

Philmont Advisor's Guide



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PREFACE

Going to Philmont can be the highlight of a young person's Scouting career. However, getting a crew ready to go can sometimes appear to be an overwhelming task for a first time advisor. This guide is written to supplement the information contained in Philmont's *Guidebook to Adventure* and *TREKS Itinerary Guidebook*. Written to reflect the combined training programs of the National Capital Area Council and the Baltimore Area Council, the information contained in this guide can easily be adapted by other councils or troops to assist them in preparing for Philmont or other individual long term backpacking trips. Although the primary pronouns used in this guide are often masculine, we realize that there are many female Philmont participants and staff. It was just easier to write "he" or "she" than "he/she." We present our combined viewpoint on how to prepare for and how to hike and camp while at Philmont. Initial guides merged the lessons learned from our years at Philmont along with the guidance contained in several outstanding resources including the *Boy Scout Fieldbook*, the *Complete Walker IV*, and the *National Outdoor Leadership School's Wilderness Guide*. This Guide and its sources continue to evolve. Despite all of this, you should know that we still argue among ourselves over the finer details of backpacking.

Online resources abound, but your first stop should be the Philmont Scout Ranch website at www.philmontscoutranch.org, where you'll find **official** Philmont info (including the annual *Council & Unit Planning Guide*, *Guidebook to Adventure*, *TREKS Itinerary Guidebook* and itinerary selection). Go to <https://www.youtube.com/channel/UCDWqeLs6b0NZqK9Fw5cUDA> to see training and promotional videos from the official Philmont YouTube channel. *The Philmont Documentary (DVD)* is a collection of Philmont history, plus a taste of an actual trek, at <http://www.toothoftimetraders.com/the-philmont-documentary/pabaidbkjihdijc/product>. "Unofficial" sources are available to get perspectives from other campers. To share online discussions with new and past advisors, subscribe to the Philmont list on USSCOUTS at <http://usscouts.org/lists>. An online trek selection tool, photos and maps are available at www.philsearch.org. Check out the Philmont-specific forum threads on www.backpackinglight.com. Keep in mind that *any* online forum can contain methods and opinions that aren't always consistent with current Philmont practice. The Philmont Advisor's Guide presents current methods accepted at Philmont.

Although purchase of the guide entitles you to only one copy of the document, you can copy it and give to others who may be planning similar activities by sending a \$10.00 check for each copy. The mail-in form plus a PayPal option are available at www.philmontadvisorsguide.com/pag.html.

We also encourage your comments on the contents of this guide. Although we would like to go to Philmont each summer, that is just not possible. Requirements and equipment needs constantly change and we are always receptive to new ideas. Our goal is to keep this guide as current as possible. If your comments are published, you will get to see your name in print along with the guide's other contributors. Please mail your comments and updates to Mimi, who has responsibility as the guide's publisher.

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INTRODUCTION

“You have your way. I have my way. As for the right way, the correct way, and the only way, it does not exist.”

Friedrich Nietzsche

Since the advent of the Philmont Advisor's Guide more than two decades ago, we have advocated adaptability, flexibility, and an open mind to learning. As Leave No Trace techniques, best practices, and backpacking gear evolve, the possibilities for change and choice can seem overwhelming. There is no one right answer, and savvy crews learn to use shakedown and team building to find the best solution to meet the needs of their crew.

This guide was started by Cooper Wright and Wally Feurtado to provide practical assistance to new Philmont advisors, at a time when there were no ready resources like the internet. The guide continues to present the most up-to-date practices in use at Philmont, validated each year by advisors and Philmont staff who contribute to annual edits and updates. It's important to keep in mind that "your way" may not always be "the Philmont way," but all Philmont practices are in place to meet the demands of their specific mission to provide an unforgettable adventure in backpacking to thousands of campers each summer, many of whom arrive with little training or experience. "The Philmont Way" is meant to provide a safe and consistent experience for all campers, and makes it logistically possible for the ranch to continue to function smoothly, hosting over a million campers since its inception in 1939.

The expansion of online resources allows new crews to take a virtual trek, through the pictures and advice of past participants. Philmont forums and bulletin boards promote the sharing of ideas and opinions, where traditionalists and lightpackers can dissect and contrast alternate methods or ounces carried. That said, like guests who respect the house rules of the homes they visit, our crews should arrive at Philmont with open minds, respectful of the methods taught and endorsed by their rangers, as symbols of the fifth point of the Scout Law: A Scout is Courteous.

I hope you enjoy the Philmont Advisor's Guide and find it a useful resource to prepare your crew for their mountaintop experience at Philmont!

Yours in Scouting,



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PHILMONT ADVISOR'S GUIDE

**"[N]o one ever wrote home about the views from Base Camp"
– found on the wall of a latrine at Miner's Park**

BEFORE YOU GO

Physical Training

Philmont is physically demanding, especially for adults. It is absolutely amazing how many advisors go to Philmont expecting that it will be just like another summer camp. What a surprise when they have to come off the trail because they cannot handle Philmont's physical demands. This problem occurs so frequently that one of the responsibilities of your Philmont Ranger is to evaluate the physical conditioning of both you and your crew to determine whether you are able to make the entire trek.

*Many adult advisors coming to Philmont are not adequately prepared for the physical demands of the backcountry and **far too many adult advisors had not exercised at all** prior to their arrival at Philmont.* Current CDC statistics show that approximately 70% of American adults over the age of 20 are overweight; 35% of those are obese. Would you willingly add the comparable weight in rocks to your backpack? Moreover, your heart and lungs now have to oxygenate this extra body mass making you less efficient. The bottom line is that most adults coming to Philmont are already disadvantaged when compared to their Scouts and will need to train even harder for Philmont.

We believe that a three-part physical training program is required to fully prepare for Philmont. The first part is an aerobic program to build up your cardiovascular system. The second part is a strength program to tone those muscle groups that will be used most often, including the body core. The third part is a series of pre-trek hikes to get your feet used to hiking with boots. However, before starting your exercise program, get a copy of BSA's Health & Medical Record form and bring it when you get your physical examination. At that time, review your exercise plan with your doctor.

The first rule in any physical training program is to start slowly and build up your exercise routine. This is hard to do because we remember what we were capable of doing when we were younger and in much better shape. The second rule is to immediately stop exercising if you experience any pain. Philmont suggests that you begin an exercise program at least six months before arrival. We agree, and recommend that you increase your level of training intensity during the last three months.

During the last month before you leave for Philmont, you should try to exercise every day, but include one "active recovery" day each week, exercising below cardio training rates. If your body is only used to exercising every other day, it will begin to anticipate a day to recover. At Philmont, every day is another day on the trail. While it may be easy to hike that first tough day at Philmont, on the very next day, the body seems let down, thinking that it is supposed to get a day off! Usually by day six, you have worked through the soreness and are used to the physical exercise, but the first five days can be rather difficult.

The objective of the aerobic/cardio exercise program is to condition your heart so that it pumps more efficiently. In one minute, with 45 to 50 beats, the heart of a well-conditioned person pumps the same amount of blood as an inactive person's heart pumps in 70 to 75 beats. Compared to a well-conditioned heart, the heart of an inactive person pumps up to 36,000 more times per day!

The American Heart Association (AHA) says that physical exercise is anything that makes you move your body and burn calories, and recommends that adults do the following as part of a healthy lifestyle:

For Overall Cardiovascular Health:

- At least **30 minutes of moderate-intensity** aerobic activity at least **5 days per week for a total of 150**
- OR**
- At least **25 minutes of vigorous** aerobic activity at least **3 days per week for a total of 75 minutes**; or a combination of moderate- and vigorous-intensity aerobic activity
- AND**
- **Moderate- to high-intensity muscle-strengthening activity** at least **2 days per week** for additional health benefits.

For Lowering Blood Pressure and Cholesterol

- An average **40 minutes of moderate- to vigorous-intensity** aerobic activity **3 or 4 times per week**

Moderate-intensity physical activity means working hard enough to raise your heart rate and break a sweat, yet still being able to carry on a conversation. It should be noted that to lose weight or maintain weight loss, 60 to 90 minutes of physical activity may be necessary. The 30-minute recommendation is for the average healthy adult to maintain health and reduce the risk for chronic disease.

Your estimated maximum heart rate is 220 minus your age. Exercising above 75 percent of your maximum heart rate may be too strenuous unless you have been training for several months. Exercising below 60 percent gives your heart and lungs little conditioning. Therefore, the best activity level, better known as your target heart zone, is 60 to 85 percent of your maximum heart rate.

To monitor your heart rate, learn how to take your pulse when you exercise and while you are on the trail at Philmont. Place two fingers on the carotid artery in the groove on either side of the Adam's apple. Count for 6 seconds and multiply the result by 10 giving your heart rate per minute. Should you find that your pulse is too high, slow down to keep within your target heart zone. A Heart Rate Monitor is an excellent way to monitor and track your training efforts. Popular brands include Timex, Polar, and Garmin. You can choose models which offer training plans and download data to your computer too. The most accurate models transmit via a chest strap. Mimi recommends using a coded, water-proof chest strap transmitter, rather than the cloth model that comes with many wrist receivers. This will function better in high moisture (translation: sweat) situations and you can also then use your HRM while swimming if you have a water resistant receiver.

When you begin your exercise program, aim for the lower part of your target zone (60-70 percent) within the first few months. As you get into better shape, gradually build up to the higher part of your target zone (70-80 percent). After 6 months, we encourage that you exercise at 85 percent of your target zone. For example, a 40 year old adult advisor should have an estimated maximum heart rate of $220 - 40 = 180$. If this advisor has just begun his physical training program, his training heart rate should be 108 ($180 \times .60$). If he is in excellent physical condition, he should exercise at a training heart rate of 153 ($180 \times .85$). It is interesting to note that the training heart rate for your average, long legged 16-year-old crewmember ranges from 122 to 173! No wonder why it usually is an adult who is getting a cardiovascular workout while on the trail.

There are lots of aerobic training programs that you can choose from such as running, biking, or swimming. Switching up your cardio activity regularly will keep you motivated. Stair climbing and descending can be a great cardio option for those in office buildings – including with your pack, gradually increasing the number of flights. You should plan to aerobically exercise at least three times a week. It is also important that you try to exercise for a minimum of twenty to thirty minutes, at your training heart rate, increasing as your fitness level develops. You should note that your estimated maximum heart rate and training zone values are only predicted averages that may differ 10 to 15 percent higher or lower depending on your actual fitness level, maximum heart rate and resting heart rate.

Your training zone and maximum heart rate should be items of discussion when you visit your doctor prior to beginning your physical training program. And if you are planning on taking a more strenuous trek, we believe that you should be working out consistently at the higher end of the training zone. Although Philmont's *Guidebook to Adventure* that says to train at the 75% level, we think you will need train at the 85% level to get ready for Philmont's steep climbs. For more information, go to the American Heart Association's (AHA) website, www.heart.org and click on Healthy Lifestyle to find out more information on exercise and fitness as well as suggestions for managing your weight.

The objective of the strength exercise program is to prevent injury and to build or tone muscles so that you will not be sore at Philmont. Leg muscles need to be strong for climbing hills. Muscles around your knees need to be strong for going down hills. It's critical to find a strength program that prevents imbalance in muscles supporting the knees, to prevent common injuries. A physical therapist (physiotherapist) can help determine if you have a muscle imbalance in the muscles supporting the knee and create a personalized exercise program. Imbalance of the quadriceps is common, especially in women. The quadriceps is divided into 4 divisions. If the inner division is weak, the stronger outer division tends to pull the kneecap toward the outer side of the leg. Tightness of the quads can also pull the knee towards one side so stretching as well as strengthening of muscles that support the knee is important. In some cases, the quadriceps is significantly stronger than the hamstrings. (The quadriceps should only be about 25% stronger than the hamstrings). This can cause weakness of the knee. If this is the case, concentrating on strengthening exercises for the hamstrings, and stretching exercises for the quadriceps are very helpful.

Many adults have significantly more problems with the downhill sections. The leg motion required for uphill is substantially different for downhill and stairwells and modest hills don't do enough to strengthen the muscles around the knee required for down hills. A recommended exercise is to stand on a six to eight inch platform and step off with a double stride and bend the opposite knee as low to the floor as possible. Step back up on the platform and alternate by stepping off with the other leg. Increase the number of repetitions and weight. This exercise is recommended by Ed Visteurs, the first American to climb all fourteen of the world's 8,000 meter mountains.

Shoulders and chest need to be toned because the backpack straps rest along those muscle groups. Consider a weight program doing squats, military presses, and calf raises. Joe Flaig suggests one exercise you can do at home by getting a 50-pound bag of sand, dividing it up into smaller bags so it fits better into your backpack. Then go up and down the basement stairs, two at a time. This is very close to going up and down a very steep hill.

The objective of the hiking program is to get your feet used to hiking long distances in boots. One of the questions asked on the TV game show "Family Feud" was "What was the most number of miles you have walked in one day?" The number one response was just two miles! A common ailment of advisors is "Hiker's Ache." The constant pounding that your feet take at Philmont, as a result of back-to-back daily hikes of over 10 miles, can add up and create significant soreness throughout the body the next day.

On one of his early Philmont crews, Wally was sore all over after his first shakedown hike. Three weeks later, after his second shakedown hike, Wally was sore again. He was able to eliminate some of this soreness by taking a series of weekly 10-mile hikes during the final four to six weeks prior to departure. Just like your physical training program, you should also build up your hiking endurance. Spend time in your boots and hiking socks. Cut the lawn in your boots. Walk around the block each night in your boots. Find out where your feet hurt and where you can expect blisters.

When Coop went to Philmont, he always took along a supply of Vitamin I (better known as ibuprofen or "I-B Hurtin"). Taking ibuprofen with breakfast in the morning before each hike and an additional amount with supper at the end of the day helps eliminate some of the soreness. The idea is to get the ibuprofen in your system before you hit the trail each day. Stretching exercises done for five to ten minutes at the end of the day are important to help lessen the soreness and get the body ready to go again. They can also help prevent or reduce injuries to muscles. Stretching cold muscles before exercising can cause injury, but warming up those muscles before exercising, with light exercise, is beneficial.

