

Course Description

Alaska Mountain Instructor Course

Features Of This Course:

- Route length: 70 to 100 miles
- Bear/tundra camping and river crossings
- Glacier travel occurring above and below snow line using snowshoes, crampons, or boots
- Teaching practice and coaching
- Snow, ice, and mountaineering skills development
- Potential for technical peak ascents, snow / ice climbing
- Avalanche assessment skills development
- Alaska natural history classes
- Extensive snow camping
- Potential for cold conditions
- Extended time on glaciers (30% to 60% of course)
- Living and traveling in close quarters
- Average group size: 12 students/3 instructors

Course Purpose and Expectations

The primary purpose of this course is to train and evaluate potential NOLS Instructors. Each student's skills and abilities will be assessed and evaluated by the course instructors in determining their potential as an instructor. We look for initiative, creativity and potential for growth as a wilderness educator.

A NOLS Instructor must be capable of fulfilling a broad range of leadership roles, be a competent and effective teacher, be competent living outdoors for extended periods (up to 30 days) in fair and inclement weather, be an exemplary expedition member, and be able to perceive hazards and manage risk within the context of NOLS risk management strategies.

Aside from evaluations and training, this course will also provide an opportunity to learn new methods, exchange ideas, and experiment with teaching and leading styles. Finding the balance between displaying your abilities and talents and learning new skills will require a commitment to communication. The course instructors will discuss expectations in detail, but it takes ongoing communication from every expedition member for a highly successful learning community on the NOLS Instructor course.

The NOLS Instructor course is a demanding learning experience that includes academic study as well as demonstration of skills. There is little free time. Those who do well bring a positive attitude toward learning and growing, an attitude of respect and support for others, and an attitude of care and enjoyment of the natural environment. Strength, stamina and excellent health are essential for full participation in the numerous classes and activities.

Environment and Route

The Alaska Mountain Instructor course is conducted in May at the beginning of the NOLS Alaska season. The classroom for this course is in the Alaska, Chugach or Wrangell-St. Elias Range, all world famous Alaskan mountain ranges. The final route is chosen shortly before the start of the course. The Alaska Range is in the interior of the state and is the location of some of North America's highest peaks. The Chugach Range is one of the most heavily glaciated mountain ranges in North America. The Wrangell-St Elias Range is in the largest National Park in the United States. The routes are classic for a mountaineering expedition in Alaska—long approaches via large glaciers, potential winter weather conditions, hard work, long days, outstanding scenery and the chance for some technical climbing. These areas are perfect for learning wilderness travel techniques, outdoor living skills, and glacier mountaineering. On this course, you'll develop and refine the teaching and leadership skills needed to prepare you for professional positions at NOLS, starting with wilderness (backpacking) courses and moving towards mountaineering courses, and at other wilderness programs.

Student Independence

On all NOLS courses students will be independent (unaccompanied by instructors) at various times. This will include time in and around camp such as while cooking or performing camp chores. Instructors may allow students to travel away from camp. Students often have independent unsupervised time, usually in town, before and after their course starts.



Independent Student Group Travel

An emphasis of many NOLS courses is the development of skills that permit you to be self-sufficient in remote backcountry areas. Our teaching progression for accomplishing this is carefully planned and executed. Initially travel groups, usually of four to six students, will include an instructor who will teach travel skills and leadership. Gradually, as students gain proficiency, the instructor will allow them to take on more responsibility and make more of the decisions. If they demonstrate the necessary competencies in risk management, outdoor skills and teamwork to the instructors, they may travel in student-led groups without instructors for a day at a time as they hike from camp to camp. We call this daily independent student travel and it is an effective educational tool. It allows students to practice travel skills and leadership and gives them responsibility for the outcome while still having indirect supervision by instructors and the benefit of the NOLS support systems. As students on an instructor course, you will experience the same progression.

As many other courses do, this course may culminate in a Student Expedition. After successful practice with daily independent student travel and if instructors think the group is ready, the instructors will help divide the students into student expedition groups (usually four to six students each). With instructor oversight, each group will then select a leader and carefully plan and execute a multi-day independent student-led expedition. This part of the course builds on the skills they've learned and practiced and allows them to travel without instructors for up to 4 days. Students are aware of where the instructors and the other student groups are planning to travel and camp. Each Student Expedition group will carry an emergency communication device that will allow students to initiate an emergency response in the event of a serious emergency. In most cases students will have a personal locator beacon, but in some situations they will have a satellite phone, cell phone, radio or possibly another type of device. The instructors with a satellite phone, or additional communication capability, may be up to 24 hours away from the students. Our students often say the student expedition was the highlight of their course.

