***NSAA/NSP Aerial Evacuation Resource Guide*** (current edition) ***Mountain Bike Responsibility Code*** (Appendix G)
Instructors	Instructors should hold current discipline-specific instructor credentials or be subject matter experts.
Track Prerequisites	None
Evaluation Format	Since this is an introduction to bike patrolling activities, a final evaluation is not required, but may be instituted according to local protocol.

CONTENT

Section A: Types of Bike Patrols

Bike host units and patrols consist of dedicated members partnering with resort operators, land managers, land owners and emergency personnel to respond, educate and, in some cases, assist bike users in order to enhance their recreational experience.

There are a broad range of bike patrol units including:

- Lift-served downhill biking at established resorts
- Backcountry bike patrols on public or private lands
- Urban bike patrols on established trails or bike parks on public or private lands

Section B: Duties and Responsibilities

Depending on specific responsibilities (which will vary widely among different patrols), members may:

- Assist in medical and mechanical emergencies
- Educate trail users of proper etiquette
- Inform land managers, owners and trail users of trail conditions through monitoring efforts
- Assist resort operators or land managers with trail maintenance and inspection
- Perform opening and closing activities such as trail opening inspection and closing sweep
- Be responsible for various emergency response activities such as lift evacuation, medical response and transportation of injured patients

Responsibilities may include:

- Know and follow local policies and procedures
- Know personal limitations
- Maintain personal equipment
- Adhere to patrol schedule/complete required patrol hours
- Represent the NSP and your local bike patrol in a professional manner
- Maintain patrol equipment
- Wear patrol uniform
- Assist injured, ill or lost trail users
- Complete incident reports and/or log sheets
- Interact with trail users, emergency staff and land management agencies
- Educate trail users

Qualifications

- CPR certification (annual requirement of the NSP)
- Outdoor Emergency Care or Outdoor First Care certification from NSP
- Satisfy training requirements established by local patrol that may include components such as:
    - Lift evacuation
    - Local medical protocols
    - Injured guest extrication and transportation
    - Vehicle operations (e.g. ATV, UTV)
    - Interpersonal skills
    - Interagency relations, ICS 100
    - Trail/environmental issues
    - Orienteering
    - Riding skills
    - Trailside bike repair

Patrolling (local patrols may vary)

- General Patrols
    - A good working relationship with local land managers is the most important component of a successful bike patrol
    - Effective communication with land managers
    - Understand local liability and insurance
    - Patrollers are recognized as an extension of the local land manager.
    - State laws determine employee status of volunteers.
    - Report for pre-shift briefing
    - Wear/carry your uniform/jersey, helmet, radio, cell phone and patrol pack
    - Ride your bike
- Event Patrols
    - Patrol leader
    - Coordinate with Race Promoter
    - First Aid/Patrol tent
    - Course Marshals
    - Moving Patrol
    - Sweep/clear course
- Logging Patrol Hours
    - Total hours
    - Miles
    - People
    - Kind of Patrol
    - Trails/location
    - Events/incidents
- Reporting Incidents
    - Follow local patrol reporting protocol.
    - Report all significant incidents or events.
        - Any incident that requires EMS activation

        - Any incident the requires land management involvement above simple notification
        - Any incident that required law enforcement
    - Must notify the Patrol Director and fill out incident report
- PPE required for bike patrollers
    - Helmets
    - Additional PPE for downhill bike patrollers may include full coverage helmet, protective body armor, shin guards, gloves, wrist guards, and other pieces, depending on local protocol
- Bike and equipment kept in good working condition

Section C: Trail Issues and Communication

Environmental and Social Issues

- Trail damage on downhill mountain trails is primarily caused by poor drainage of water, not mountain bikes
- You are responsible for promoting safety to all trail users
- Gain trust and promote user harmony by showing respect to all trail users

The Rules of the Trail

- Ride on open trails only
- Leave no trace
- Control your bicycle
- Always yield the trail
- Never scare or harm animals
- Plan ahead

Communication skills

The bike patroller will:

- Demonstrate the ability to interact effectively with all trail users (hikers, horses and bikers)
- Know technical aspects of using a two-way radio and cellular phone as required
- Know how to contact and provide information to the land managers, trail or race promoter

Section D: Transportation and Evacuation Considerations

This section is intended to offer a list of tools to assist in locating, accessing and transporting summer recreationalists. This is a global overview of suggested equipment that will allow you to function as a first responder in a variety of venues.

Basic types of bicycles

- **Road bicycle**
  The term *road bicycle* can describe any type of bike used primarily on paved roads, in contrast to bikes primarily intended for off-road use such as mountain bikes.

  Some features of a road bike include, but not limited to:
  - The tires are narrow, high-pressure (100 psi [700kPa] or higher), and smooth to decrease rolling resistance
  - The handlebars are bent ("dropped") to allow the rider position to be leaned forward and downward, which reduces the forward vertical cross-sectional area and thus highly reduces the air resistance
  - Derailleur gears are usually used; however, single-speed and fixed-gear varieties exist
  - Disc brakes or rim brakes are typically used, although there might be technical differences. For example, road bike caliper brakes use shorter and wider pads than mountain bike cantilevers
  - The bicycle is of a lightweight construction

  Several variations of road bikes include:

  - **Touring Bicycle**
    Touring bikes are designed for bicycle touring. They are robust, comfortable and capable of carrying heavy loads.

  - **Hybrid Bicycle**

Hybrid bicycles are designed for a variety of recreational and utility purposes. While primarily intended for use on pavement, they may also be used on relatively smooth unpaved paths or trails.