Wally's program consisted of a 2.5-mile hike with weight loaded in his daypack; stationary bike; and push-ups and leg lifts. Every other day, he added weight work for strength. His goal was to exercise 4 to 6 days a week. If he had to miss a day, he resumed with the aerobic portion of the program and deferred the strength until the next day. Wally used stationary bicycling for an aerobic exercise program because it is a low impact activity and did not stress his knee and ankle joints. It also built his leg strength, which is needed at Philmont. Local garage sales have low mileage bikes for very reasonable prices. Some people hate to use the bike because it is boring. Wally found a way to keep his motivation up while riding. He wrote the word PHILMONT on a large piece of paper and taped it to the front of his bike. As he exercised, he glanced down at the PHILMONT sign to remind him of why he was doing it.

Coop's aerobic training program consists of runs, three to five miles in length, three to four days a week. He varies his runs, adding hills or changing his pace and distance so that it made them more enjoyable. On the days when Coop does not run, he does weight work for strength, concentrating on exercises to strengthen his back, chest and legs. When Coop went to Philmont, he would change his program to focus on hike preparation for the prior month. He loaded his pack with phone books and walked for an hour each day in his hiking boots. This helped get his back muscles and feet used to the amount of weight that he would be carrying on the trail.

Mimi does walking, hiking and lap swimming as her primary cardio workouts, but will also add in gym machines like treadmill, bike, and elliptical in cold or inclement. She switches up her cardio throughout the week, to get maximum benefit and keep her program interesting. Her normal target is a minimum of 60 minutes of cardio, six days a week, but she'll often vary intensity and duration. She does a circuit of weight machines at the gym at least twice a week for strength, and frequently adds in both free weights and callisthenic exercise at home. To prepare for Philmont, she too adds in training with a fully-loaded pack.

If you are a smoker, getting ready for Philmont provides a great opportunity to make the move to quit. Smoking and the use of tobacco products by anyone under age 18 is illegal in the state of New Mexico, and Philmont strongly discourages the use of tobacco products *by anyone*. All buildings, tents, and vehicles at Philmont are smoke-free. There are designated smoking areas for those who smoke. If you are still smoking by the time you arrive at Philmont, the odds are that you will soon have a revelation of biblical proportions. Climbing Mount Phillips or Baldy Mountain can be a significant emotional experience for a smoker. For most, the climb is a rugged challenge, culminating with the reward of panoramic vistas and untold beauty. The heavy smoker however, will spend the majority of the time catching his breath!

At the appendices, we have included a copy of Philmont's suggested six-month physical preparation program. The physical training portion of this program pretty much follows the guidelines that we have outlined above and it makes a good handout when you first meet with your crew. A final word on

physical training: From a practical standpoint, it is probably impossible to over train for Philmont, provided that you do not injure yourself in the process. Adults will, in most cases, need more physical preparation than crewmembers will. You may want to use the Personal Fitness Merit Badge requirements as a training outline and have the entire crew complete it before leaving for Philmont.

If you keep finding reasons for not exercising on a regular basis, do yourself and your crew a favor; rent a beach house and DON'T GO to Philmont. You will become your crew's weakest link and could ruin the Philmont experience for the rest of the crew.

Diet and Weight

As the *Philmont Advisor's Guide* has evolved, so has the strict adherence to the weight policy at Philmont. There have been instances when Philmont had to medevac an extremely overweight advisor out by helicopter from Shaefers Pass because the search and rescue team simply could not carry him out on a litter. As a result of continued incidents like these over the years, Philmont's medical staff has intensified its already very thorough screening process for overweight advisors and crewmembers. Additionally, the cost of dealing with these emergencies places a tremendous burden on the Philmont budget. The Philmont Infirmary says the cost of a single medevac from the backcountry can exceed \$20,000.

One recent year, after an alarming start to the camping season, Mark Anderson, the Director of Program at Philmont, send out a memo with the following advisory to all crew advisors due to arrive:
"Does each participant meet Philmont weight limits for backpacking and hiking? ...During the first 5 days of operation – June 8, June 9, June 10, June 11, June 12 and June 13 – Philmont has sent 16 participants home who did not meet the guidelines. Fourteen were adults and two were youth participants."

It's important to note that upon failing medical re-check, participants are immediately sent directly to transportation, to arrange travel home. It's a mistake to assume that failing medical recheck means that Philmont will let you stay in base camp for ten days or at a Cimarron hotel until your crew comes off the trail. Campers are sent home by the first available transportation option, at their own cost.

The current BSA Annual Health & Medical Record Form, which must be completed by all campers and Philmont staff, is regularly updated and includes a High Adventure Risk Advisory with specific information about Philmont. <http://philmontscout ranch.org/Camping/WhoCanCome/HealthMedicalRequirements.aspx> Physicians/examiners must specifically sign a certification that participants meet the height and weight requirements. In addition, participants, and parents of participants under 18, must now sign off on the following statement:

I understand that, if any information I/we have provided is found to be inaccurate, it may limit and/or eliminate the opportunity for participation in any event or activity. If I am participating at Philmont, Philmont Training Center, Northern Tier, Florida Sea Base, or the Summit Bechtel Reserve, I have also read and understand the supplemental risk advisories, including height and weight requirements and restrictions, and understand that the participant will not be allowed to participate in applicable high-adventure programs if those requirements are not met. The participant has permission to engage in all high-adventure activities described, except as specifically noted by me or the health-care provider. If the participant is under the age of 18, a parent or guardian's signature is required.

At a minimum, all advisors and any crewmembers that appear to be overweight (DESPITE what weight is shown on their medical examination forms) will be weighed in as part of the medical check process at the Philmont Infirmary. Depending on the guideline being imposed by the staff on duty, any individual over the age of 18 could be weighed in addition to anyone appearing to be overweight. Advisors that are over Philmont's maximum acceptance weight (shown below) **will not** be allowed on the trail.

Weight limit guidelines are used because overweight individuals are at a greater risk for heart disease, high blood pressure, stroke, altitude illness, sleep problems, and injury. These guidelines are for all Scouting high-adventure activities. Each participant's weight must be less than the maximum acceptable limit in the weight chart. Participants 21 years and older who exceed the maximum acceptable weight limit for their height at the Philmont medical recheck WILL NOT be permitted to backpack or hike at Philmont. They will be sent home.

For participants under 21 years of age who exceed the maximum weight for height, the Philmont staff will use their judgment to determine if the youth can participate. Philmont will consider up to 20 pounds over the maximum acceptable; however, exceptions are not made automatically and discussion with Philmont in advance is required for any exception. Philmont's telephone number is 575-376-2281.

Due to rescue equipment restrictions and evacuation efforts from remote sites, under no circumstances will any individual weighing more than 295 pounds be permitted to participate in backcountry programs, regardless of height.

The reality is that **the maximum weight contains weights which represent BMIs (Body Mass Index) considered OBESE by medical standards.** Don't target the "maximum" weight unless you really want to hike the trails as an obese person! You will have a much better Philmont experience hiking the trails with a normal BMI and weight.

IMPORTANT: Keep in mind that you can't rely on what happened to someone in the past to happen to you. Don't get your hopes up because you heard an overweight advisor brag that he slipped through the net and didn't get weighed – the chances of that happening are slim. There is a rotating group of medical staff working at Philmont all summer, and each has their own tolerance on this issue. **Your only sure way of passing medical recheck is to meet the published weight guidelines.**

Please review the height/weight requirements with each crewmember early in your crew formation and training process. Mimi warns to be wary of crew members who "forget" or delay turning in their physical forms – it's often a red flag.

If you know that an advisor or one of your crewmembers does not meet the height/weight guidelines, have him put a plan in place to lose the extra weight. He should consult his doctor prior to beginning any diet. If he exercises each day, he will begin to lose weight, even if he does not change his diet. Many hikers who are just ten to twenty pounds overweight will begin to lose weight just by increasing their physical activity through exercise, even if they do not change their diet. The reason is simple. Excess calories are burned up. The weight loss may only be one or two pounds per month, but weight loss will occur. There are excellent websites and smart phone apps that allow you to track your exercise and nutrition, to allow for safe, slow weight loss and a balanced diet. It is always best to choose a program with the approval of your physician.

If a low fat diet was part of your physical training program, you may want to slowly increase your daily fat intake just prior to leaving for Philmont. Wally had a problem one year trying to adapt to the typically high fat meals served while traveling to and on the trails at Philmont. You don't need to be battling your stomach while hiking at 10,000 feet elevation.

Philmont uses the revised Dietary Guidelines for Americans from the U.S. Department of Agriculture and the Department of Health and Human Services (shown below) as their weight guidelines for crewmembers and adult advisors. We encourage advisors and crewmembers to aim for a normal BMI and not the maximum allowable weight.

Philmont Weight Limits for Backpacking (lbs.)

HEIGHT	MAX WEIGHT	HEIGHT	MAX WEIGHT
5' 0"	166	5' 10"	226
5' 1"	172	5' 11"	233
5' 2"	178	6' 0"	239
5' 3"	183	6' 1"	246
5' 4"	189	6' 2"	252
5' 5"	195	6' 3"	260
5' 6"	201	6' 4"	267
5' 7"	207	6' 5"	274
5' 8"	214	6' 6"	281
5' 9"	220	6' 7" & over	295

Mimi reports that each year her contingents ask about participants who fall under the minimum recommended weights. Philmont typically does not enforce a weight minimum, but does monitor the acceptance of underweight participants. Philmont has previously shared the following information with those questioning the participation of underweight individuals:

- *Crew dynamics can be an issue...Scouts will know the value of the Scout and what his strengths are. An issue can arise when others get tired and they are carrying a little more crew and shared gear. We ask that a person carry no more than 25-30% of their body weight. A small person will barely be able to carry his personal gear.*
- *Back problems. Occasionally we have found that a small framed individual has worked through scoliosis or other back issues. We would ask that their doctor is comfortable with them carrying a backpack for 10 days.*
- *Equipment. Finding a backpack that will work with a small frame is easier today than in the past...some of the smaller women's packs work well. The angle of the hip belt will help grip to someone without hips. Taking some of the weight off the shoulders will help reduce the bruising that takes place on the shoulders if all of the weight is carried there.*
- *Enforcing the 25-30% rule. This can be difficult. Most kids will start adding more to their pack each day throughout the trek. The cumulative effect is that they will reach a point where the quality of the experience is diminished.*
- *Physical fitness. It is important that a small participant aggressively get in shape. We sometimes worry about the overweight person and they work hard at exercising and preparing. We may think that a small person is already there. Everyone needs to improve their fitness for the best possible experience.*

Selecting Your Itinerary

The trek selection process was modified significantly for 2010, and crews are required to submit their choices to Philmont via an online system. The former postcard system is no longer used. Although Philmont still publishes the *TREKS Itinerary Guidebook* in paper form and provides to each crew, Philmont also posts all itinerary information online on the Philmont website prior to the itinerary books' arrival in the mail. The online system goes live several days after all crews receive their *TREKS Itinerary Guidebook*, allowing all crews equal opportunity for trek selection. We recommend that you carefully

follow the instructions on the Philmont website and be sure to complete the Itinerary Selection Worksheet provided, well in advance of your selection date. Be patient and flexible, keeping an eye on the Philmont website for the latest information during this process. After their trek selection, crews immediately see the results and subsequently receive their itinerary confirmation by email. Please refer to your *TREKS Itinerary Guidebook* or the Philmont website at <http://www.philmontscoutranch.org> before making your selections.

Program features play a huge role in your crew's trek selection process. On one hand, many advisors feel that "hiking is the program" at Philmont. Make no mistake – selecting the "program" of hiking that matches your crew's interest is extremely important, particularly decisions such as whether to climb Baldy, Mt. Phillips, or hike back into base camp via Tooth Ridge. That said, a more objective view is that you can do a backpacking adventure anywhere. Many locations all over the world have scenic and challenging mountain terrain. It's Philmont's diverse programs and trained backcountry staff that makes Philmont unique. The *Guidebook to Adventure*, and online and hardcopy versions of the *TREKS Itinerary Guidebook* provide extensive information on backcountry programs. In addition, many popular tools exist to help crews come up with their top itinerary choices, the most popular being the online trek selection tool at www.philsearch.org.

The maturity of your crew is another factor that must be considered in trek selection. You do not want to "over trek" by doing more miles than your crew can physically or emotionally handle, thereby missing planned program opportunities. On the other hand, you do not want to "under trek" and wind up spending lots of time in camp when you could have had a chance to see more of Philmont. You should also keep in mind that a unit crew with extensive preparation is typically capable of a more difficult itinerary than a provisional crew that hasn't had the same opportunity to work together in the past.

Before discussing possible trek selections with your crew, assess their abilities and maturity level. It is tough for a fourteen-year-old crewmember to perform his camp chores when he is tired after a long hike or immediately after he wakes up. It can take a new, young crew three to four hours from the time they wake up until they take their first step on the trail. Some crewmembers may suggest that if they wake up before light, they can leave camp by 8 am. This doesn't always work because the more time a crew gets, the more time they may take. Advisors can take charge and kick butt and get the crew out of camp within an hour, but this does not allow the crew leader to perform his function and it just raises the advisor's blood pressure.

With fourteen to fifteen year old crewmembers, you may want to consider a "challenging" trek. Philmont shares that a "*Challenging*" itinerary will allow the crew more time for program. It also allows time to do some interesting side hikes, visit backcountry trading posts, take showers, and just enjoy the solitude of the backcountry trail camps.

With fifteen to sixteen year old crewmembers, a "rugged" trek is often selected. Philmont says that a "*Rugged*" itinerary, although offering more physical challenge, is very enjoyable for a crew that has trained. It also offers a variety of exciting program. Remind the crew that if they take only two hours to get out of camp, they will be able to hike an additional 1 to 2 miles a day.

The *TREKS Itinerary Guidebook* shares that a "*Strenuous*" itinerary is just as it sounds. A great experience for a crew of physically fit, older Scouts, Venturers, and capable adults. More time is devoted to hiking; however, a well prepared crew can still experience several programs. Many seasoned crews who have hiked together several years choose a strenuous itinerary.

Philmont says that a trek rated "*Super Strenuous*" is, by far, the most difficult and, for a small but dedicated group of Philmont crews, the most rewarding! These few itineraries are highlighted by climbing some of Philmont's highest peaks and hiking long days of many miles. These itineraries should only be attempted by older more experienced crews where every person is in exceptional physical condition.