Weather and Other Challenges

Mountain weather is capricious. On any given day, temperatures may range from below freezing to warm. Winter weather conditions are common and can be quite violent. Courses may experience severe wind, snow and rain, or long stretches of sun and blue skies.

Travel in the mountains can be tough. The days are long and the loads heavy. Camping on the glacier involves lots of hard work to prepare a weather-ready camp. You'll be miles from the amenities of civilization. Telephones, ambulances, and hospitals may be several days away.

The course will spend most of the time camping and traveling on snow. But a significant portion will be spent hiking on tundra practicing off-trail navigation or bushwhacking through willows. Bear camping, which requires patience and good communication skills, and river crossings will be discussed and thoroughly practiced. Snow conditions and weather will affect how much mileage can be covered. You will traverse steep slopes of snow, ice, or loose rock, and grunt up heavily crevassed icefalls. But the hard work is worth it. There's nothing quite like installing a snow camp high in the mountains where you can view miles of pristine glaciated wilderness and countless unnamed peaks. It's exhilarating.

Identifying and managing mountain hazards—falling rock, weather, animals, moving water, snow pack, avalanches and steep terrain will be a constant theme in our instruction. Managing risks and assuming responsibility for yourself and your colleagues will help make your expedition in these wild and beautiful mountains healthy and fun.

The Expedition

The Alaska Mountain Instructor course is a self-contained expedition that will be in the mountains on glaciers and tundra for close to thirty days. Re-supplies of food and fuel will be brought to the course by airplane. Throughout the course, students live outdoors, prepare their own meals and care for themselves. The expedition format emphasizes hands-on learning and the application of skills ranging from navigation and hazard evaluation to leadership and teaching. Cooperation and teamwork are a must and all members are expected to participate fully in the daily requirements of living comfortably in the out-of-doors.

Because you'll travel on rope teams and camp within a perimeter while on the glacier, you'll gain much experience with camping and traveling in close quarters. You'll spend time utilizing river crossing and bear camping techniques while hiking across the Alaskan tundra.



Personal Electronics

A key element to a NOLS education is time spent in wilderness. The benefits of this include being closer to nature, time away from society and civilization, and being in an environment where natural forces predominate and students have the opportunity to develop good judgment and practice self-reliance. NOLS does not permit students to use personal cell or satellite phones or other communication devices including personal tracking devices (e.g. SPOT), while in the field. Additionally, students are not permitted to take personal music players (iPods, MP3 players, CD players, etc). Instructors will be carrying sufficient communication equipment (usually a satellite phone) to handle any emergencies that may arise.

The First Days

You'll spend your first two days in town. During this time, you'll be issued equipment, bag food, and pack up while becoming familiar with the NOLS outfitting procedures. There will be time for a course orientation and some fundamental classes. You'll also have some time to research and prepare the classes you will present during the course. The first two nights will be spent camping at the NOLS Alaska facility. Early on the third day you'll head off to the mountains to begin your expedition.

Course Progression

The NOLS Instructor course has a full agenda and the days will be busy with camping, classes and hiking. The course may not hike many miles during the first week in order to allow students to become familiar with the environment and to provide time to cover the many classes that are commonly taught during the first days of a NOLS course. Students are expected to teach classes throughout the course. This student teaching can be time consuming because each class is followed with a feedback session. The pace of the course should pick up after the first week and more emphasis will be on hiking and leading groups.

It is common for the course to spend two or three nights in the same camp to allow for teaching and other activities. Severe weather may also prohibit or limit activities. Being flexible with our schedule will allow us to complete our busy agenda while making the most of experiential opportunities.

Risk management awareness in wilderness situations is a critical element of outdoor leadership. Your instructors will teach most of the risk management-related classes including glacier travel systems, emergency procedures, and ice and snow climbing. Hazard evaluation, accident prevention, group management, first aid, and evacuation procedures are thoroughly discussed and practiced on the course. Students will be evaluated on their first aid skills and knowledge. Practical scenarios will be used during the course. Students must pass the written NOLS Wilderness First Aid test to work at NOLS. This will be administered before leaving for the field.