- **Utility Bicycle**

  Utility bikes are designed for utility cycling and are a traditional bike for commuting, shopping and running errands in towns and cities. A *roadster* is a specific form of the utility bicycle developed in the UK.

- **Recumbent Bicycle**

  Recumbent bikes are designed for a variety of recreational and utility purposes, but are characterized by the reclined riding position in which the cyclist is seated.

- **Vintage Road Bicycle**

  Vintage road bikes are also known as classic lightweight bicycles and are generally older bicycles with frames which are manufactured using steel tubing and lugs. Certain examples of this bicycle type have become collectors' items, with potential values of several thousand dollars. Other

cyclists prefer this type of bicycle to those manufactured using modern techniques because they are “practical, versatile, durable, repairable and timeless”, regardless of current popular trends.


- **Flat bar Road Bicycle**

  Flat bar road bike, also called fitness bike, is a relatively new style of bicycle. It is simply a road bike fitted with a flat handlebar and MTB-style shifters and brake levers. This combination provides a light, fast bike with a more upright riding position that is more comfortable and gives a better view in traffic. Flat bar bikes are commonly used for commuting, urban and fitness riding.

- **Gravel Bicycles**

  Gravel bikes, sometimes also referred to as adventure bikes, are essentially road bikes designed to tackle a variety of surfaces, carry additional gear and are suitable for all-day riding on roads less traveled. They are made to be more durable and robust than a standard road bike, along with having an increased gear range and space for far wider tires.

- **Mountain Bicycles**

    - **Cross-Country Bicycle**

      Cross-country bikes are some of the lightest mountain bikes, typically between 7 and 16 kilograms (15-35 pounds). They usually feature suspension forks in front and sometimes have suspension in the rear. In both the front and rear, most XC bicycles have approximately 100 millimeters (3.9 inches) of suspension travel, although some riders prefer 125 to 150millimeters (4.9-5.9 inches) of travel as bicycle frame strength and technology advance. The geometry of the frames generally place the rider in a little more upright position than on a road bike but much less than on a downhill bike.

    - **Enduro Bicycle**

      In general, endure bikes are better equipped than downhill bikes for all-purpose riding. An enduro bike is a great choice for all sorts of trail riding, but downhill bikes are often tuned for precise movement and speed that is not part of the casual riding experience. Also worth noting is that downhill bikes are often inappropriate for long stretches of uphill riding. What a downhill mountain bike may lack in quality-of-life endurance features, it makes up for in terms of technical control.

    - **Downhill Bicycle**

      Downhill bikes are heavier and stronger than other mountain bikes and feature front and rear suspension with over 8 inches (20 centimeters) of travel to glide quickly over rocks and tree roots. They are not geared or designed to negotiate long uphill travel.

- **Electric Bicycle**

  Electric bikes, also known as e-bikes, are bikes with an integrated electric motor which can be used for propulsion. Many kinds of e-bikes are available world-wide, from e-bikes that only have a small motor to assist the rider's pedal power to more powerful e-bikes which are closer to moped-style functionality. All retain the ability to be pedaled by the rider ad are therefore not electric motorcycles.

  *Please confer with your local land managers on their policies pertaining to e-bikes, as some do not allow them.

- **Adaptive Bicycles**

  A handcycle is a three-wheeled, self-propelled vehicle that is powered with the user's arms rather that their legs and is used by both able and disabled people for recreation and fitness. The front wheel is driven by derailleur gearing powered by specially designed hand cranks and is used by a wide range of users including people with limited use of their legs from spinal cord injuries, amputations, multiple sclerosis, stoke, cerebral palsy and spina bifida.

Mechanical Transport

These vehicles are used as utilitarian tools to assist in trail set-up, trail maintenance, uninjured recreationalist transportation, repair assists, and injured recreationalist transport. Local, state, and federal laws, training and protocols are the guidelines for the use of these vehicles.

- **Rokon Motorcycle**

  Rokon motorcycles use a combination of belt, chain, and shaft drives coupled to gear boxes to drive both the front and rear wheels. Older machines were powered by a West Bend (US Motor/Chrysler Marine) 820 2-stroke engine (134cc), while newer machines have either a Honda or Kohler engine of about 6 hp. The wheels are able to hold gasoline or water for long distance trips.

  These are slow-speed, off-road motorcycles designed for use in the most rugged terrain. Some are capable of 35 mph or more, but typical speed is about 20 mph. However, going up very steep hills the bike may only travel at 0.5 mph.

- **All-Terrain Vehicle**

  An all-terrain vehicle (ATV), also known as a quad, three-wheeler, four-wheeler, four-track, or quadricycle, as defined by the American National Standards Institute (ANSI), is a vehicle that travels on low-pressure tires, with a seat that is straddled by the operator, along with handlebars for steering control. As the name implies, it is designed to handle a wider variety of terrain than most other vehicle. Although it is a street-legal vehicle in some countries, it is not street-legal within most states and provinces of Australia, the Unites States or Canada.

  By current ANSI definition, ATVs are intended for use by a single operator. These have the capability of hauling small amounts of material on the optional racks mounted on the front or back of the vehicle. They may also have the ability to haul a small trailer behind the vehicle for equipment or patient/attendant transport. This is an excellent mode of transportation for primary responders to locate patients in the field.

- **Side-by-Side Multi-passenger ATV/UTV**

  These vehicles have the capability of hauling up to 6 passengers. Some models have cargo boxes mounted in the rear of the vehicle to haul materials, or incorporate inserts that have an attendant seat and patient platform. These ATVs have 4 or 6 tires, and can have track modifications installed.

- **Ambulance**

  Most patrols interface with an ambulance service that provides more advanced medical services, or merely transports a patient to a medical facility for further treatment. Ambulances are a viable alternative for transport when the use of a rescue helicopter isn't possible due to weather or availability. It is important to know the local EMS protocols and interface with these agencies for training to ensure a fluid continuum of patient care.