A second factor that should be considered in selecting a trek is scenery. Some areas of Philmont are simply spectacular. Here are Wally and Coop's favorite places to hike:

- a. Fish Camp to Abreu - The trail follows along the south side of the Rayado River canyon where the hiker has continual views of the river and the mountains to the north.
 - b. Ponil, Sioux, and Bent to Pueblano over Wilson Mesa. Several years ago, Wilson Mesa was devastated by a forest fire which destroyed its trees but provided for some exceptional views north into Colorado and west towards Baldy Mountain. The views from Wilson are some of the best in the ranch
 - c. Abreu to Crater Lake via Stonewall Pass - This hike has some special views of the Tooth of Time just outside of Bear Caves camp. Be sure to get out of camp early because this trail is very unsheltered and has no water.
 - d. Miners Park to Shaefers Pass - This trail offers a close up view of the "Grizzly" Tooth.
 - e. Shaefers Pass to the Tooth of Time - The view from Shaefers Peak is outstanding. The path along Tooth Ridge is exceptional, with huge rock outcroppings and great views. The trail between Shaefers Peak and the Tooth is very rocky and you can turn an ankle if you are not careful. Be sure to look to the north and pick out Baldy Mountain. Once past the Tooth, the trail becomes a hot, dusty walk into Base Camp that never seems to end – be sure to have plenty of water. The spring at Shaefers Pass is an unreliable water source so consider eating supper for lunch and fill up all your water containers at North Fork Uracca camp or Clark's Fork camp.
- NOTE: Backpacking at night is prohibited. Hiking at night is discouraged, but there are exceptions such as crews staying in trail camps who come to evening programs in staffed camps such as Pueblano or Cyphers Mine. While many crews try to get to the Tooth of Time for sunrise, this trail can be treacherous in the dark, and due caution should be exercised.
- f. Hidden Valley, Window Rock and Cathedral Rock – This provides exceptional views of the Tooth of Time and base camp. Hidden Valley is a special place, soft and quiet. Ranger Christian Braunlich said, "Hidden Valley is never the same every time I see it."
 - g. Cimarroncito to Sawmill - This path goes through Grouse Canyon and Sawmill Canyon. The views along the canyon walls are outstanding. The section of Grouse Canyon from Ute Gulch commissary to Cimarroncito has some great views too.
 - h. Sawmill to Thunder Ridge - There are some spectacular views of Baldy Mountain, Wheeler Peak (New Mexico's highest mountain), Eagle Nest Lake and Colorado. As you reach tree line at Thunder Ridge, look again to the west for some more great views.
 - i. Thunder Ridge to Comanche Peak - There are several overlooks that offer views of Baldy Mountain and Wheeler Peak to the west. Comanche Peak camp offers an incredible sunrise view.
 - j. Vista Grande to Harlan - This hike takes your crew through two beautiful meadows.
 - k. Harlan to Cimarroncito - Words cannot describe this trail with views of Cathedral Rock, Window Rock and the backside of the Tooth of Time.
 - l. Dan Beard to Bent via Bonita Canyon - The crew should use a hike/rest technique to provide an opportunity to see the view of the canyon. As you get closer to Dan Beard, the tops of the mountains have been burned in past fires.

- m. Indian Writings to Dan Beard - Along the trail, there are several outstanding rock formations. The views north to Little Costilla Mountain are unique. North Ponil Creek where Indian Writings is situated, has experienced flash flooding on occasion, due to the fire damage.
- n. Ponil to Indian Writings - The views from Hart Peak are great, but the view from the top of the canyon leading to Indian Writings is exceptional. See the discussion on flash flooding above.
- o. The High Peaks – Hikes up Baldy Mountain or Mount Phillips are tough, but the struggle is well worth the view. The loop from Baldy Town over Baldy Mountain and through Copper Park is particularly impressive. The hikes up Phillips from the south and up Baldy from the north are particularly tough.
- p. Baldy Skyline to Head of Dean - The new trail provides some exceptional views west to Baldy and Touch Me Not Mountain.
- q. Inspiration Point - Located at the top of Uracca Mesa, Inspiration Point makes another special sunrise spot.
- r. Lover's Leap Turnaround to Lover's Leap Camp – This is a favorite starting hike at Philmont. From Lover's Leap, there are great views of the Tooth of Time.
- s. Rayado River to Lookout Meadow – The hike to Lookout Meadow is strenuous, but well worth the challenge. The day begins with a short walk to Abreu, where the crew can stop and help with morning chores. The hike continues along the Rayado Creek where the trail splits and goes up Bonito Canyon. Once out of the canyon, you will come to a meadow framed by pines and aspens. Depending on the amount of rain, the field may be filled with mountain iris, yarrow, and other wildflowers. Look for deer, bears, elk, and mountain lions here. Once at Lookout Meadow, sit on the grassy reservoir wall at dusk to watch birds swoop up insects while deer come to water. The reservoir may be full of cruddy water, but it can be made potable with MicroPur or a filter/purifier.

A third factor to consider is whether your crew wants to hike over Baldy Mountain or not. Although some feel that the northern part of the ranch is not as scenic as the southern part, Baldy is a big attraction for many crews. It seems like no matter where you hike, Baldy is always in the skyline, offering a constant challenge to those who would hike up its steep slopes. By seeing Baldy at every turn, those crews that are not scheduled to hike over it are constantly reminded of what they missed. Over half of Philmont's treks provide an opportunity for crews to hike over Baldy. There are a number of treks that allow you to climb Baldy Mountain and hike in over the Tooth of Time. These treks are among the most popular and therefore are the most difficult to get as your first choice. There are also treks that begin in the southern part of the ranch, include a side hike over Baldy Mountain, and finish in the northern part. These treks are great because Baldy Mountain gets bigger and bigger and the anticipation grows, as the crew gets closer. However, these treks are usually the most strenuous. Please do not assume that we are promoting the treks that hike over Baldy. On the contrary, hiking in the scenic southern portion with its views from Mount Phillips or Comanche Peak of Baldy and Touch Me Not Mountain is simply spectacular. Choose a trek according to your crew preferences.

When you review the *TREKS Itinerary Guidebook*, there is one final factor that you may want to consider. Hiking into Camping Headquarters over the Tooth of Time can be pretty special. You can't beat the feeling of pride and accomplishment that will be your crew's as they walk the final few miles back into civilization. However, be prepared that the trail from the Tooth is a long, hot, dry walk into Camping Headquarters that sometimes seems to never end. There are also a few itineraries that allow crews to hike up to the Tooth of Time early in the trek.

It is great if your crewmembers can decide on their trek by themselves. However, with thirty-five treks to choose from, this can be a very time consuming process. One method that has worked for many advisors

is to preselect five itineraries that are within the physical and emotional abilities of the entire crew, including the advisors, including the program areas of top interest to the crew, and have the crew rank them. These itineraries are then presented during a crew meeting and the entire crew has a chance to decide what treks to select. Another technique is to use a pre-qualifying paper survey tool. Mimi has used a survey tool with each of her crews, which the crew leader administers, which allows the crew to narrow down the trek selection to the five required, based on key questions and program interests. Sid Covington uses a similar tool. Two of the most popular itinerary choice aids on the web are the great trek selection and comparison tools available at www.philsearch.org, or the matrix available at www.watchu.org. No matter which trek your crew finally decides on, it's going to be great. Remember - there are no bad treks at Philmont!!!

Crew Training

"Train for Day 11, not Day 1"

Crew 506's Motto

The single most important goal for the Philmont advisor is helping the crew pull together as a team. This is especially true for crews made up of Scouts from different troops that have never hiked and camped together before. Advisors need to know the physical and emotional capabilities of each crewmember **BEFORE** they head for Philmont. The way we have found that works best is to have a super active program leading up to your departure to encourage cooperative interaction.

An initial meeting with the crew and their parents should take place as early as October or November. The purpose of this meeting is to review Philmont's "Keys to a Successful Philmont Wilderness Adventure" on YouTube at <https://www.youtube.com/watch?v=1-DEn32Vx4>, discuss equipment needs, go over medical requirements, and discuss emotional problems and learning disabilities. Ask crewmembers to bring their sleeping bag, backpack, and rain gear for your evaluation. You may also want to look at hiking boots. But it is probably too early to buy new ones, especially if a crewmember's feet are still growing. If new equipment is needed, talk with parents about the possibility of getting items for Christmas. New boots should not be purchased until March to provide enough time to break them in while ensuring that they will not be outgrown before leaving for Philmont! Also at this meeting, bring a compass and a map and ask the crew to orient the map. Chances are that the crew will not be able to do this correctly. Other topics that should be discussed include the importance of hiking together, physical training, and mandatory attendance at the training sessions.

Tell the crew about the importance of being physically able to hike at Philmont. A real concern is hypothermia. When it rains at Philmont, the temperature can suddenly drop to 50 degrees or less. If a wind kicks up at the same time, all the ingredients are present for a crewmember to become hypothermic. If the crew can maintain a reasonable pace, it will keep their body heat up. A slower hiker can pose a real medical threat to the rest of the crew. In addition, by day four on the trail, the slower hiker will probably be isolated by the rest of the crew who are by now frustrated from slowing down to meet his pace.

Coop had to deal with an adult in his crew who, for whatever reason, elected not to get into shape. His lack of physical conditioning was readily apparent during each of the crew's early shakedown. Although he was a dedicated Scouter who had been on many troop campouts, he simply was not physically ready for Philmont. Fortunately, he decided on his own, to drop out of the crew. Philmont takes a tough stance of encouraging all crew members to finish their trek, and there is no guarantee that an out of shape hiker will be allowed to come off the trail. Both unfit crew members and the crew need to be aware of this. Having an unfit crewmember, adult or youth can completely demoralize a crew and lessen their Philmont experience.

Finally, remind the crew that training is mandatory. We recognize that there are many demands on a teenager's life, but it is absolutely essential that the crew spends time together, learning the skills they will need while on the trail at Philmont. Remind the crew that the purpose of these training sessions is not just to get in shape or learn how to hike, any more than ball practice is to learn to throw and catch. The purpose of the training is to learn how to work together **as a team** rather than a group of individuals hiking together.

A minimum mandatory training schedule we have used for crews that have never hiked together before is shown below. This is ***the minimum number of shakedowns that would include every single member of the crew*** – no exceptions. Obviously more opportunities to get together increase the crew's opportunity to practice their backcountry skills.

March - Classroom training on the basics of personal and crew gear with an inspection of each crewmember's fully packed backpack.

April - a one-day training session with all personal and crew gear. Pick a location where the crew can hike in one to four miles and completely set up a Philmont style camp. Before hitting the trail, do a complete shakedown of all personal gear. While on the trail, practice terrain awareness and hiking techniques (see On the Trail section). After setting up camp, put up bear bags, purify water, cook a complete meal, and wash dishes. Once the meal is finished, the crew breaks down camp and hikes out. **Note:** It is possible to order food packages from Philmont that contain the same meals that are used on the trail, but you need to plan early and call the Philmont commissary in the fall while supplies are still available. This allows the crew to gain some experience with the Philmont menu and cooking procedures.

This type of session maximizes training without requiring the commitment of a complete weekend. It also provides an opportunity to evaluate map and compass skills as well as to determine which crewmembers are not in shape. Finally, it stresses all the skills that will be needed for the May overnight.

Mid May – 15-20 mile, 2-night shakedown hike with all personal and crew gear. The advisor should make a final determination of those crewmembers (including adults) that are not physically ready for the trail. Holding the shakedown in May provides the opportunity for up to two months of additional physical conditioning before leaving for Philmont.

Four weeks prior to departure - A second 15-20 mile, 2-night shakedown hike with all personal and crew gear. This will be your final opportunity to refine crew operations and practice low impact camping skills, as well as checking out personal and crew equipment. It should also give you a chance to find out which crewmembers haven't been hiking enough in their boots. Those who have spent time in their boots won't get blisters. If a crewmember does get blisters, he will have several weeks to heal before hitting the trail at Philmont and he will know where he needs to apply moleskin for protection.

Two weeks before departure – Ensure that all paperwork including health records, copies of health insurance cards, first aid and CPR certification are turned in. Stop drinking any soda or coffee to wean away from caffeine if you don't plan to carry coffee.

One week before departure - Final backpack and uniform inspection. Every time that this final shakedown is held, it is amazing the amount of personal gear that is still missing. Remind crewmembers to pack their boots or have the entire crew wear their boots to the departure site. This may sound crazy, but on several occasions, boots have been left behind and had to be shipped overnight to Philmont. There are a couple of reasons for this. First, crewmembers typically don't pack boots in their backpacks before going out for a hike. They wear them! Second, trips to Philmont usually depart early in the morning when a teenager's mind is not working on all cylinders and boots are hard to see, sitting on the floor. This is especially true if he has been up all night, doing his final packing. Regardless of what footwear you have on at an airport, it needs to be removed anyway at security, so that isn't a valid excuse. Use the checklist

included in the appendices to ensure that you have everything before you head out the door. This final session is also a good opportunity to answer questions and pass out information to parents.

For crews that have never backpacked together, this training schedule represents the suggested minimum required preparation. Based on your crew's ability, you may elect to modify the number of hikes and meetings shown. Even with an experienced crew, it is still necessary to hold at least one day and one overnight shakedown.

There are several other measures that you can use to help bring your crew together. The first is the 50 Miler Award. All treks at Philmont have sufficient mileage to qualify your crew for the 50 Miler Award. However, the three hours of conservation work performed by each crew at Philmont is seven hours short of the ten hours needed for the award. This means that your crew will have to complete these hours of service work at home. There are numerous acceptable projects available at the local national, state, and county parks. This work is an excellent way to build crew camaraderie and provides service time for those crewmembers needing it for advancement. If you finish the seven additional hours of conservation work before you leave, you can present your crew with the 50 Miler Award when they come off the trail at Philmont; a nice touch.

The second measure is merit badge advancement or work on Venturing requirements. Unlike other summer camps, Philmont does not offer merit badges. However, by planning ahead, every crewmember should be able to earn Backpacking Merit Badge, especially if the crew is doing a higher numbered itinerary and it takes two or more shakedown hikes prior to leaving for Philmont. There will be many opportunities both during travel and on the trail at Philmont to teach and test crewmembers on their knowledge gained. The crew may also want to consider earning Hiking Merit Badge and doing some preliminary work on Astronomy Merit Badge. You can't beat Philmont's night skies (for those that can stay up that late) for stargazing. The use of Personal Fitness Merit Badge as a means to improve the overall physical stamina of the crew was discussed earlier.