Snow and ice climbing are important components of the NOLS curriculum and are taught and evaluated on the Alaska Mountain Instructor course. After completing a careful progression of instruction, students are expected to become familiar with managing top rope and rappel sites in diverse mountain settings. Emphasis is placed on rescue procedures and concerns when climbing with students. However, actually climbing specific routes may only make up a small percentage of the course time. It should be remembered that mountain weather may even prevent climbing activities from taking place at all.

The Final Days

On the second to last day the group will be picked up at the road-head and driven back to NOLS Alaska headquarters. After clean up and de-issue of gear are completed, there will be a final dinner and graduation ceremony. On the last day of the course evaluations will be completed and the course will be driven back to Anchorage after dinner.

Student Classes

In the field, you'll be responsible for teaching the basic and advanced classes. Wilderness living skills, travel techniques, natural history, environmental ethics, expedition behavior, and communication/evaluation skills are all important parts of the curriculum. You'll be challenged to experiment with different teaching styles while polishing your skills, judgment, leadership and supervisory abilities. Peer and staff feedback of class content, teaching techniques and effectiveness are essential parts of the learning process.

Topics will be decided before leaving town. Try to select subjects you are already familiar with. Instructors will advise you on content, and the NOLS Staff Library will be available for a short time at the start of your course. You should try to prepare as thoroughly as possible before leaving town. This will help you present classes that are clear, concise and relevant, as well as



effective and fun. NOLS is known for creative and effective use of impromptu teaching aids that can include anatomical diagrams on bodies, "blackboards" on enamel pads, sandbars or models made from snow.

Critiques of classes can help everyone learn about education when done positively and constructively. After some warm-up "mini-classes," feedback may become more formal and possibly begin with a self-critique.

On any NOLS course, the classes support the activities, but the activities are the heart of the course. Instructors constantly adjust plans with changing conditions, especially as "teachable moments" arise. This makes the scheduling of your classes tentative. It also means that NOLS instructors routinely plan for many different alternatives, only using the most fitting ones. It is possible that one or two prepared classes will not even be presented. We hope that you will point out teachable moments as you experience them. Guided discovery is what experiential education is all about. Helping you to develop your skills to both model and guide others in this discovery is what the NOLS instructor course is all about.

Please be prepared to teach any of these basic topics on short notice

- Stove Use and Care
- Pack Packing and Carrying
- First Day Hiking Tips
- Basic Cooking
- Tent and Fly Pitching
- Foot Care and Blister Treatment
- Time Control Planning (Hiking Itineraries)
- *Leave No Trace* Techniques
- Bear Safety
- Basic Map Reading
- Campsite Selection
- Sanitation and Hygiene
- Food Identification
- Keeping Warm and Dry

Expect to teach at least one of these more advanced classes. You can prepare them at the start of your course. Arriving with a basic understanding of the following topics will help you throughout your NOLS experience. Here are a few examples:

- Advanced Cooking and Baking
- Knots
- Compass Use
- Advanced Map Reading
- Wilderness Ethics and Land Use
- Expedition Behavior
- Field Expedient Splints
- Field Expedient Litters
- Environmental Injuries (Cold, Sun)
- Extended Patient Care
- High Altitude Physiology
- Athletic Injuries
- Nutrition
- Ecological Concepts/Topics
- Taxonomy and Flower Keys
- Gender-Specific Medical Concerns
- Fauna/Animal Signs/Tracks
- Weather/Lightning
- Glaciology
- Plate Tectonics/Rocks & Minerals
- Ornithology
- Leadership & Group Dynamics Topics
- Alaska History
- Stove Repair
- Climbing Topics (Ice & Snow)
- Expedition Planning

Expect to also teach a mini-class on a local animal and a local plant (1-5 minutes).

Evaluations and Future Employment

Instructors evaluate students on the following areas: risk management and judgment, teaching, communication, expedition behavior, leadership, conservation practices, mountaineering and outdoor skills. At the conclusion of the course each student receives a written evaluation documenting her or his abilities. Those who complete the course and do well are eligible to work wilderness (*i.e.* non-technical) courses as an instructor at NOLS. Full instructor certification is based on evaluation at the end of the first course as an instructor.

Currently about 80 percent of those passing end up working for NOLS within the first two years, but job opportunities cannot be guaranteed. Availability of work immediately after the AKIC varies from year to year and we will update you on the likelihood of such work as the course date approaches. If work were available, it might be in Alaska or at some other NOLS location. If you work in Alaska and provide receipts for your travel, you would receive a reimbursement of up to \$425 from NOLS Alaska. We will ask you what dates you are available for work before you leave for the field.