- **Rescue helicopter**

  Rescue helicopters are used to expedite patient transport to medical facilities whether it be by placing the patient in the air ship or short hauling the patient,

with an attendant, on a cable system. It is important to know how to set up a landing zone, and how and when to approach a helicopter after it has landed. Interfacing and training with local agencies insures rescuer and patient safety.

- **Chairlifts**

  Chairlifts can provide access to a scene for rescue personnel and equipment. They can also be used as a method of extrication for patients accompanied by first responders. Local and federal protocols should be followed.

- **Trams**

  Trams can be used to transport patients as well as rescuers if local protocols allow.

- **Four-wheel drive vehicles**

Four-wheel drive vehicles such as pick-up trucks or SUVs can be used for access or egress tools for rescue personnel, equipment, or patient transport. The use of such vehicles is regulated by area protocols, and insurance guidelines.

- **Dirt bikes**

  Dirt bikes can be used to expedite first responder access to the scene of an accident on single track trails, or to areas too heavily populated with terrain obstacles such as trees or rocks. Some agencies allow motorized vehicles for rescue operations, others may not. It is important to have a Joint Statement of Understanding with whoever you're providing service to.

- **ATV Trailer with patient and attendant platforms**

  The All-Terrain Res-Q™ rescue trailer is a very effective means of transporting patients out of rough terrain or wildland situations. The ATR trailers can be towed by all-terrain vehicles, the larger utility vehicles and snowmobiles. These rescue trailers offer a host of features and accessories that will assist emergency responders in caring for their patients while they are transported to a waiting ambulance or helicopter landing zone.

- **SAR wheeled litter**

  The SAR wheeled litter is a heavy-duty single wheel litter designed to extricate a patient in rocky or irregular terrain. There are a variety of types with different

sized wheels, handle configurations, and short haul ratings. These can be used with the wheel attached or as a carrying platform for a patient for short distances. These ca be used in conjunction with rope ascending and descending systems, as well as helicopter transport.

*Note: Every area, venue, park, trail has different extrication and transportation requirements. Some patrols merely summon extrication/transportation assistance from local EMS providers, while others are required to perform extrication/transportation. Those who are in a wilderness environment need to apply critical thinking to extrication which may require considerable resources (equipment/manpower).

Section E: Trailside Repair

Scene:

A rider has a mechanical failure a couple of miles from the nearest trailhead. If warmth and daylight are waning and he or she is unfamiliar with the surrounding area, a minor inconvenience can become a very unpleasant experience, or even a life-threatening situation.

It is important for bike patrollers to educate the mountain biking public on the importance of being prepared for mechanical problems on the trail. Patrollers must be able to perform basic trailside bike repairs for the sake of themselves and other riders who may need mechanical assistance.

Repair Guidelines

Patrollers should have a working knowledge of most typical bike tools and standard field repairs, including:

- Flat tire repair
- Chain repair
- Basic derailleur adjustment
- Seat adjustment
- Brake adjustment
- Headset adjustment

- Basic spoke and wheel repair

Training

Patrols are encouraged to partner with local bike shops to refresh or improve their bike repair skills. Your patrol's local involvement helps keep local riders enthusiastic about the sport, which means more customers to support the shop's business. Once bicycle shops understand the NSP's role, they may be willing to donate a mechanic's expertise for a training clinic or even act as a local sponsor. Use your initial meeting as an opportunity to build a relationship with a local bicycle dealer. In the long run, your patrollers could be directing riders to their shop for all of their needs.

Alternatively, a knowledgeable, experienced patrol member or friend can teach a repair clinic for the group. There are a number of excellent books about bike repair available. Practice often and share experiences about creative solutions to mechanical issues.

Legal Issues

Performing mechanical repair on another person's bike could lead to legal action if injury results from the patroller's actions. It is always preferable to supply the rider with tools and advice to fix their own bike to minimize the patroller's liability should an injury occur. In addition, the riders will learn how to do the repair themselves. Use common sense. If you're deep in the backcountry, if it's getting cold or dark, or if the rider has no mechanical ability, it may be better to fix the problem. Check with your resort or land manager to see if there is a policy regarding mechanical aid.

Tool/Spare Parts Kit Contents

It is suggested that patrollers carry and be familiar with the following tools:

- Multi tool
- Pump (Presta/Schrader)
- Chain tool (chain breaker)*
- Patch kits (glueless is suggested)
- Hex key set (Allen wrenches)*
- Torx T25 wrench (for disc brake rotors)*
- Tubes (Presta/Schrader)
- Philips head and flat head screwdriver*
- Duct tape (small roll)
- Zip ties
- Shock pump
- Spoke wrench*
- Tire levers (2-3)
- Tire boot for ripped tires

A quality bike tool kit would provide many of these tools in a small, compact package. Discuss the available options with your local bike shop.

5

Introduction to Patrolling
Training Checklist

Trainee Name _____

Patrol _____

The History and Organization of the National Ski Patrol

Performance Objective	Review Date/Initials	Final Check Date/Initials
Identify the founder of the National Ski Patrol		
Identify the NSP motto		
Identify the number of divisions in the NSP		
Describe the leadership hierarchy of the NSP: National, Division, Region, Local		
Describe what the Strategic Plan does		
List the two types of members		
List two governing documents of the NSP		

Instructor Signature:_____

Risk Management

Performance Objective	Review Date/Initials	Final Check Date/Initials
Demonstrate basic knowledge of personal risk management techniques and information that assists the individual in assessing risks, hazards, and acceptability of the activities associated with skiing/riding or cycling and being a ski or bike patroller.		
Explain the concept of inherent risk.		