The third measure is to have the crewmembers complete the Leave No Trace (LNT) Awareness Award as part of their pre-trek training. Boy Scouts of America and Philmont have adopted the LNT principles as the means to instill an awareness of minimum impact backcountry camping and hiking skills. Excellent training materials for crews are available at www.lnt.org. Be sure to practice LNT during your shakedown hikes and while on the trail at Philmont. Better yet, take LNT back to your troop and make it a part of their camping practices.

Walter Underwood's crew used Wilderness First Aid training as a team-building activity, as the work in scenarios requires intense cooperation and decision-making exercises – perfect for crew development. They found that WFA training gave all crew members a more mature outlook on risk.

Denise Vowell suggests two excellent ways to enhance team development with the crew. If your council or local park or school systems has a C.O.P.E. or similar ropes and challenge course, it's a great way to assess leadership skills – and you can often see a clear indication of your likely crew leader, based on crew dynamics during the exercises. Mimi concurs, and used C.O.P.E. as a method to introduce and merge her diverse provisional crew. A second great opportunity is an orienteering course, performed with backpacks and boots. Denise says this is especially useful to crews going into the Valle Vidal. It can be an early event, allowing advisors to assess pack fit and footwear choices, in addition to map reading skills. Denise's ranger commented that they were the only crew she had all summer that was able to orient the map correctly at the bus drop off.

The final measure is to develop your own crew T-shirt. A crew T-shirt helps to build crew unity and does wonders for crew dynamics. It lets other people at Philmont know where you are from. We have seen some really great crew T-shirts, some of which are pretty funny. Gather your crew up and let their creative juices flow. Coop's crews' T-shirt became the uniform of the day as soon as Class A uniform

shirts came off. The crew wore their T-shirts everywhere while in Base Camp. It also became their in-camp T-shirt while on the trail. Coop provided each crewmember with two T-shirts and gave a T-shirt to his council contingent planner and Ranger. Denise Vowell's crew also gave out two short sleeve shirts as part of the crew cost, and encouraged, but did not mandate their use on the trail at Philmont. She said they may get scarred, but that's part of the post-Philmont charm! Her crews have used puff paint, silk screening, and most recently laser printer iron-on sheets, printing their own design. She recommends checking Campmor's discount pages for cheap shirt options.

Troy Hayes' crews took crew shirts to another level. They bought CoolMax T-shirts from Campmor and then had a local silk screener apply their crew logo. A word of caution however: Some synthetic T-shirts do not hold ink well, so check with your shirt logo/design imprint vendor and be sure to buy an extra for him to experiment with. "Wicking" type T-shirts have become more common and most vendors are prepared to deal with them. You can also order crew T-shirts from Philmont, which will be customized for your own crew. Information for ordering is included in packets received by each crew well in advance of arrival. Mike Earp's Baltimore crew used the Philmont wicking tees with great results and highly recommends them. Shirts from the authorized scout vendor "Class B" (www.classb.com) have also taken off in popularity, and provide a high degree of customization and huge array of design and color choices. Mimi's crew was really happy with their Class B Philmont shirts, which depicted the map of their itinerary from the TREKS book and a crew roster, ordered in two colors. The crew used their orange shirt as a sleep shirt, keeping it clean, and hiked back into basecamp with matching clean shirts on the last morning.

If your crew leader has not been predetermined, then sometime during the early stages of your crew training program, you should elect (or in rare cases select) the Crew Leader, the Chaplain's Aide ("second in command") and the Wilderness Pledge Guide – the three members of the crew leadership team. One method we have used is to hold the election of the crew leader AFTER the first or second shakedown. For crews that haven't camped together before, doing this allows the crew to "test drive" its leader before finally selecting one. We also encourage designating a crew quartermaster to be responsible for the crew's equipment.

The crew training that has been outlined above provides an excellent opportunity to establish the crew leader's authority and let him grow into his job. We also believe that you need to have a specific training session for your crew leader and his assistant to review leadership styles as well as their roles and responsibilities in assisting you in getting the crew ready to go to Philmont. Some excellent resources are *National Youth Leadership Training*, *Outdoor Leadership* by John Graham, Mountaineers Books and *AMC Guide to Outdoor Leadership* by Alex Kosseff, Appalachian Mountain Club Books. Both are available on Amazon in hard copy or for Kindle. A crew leader's orientation, prepared by the Philmont staff, is distributed with the *TREKS Itinerary Guidebook* packet. It is another excellent handout for your crew leader and provides some discussion points that should be included as part of your Philmont training program. Walter Underwood suggests the BSA Patrol Leader's Handbook as a great resource for leadership techniques for crew youth.

First Aid and CPR Certification

Philmont requires that at least two people in each crew to be certified in American Red Cross Wilderness First Aid or equivalent, and CPR from the American Heart Association, the American Red Cross or the equivalent. Wilderness First Aid is the assessment of and treatment given to an ill or injured person in a remote environment where definitive care of a physician and/or rapid transport is not readily available. Wilderness First Aid training is a sixteen hour course. Several hours may be required for Philmont staff to reach a remote backcountry location after a message is delivered to the nearest staffed camp. Wilderness First Aid and CPR training will result in proper and prompt attention being given to injuries and/or

illnesses. **You must present current certification cards for both WFA and CPR upon check in to verify this requirement.**

Equivalent Wilderness First Aid (WFA) training can be obtained from nationally-recognized organizations. For the most up-to-date list, check the appendix of the *TREKS Itinerary Guidebook*.

Philmont encourages each crew to have at least two people trained in Wilderness First Aid or the equivalent. However, Philmont will accept the following advance levels of training and a copy of the license or certification must be shared with Philmont during the registration process:

- Wilderness First Responder (72 hour course)
- Outdoor Emergency Care
- EMT - Basic, Intermediate, Paramedic
- Military Corpsman or Medic
- Registered Nurse
- Licensed Nurse Practitioner (LPN)
- Licensed Physician Assistant
- Licensed Physician - MD (Medical Doctor) or DO (Doctor of Osteopathy)

Note: For medical professionals licensed in states other than New Mexico, the professional should check with Philmont Infirmary staff on what procedures they can legally conduct in the backcountry.

The Boy Scouts of America and the American Red Cross have a national agreement, the primary goal of which is to help councils (with their districts and units) become self-sufficient teaching Red Cross courses, including First Aid. *Wilderness First Aid* is specified in the agreement. Through this agreement a local council can coordinate training of American Red Cross courses by providing BSA volunteers who are certified to instruct the course by the American Red Cross. The fees for the course taught by the BSA volunteers are dramatically reduced and include a \$5.00 administrative fee and the cost of materials. Visit with your council service center for more information about the American Red Cross National Agreement.

Philmont is a great excuse to try and get everyone in the crew trained, so try and set up a group session for the whole crew and use it for team development. Several hours may be required for a Philmont medical staff member to reach a remote backcountry location. First Aid and CPR training will enable you to give proper and prompt treatment to injuries or illness until more skilled medical help can arrive.

Do not arrive at Philmont without your certification cards or without two members of your crew meeting the WFA and CPR requirements. Contrary to urban legend, there is no "quick fix" available at Philmont if a crew shows up without proper training, either in terms of a shortened substitute course, or the automatic assumption that the crew can "rent-a-ranger" (considered a derogatory term) who has the proper first aid credentials to make up for their own lack of preparation.

Medical Preconditions

The Philmont medical form, the *Guidebook to Adventure*, and this guide all make it a point to identify and discuss the very real risks involved in participation at Philmont and the medical preconditions that could elevate these risks. All potential Philmont participants, their parents and **their physicians** need to be aware of these risks to better evaluate their ability to participate in light of their particular health history and medical preconditions.

Philmont is a big place and it could take several hours to get help in the event of a medical emergency. You do not want to be faced with a medical situation that could have been prevented with a little foresight and preparation. Philmont is extremely tough on letting people into the backcountry with

medical preconditions. Crewmembers with high blood pressure, insulin-dependent diabetes mellitus, seizures, asthma or who must carry special medications will come under particularly intense screening during the medical recheck that is conducted during your in processing activities at Philmont.

One year it took Coop's crew almost two hours to clear the Philmont Infirmary because one crewmember had a record of asthma attacks that occurred several years before. Although this crewmember brought an inhalator with him, he was required to buy two more that were to be carried by his tent buddy and an advisor. Mimi had a similar experience with a youth in her Venturing crew, who had brought an expired inhaler for her asthma. This prolonged the health check for thirty minutes, and the young lady was also required to purchase an additional inhaler.

It is imperative that you are aware of existing medical preconditions for all of your crew (including the adults). If you are not sure whether a medical precondition will keep a member of your crew off of the trail, have that person send his/her complete medical records to Philmont early and let Philmont decide. One year, Coop had two of his crewmembers send their records to Philmont six months ahead of time, when there were medical issues. Ultimately, one crewmember had to be dropped as result of this early screening.

While at Philmont (and when on your training hikes before Philmont), it is important that the entire crew be made aware of any known medical preconditions, so if something should happen on the trail, they can be prepared. T.W. Cook had a crewmember with medication-controlled epilepsy who had been seizure free for over a year as required by Philmont. He had his doctor contact Philmont well in advance to ensure that they had all the information they needed. Because of this, his medical re-check was very straightforward. However, later on the trail, he had dehydration problems because neither he nor Philmont realized that his seizure medication was a diuretic.

Denise Vowell took a youth with Type 1 (insulin dependent) diabetes, and stresses that it's imperative that Scouts work with their doctor and nutritionist to account for the effects of vigorous physical activity on insulin usage. Their crew kept "Gu" and a tube of frosting and a peanut butter granola bar in the oops bag at all times. The Scout's tent mate was educated in signs of diabetic distress at night, to assist in getting the Scout what was needed. The Scout learned what was needed to maintain the correct blood sugar level early in the trek.

Sleep apnea has become one of the red flags triggering increased scrutiny for high adventure participation. Most individuals (likely advisors) who have been diagnosed with sleep apnea use their CPAP machine at home and just "tough it out" at Philmont. After taking this approach in the past, Denise Vowell had her doctor prescribe a dental appliance for her trek. Although it doesn't work as well as a CPAP, it does not require any electricity. Denise noted that it made sleeping on her most recent trek much more restful than in previous years. The devices are not cheap, and Denise cautions to make sure to practice with the appliance long before Philmont. She found that it took several months of intermittent use before she could make it through an entire night of use, but the reward was that at Philmont (and enroute) she slept just fine with it. Physician Jonathan Hall shared that Provent is a type of nasal valve attached to an adhesive that you place over each nostril at night time. He shared a tent with another adult leader who also had sleep apnea and also tried the Provent. Both agreed it was a little better than nothing, but not as good as the CPAP machine.

Another area that needs to be discussed with parents is who has the responsibility to ensure that youth crewmembers are taking their prescribed medications. Philmont's policy is that all crewmembers are responsible for taking their own medication, but you may choose to handle this differently in your own crew, depending on the maturity of your crewmembers. There are three ways to handle this problem: the advisor holds and dispenses the meds; the youth member holds and dispenses the meds; or the youth member holds the meds and takes them in the presence of the advisor. Denise Vowell recommends a fourth method – making Scouts accountable for their meds, per Philmont guidelines, but announcing a

morning and evening "med call." Fatigue, weather conditions, and long days can disrupt a med schedule and possibly cause a condition that forces a crewmember off the trail. We strongly recommend that you discuss this topic with the parents and the crewmember involved, even before you take your first shakedown hike.

A final point to remember: If you have a crewmember that has to take meds and comes off the trail, there is NO ONE back in base camp (including the Philmont Infirmary) that will be there to ensure that the meds are taken! This turned out to be a major problem for one contingent when a youth who returned to base camp failed to take his meds required to stabilize his mental health.

Special Dietary Requirements

Philmont trail food is by necessity a high-carbohydrate, high-caloric diet. It is high in wheat, milk products, sugar and corn syrup, and artificial coloring/flavoring. If an individual in your crew is allergic to some food products or requires a special diet, suitable food must be purchased at home and brought to Philmont. Philmont asks that food substitutions be made only for medical (including allergies) or religious reasons. All food shipped to the backcountry is subject to inspection to insure the best delivery method. There is no fee reduction for individuals who bring their own food. Individuals with potentially several reactions from cross-contamination may consider bringing a personal integrated cooking system to boil their own water.

If replacement food is required, go to the Philmont website and find the menu and ingredients list at <http://www.philmontscoutranch.org/Camping/Hikers/Dining.aspx>. All the meals are numbered from 1 to 10. Review this list and determine which meals would cause a problem and prepare a substitute for that meal (i.e., Supper 5). When putting the substitute together, keep in mind that Philmont participants need approximately 3,000 calories a day. Package this/these meals individually and label them with your Expedition Number, the person's name, and the meal ("Supper 5"). Do this for all meals that need to be substituted.

After the crew has completed trip planning, your crew's Ranger, the Crew Leader, and individual(s) needing the substitute food should bring the food and the crew's "Advanced Crew Leader Copy" to Logistics. The Logistics staff will then group the meals by backcountry commissary and will arrange for them to be delivered to that commissary so they will be there when the crew makes its regular food pickup. The key thing to be sure of is that they are clearly labeled as above.

Appropriate substitutions can be arranged for food served in the dining hall by speaking with the dining hall manager upon your arrival at Philmont.

If you have any questions about food substitutions, please contact Philmont by telephone at (575-376-2281) or email at camping@philmontscoutranch.org. The menu and ingredient list for the summer is usually available in April before the summer.

Emotional Problems and Learning Disabilities

Advisors should review individually with parents any emotional problems or learning difficulties, including Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD), that their child may have. We know that Philmont can be a significant emotional and physical experience in the life of a crewmember. It is therefore important to stress to parents that you will be acting as their surrogate for a two-week period and that any information they share with you will remain strictly confidential. Although the Philmont medical form should contain all medications that are to be taken, some parents are reluctant to indicate that their child is taking something to help control his or her behavior. Coop had a crewmember try to hit another crewmember with a shovel when he became emotionally stressed out.