While it is possible to qualify for work as a mountaineering instructor during the AKIC, generally less than 25% of AKIC students do so. To work Alaska mountaineering courses, a typical AKIC graduate will need more training—available inexpensively from NOLS. Usually this would occur the following May.

We operate on the premise that there is always more to learn and there are always areas for growth, no matter what the skill level, knowledge or experience. As a result of the course, we expect our students to be competent and responsible wilderness travelers and leaders.

Course Objectives

As an overall course objective, we expect Instructor Course graduates to be capable of responsibly leading groups of novices through educational experiences in the wilderness. Each course will be unique due to variables such as route, group dynamics, fitness levels and environmental conditions. Working with these variables, it is our intent to accomplish the following outcomes.

Risk Management, Judgment and Decision-making

NOLS prepares instructors to teach and practice responsible habits that promote the health and well being of self and others.

Objectives include the ability to:

- Demonstrate knowledge of hazards in the mountain environment.
- Describe and consistently perform specific techniques to reduce or avoid hazards.
- Formulate emergency plans for groups in the outdoors in a variety of settings and circumstances.
- Show ability to provide emergency, and extended medical care, appropriate to a remote wilderness setting using available resources.
- Use experience and judgment to implement sound decisions and follow them through to completion.
- Understand and work within NOLS risk management policies and procedures.

Leadership

At NOLS, we define leadership as “timely, appropriate actions that guide and support your group to set and achieve realistic goals. Great leaders create an environment that inspires individuals and groups to achieve their full potential.” On this course, the emphasis will be on gaining competence as a foundation for leading in the backcountry. We expect each student’s leadership ability to grow by accomplishing the following:

- Gain an understanding of the four types of leadership: self-leadership, active followership, designated leadership and peer leadership.
- Demonstrate a willingness to grow in each of NOLS’ seven leadership skills:
 1. Gain outdoor skills competence and thus be a better leader in the outdoors.
 2. Demonstrate positive expedition behavior, by serving the goals of the group.
 3. Tolerate adversity and uncertainty with a positive attitude.
 4. Actively cultivate your self-awareness as an outdoors person and a leader.
 5. Work to understand the leader’s vision and when appropriate develop your vision as a leader. Follow through with appropriate action to help the group achieve its potential.
 6. Improve your judgment and decision-making skills, learning the pros and cons of various decision-making styles on the continuum between directive and consensus.
 7. Practice effective communication skills from active listening to public speaking.
- Gain understanding of your own signature style of leadership.

Outdoor Skills

Students are expected to live, travel and guide others in the outdoors within a framework of well being and care of the environment. Objectives include the ability to:

- Live comfortably in a mountain environment: camping, cooking and dressing for varied conditions.
- Travel competently in mountain terrain using appropriate off-trail navigation, hazard evaluation, glacier travel techniques and river crossing techniques.
- Demonstrate a thorough understanding of elementary climbing systems including knots, belaying and anchors.
- Set up and supervise top-rope and rappel sites in diverse mountain settings.
 - Experience snow and ice climbing, and non-technical peak ascents.



- Possess skills and knowledge of snow travel techniques.
- Accurately assess skills, strengths and endurance in self and others and conservatively apply those limits to given situations.

Environmental Studies

Students develop awareness of how to apply minimum impact ideas to their lives beyond the course. Objectives include the ability to:

- Consistently practice and teach sound minimum impact living and travel skills.
- Use basic observation and interpretive teaching skills to convey an understanding, appreciation and respect for the natural world.
- Facilitate the transference of wilderness ethics and practices to daily life.

Wilderness Education Skills

The AKIC prepares students to be wilderness educators as well as wilderness leaders. Objectives include the ability to:

- Demonstrate the ability to effectively teach basic outdoor living skills.
- Demonstrate knowledge of environmental and risk management concerns and their influence on learning in the wilderness.
- Be an exemplary model of a responsible and effective wilderness educator.
- Demonstrate motivation and enthusiasm in the pursuit of learning.
- Be effective in presentation and utilization of learning opportunities, adapting to the variables of the course.

Transfer of College Credit

NOLS cannot guarantee that credits from courses are transferable. Transfer of credits is at the discretion of the receiving school and depends on the comparability of curricula and accreditation.