Describe available NSAA programs and resources.		
Describe area/resort responsibilities.		
Describe NSP responsibilities.		
Describe personal risk management understanding.		
Describe NSP and local area insurance.		

Instructor signature _____

The NSP, Area Management and the Role of the Patroller

Performance Objective	Review Date/Initials	Final Check Date/Initials
Discuss the benefits of NSP membership.		
Discuss patroller responsibilities to resort management.		
Discuss the NSP-NSAA JSOU, others.		
Describe the responsibility of the NSP to its members.		
Describe the responsibility of the resort to its patrollers.		

Instructor signature _____

Guest Services

Performance Objective	Review Date/Initials	Final Check Date/Initials
Discuss opportunities to enhance guest experience.		
Discuss services available at the ski area.		
Discuss positive approaches to skier education and other methods to encourage responsible conduct on the hill.		
Discuss reasons why guests might not return to the area.		

Instructor signature _____

Scene Management

Peformance Objective	Demo Date/Initials	Final Check Date/Initials
Demonstrate how to safely approach an incident scene with an unloaded toboggan.		
Demonstrate safe positioning of the toboggan using appropriate anchoring techniques and setup procedures to prepare for loading an injured guest in varying snow/terrain conditions.		
Explain how to inspect a toboggan prior to use.		
Identify key elements of securing, organizing and controlling the scene.		
Describe the similarities and differences between a ski patrol rescue leadership system and an incident command system (ICS).		

Instructor signature _____

Adapting to the Outdoor Environment

Performance Objective	Demo Date/Intials	Final Check Date/Initials
List, describe and give examples of how the body produces heat.		
List, describe and give examples of how the body loses heat.		
Explain the consequences of heat imbalance.		
Recognize personal requirements for temperature control.		
Compare and contrast commonly used materials for layering clothes.		
Explain the differences in clothing construction and features.		
Discuss layering, venting and other dressing strategies.		
Explain basics of proper footwear and foot care.		
Discuss problems associated with high altitudes (over 8000 feet).		
Discuss high-altitude acclimatization strategies.		

Instructor signature _____

Introduction to Rope and Belay Skills

Performance Objective	Demo Date/Initials	Final Check Date/Initials
Describe safety measures to manage hazards on sloping terrain.		
Describe the proper use and care of a harness and belay device.		
Describe and compare static rope, dynamic rope, cordage, and tubular webbing.		
Discuss storage, care and inspection of ropes, cordage and webbing.		
Describe and demonstrate eight rescue knots and their uses.		
Describe and demonstrate how to build an anchor on a tree or other fixed object.		
Demonstrate lowering from an anchor.		
Demonstrate belaying from an anchor.		

Instructor signature _____

TRACK 1: ALPINE

Alpine Risk Management

Performance Objective	Demo Date/Initials	Final Check Date/Initials
Describe the elements of YOUR RESPONSIBILITY CODE.		
Describe other NSAA safety initiatives.		

Instructor signature _____

Introduction to Outdoor Emergency Transportation

Performance Objective	Demo Date/Initials	Final Check Date/Initials
Identify the types of toboggans used at the local ski area.		
Describe how each toboggan component contributes to effective operation.		
Inspect a toboggan using a systematic check of components for safety and function.		
Identify the purpose, goal, and risks involved for each skill activity.		
Demonstrate skiing maneuvers essential to effective toboggan operation without a toboggan on varying terrain/snow conditions progressing from easier to more difficult.		
Demonstrate competent, safe empty toboggan handling on varying terrain/snow conditions.		
Demonstrate competent, safe, smooth, controlled front operation of a loaded toboggan on varying terrain/snow conditions.		
Demonstrate competent, safe, smooth, controlled toboggan handling on the tail of the loaded toboggan on varying terrain/snow conditions.		
Demonstrate safe change of operator position from front to rear of toboggan on varying terrain/snow conditions.		
Demonstrate a static belay from the tail position to control descent on difficult terain.		

Instructor signature _____

TRACK 2: Nordic/Backcountry Skills

Nordic/Backountry Skills

Performanc Objective	Demo Date/Initials	Final Check Date/Initials
Describe ALAAST		
Describe the skills needed to be a Nordic/Backcountry Patroller.		
Describe related NSP educational programs.		
Identify the types of toboggans used at the local resort.		
Describe how each toboggan component contributes to effective operation.		
Inspect a toboggan using a systematic check of components for safety and function.		
Be able to help construct an expedient toboggan.		
Be familiar with the Navigation; SAR, Field Repair, Rescue, Medical, Avalanche, and Survival aspects of N/BC patrolling.		
Be familiar with the navigation, knots, OEC, toboggan, incident management, helicopter, rope rescue, SAR, local protocols, and survival skills of N/BC patrolling.		

Instructor signature _____

TRACK 3: Bike Patroller Skills

Bike Patroller Skills

Performance Objective	Demo Date/Initials	Final Check Date/Initials
Explain the different types of bikes.		
Describe motorized and non-motorized methods of patient transport.		
List and describe the Mountain Bike Responsibility Code (Appendix G).		

Explain basic bicycle mechanics and how to fix common mechanical issues.		
List what items you may want to carry in your tool kit.		
Discuss how to approach helping someone with a mechanical issue and describe why.		
Identify various methods of transportation / evacuation used by bike patrollers.		
Describe the responsibility of bike areas, venues and land managers to their patrollers.		

Instructor signature _____

Introduction to Patrolling

Completion Checklist

Instructor of Record (IOR) will maintain a copy of this document for their records upon completion of the course. Participants will be given a copy by the IOR for documentation of completed components. It is the responsibility of the participant to present a copy of this document when transferring to another patrol.