Fortunately, he was able to grab the shovel before anyone was hurt and calmed him down. After the incident, Coop found out that the crewmember was on medication for an emotional problem and that he had simply forgotten to take it.

On one of Wally's treks, a crewmember with a learning disability needed to have instructions repeated three or four times until his brain made the connection. Although the crewmember was really bright, it took repetition for him to completely understand instructions. When his crew went spar poling, Wally advised the backcountry staff and they provided extra help to successfully guide the crewmember up the pole. The same was true for rock climbing. In addition, when this crewmember was given instructions by other crewmembers that did not know of his learning disability, Wally would step in and calmly repeat the instructions to prevent the crew from becoming frustrated. Advisors, please talk to the parents of your crewmembers concerning any special situations that you should be aware of before you leave home.

Removal of a Crewmember

Removing an adult or youth crewmember is, by far, the most difficult issue that a lead advisor may face in the months leading up to Philmont. There are so many factors involved with the removal of a crewmember that it can become an extremely difficult and emotional issue for all involved to resolve. Unfortunately, what most often happens is that the lead advisor chooses to ignore the situation in the hope that things will improve prior to going to Philmont or while on the trail. Most experienced advisors have seen instances where the behavior of a single crewmember ruined the entire Philmont experience for the rest of the crew.

The most common reason for removing a crewmember is that they are not in shape. The second most common reason is that they lack the emotional maturity to take care of themselves and to work cooperatively as a crewmember. Denise Vowell had a Scout who fit both these criteria and had neither the stamina nor maturity to participate in a trek. In later years, the Scout successfully completed a strenuous trek and subsequently participated in a second trek as Chaplain's Aide.

Wally's presentation on "When is a Scout ready for Philmont?" states "The Scout must be willing to do his job correctly without being repeatedly reminded." It is certainly interesting to note that both of these issues should have been uncovered during the crew's scheduled shakedown. However, as it usually turns out, the problem crewmember is usually the one who, for whatever reason, keeps missing crew training sessions and shakedowns. As a result, he or she becomes an unknown quantity when it comes to physical conditioning and emotional maturity.

The situation is further compounded by the fact that by the time the problem is uncovered, the crewmember may have already spent considerable funds to participate and getting refunds from Philmont and your local council may be impossible. Therefore it's best to level with parents about your reasons why their teen isn't ready for Philmont. Denise Vowell suggests that they are probably aware of the same issues that you've noticed on shakedowns. Doing this early in the process minimizes the financial impact.

The best method we have found is to communicate your expectations for all crewmembers and their parents very early in the planning process. Some experienced advisors, like Dr. Bob Klein, even use a written contract outlining their trek expectations that must be signed by each crewmember. Included in your expectations should be the following:

- No crewmember can be a hypothermia risk to the other crewmembers. When it rains at Philmont, the temperature can drop into the 40s and 50s and the wind picks up, all hypothermia conditions are present. On the trail, crewmembers must be physically able to sustain a reasonable pace to keep generating heat.

- Crewmembers must participate in a pre-set minimum number of shakedown hikes and training sessions. If a crewmember misses a shakedown hike or training session, he or she should work with the advisor to get the needed training or take an additional hike.
- Crewmembers must be willing to perform their assigned in-camp tasks, without advisor intervention. Less emotionally mature crewmembers, when they are tired, have a tendency to shirk their tasks. This means that other crewmembers have to pick up their load, creating tension within the crew.
- Crewmember must have the maturity to stay hydrated, eat the Philmont-supplied food, keep clean and take their personal medications while in the backcountry. On weekend shakedowns, not drinking or eating enough, not keeping clean, or missing personal medications may not cause an immediate problem. At Philmont, with a longer duration on the trail, failure of crewmembers to take care of themselves can have a cumulative effect, thereby impacting the entire crew.

Walter Underwood took Wally's advice presented in the Philmont Advisor Guide and removed a crew member who would not complete his assigned tasks or get out of bed for breakfast without prodding by an adult, and also violated a cliff warning sign. Taken together, it was a shakedown red flag that he wasn't ready for a 50 mile mountain trek that year. As an advisor, you may be faced with a similar situation involving a crewmember early in your crew development process. Always remember that your first responsibility is to the crew and not to an individual crewmember. You must step in early and talk to the problem crewmember along with his or her parents. We recognize that parents love their children and they may be the ones who are putting their son or daughter in a situation that they are physically and emotionally unable to handle. Making the tough decision to remove a crewmember may cause hard feelings between the advisor and the crewmember and his family. However, in the end, the crew will realize that the right decision was made and will become an even stronger group on the trail.

The problem is further compounded after you arrive at Philmont and you have a crewmember that suddenly decides on Day 4 or 5 that he or she no longer wants to stay on the trail. Philmont does not have a procedure to handle this type of situation. Hikers will ONLY be taken off the trail if the Philmont Infirmary deems that they have a medical emergency or if there is a major family difficulty back home. Basically, you and your crew are stuck with this person. Some hikers have made the situation even worse by sulking, intentionally injuring themselves, walking at a slow pace causing the crew to miss program and arrive late in camp or refusing to carry their share of the crew gear. The only thing you can do is keep pushing and prodding the hiker on and try to ensure that the rest of the crew does not fall apart as a result. You may have to unload his pack and have other crewmembers carry his gear, but the hiker is not coming off the trail!

Stephen Braunlich, Crew 1519's second Ranger, recounted the following incident. An advisor's son, who did not want to be at Philmont in the first place, developed a clique of others in his crew who, like him, did not want to be on the trail either. This group of four was able to convince two more easily manipulated members of the crew to join them. While camped at Uracca Mesa, one of the group figured out that if the crew committed a serious bear violation, they would be taken off the trail and sent home. That evening, they buried two un-eaten pilot biscuits. Although this violation was discovered before anything happened, these young men had endangered their crew as well as the other crews camping in the area. They also could have caused the death of a bear. These four young men who did not want to be at Philmont should have been discovered earlier during pre-trek training and made to stay home, even though their parents wanted them to go.

Crew Equipment

There is an ongoing debate as to whether to bring equipment from home or use Philmont's. There are pros and cons. The most viable reason for considering bringing your own gear is that your crew will have an opportunity to become familiar with it during your shakedown hikes. Bringing your own equipment means that you don't have to return it back to Services, which saves time when your trek is over. Every pot must be scrubbed and all tents must be dried and inspected. This is not to say that if you use your own equipment that you can skip this part, but it allows you to bypass the lines of other crews waiting to turn in their borrowed equipment.

There are also advantages to using Philmont equipment. Using one of the newer Philmont tents ensures that you'll have a tent which has been inspected, is missing no parts, and hasn't harbored Cheetos and candy on a troop camping trip. Philmont equipment precisely matches the recommended crew equipment needs of any crew. Mimi recommends using Philmont's bear ropes, sump strainer, and spatula, even if you are bringing other crew equipment from home.

Tents

Philmont requires everyone to sleep in a tent. The most recent version of the Philmont *Guidebook to Adventure* states "Due to the terrain, wildlife, and sudden change in weather conditions, tents are a required shelter for a Philmont trek and therefore all crew members are required to sleep in a tent. Bivy sacks are not acceptable."

Sleeping out underneath the stars or in bivy sacks is not allowed in keeping with Philmont's bear protocols and rodent hantavirus concerns. You don't want a foraging bear to think that you are a log at night and roll you over looking for grubs. Hammocks are not allowed since their use by campers over a summer has been shown to damage the trees. Philmont policy previously required enclosed tents with floors, but currently leaves that undefined in the *Guidebook to Adventure*. Walter Underwood shared that his units' crew successfully used floorless, lightweight tents with separate ground cloths. As with any experiences we recount that differ from published policy, you cannot assume that you'll have the same experience when you bring your own crew tents.

Philmont prefers two people per tent but will allow individuals to sleep alone in one or two person tents if there are an odd number of adults or youth. Two people to a tent make more efficient use of limited camping area and LNT – two one-person tents take up almost twice the site space as one two-person tent. We feel that youth should be paired in tents whenever possible and that advisors need to make a personal decision as to their own tenting but encouraged to share tenting. Be advised that some advisors have reported that their ranger requested two same-gender adults to share a tent instead of packing their own, to limit impact, although Rangers do not dictate policy

According to the *Guidebook to Adventure*, "If you choose to provide your own tent it must be a two person tent and free of all food smells." Mimi and Coop feel that youth should not be alone in a tent and in the cases of odd numbers, should sleep in three person tents. Mimi has successfully used three person tents for three youth with no resistance from rangers on all her treks with odd numbers of youth. Use of a three person tent should never be done for the purpose of roominess. Your ranger may provide alternate recommendations but should not approve/disapprove tenting arrangements.

If you do decide to bring your own tents, make sure that they are meticulously clean. This is especially true if you are using a troop tent. Who knows how many Hostess Twinkies, candy bars, and peanut butter and jelly sandwiches have been consumed inside! Bears and other animals at Philmont will be attracted to food odors on your tent. If your tents have never been washed before, sponge them out with warm water and a mild soap several months before you leave for Philmont. Be sure to check manufacturer instructions first to ensure that the waterproof qualities of the fabric will not be impacted.

Non-scented soaps for washing clothes are available from stores that sell hunting supplies. When the tents have been washed and dried, it is a good idea to reseal all the seams to eliminate leaks. After everything is done, we keep them with the crew until we go to Philmont to ensure that they do not get re-contaminated with food odors.

Until 2012, the only tent issued by Philmont was the BSA Philmont Backpacker tent. This two-man tent weighed 6 lb. 3 oz. In late June 2012, Philmont piloted the use of proprietary tents manufactured for Philmont by MSR. These free-standing tents, called the "Thunder Ridge," are based on popular MSR designs and weigh about 5 lb. 13 oz. fully packed and require 6-8 stakes (far less than their predecessor). They are green and have the "bearmuda triangle" emblazoned on the floor and the Philmont Wilderness Pledge and the LNT principles sewed into the pockets. Ranger Rick Gibbs says that the tent feedback from campers and staff has been great. Logistics Manager Sid Covington said that the design held up well to the rigors of Philmont camping.

The Thunder Ridge tents are now assigned to crews, and the older Backpacker tents are used for overflow purposes or early arrival crews who are set up in the meadow. Sid recommends that contingent crews use Philmont's tents, saying that they are often cleaner and often no heavier than personal tents, and new enough that water proofing isn't an issue. Sid says that Philmont sends huge numbers of Philtents to the backcountry to replace personal tents that die during a trek, and if it rains toward the end of the trek, it's lots better to give the wet tent to Services than have it mildew all the way home! MSR updated the original 2012 Thunder Ridge design based on feedback and the latest version of the tent worked even better than the original.

Sid Covington recommends bringing an extra stuff sack that can be used by tent mates to divide the tent. One crewmember can carry the tent itself in its stuff sack, the other can carry the rain fly, ground cloth, poles, and pins or some other combination that allows them to equitably split the weight.

If bringing your own tents, they need to be waterproof. Test this by setting up the tent under a lawn sprinkler. If they leak, reseal and re-tape all seams. On the trail is the wrong time to find out that things leak.

- Ground sheet: Tents need a ground sheet. Coated nylon and heavy-duty plastic work fine. For Philmont tents, the footprint should be 5'-6" by 7'-6." DuPont Tyvek, makes an excellent footprint and is lighter than plastic. Sid Covington recommends running Tyvek through the washing machine before leaving home to make it softer and quieter. Carol Rodgers buys 3 mil plastic sheeting at Home Depot and makes several ground sheets per roll.
- Tent Pegs: The ground at Philmont is rocky and hard. Tent pegs must be able to take a pounding without bending. The metal tent pegs that typically come with tents bend. A stronger tent peg is needed. One recommendation is 7 inch aluminum gutter nails. Gutter nails can be purchased at hardware stores, but are getting more difficult to find. The big box home centers (such as Home Depot) typically sell them with ferrules, and thus are probably more expensive. A local lumberyard will probably sell them cheaper without ferrules. Roy Fisher's crew found that a box of 500 gutter nails was cheaper than buying the necessary number of tent stakes and they had enough to handle future treks. Walter Underwood's crew found that titanium skewer stakes were perfect for Philmont, although costly. These stakes can penetrate hard soil or snake between rocks. They also brought several fat Easton aluminum stakes for soft spots. His crew painted the tops of their stakes with orange nail polish to make them easier to locate in the grass if dropped. Mimi recommends that you always bring a few extra tent pegs, regardless of how easily they can be identified, because you just never know when they'll go flying off during a storm, or be left in a dark campsite.

Philmont does not issue any tent or tarp pegs, so "Be Prepared." The *Guidebook to Adventure* lists 10 tent pins per crew member. This number is based on crew members using Philmont tents and the

Philmont dining fly (which requires 8). This also provides a few extra for rigging camp clothes lines, the inevitable lost ones, and other uses. Sid Covington recommends that his contingent crews purchase skewer stakes from the Tooth of Time Traders at Philmont. They are inexpensive and work well in Philmont's rocky soil. One caution is that, if your crew has requested and been granted "early arrival," be sure to purchase the stakes in advance if you are arriving after the Tooth of Time Traders closes. You may have to use trail tents for the early arrival night and will need tent stakes and ground cloths for these.

Dining Fly

Philmont will also issue your crew a 12' x 12' nylon fly with 2 poles. Their fly weighs about 4 pounds. Philmont asks crews to bring three 50' lengths of 1/8" nylon cord to rig the dining fly under the ridge line and along two sides. Some dining flies may already have the nylon cord in place, but you can't count on that and should be prepared to provide your own. Cooper and Mimi bring their own nylon fly, pre-rigged with nylon cord, and use trekking poles to support it. Many crews have switched to crew tarps with newer, lightweight fabrics such as silicon-treated nylon, and considerably reduced the weight of the crew tarp. Other crews have made their own tarps out of Tyvek. The determining factor for your tarp selection should be the ability to have the entire crew fit under the tarp if necessary, regardless of the tarp's material. If you do use Philmont's dining fly, you may want to leave the poles in your crew storage and use trekking poles; this reduces some of the crew weight.

Advisor Dobbin Connor suggests that a waterproof stuff sack for the tarp and stakes is a nice addition to crew equipment, for situations where the tarp gets wet and can't dry before packing. Another solution is to use a spare trash bag for this purpose.