NOLS Instructor Course (IC) Reading List

NOLS instructor courses are stepping-stones for outdoor professionals who already have extensive experience in the terrain and skills of their course. We expect each participant to have a broad experience base and be in shape physically and mentally. Staying well read is a given part of continuing education for any professional. You should already be familiar with many of the titles on this list. We expect you to have a working knowledge of at least one book from each relevant category before beginning your course. Your familiarity with these books can only enhance your experience on your NOLS Instructor Course. Your preparation before the course often determines whether you are learning basic material on your course, or better yet, learning how to teach it. And most of all, we hope you enjoy these books.

Got suggestions? Just email recommended titles to curriculum@nols.edu

Key

* Books we routinely use as references in the field

** NOLS instructor notebooks will be supplied to IC students on specific IC course types.

BSIC= Baja Sailing Instructor Course

KIC= Sea Kayak Instructor Course

RIC-U/Y = River Instructor Course: raft/kayak/canoe in Utah or canoeing in the Yukon

SIC = Summer Instructor Course: the original "IC" has been run in Wyoming's mountains since 1971.

Some of these have a separate climbing camp: some are 35-day expeditions.

ICS = Southwest Instructor Course: a mountain instructor course run in Arizona

AKIC= Alaska Instructor Course: a mountain instructor course with glacier travel but no rock camp

PNIC= Pacific Northwest Instructor Course: a mountain instructor course with glacier travel but no rock camp

Wilderness Education (all ICs)

Drury, Jack, et al (2005). *The Backcountry Classroom (2nd ed.)*.

**Gookin, John (2006). *The NOLS Wilderness Educator Notebook, (10th ed.)*.

Priest, Simon (2005). *Effective Leadership In Adventure Programming (2nd ed.)*.



Risk Management (all ICs) Recommended focus list:

- **Gookin, John (2006). *The NOLS Wilderness Educator Notebook, (10th ed.)*. chapter 11
- **Leemon, Drew & Tod Schimelpfenig (2005). *Risk Management For Outdoor Leaders*.
- Priest, Simon (2005). *Effective Leadership In Adventure Programming (2nd ed.)*. chapter 7

These publications document common accidents and supplement the above comprehensive titles.

- American Caving Accidents* (annual). National Speleological Society.
- Broze, Matt, and George Gronseth (1997). *Sea Kayaker's Deep Trouble*.
- Gonzales, Laurence (2004). *Deep Survival: Who Lives, Who Dies, And Why*.
- Walbridge, Charlie (1996). *The ACA's River Safety Anthology*.
- Williamson, Jed (annual). *Accidents In North American Mountaineering*.

Living in the Wilderness (all ICs)

- *Harvey, Mark (1999) *The NOLS Wilderness Guide*.
- Howley Ryan, Mary (2008) *NOLS Backcountry Nutrition*.
- *Pearson, Claudia (2004). *The NOLS Cookery*.

Minimum Impact Camping (all ICs)

- *Hampton, Bruce, and David Cole (2003). *Soft Paths (3rd ed.)*.
- Harmon, Will (1994). *Wild Country Companion*.
- Hart, John (1998). *Walking Softly in the Wilderness*.
- *Regional Leave No Trace "skills & ethics" booklets www.lnt.org

Climbing & Mountaineering (SIC, ICS, AKIC)

- **Anderson, Dave (2008). *NOLS Rock Climbing Instructor Notebook (4th ed.)*.
- Chouinard, Yvon (1978). *Climbing Ice*.
- Cox, Steven (2003). *Mountaineering: The Freedom of the Hills (7th ed.)*.
- DaSilva, Rachel (1998). *Leading Out: Mountaineering stories of adventurous women*.
- Long, John (2006). *Climbing Anchors, (2nd ed.)*.
- Long, John (2003). *How To Rock Climb (4th ed.)*.
- *Powers, Phil (2008). *NOLS Wilderness Mountaineering (3rd ed.)*
- *Tyson, Andy (2005). *Glacier Mountaineering*.
- Vause, Mikel (2002). *Rock and Roses (2nd ed.)*.

Whitewater Paddling (RIC)

- American Canoe Association (2005). *ACA Instructor's Manual*.
- *Gullion, Laurie (1987). *Canoeing & Kayaking- Instruction Manual*. American Canoe Association.
- Jackson, Eric (1999). Whitewater paddling strokes and concepts. Stackpole.
- Mason, Bill (1999). *The path of the paddle*. Firefly Books.
- Ostis, Nate (2010). *NOLS River Rescue*. PA: Stackpole.
- **Ostis, Nate (2006). *NOLS River Educator Notebook*.
- ACA books: we generally use the ACA curriculum for whitewater instruction (with their blessings).