Chapter Name		Completed
The History and Organization of the National Ski Patrol		
Risk Management		
The NSP, Area Management and the Role of the Patroller		
Guest Services		
Scene Management		
Adapting to the Outdoor Environment		
Introduction to Rope and Belay Skills		
Track 1: Alpine	Alpine Risk Management	
	Introduction to Outdoor Emergency Transportation	
Track 2: Nordic/Backountry Skills	Introduction	
	Nordic/Backcountry Rescue & Toboggan Skill Sets	
	Nordic/Backcountry Skill Eelements	
Track 3: Bike Patroller Skills	Types of Bike Patrols	
	Duties and Responsibilities	
	Rules of the Trail	
	Types of bikes/Types of Transportation	
	Bike Repairs/Suggested Toolkit	

APPENDIX A:

NATIONAL SKI PATROL SYSTEM EVENT/TRAINING RELEASE FORM

I agree I am voluntarily participating in this EVENT/TRAINING. I understand that the EVENT/TRAINING may involve extensive field work on first aid scenarios, skiing, and toboggan handling along with other activities which ski patrollers encounter in their duties of patrolling a ski area. I realize there are inherent risks in this type of activity including changing weather conditions, changing snow surface conditions, ice, bare spots, rocks, stumps, trees and the possibility of collisions with manmade and natural objects or other skiers and such activity can be dangerous and can result in serious injury or death. I knowingly assume the risk of participation and understand I can withdraw from this EVENT/TRAINING at any time. I understand that by participating in this EVENT/TRAINING I may also encounter additional risks not inherent to a normal participant to the sport of skiing. I agree to personally assume all of these risks. I also agree that I will rely solely on my own judgment regarding my personal safety and ability with regard to the terrain, circumstances and conditions in which I may be placed upon and asked to demonstrate or perform to accomplish the tasks involved in EVENT/TRAINING, and that I will decline to perform any activities if I believe I am placing myself in an unsafe situation or subject to possible injury or death if I proceeded.

As a requirement of this EVENT/TRAINING, I acknowledge that I agree to waive any right I might have to file a lawsuit for any injury or death resulting from my participation in this EVENT/TRAINING and I hereby remise, release, and forever discharge the ski area hosting the event, the National Ski Patrol System, Incorporated and its members, both individually and jointly, and I agree that no one else may file a lawsuit in my name related to my participation in this EVENT/TRAINING. If any part of this Release shall be determined to be unenforceable, all other parts shall be given full force and effect.

Participant Signature:_____ Date: _____

Participant Name: (printed): _____

Address:_____ Phone: _____

_____

ADDENDUM TO RELEASE

The above Participant is less than 18 years of age; the undersigned parent or guardian hereby consents to the above Participant participating in the EVENT/TRAINING and signs this Release on behalf of the Participant.

Parent/Guardian Signature:_____ Date:

_____

Parent/Guardian Name: (printed)

_____

Address:_____Phone:

_____

. . . . . .

Not part of Release and for record keeping purposes only.

To be completed by instructor: Date: _____

Event/Training:_____Location:

_____

APPENDIX B:

NSP Course Evaluation Form

Course title	Date
Instructor of Record	Course #
Course location	

1. The course met my expectations.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

2. The course was well organized.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

3. The material was easy to understand.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

4. The skills development sessions were valuable.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

5. The instructor(s) clarified material when trainees appeared not to understand.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

6. The instructor(s) adapted explanations, concepts, and applications to my specific needs.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

7. The course was taught in a relaxed, positive manner.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

8. I am confident in applying the skills taught in this course in a rescue/patrolling environment.
   Strongly agree ___ Agree ___ Neutral ___ Disagree ___ Strongly disagree ___

9. Overall, I would rate this course:
   Excellent ___ Very Good ___ Good ___ Needs Improvement ___

10. We welcome your comments and suggestions for improving the NSP education programs. It is helpful if you are as specific as possible. Please use another sheet of paper if needed.