Bulk Water Containers

Philmont recommends that crews bring 2-3, 2.5 gallon plastic water containers. They easily develop pinpoint holes after continuous use, so we recommend buying fresh ones and testing for leaks prior to your trek. Those 2.5 gallon containers are normally only used in camp, to carry water between the water source and campsite. Reliance Products make foldable .9 gallon water jugs that provide a good compromise between personal canteens and the traditional 2.5 gallon size, and some advisors report that they've switched over to these lower volume, more easily handled substitutes. Mimi's crews use five (5) one-gallon containers in place of the traditional 2.5 gallon containers. Carol Rodgers used the red dromedary three liter bags for the first time in 2014 and thought they were amazing - easy to hang up, easy to carry, easy to use, and durable.

Once unpurified water has been held in a bulk water container, any subsequent water contained there is automatically considered unpurified, unless the water in the bulk container goes through a purification process. Denise Vowell's crews use a 3-4 liter red dromedary bag, marked with a large black "X" to carry unpurified water back to the fire circle from the source. The color and "X" are great reminders that water needs to be purified after being poured from the bag. If your crew is using a "floppy" bulk water container such as a dromedary bag, take care to practice water transfer on your shakedown so it's not wasted in accidental spills.

Stoves

When Coop first went to Philmont in 1958 as a crewmember, all cooking was done over an open fire. Backcountry cooking changed a great deal since then (so has Coop!!) and stoves have become an essential part of crew equipment. You must bring/ship your stoves to Philmont. Philmont does not rent stoves, so if you don't bring stoves, you'll be buying them at the Tooth of Time Traders.

Getting Your Stoves to Philmont

Airlines will no longer accept stoves and fuel bottles as baggage, so if you are flying on a commercial carrier, you will have to send them via USPS or UPS to and from Philmont. One crew in Coop's contingent did not heed this advice and wound up having their stoves and fuel bottles confiscated at the airport during baggage check-in and had to buy new ones when they arrived at Philmont!

Your stoves should be mailed several weeks in advance and will be held in the Mail Room at Philmont. Plan your last shakedown date accordingly so you have time for your stoves to reach Philmont. Ship to:

Your Name
Expedition # (example: 711-L1)
Philmont Scout Ranch
47 Caballo Rd.
Cimarron, NM 87714

Before packaging up your stoves and fuel bottles, they must be completely empty, washed and dried, so that they are fume free. If you are bringing a Peak 1 stove or any other type of stove that has a built-in fuel tank, empty all fuel from the tank and relight the stove. This will burn out any residual fuel that may be left in the bottom of the tank and in the generator. Once the stove goes out, pump it up again and let air perform a final purge of the system. Make sure that all fuel bottles have been washed out with Camp Suds and rinsed with water and have had a chance to air dry. Rinsing your fuel bottles will ensure that they contain no residual gas. Remember that you will have to perform these same procedures when you come off the trail in preparation for your trip home.

The last night on the trail, combine the leftover fuel into one bottle and begin washing and airing out the other fuel bottles. If you can wash and rinse the fuel bottles on the trail and give them an evening to air out, you will have fewer hassles when you arrive back in base camp. Many crews offer their excess fuel to other crews once they've cooked their last meal on the trail. If you haven't given away your extra fuel in the backcountry, once you arrive in base camp try to find an outgoing crew that needs fuel at the Welcome Center, Logistics or Services. If your crew comes off the trail late, go to Packs and Gas to turn in your extra fuel. Once the fuel bottles have been emptied, wash and rinse them out and begin air-drying. **DO NOT TRY TO BURN THE FUMES FROM THE BOTTLE.** Package the stoves and fuel bottles, but **DO NOT TAPE UP THE BOX.** The Mail Room at Philmont will inspect the stoves and fuel bottles (or smell them) and will seal your package after they have been aired out completely. They will then ship your stoves and fuel bottles home.

Stove and fuel types

Philmont recommends that crews carry 2-3 stoves although many crews carry just two. Stoves using liquid fuel and canister fuel are your two options at Philmont. White gas and canister fuel are available at Philmont. White gas is available at camping headquarters and at all backcountry trading posts. You can find canister fuel at camping headquarters in Tooth of Time Traders, and in the backcountry at Ponil, Baldy Town, Rich Cabins, Ute Gulch, Miners Park and Phillips Junction trading posts. As of March 2014, the Tooth of Time Traders advertised the following canister fuel available at Philmont: JetBoil Jetpower Fuel, MSR Canister Fuel, and Optimus Canister Fuel. You can also buy the JetBoil CrunchIt tool. Check fuel availability and resupply information:

http://www.toothoftimetraders.com/philmont/dept.asp?s_id=0&dept_name=Fuel+at+Philmont&dept_id=7016

Liquid fuel stoves are the most popular at Philmont because they usually burn hotter and work more consistently in cold weather. The drawback is that they are often more complex than canister stoves since fuel must be vaporized before burning. Many liquid fuel stoves require priming. Some require pumping to pressurize before lighting, and as fuel is consumed the pump is also operated to maintain steady stove pressure. If you use a liquid gas stove, we recommend that you bring along a Coleman filter funnel to reduce the possibility of getting dirty fuel. Be sure and give it to the commissary personnel to use when they fill your fuel bottles.

Canister stoves have gained popularity due to their ease and simplicity, with no pumping or priming. The fuel burns cleanly and they simmer better. A big disadvantage is the inability to accurately gauge the amount of fuel remaining in a used canister. Canister fuel provides less efficient heat output, and diminished operation in colder temperatures, but has improved greatly since manufacturers switched to isobutane/propane blends. Carol's crew made a 'koozie' for the fuel canister out of silver insulating material available at any hardware store and it kept the fuel can from icing over in the cold and didn't add any weight to their packs. If using canister fuel, be sure to properly dispose of used canisters.

A great place to pick up canister fuel is in the Advisor Lounge! Many crews drop off their leftover fuel purchases in the Lounge, and they're free for the taking. It's a great idea to check there first before heading to the Tooth of Time Traders...and of course a great idea to drop your own leftover isobutene fuel there when you come off the trail. Denise Vowell's crew was able to score fuel for their entire treks from the Lounge on two treks.

Regardless of whether you choose liquid fuel or canister fuel stoves, we recommend stoves which are remotely connected to the stove by a fuel line, rather than liquid fuel stoves with integrated fuel tanks (some Coleman stoves) or canister stoves that sit directly on top of the fuel canister. Balancing large Philmont-sized pots on top of these stoves can cause extra heat to reflect back to the fuel source, and can also make it difficult to adjust the flame without getting too close. Carol's crew put the pot on top of the fire ring cross support, and the fuel can underneath - maybe on a flat rock to adjust the height - which made the pot fully supported instead of relying on the little stove "wings." In trail camps without a fire ring, they made a circle of rocks to hold the pot, with the stove inside under the pot, creating a wind screen. They dispersed the rock pile when done.

A question that is often raised involves the amount of fuel is required? IF 4-quart pots with tightly fitting lids are used for heating, and IF dish washing is performed as described in this booklet, and IF stoves are never lit until the pot is ready to be put on the stove, and IF the pot is taken off the stove immediately after the water reaches a boil, then two 32 ounce fuel containers of white fuel are all that is required for the entire trip. Pete Lane's crews have calculated that they use 6-7 ounces of white gas per meal with both the MSR Whisperlite and Dragon Fly, and take either two 22 ounce fuel bottles, or one 22 ounce and one 11 ounce bottle, depending on days between resupply. Canister fuel use depends on the size of the canister. Mimi's most recent crew needed a total of three 8 oz. canisters during their trek. Gary's crew scrounged extra cocoa for their cold morning wake ups and needed almost five canisters.

Integrated cooking systems (like JetBoil) are extremely popular outside of Philmont, they are not practical for group cooking for Philmont crews. "Pocket rocket" stoves are also not advised for Philmont crews, but some advisors carry a personal "pocket rocket" and 3.5 ounce (100g) fuel canister for their morning coffee, so that they can get up early and make their brew without causing a delay getting out of camp in the morning.

While some crews enjoy using commercial alcohol stoves during backpacking trips at home, they are not the best choice at Philmont because the fuel source isn't sold at the Tooth of Time Traders, making it difficult for crews which travel without personal vehicles. Sid Covington notes that the BTU rating of alcohol is too low and boiling time at Philmont's altitudes is unacceptable. Homemade alcohol stoves are

prohibited in the *Guide to Safe Scouting*. Note for Coleman Xponent stove owners: Coleman no longer makes the PowerMax fuel canisters for Coleman Xponent stoves, but the PowerMax Fuel Adapter allows the use of traditional canister fuel with the Xponent stoves.

Stove use and safety

Whatever stove is chosen, it is important that you are familiar with it before you leave home. In his book, *The Complete Walker IV*, Colin Fletcher says that most of the trouble with backpacking stoves comes from stupidity and neglect. Stupidity isn't readily curable; neglect is. Check your stove before you leave home and know how to safely operate and maintain your stove on the trail. Stoves demand your crew's respect and care.

Use a wind screen (store bought, natural protected area, or packs and people) to keep your stove lit in windy conditions. Donna Sengelaub recommends bringing a small supply of emergency kindling, including Vaseline coated (smellable) matches, to start a fast fire in extreme conditions. Make sure that your crew tops off the stove's fuel tank before starting a meal. It isn't easy to interrupt meal preparation for a refill and it can be dangerous with a hot stove. Make sure that your crew does not overfill their stoves. Both Peak 1 and Whisperlite stoves need an air space that can be pressurized when the stove is being pumped up. Beware of large pots. They spill easily and can entrap enough heat to cause your stove to explode. Fill your stove away from your cooking area so that any spilled fuel will not be ignited when you light your stove. When using white gas stoves are primed by burning a small amount of fuel prior to lighting the stove, be sure to use minimal fuel to avoid soot buildup in the stove fuel jets.

If your stove flares up, have a pot ready to place over it to snuff out the flames. Never use a stove in or near a tent. Never open the fuel cap of a hot stove. Always let a stove cool down before refilling it or packing it away. Stow fuel bottles and stoves in a pack's outside pocket. Make sure that tops are on tight and check (before you hit the trail) that the gaskets are not cracked and do not leak. Use a funnel or pour spout when filling a stove. Always empty your stove when storing it; old fuel can separate and gum up the generator. Carry a maintenance kit for your stove with you and KNOW how to use it. Better yet, give your stoves a complete checkup before you go to Philmont and make sure they are ready for the trail.

The first rule in lighting a stove is not to light it until something is ready to be cooked or boiled. Likewise, never leave a stove burning with nothing on it. Crews waste gas by lighting the stove and waiting for someone to find the pot and get the water. The second rule is to make sure that the fire circle is established. When the cook crew starts working, everyone seems to migrate to the fire circle, drooling at the mouth with cups and spoons in hand.

If someone walks through the fire circle, he can easily tip a stove or a pot over, scalding the offender or innocent bystanders and wasting food. We know of a crew leader who had to come off the trail because he was inside the fire ring and was burned by hot water. As a rule, once the stoves are lit, allow no one in the fire circle other than the cook crew. The penalty for the offender is that he gets to do the dishes. Ranger Evan Bowser tells his crews to set the stoves up inside the fire ring and cook there to keep from kicking over the pots/stoves accidentally. That way, the only way it can get knocked over is if someone actually falls in to the fire ring or if the cook is stirring too vigorously.

Personal Equipment

For most first time Philmont hikers, it is not unusual to spend \$400 to \$800 in equipment. The most often purchased items are boots, sleeping bags, packs, and rain gear. Hopefully, the decision to go to Philmont comes prior to holidays so that some of the gear may be obtained as holiday presents.

Packs

Unless you come from an a typical Scout troop, this may be the first time that you or your crewmembers have ever carried personal and crew gear, food for more than two nights, and several quarts of water in a pack at one time. Packs that made it for years on troop campouts may not have enough volume to handle what you and your crew will be carrying on the trail at Philmont. We find that many Philmont hikers get a new pack before their trek. As an advisor, it is difficult to recommend a type of pack to bring to Philmont. Pack selection really boils down to individual choice and the amount that you are willing to pay for the pack.

Until the last decade, external frame packs were traditionally the most common choice. Still in use by many campers and available for rent from Philmont, external frame packs allow you to easily strap on additional equipment, giving you great flexibility in what you can carry. External frame packs usually come with lots of built in pockets that provide easy access for needed gear. Philmont recommends that an external frame pack should be a minimum of 65L/3966 cubic inches in size. Many outfitters are reducing or eliminating external frame packs from their inventories as internal frame packs have evolved and become adjustable and affordable, with a vast array of models, features and pricing.

Internal frame packs are basically bags that are built around a hi-tech suspension system. They fit closer to your back and almost become a part of you while on the trail. External frame packs feel more like wearing a ladder when compared to the fit of an internal frame pack. Because sleeping bags are carried inside of an internal frame pack, Philmont recommends that your internal frame pack should be no less than 75L/4600 cubic inches. You can adapt this based on your own gear selection, volume and weight.

Note: Many backpackers, particularly those practicing "light-packing," may be aghast at the pack sizes recommended by Philmont. One factor to remember is that the Philmont food packaging system takes up far more pack space than traditional backpacking foods. In addition, the ability to downsize a pack involves a combination of skill, experience, and low volume gear. Many attending Philmont are new to backpacking, or do not have the disposable income to purchase the latest lightweight, low bulk gear, and as such, may require a larger pack.

Regardless of the type of pack you use, your choice will come with trade-offs. Walter Underwood provides four characteristics of packs: 1) Rigidity of frame – rigid frames (external or internal) are easier to pack but heavier; a flexible frame can be lighter but requires more skill to pack so that it carries well. 2) Padding in suspension – a well-padded, contoured hip belt adds comfort for heavy loads, but increases the weight of the pack, so if you can decrease pack weight you can decrease padding. 3) Pockets, zippers, flaps and straps – these are handy, but there is a trade-off in weight and cost of pack. 4) Fabrics and pack materials – ultra light materials can require extra expense, care and caution, but may be incorporated into packs in smart ways to decrease overall weight, such as the use of mesh pockets.