River Rescue (RIC)

- Ostis, Nate (2010) *NOLS River Rescue Booklet* (in press)
- *Ray, Slim & Les Bechdel (1997). *River Rescue (3rd ed.)*.
- Walbridge, Charlie (1995). *Whitewater Rescue Manual*.

Sea Kayaking (KIC)

- Burch, David (2005). *Fundamentals of Kayak Navigation (4th ed.)*.
- *Dowd, John (2004). *Sea Kayaking- A Manual For Long Distance Touring (5th ed.)*.
- *Hutchinson, Derek (2004). *The Complete Book Of Sea Kayaking (5th ed.)*.



Ince, John, and Hedi Kottner (1992). *Sea Kayaking Canada's West Coast*.
Schumann, Roger & Jan Shriner (2001). *Sea Kayak Rescue*.

Seidman, David (2000). *The Essential Sea Kayaker (2nd ed.)*.

**Smithhammer, Bruce (2005). *The NOLS Sea Kayak Instructor Notebook (2nd ed.)*.

Washburne, Randall (1998). *The Coastal Kayaker's Manual (3rd ed.)*.

Sailing (BSIC)

**NOLS Sailing Instructor Notebook

Fries, Derrick (1997). *Start Sailing Right*. US Sailing Assn.

Rousmaniere, John (1999). *The Annapolis Book of Seamanship (3rd ed.)*.

Seidman, David (1995). *The Complete Sailor: learning the art of sailing*.

Oceanography & Marine Biology (KIC & BSIC)

Carson, Rachel (1998). *The Edge Of The Sea*.

*Fox, William (1992). *At The Sea's Edge: Coastal Oceanography for the Amateur Naturalist*.

Greenlaw, Linda (1999). *The Hungry Ocean*.

Pojar, Jim, and Andy MacKinnon (1994). *Plants of Coastal British Columbia*.

Steinbeck, John (2001). *The Log from the Sea of Cortez*.

Bluewater Expeditions (KIC & BSIC)

Brower, Kenneth (1983). *The Starship and the Canoe*.

Callahan, Steve (2002). *Adrift*.

Fredston, Jill (2001). *Rowing To Latitude*.

Junger, Sebastian (1997). *The Perfect Storm*.

Lansing, Alfred (1999). *Endurance: Shackleton's Incredible Voyage (2nd ed.)*.

Wilderness Medicine (All ICs)

Auerbach, Paul (2007). *Wilderness Medicine: Mgmt of Wilderness and Env. Medicine (5th ed.)*. (reference book)

Forgey, W (1999). *Wilderness Medicine (5th ed.)*

Giesbrecht, Gordon & James Wilkerson (2006). *Hypothermia, Frostbite and Other Cold Injuries. (2nd ed.)*.

*Houston, Charles (2005). *Going Higher: Oxygen, man and mountains (5th ed.)*

Johe, David & Warren Bowman (2002). *Outdoor Emergency Care (4th ed.)*.

*Schimelpfenig, Tod (2006). *NOLS Wilderness Medicine*.

*Schimelpfenig Tod, Padgett Justin. *Wilderness Medicine Field Guide. 2ed Ed 2009*

Setnicka, Tim (1981). *Wilderness Search and Rescue*.

Tilton, Buck (2004). *Wilderness First Responder (2nd ed.)*.

Wilkerson, James A. (2001). *Medicine for Mountaineering (5th ed.)*.

Wildland Ethics (All ICs)

Brower, David (1995). *Let The Mountains Talk, Let The Rivers Run*.

Callicott, J. Baird, and Michael P. Nelson, eds. (1998). *The Great New Wilderness Debate*.

Cordell, HK, et al (2005). *The Multiple Values Of Wilderness*.

**Gookin, John & Darran Wells (2002). *NOLS Environmental Education Notebook*.

*Goodrich, Glenn (2006). *NOLS Wilderness Ethics: Valuing and Managing Wild Places*.

Hendee, John, et al. (1990). *Wilderness Management (2nd ed.)*.

Nash, Roderick (2001). *Wilderness and The American Mind (4th ed.)*.