    What are the strengths of the program? _____

    _____

    _____

    What could be improved in the program? _____

    _____

    _____

    I'd like my instructors to do a better job of: _____

    _____

    _____

    My instructors did an excellent job of: _____

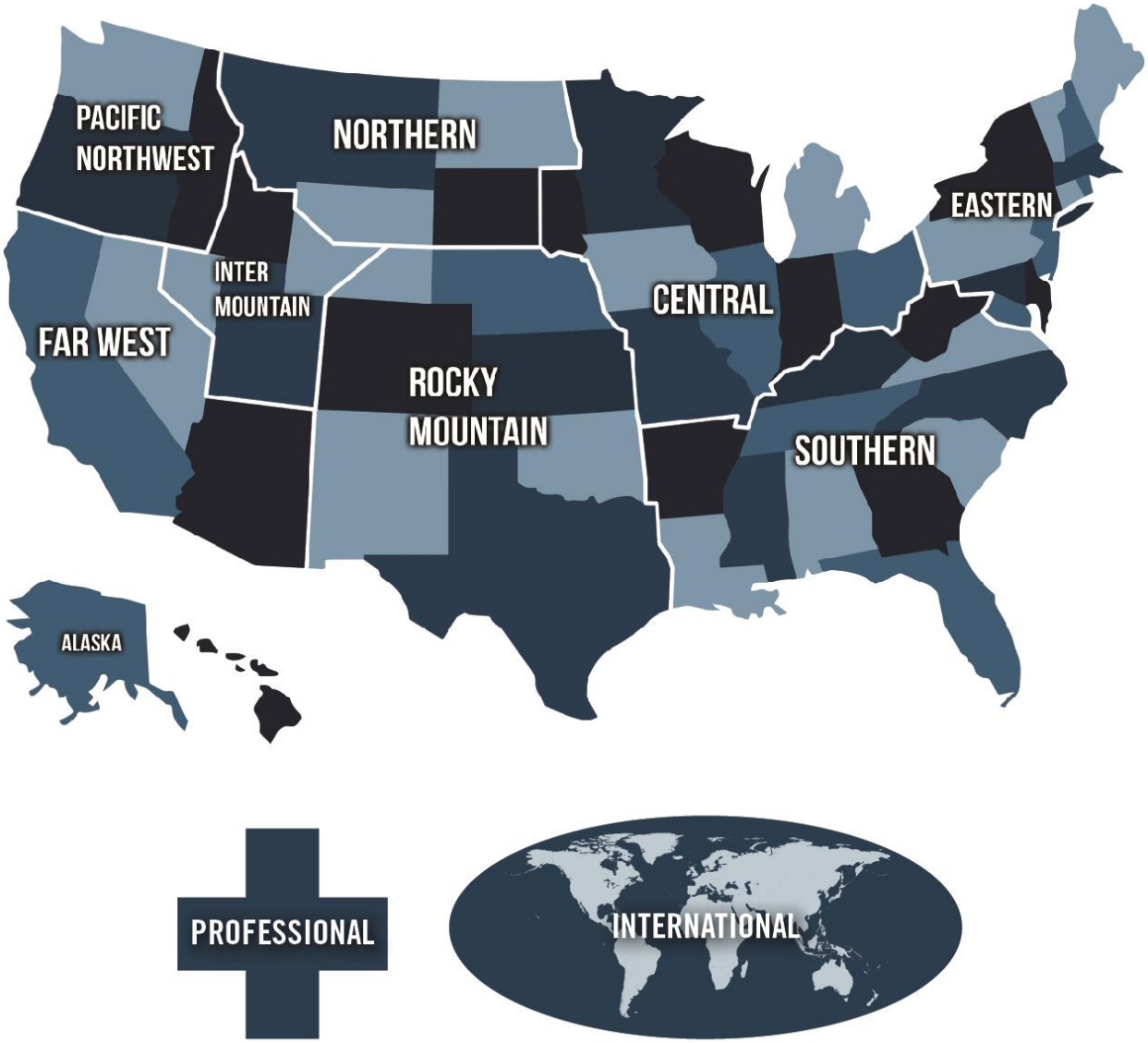
    _____

    _____

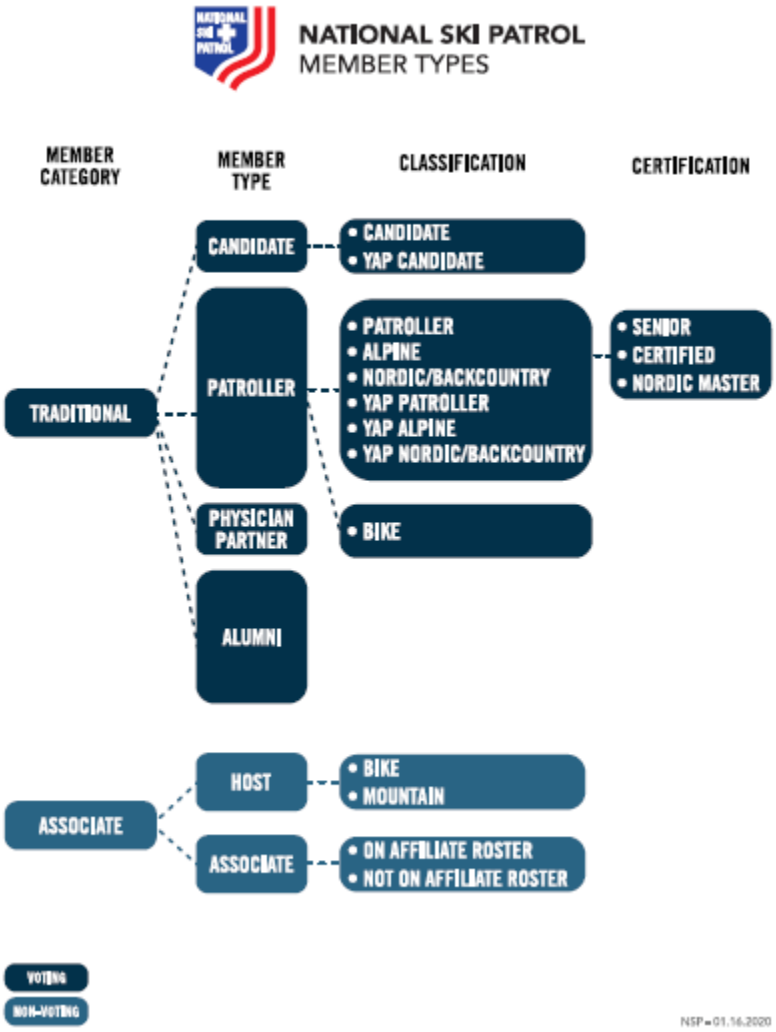
    Other comments?_____

    _____

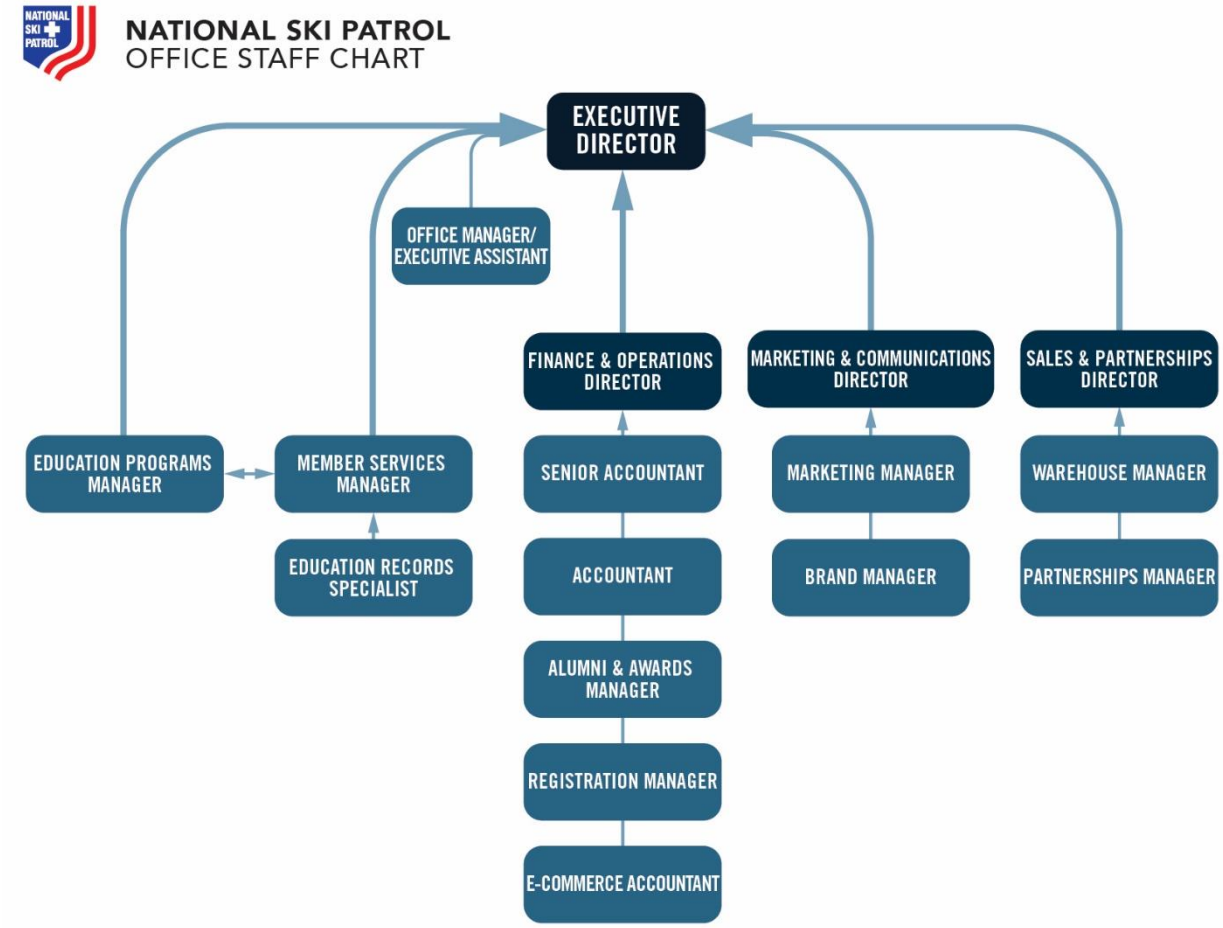
APPENDIX C: National Ski Patrol Division Map



APPENDIX D:

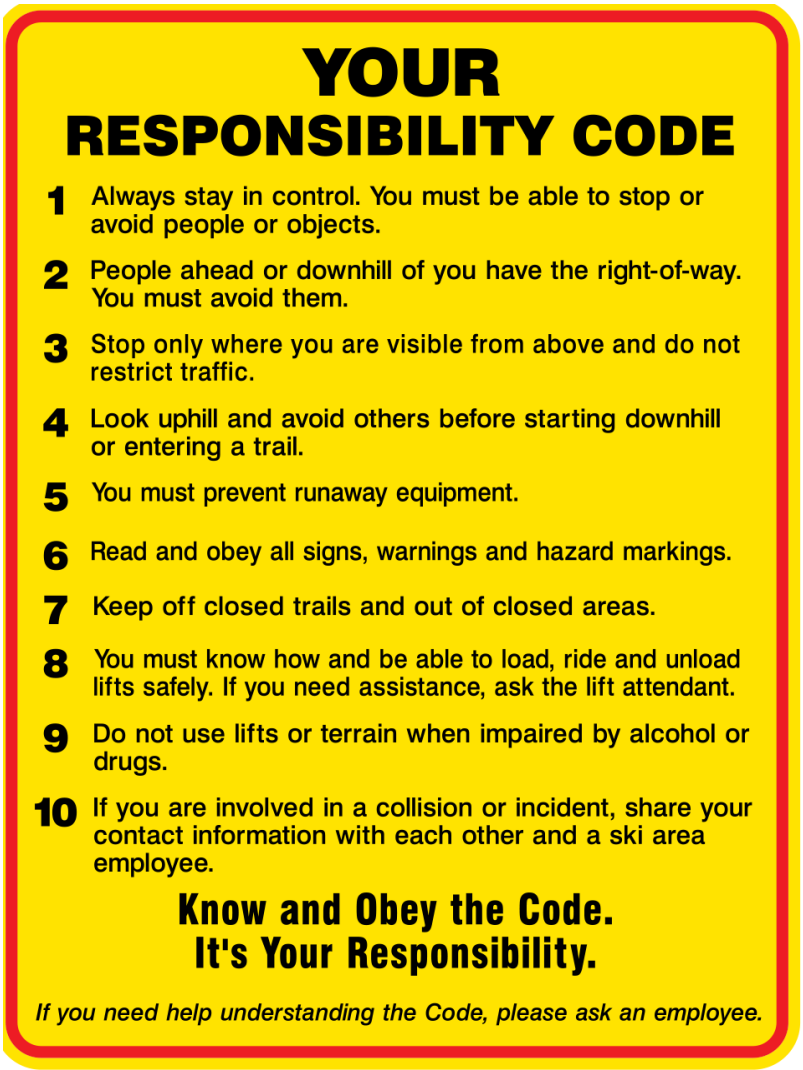

NATIONAL SKI PATROL
MEMBER TYPES
MEMBER CATEGORY
MEMBER TYPE
CLASSIFICATION
CERTIFICATION
TRADITIONAL
CANDIDATE
CANDIDATE
YAP CANDIDATE
PATROLLER
PATROLLER
ALPINE
NORDIC/BACKCOUNTRY
YAP PATROLLER
YAP ALPINE
YAP NORDIC/BACKCOUNTRY
SENIOR
CERTIFIED
NORDIC MASTER
PHYSICIAN PARTNER
BIKE
ALUMNI
ASSOCIATE
HOST
BIKE
MOUNTAIN
ASSOCIATE
ON AFFILIATE ROSTER
NOT ON AFFILIATE ROSTER
VOTING
NON-VOTING
NSP - 01.16.2020

APPENDIX E: National Office Staff Flow Chart



APPENDIX F: YOUR RESPONSIBILITY CODE

NSAA first developed the Skier Responsibility Code in 1962. In the last 60 years, the Code has undergone several revisions to stay in step with modern language and skiing behavior (and to include snowboarders, bikers and everyone who enjoys the slopes!). The 2022 version of Your Responsibility Code has grown from seven points to 10. The pre-existing seven points were revised, sometimes minimally, to modernize the language. One previous point was split into two. Two new points were added: one, to emphasize the importance of not skiing or riding under the influence of alcohol/drugs; another to let skiers and riders know what to do when you get into a collision or other on-mountain incident.



APPENDIX G:

MOUNTAIN BIKER'S RESPONSIBILITY CODE

Mountain biking involves risk of serious injury or death. Your knowledge, decisions and actions contribute to your safety and that of others.

ALWAYS:

1. **STAY IN CONTROL.** You're responsible for avoiding objects and people.
2. **KNOW YOUR LIMITS**. Ride within your ability. Start small and work your way up.
3. **PROTECT YOURSELF.** Use an appropriate bike, helmet and protective equipment.
4. **INSPECT AND MAINTAIN YOUR EQUIPMENT.** Know your components and their operation prior to riding.
5. **BE LIFT SMART.** Know how to load, ride and unload lifts safely. Ask if you need help.
6. **INSPECT THE TRAILS AND FEATURES.** Conditions change constantly; plan and adjust your riding accordingly.
7. **OBEY SIGNS AND WARNINGS.** Stay on marked trails only. Keep off closed trails and features. Ride in the direction indicated.
8. **BE VISIBLE.** Do not stop where you obstruct a trail, feature, landing or are not visible.
9. **LOOK AND YIELD TO OTHERS.** Look both ways and yield when entering or crossing a road or trail. When overtaking, use caution and yield to those ahead.
10. **COOPERATE.** If involved in or witness to an incident, identify yourself to staff.

Know and Follow the Code. It is Your Responsibility.

APPENDIX H: National Ski Patrol Courses/Programs

Courses descriptions offered by the National Ski Patrol can be found by logging in to www.nsp.org . A brief listing is included here:

- Introduction to Patrolling
- Instructor Development Course: Training the Adult Learner
- Instructor Mentoring Program
- NSP Instructor Skills Review for Continuing Education
- Discipline-Specific Instructor Continuing Education
- Leadership Development Program
- Outdoor Emergency Care (OEC) – Traditional/Hybrid
- OEC challenge course
- OEC modified challenge course
- OEC Refresher
- OEC Enhancement Seminar
- Senior OEC Module
- Outdoor First Care (OFC)
- Outdoor First Care Renewal
- Outdoor Emergency Transportation (OET)
- Snowsports Enhancement Seminar (SES)
- Toboggan Enhancement Seminar (TES)
- Senior OET Skiing or Boarding Module
- Senior OET Toboggan Module
- Ski Trainer's Workshop (STW)
- Toboggan Trainer's Workshop (TTW)
- Transportation Program Continuing Education
- Toboggan Handling refresher
- Nordic Backcountry Skills Course
- Nordic Backcountry Skills Refresher
- Nordic Backcountry Skills Enhancement Seminar
- Nordic Backcountry Ski Enhancement Seminar
- Backcountry Skills for Alpine Patrollers
- Senior Nordic Backcountry Program
- Nordic Backcountry Master's Program
- Patroller Enrichment Seminar (PES)
- Senior Aid Room Management
- Alpine Certified Program

- Avalanche Awareness
- Level 1 Avalanche, module 1
- Level 1 Avalanche, module 2
- Level 1 Avalanche, module 3
- Level 1 Avalanche, module 4
- Level 1 Avalanche, module 5
- Level 2 Avalanche for Rescue Personnel
- Mountain Travel and Rescue (MTR) Fundamentals
- MTR 1
- MTR 2
- MTR Clinic
- MTR Enhancement Seminar
- MTR Refreshers
- Bike Enhancement Seminar
- Bike Fundamentals
- Bike 1 (in development)
- Bike 2 (in development)
- Bike Clinic (future development)

Version History:

Version Number	Version Date
Version 1	June 1999
Version 2	March 2003
Version 3	April 2020
Version 4	May 2020
Version 5	November 2022