No matter which type of pack you have, there are four things that you must do to ensure that your crew is ready to go:

First, check to see that the pack is fitted to the individual crewmember. An improperly fitted pack significantly increases its apparent weight and carrying difficulty. The hip belt must fit snugly below the waist to allow the full weight of the pack to be carried on the crewmember's hips while at the same time providing enough padding to protect the hips. The shoulder straps should be padded and fit the width of the shoulders. When viewed from the side, shoulder straps should be level (or a little upward) from the shoulders to the pack frame. Mimi finds that the single most common pack adjustment mistake is too much tension on the load lifter straps, which should be the final adjustment each time a pack is put on. Many inexperienced backpackers will immediately over-tighten these straps instead of properly adjusting shoulder straps, with the telltale result of shoulder straps which lift entirely off the shoulders! Most

women enjoy the design features of women's' packs, which typically come in smaller volumes and have shoulder straps (and often waist belts) designed for a woman's torso. Many young Scouts – especially those with narrow shoulders – are best fitted in a women's' pack, and it's unlikely that anyone will know the difference. Fit is more important than labeling! Carol recommends using seat belt neck protectors, found in automotive stores, to pad hip belts for scouts with narrow hips, holding them in place with a pair of old socks with the feet cut off.

If you don't know how to fit your pack, find someone who does. If a crewmember does not have a pack that you deem adequate, he can rent one at Philmont for a very reasonable cost of \$18.00.

Second, check the condition of the pack. Most crewmembers have probably never rinsed the salt and sweat from their pack's suspension system. Dry rot of pack materials may be present in older packs, and hip belt foam can deteriorate in any pack. Check the stitching at all stress points in the pack material for tears or unraveling. Check the grommets on the shoulder straps and hip belt to ensure that they have not pulled out of the pack material. Check the pack frame welds to ensure that they are not cracked. Denise Vowell cautions to be sure to check both youth and advisor packs. One of her co-advisors chose to bring his 30 year old lightweight magnesium pack frame to Philmont, out of misplaced nostalgia. It broke on day 4, and was repaired with duct tape and sticks, drawing laughs at staffed camps and along the trail. Thanks to a Conservation crew with a radio, they arranged for Philmont to provide a replacement pack to be waiting at their next staffed camp. Denise had inspected all the Scout packs, but not the advisor's, and said, "Lesson learned!"

Third, make sure that the pack is large enough to carry all of a crewmember's personal gear plus his share of crew gear. Having a small pack is not an excuse to shirk your share of crew gear.

Finally, we recommend bringing a pack cover that is designed to fit your pack. A pack cover will beat a trash bag any day. However, trash bags will work in a pinch; we just don't recommend them. If someone in your crew is missing a pack cover and has to resort to trash bags, plan on bringing several (4-5) because they will rip and tear on the trail.

Boots

Many outfitting stores still recommend leather hiking boots for Philmont because of the support they provide when compared to synthetic boots. This advice is becoming increasingly dated. Leather boots cost more and are harder to break in. Wally's son Wes required a new set of boots each time he went to Philmont because his feet grew. Spending \$150 to \$250 on leather boots just does not make sense when a synthetic pair of boots costing \$60 to \$125 will work just as well. The advances in synthetic boots, in terms of quality, reliability and support have made them a standard on the trails. Coop notes that many Appalachian Trail thru-hikers prefer composite boots because of their ability to dry out faster than all leather boots. Mimi has worn composite boots on treks and come off the trail without a blister, using no moleskin or Spiroflex. In recent year, many hikers have also been moving to light, low-cut boots and trail runners, but that is a personal decision which should be tested during shakedown with full-weight packs. Advisors who have joint issues or are on the upper side of the weight charts may find more secure footing and support in a traditional ankle-height boot. Mimi has switched to backpacking in a trail shoe, replacing her traditional style composite boots, after testing various combinations on shakedown trips. She now wears the Salomon Synapse, and uses Dirty Girl gaiters to keep out trail debris.

Opinion varies about Gore-Tex boots. Gore-Tex now treats most synthetic boots, which allows them to provide waterproofing qualities equal to full-grain leather. Many Rangers swear by their Gore-Tex boots. Ranger Trainer Evan Bowser says "I LOVE MY GOR-TEX!! If you treat it with love, it will keep your feet dry." If water enters the boots from the ankle opening, you need to take them off and pour the water out because while Gore-Tex wicks moisture away from your feet, it also traps water in. Evan also reminds

crews that branding is bad for the Gore-Tex. It is important that crews know that once they brand their boots, the Gore-Tex will never be as good as it was. In addition, branding boots voids any warranty that the boot may have. Just like with Gore-Tex clothing, your boots will function better if an appropriate waterproofing treatment is applied to the outside of the boot if Gore-Tex is just contained in the boot liner. If your boot has a Gore-Tex membrane you should still consider waterproofing the outside of the boot. Evan recommends Sno-Seal, while Mimi Hatch and Ranger Greg Hoyt advocate Nik-Wax waterproofing products.

One note about Gore-Tex: Hikers whose feet perspire excessively may want to consider a non-Gore-Tex boot choice, as the limited vapor passage will exacerbate the problem (as will gaiters). A traditional sock/liner combination is also helpful for those with sweaty feet, along with frequent changes.

In any case, if new boots are needed, plan on purchasing them in early March. This will provide enough time to break in the boots while reducing the possibility of them being outgrown by Philmont. If you do buy leather boots, make sure that they have been waterproofed several times before you head to Philmont.

Some hikers swap their boots insoles with replacement insoles. Like the name says, replacement insoles are intended to replace the original insoles, and are not placed on top of them. Failure to heed this will result in blisters at a minimum, as was experienced by one of Denise Vowell's crew members, who left in the original insoles and ended up missing the crew's Mt. Baldy hike as a consequence. Mimi replaced her insoles with SuperFeet insoles in her traditional hiking boots on the recommendation of several outdoor outfitters. She felt that her new insoles distributed the weight of her foot better and was a factor in her blister-free treks. Most of Dave Parmly's crew used them and did not experience any blister problems. They also tend to provide more positive arch support.

If you choose to do this, be sure to try out the new insoles during your shakedown hikes. It is not uncommon for your feet to ache slightly or to feel a slight discomfort the first few times you use these insoles because of the additional support provided and the different muscle groups used. Coop replaced his insoles and found that the new insole raised his heel out of the boot's heel cup and caused a blister. Because some boots require "high volume" insoles while others use "low volume" insoles, it is a good idea to take your boots with you when you buy your insoles to ensure you get the right type. Individuals who are prescribed orthotics for pre-existing foot issues should make sure to bring these to the store when purchasing new boots, and insert in place of the manufacturer's insoles before making their final selection.

It is important that the boot be fitted properly. If your sales clerk does not know how to fit your boots, we recommend going to another store. Boots should always be fitted using the same socks that you plan to use on the trail. Usually, you can tell if your boot fits properly if you can fit one finger behind the heel of your foot after you have kicked your toes as far forward as possible in an unlaced boot. We recommend that you wear a loaded backpack while you try on your boots in the store, especially if you have high or flexible arches. Most stores will allow you to return your boots if you HAVE NOT worn them outside, so take them home, wear them and make sure they fit. REI allows returns on anything purchased in their store, even after use. So if a crew member has problems with boot fit, they may want to consider purchasing their boots at REI and to have the option of returning them after a shakedown if they don't work out.

Socks

Wearing sock liners is another topic that has proponents on both sides of the choice. If wearing two layers of socks, the inner layer should be a synthetic (polypropylene or CoolMax) sock liner. The liner wicks the moisture away from the foot to the outer sock. Wool socks as outer layers work well, however,

some crewmembers do not like the feel of all wool socks and they take a long time to dry out once they get wet. Wool blend socks that include synthetics retain their shape and tend to dry faster. These socks ("not your mama's" ragg wool socks) also allow hikers to successfully trek without sock liners, and increasing numbers of hikers choose this option. Walter Underwood stopped wearing liner socks twenty years ago and hasn't suffered a blister in all that time. Christian Braunlich, a Philmont Ranger and REI employee, still uses two layers even when he wears his high tech socks for the extra protection. When wearing traditional hiking socks, Mimi finds the liner layer helps to provide a better boot fit due to her low volume feet. Use your shakedown to determine which sock system works best for you.

Coop likes the all-synthetic Thorlo Hiking sock that does not itch and dries quickly because it contains no wool. Wally and Mary Lane use Smart Wool socks. Mimi switched to Injinji toe socks when she switched to trail shoes, replacing her prior system of Smart Wool socks paired with Fox River X-Static liners which hold their shape well and contain silver-coated fibers to kill bacteria and fungus. Stephen Braunlich used Dahlgren Low Volume Alpaca wool for 75% of his hiking and never got a blister. The rest of the time he used a set of REI Merino wool socks. Even though these socks contain wool, they are very soft and dry much quicker than the all-wool ragg socks.

Regardless of what socks are selected, and whether liners are used, when the foot is dry, there is a decreased chance of a getting a blister. Mimi recommends removing boots and socks at lunch breaks and any other 20 minute rest stop. Although socks may still feel damp after a short stop, the skin has a chance to dry, and that's the key to minimizing blisters. Hikers with excessively sweaty feet may also want to completely switch socks at these breaks.

Like most backpacking equipment, it really comes down to a matter of personal choice. Whatever type you use, pack three pairs of outer socks and (if worn) two or three pairs of sock liners. Make sure that you check the condition of your crew's socks before you head for Philmont. Look for badly worn spots that will lead to blisters on the trail. Too often, crewmembers will buy new boots and neglect to buy new socks. Socks do wear out! If the socks' padding capability is worn down, get new ones.

Gaiters

Coop finds that an inexpensive pair of ankle high gaiters can be indispensable on the trail. Knee high gaiters are just too warm. Gaiters help keep your boots and socks clean and dry. Richard Schlosser, who wears low cut trail runners, compensates with gaiters to keep out small rocks and sand. Mimi always found traditional gaiters too hot, but now wears Dirty Girl gaiters with her trail shoes, which combine function and fashion – for men and women – yet are cool and comfortable.

In-Camp Shoes

Hikers need to pack an in-camp shoe that can be worn once they get into camp and get their boots off. Philmont recommends the use of in-camp shoes to limit impact from the soles of hiking boots in the campsites. A set of moccasins or running shoes makes an excellent in-camp shoe. Carol sprays her lightweight leather moccasins with waterproofing prior to her trek to keep her feet dry on damp evenings and dewy mornings. Philmont recommends lightweight sneakers in the *Guidebook to Adventure*. Crocs have become popular as a lightweight in-camp shoe, and some hikers use them for stream crossings too. Teva or Chaco style sandals without closed toes are permitted in the backcountry, although Philmont requires that they be worn with socks. We also recommend wearing socks with Crocs, since they're perforated. Mimi has recently switched to Vivobarefoot Ultra Running shoes, which combine the weight and comfort of Crocs with the fit of an athletic shoe. If sandals are selected as camp shoes, they are not permitted in cooking or activity areas. Philmont still requires the wear of a closed toe shoe or boot when cooking, branding, rock climbing, horseback riding, spar pole climbing, and your conservation project.

Getting into in-camp shoes gives your feet a rest and gives you an opportunity to air dry your boots. You may want to bring along a set of in-camp socks. Mimi uses a CoolMax anklet style for her in-camp sock that is cooler and lighter than wool and dries quickly when washed. Whatever type of in-camp shoe you choose should have a low impact sole that keeps it from further damaging the ground of your already over-camped camp site. In-camp shoes should be easy to get on and off for those late night visits to the latrine. And finally, they should be sturdy enough for you to hike in to the next campsite, if you are having severe boot problems. Online forums contain endless discussions about the pros and cons of camp shoe choices, but in the end, it's a personal decision.

Trekking Poles

You will see many different styles of walking sticks and trekking poles on the trail. Some hikers prefer a single stick or pole. However, both Mimi and Coop are ardent believers in using two trekking poles. They are adjustable and can be lengthened or shortened according to the terrain. They help propel you forward and uphill, increasing speed, and the rhythm established by proper use of the poles can help increase speed too. They provide much needed support and relieve some of the pounding that would normally be absorbed by your body. A study in [The Journal of Sports Medicine](#) found that trekking poles can reduce compressive force on the knees by up to 25 percent. Trekking poles can be used to deflect backcountry nuisances and are great at stabilizing balance during stream crossings. They can push away thorny blackberries and swipe away spider webs that cross trails.

They also serve as poles for the crew tarp eliminating the need to carry additional equipment. They can be a pain if you are the crew photographer trying to take a picture. However, some models have integrated camera mounts, which allows them to be used as monopods for on-the-trail full crew shots.

Sleeping Bags

At Philmont's higher elevations, the temperature gets into the thirties at night and there always seems to be a stiff breeze blowing. Other than boots, the sleeping bag is the most important piece of equipment a crewmember will bring to Philmont. Crewmembers need to know that the one and only place where they will always be warm and dry is in their sleeping bags, inside their tents.

Philmont recommends sleeping bags weighing less than five pounds, and rated to 20 degrees. Many advisors recommend keeping the bag under three pounds, but we caution against requiring crew members to purchase new bags because they are a few ounces away from meeting a specific weight standard. A mummy bag is lighter and warmer than other design types. A sleeping bag rated at higher temps than the 20 degrees Philmont recommends can be safely used at Philmont with the addition of long underwear and a stocking cap as sleeping clothes. Denise Vowell uses a 35 degree bag because she sleeps warm and likes a light pack.

Down and synthetic fill are both excellent choices for bags, although down bags are the lightest in weight. Although many advisors appreciate the light weight and warmth of their down sleeping bags, they are sometimes not the first choice for youth because of their added cost and loss of insulating capability when they get wet. Often the youth members don't have the patience to take the needed time to ensure the care of their down bag. With all sleeping bags, a decrease in weight typically comes with an associated increase in price.

Care must be taken to assure that any bag is properly treated. Crewmembers must never get into their sleeping bags wet, because the moisture reduces the warming ability of the bag. During the night, the bag also absorbs moisture from the body. Every opportunity should be taken to air out the bag. Otherwise a 20-degree bag will become a 25-degree bag the next night and so on. Many crews lay their

bags on top of their tents to dry/air out when they set up camp, being cautious to put bags inside their tents when leaving the campsite for program in case of rain.