Oelschlaeger, Max (1993). *The Idea of Wilderness*.

Waterman, Laura & Guy (1993). *Wilderness Ethics: Preserving the Spirit of Wildness*.

The Wilderness Act of 1964 www.wilderness.net/index.cfm?fuse=nlwps&sec=legisact also in Goodrich (2006).

Zaslowky, Dyan (1994). *These American Lands*.



Environmental Studies & Sustainability

Brower, Michael (1998). *The Consumer's Guide To Effective Environmental Choices*.
Edwards, Andres (2005). *The Sustainability Revolution*.
**Gookin, John & Darran Wells (2002). *NOLS Environmental Education Notebook*.
Leopold, Aldo (1966). *Sand County Almanac*.

Light, Andrew & Holmes Ralston, III (2003). *Environmental Ethics*.
Lorbiecki, Marybeth (1996). *Aldo Leopold: A Fierce Green Fire*.
McKenzie-Mohr, Doug (1999). *Fostering sustainable behavior: an introduction to community-based social marketing*.
Miller, Char (2001). *Gifford Pinchot and the Making of Modern Environmentalism*.
Orr, David (2004). *Earth In Mind: On education, environment and the human prospect*.
Reisner, Marc (1993). *Cadillac Desert: The American West and Its Disappearing Water (2nd ed.)*.

Leadership (All ICs)

Bennis, Warren (1985). *Leaders*.
**Gookin, John & Shari Leach (2009). *NOLS Leadership Educator Notebook*.
Graham, John (1997). *Outdoor Leadership: Techniques, Common Sense And Self Confidence*.
Heifetz, Ronald (2002). *Leadership On The Line: Staying Alive Through The Dangers Of Leading*. Harvard Business School.
Huntford, Roland (1986). *The Last Place on Earth*.
Heider, John (1986). *The Tao of Leadership*.
Roberts, Wess and Bill Ross (1995). *Make it So: leadership lessons from Star Trek*.
Roberts, Wess (1990). *Leadership Secrets Of Attila The Hun*.
Siebert, Al (1996). *The Survivor Personality*.
Siebert, Al (2005). *The Resiliency Advantage: Master change, thrive under pressure, and bounce back from setbacks*.
Taylor, Rob (1981). *The Breach*.

Rocky Mountain History (SIC)

Blevins, Winfred (1973). *Give Your Heart to the Hawks*.
DeVoto, Bernard (1947). *Across the Wide Missouri*.
Guthrie, A.B. (1947). *The Big Sky*.

Earth Sciences (All ICs)

Day, John (1998). *A Field Guide To The Atmosphere*.
*Link, Paul (1977). *Geology of the Wind River Range*. NOLS.
McPhee, John (1981). *Basin and Range*.
McPhee, John (1983). *In Suspect Terrain*.
*McPhee, John (1986). *Rising from the Plains*.
Renner, Jeff (2005). *Mountain Weather*.
*Rey, H.A. (1975). *The Stars*.
Woodmency, Jim (1998). *Reading Weather: where will you be when the storm hits?*

Fly Fishing (SIC only)

*Anderson, Sheridan (1978). *Curtis Creek Manifesto*.
Bergman, Ray (1983). *Trout*.
Brooks, Joe (1972). *Trout Fishing*.
Gierach, John (1984). *Fly Fishing the High Country*.

Mountain Expeditions (SIC, ICS, PNIC, AKIC)

Allison, Stacy (1999). *Beyond the limits*.
Blum, Arlene (1998). *Annapurna: A Woman's Place*.
Craig, Robert (1980). *Storm and Sorrow in the High Pamirs*. (Out of print: see Chessler Books or Abebooks).
Davidson, Art (1999). *Minus 148 Degrees*.
Herzog, Maurice (1952). *Annapurna*. (various printings)
Hornbein, Tom (1998). *Everest: The West Ridge*.



Jones, Chris (1997). *Climbing in North America*.
Roberts, David (1986). *Moments of Doubt*.
Roper, Steve (1979). *Fifty Classic Climbs of North America*.
Waterman, Jon (1991). *Surviving Denali (2nd ed.)*
Wilson, Ken (1981). *The Games Climbers Play*.

Flora and Fauna (All ICs)

Colinvaux, Paul (1978). *Why Big Fierce Animals are Rare*. (out of print: see Abebooks)
Ehrlich, Paul (1988). *The Birders Handbook*.
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