Even though most sleeping bags come with a "water-proof" stuff sack, an additional plastic trash bag or an Army waterproof bag should be placed in the stuff sack to provide a second layer of protection. Another way to address this problem is with the use of waterproof compression sacks, which have become increasingly inexpensive and effective. Denise Vowell recommends Sea to Summit products. Advisor Allen Jones recommends using lightweight stuff-sack-style dry bags or dry compression bags and shares that the Sea to Summit EVent bag is only a couple of ounces heavier than a non-dry compression bag. Mimi cautions to monitor any kind of waterproof storage – including use for tents – to ensure that trapped moisture doesn't create mildew or mold due to lack of ventilation. The same qualities that keep moisture out also prevent moisture from escaping.

Sleeping Pads

Sleeping pads add 5-10 degrees of warmth when compared to sleeping directly on the ground. An inexpensive closed cell pad is a must for all crewmembers. Not only does it provide a comfortable sleep even on those not-so-level places; it also prevents heat loss downward and provides a barrier against moisture should your tent leak in a heavy rain. Cascade Design produces the traditional Ridge Rest, and also the Z-Rest (or its latest version, the Z-Lite), excellent pads that are very comfortable and less bulky than traditional pads. Many advisors prefer an inflatable or self-inflating sleeping pad because of its ability to provide a good night's sleep. Cascade Design self-inflating Therm-A-Rest pads come in a variety of series, with the ProLite4 being the thinnest and lightest of their traditional line. Therm-A-Rest pads come in varying lengths too, typically the regular and the $\frac{3}{4}$ length. Although the full-length model is a little heavier, it keeps the feet off the ground and can keep the sleeping bag dry should your tent floor get wet. Many experienced hikers use a $\frac{3}{4}$ length pad coupled with their Crazy Creek to provide full-length coverage while minimizing pack weight, but we caution that Philmont's stringent bear protocols prohibit the use of your camp chair in your tent if you've ever used it when dining.

Inflatable air mattresses are replacing the long-popular self-inflating mattresses in many backpacks, due to their ability to provide lighter weight and a more cushioned sleep. The Big Agnes Insulated Air Core and Dual Air Core have become big favorites of advisors because of their light weight and ability to fold into a small stuff sack. The Therm-A-Rest NeoAir line, has gained great reviews from Backpacker magazine and owners, but is at the very top of the pricing scale. The Klymit Static V comes in both insulated and uninsulated models and have gained tremendously popularity with through-hikers who want to have comfort and light weight at a reasonable cost. While these "advisor grade" pads from various manufacturers can cost \$60 to over \$200, depending on the series and length, it is well worth the investment if a traditional non-inflating pad doesn't provide a good night's sleep. Denise Vowell recommends trying out various inflatable versus traditional foam pads, to see your preferences. You may choose to give up a degree of comfort in trade for weight and protection from air leaks.

Some sleeping systems, such as some of the Big Agnes sleeping bags, eliminate underside insulation and have an integrated sleeping pad sleeve instead. This prevents the all-too-common problem of sliding off your sleeping pad during the night. These sleeves hold any standard rectangular sleeping pad, or can be used with the manufacturer's own pads. Mimi loves the Big Agnes Insulated Air Core and previously used the Big Agnes Roxy Ann bag to create a sleep system, but more recently switched over to the GoLite Adrenaline women's bag and the Klymit Static V.

Rain Gear

It is really difficult to give advice to crewmembers regarding rain gear other than it is a must and it should be good quality. You should note that the ONLY rain gear listed on Philmont's personal equipment

list is a rain suit and NOT a poncho. If a crewmember has money to burn, a breathable rain suit would be recommended. Gore-Tex and other proprietary breathable material allows perspiration to escape while keeping rain out. A Gore-Tex rain suit typically costs \$150 to \$300 and can be heavier than coated nylon, but there are many lightweight rain suits using proprietary materials. Both Coop and Mimi love Marmot's PreCip jacket, a less-costly alternative to Gore-Tex for breathable, waterproof raingear for under \$100. A lightweight coated nylon rain suit works almost as well and costs under \$60. Several members of Dave's and Gary's crews used Frogg Toggs (www.froggtoggs.com), and Carol swears by them too. Although they are not as compact as coated nylon, they are light, breathable and extremely inexpensive – a complete suit for under \$50. Mimi advocates buying less expensive waterproof rain pants, such as Red Ledge or Frogg Toggs, as they take much more abuse than jackets, especially if used for long pants activities such as horseback riding, conservation, spar poling, etc. Richard Schlosser uses both the Red Ledge jacket and pants, and finds that they have held up for years in monthly backpacking trips and at Philmont. Denise Vowell recommends checking out the Campmor website/catalog and places such as SteepandCheap.com. The popular Marmot PreCip is on sale annual on most sites and retail stores, with a steep discount for buying "last year's color/model."

The beauty of a rain suit is that the jacket can also be used to keep warm, when layered with a wool or fleece sweater. Our Philmont Rangers thought that an inexpensive rain suit was far superior to the most expensive poncho. Before you buy any type of rain gear, make sure that it states "waterproof" and not "water resistant." Water resistant fabric may handle light dew, but will become water logged and soak the wearer after only a few minutes of an afternoon Philmont rain. Do not purchase the less expensive, but much heavier PVC rain suit.

Prior to going to Philmont, you should test your rain gear. Your neighbors might get a chuckle, but wear a light colored T-shirt under your rain gear and get sprinkled with the water hose for about 10 minutes. This will provide a good test to determine whether your raingear needs to have a treatment such as Nikwax's TX Direct applied. Old rain gear can be rejuvenated, so don't be quick to buy new until you've checked to see if you can successfully retreat your old gear. Sarah Rogers, a Philmont Ranger, has been known to stand in the shower at home to check out her raingear!

Hiking Clothes

Most crewmembers wear hiking shorts and T-shirts throughout their trek. Traditionally Philmont campers have been instructed to have one set of hiking clothes and a second set of in-camp clothes. The logic is that this allows campers to launder their hiking shorts, T-shirt and socks when they get into camp, and have dry clothes to wear during this process.

To dry clothes, we suggest stringing clotheslines between tents or hiking poles, draping your clothes on rocks or your tent, or hanging them from the ridgeline of the crew tarp. When you get up the next morning, even if your hiking clothes are not completely dry, put your T-shirt and shorts on. Don't worry; they will dry out while on the trail. Wet socks can be safety pinned to the outside of your pack to dry as you walk along the trail. Diaper pins, because of their size, make excellent drying pins.

During the last few years, the trend has moved to bringing convertible pants that serve as your long pants and your extra pair of shorts, or even just one set of pants with zip-off legs and an extra in-camp tee. T.W. Cook and several of his crewmembers bought two identical pairs of nylon zip-off pants and then left one set of legs at home. This way they could zip the legs onto whichever pair they were wearing at the time. Even the Philmont staff uniform now includes the zip-off pants option. Female hikers have many options of hiking-specific skirts and skorts to add to their choices, and kilts sometimes show up at Philmont for either gender. Mimi switched to the REI skort on her most recent trek, but brought traditional zip-off pants for in-camp and program.

Some type of long pant is required for spar poling, horseback riding, branding, and the conservation project in addition to the obvious of keeping warm. Most crews we see wear high nylon content pants that are extremely lightweight and dry out very quickly. An acceptable substitute is to wear your long underwear bottoms under a pair of hiking shorts. Rain pants will also work, but there is the possibility of damaging them during spar pole climbing. Stay away from jeans or sweat pants. Both are made of cotton and are impossible to dry out once they get wet.

Cotton underwear? No way. Both Wally and Coop have used nylon blend hiking shorts with an inner brief to provide support. The smooth surface of the nylon shorts also helps to reduce the chaffing for hikers with thunder thighs. George Kain wears a set of synthetic (CoolMax) underwear under his Philmont cotton shorts. Other advisors have worn unpadded nylon bike shorts or a Speedo swimsuit under their hiking shorts for support. Under Armour briefs, boxers and shorts have become increasingly popular at Philmont. All of us agree that cotton underwear is impossible to keep clean and dry.

We recommend as a minimum that the T-shirts be 50/50 cotton. If you can find an all synthetic T-shirt, use it for your hiking T-shirt. Under Armor was popular with Roy Fisher's crew for both hiking shirts and underwear. Synthetic T-shirts will wick the sweat away, protect you from losing heat due to moisture during colder weather, and dry quicker when washed.

Sleep Clothes

Crewmembers will also need a set of sleep clothes (T-shirt and a set of nylon running shorts or boxers) that is kept in a waterproof plastic bag in their sleeping bag and is only worn while sleeping. When getting ready for bed, each crewmember takes off his in-camp clothes and places them in a plastic bag. Crews then put their in-camp clothes back in their packs, inside the "Bearnuda" triangle (see Camp Setup). The only time crewmembers were told to put their in-camp clothes in the "Oops Bag" (see Bears and Bear Bags) was when they had major food spills on them thereby making them a smellable. The bottom line is that in-camp clothes should never be stored inside or near tents (hence the reason for "sleep clothes"), because they could contain food smells.

Some years water sources are plentiful and streams are running brim-full while other years there is very little for the bears to eat because of the poor snow pack and lack of rain. Therefore bears have gotten used to going into Philmont's low country to look for food. Rangers will spend a great deal of time discussing your crew's actions to minimize the chance of a bear incident occurring, including the use of sleep clothes. Another way that crewmembers can bring non-human smells into the backcountry is through the use of fabric softeners on their trail clothes before they arrive at Philmont. Fabric softener fragrance will last on the trail for several days until an individual's natural body odor takes over. You may have to wash your clothes several times without soap at home to ensure that there is no detectable odor. Or you can purchase non-scented soap from stores that sell hunting supplies. Remember, bears don't see well, but they have a tremendous sense of smell. The bottom line is if you are going into bear country, it is best to sleep in clothes that have not been exposed to any smells, and you do this by sleeping in clothes that are only used for that purpose, and washed without leaving scent.

Cold Weather Gear

A set of lightweight synthetic (polypropylene or other type fabric) long underwear can be a plus on the trail, especially if you are scheduled to arrive at Philmont early in the camping season when the mornings are still cold. Long underwear can also be used as a means of increasing the warmth of your sleeping bag, especially if your trek has you camping at higher elevations. We suggest bringing your long underwear with you and making the decision during your gear shakedown at base camp.

The need for long underwear can be impacted by the weather during your trek. On one trek, no one in Mimi's crew (with the exception of one adult) brought long underwear on the trail and they did not miss it. But several years later, with a trek early in the Philmont season, her whole crew found value in their long underwear. Peter Bernier, a member of one of Coop's crew, wore his polypro and fleece to keep warm during several hailstorms and heavy rains that occurred during his Rayado trek. Again, it is a matter of when you go to Philmont, weather quirks, and the elevations where your crew will be hiking. Carol points out that it's also a matter of your typical home climate as to how you'll adjust to the cold.

An outer warm layer is absolutely required. Although wool has been a traditional choice, synthetic fleece has taken over because of its lightweight, ability to dry quickly, and softness. **DO NOT rely on cotton sweatshirts to keep you warm!** A fleece or wool knit hat is an absolute must in the backcountry. The body does not have the ability to reduce blood flow to the head to save heat as it does with other extremities. A knit hat offers tremendous warmth for minimum weight. Wally, Coop and Mimi have used their knit hats each year they have gone to Philmont. Buy these items before the end of January before the stores change over to their summer stock.

Sun Protection

Some hikers like wide brim hats. They provide protection from the increased level of ultra violet rays found at higher elevations, but are cumbersome while hiking. If a baseball cap is used, be careful of severe sunburn on the tops of the ears and the back of neck. A bandanna tied around the neck can provide some protection. Mimi likes the Visor Buff which provides lightweight sun protection. For fair complexion crewmembers, we recommend a 30 SPF sunscreen as a minimum. Coop uses 50 SPF because he has fair skin. For women considering hiking in a tank top, it's important to carefully apply sunscreen to eliminate the chance of sunburned shoulders, as backpack straps will irritate this area.

The sun and low humidity can also cause severe chapped lips. The one lip balm that seems to receive outstanding reviews by all our crews was Carmex, although ranger Greg Hoyt indicated that many Philmont staffers are not big fans of the product because the camphor can be drying. There are also other lip balms, like Chapstick, containing sunscreen to reduce the possibility of sun burned lips.

Water Containers

Each crewmember needs a minimum of 3-4 1-quart/liter canteens, or the equivalent volume in a hydration system or combination. Outside of hydration systems, options for carrying that water include traditional rigid Nalgene, Platypus bottles, the Nalgene 96 oz. wide-mouth canteen (instead of three individual canteens), or even re-cycled bottled water containers. Walter Underwood swears by his one liter Calistoga sparkling water bottle, which holds up well despite continued use. Mimi loves the new dual-valve HyperFlow cap available for the Platypus Soft Bottle, which has a bite valve that replicates the drinking ease of a bladder with the flexibility of carrying a water bottle.

Ideally each crewmember has some type of additional fourth/fifth quart/liter available, but often that is a storable/collapsible version. If you know that your itinerary will have a dry camp, we suggest that each crewmember bring along a lightweight 1-quart plastic bottled water bottle (or better yet, a roll-up canteen/reservoir) in addition to the regular canteens, to bring capacity to four quarts for dry conditions or camps. It's a lot easier to supply the crew with water for a dry camp if each crewmember carries an additional quart of water instead of having one or two members try to carry bulk water containers.

Most internal frame packs now include sleeves for hydration systems (Camelback, Platypus, etc.) and they've become quite standard on the trail at Philmont. These systems offer the convenience of being able to take a drink through a tube without having to take off your pack. Mimi has used a combination of hydration system while hiking, and a water bottle for rest stops, but is always evaluating different

options. Continually sipping water from a hydration system allows for more consistent absorption of water. Although "Cameling Up" was encouraged by earlier versions of this guide – quickly drinking 1-2 quarts of water via chugging – that amount of water will largely pass through the body as urine without being absorbed. Regardless of whether your crew members are using hydration systems or traditional canteen-style containers, water should be consumed regularly during hiking. Additionally, the issued Gatorade mix should be added to daily drink consumption to replace electrolytes which leave the body during high activity on hot days and aren't replaced by water alone.

We caution that if hydration systems are used by your youth members, you need to be diligent in checking for adequate water intake. It can be challenging to tell if a crewmember is really drinking enough, so the crew leader can do a "pee check" at rest stops, asking who hasn't urinated and checking the water level in that Scout's water bag or bottle. Hydration systems need to be monitored for mildew in their drinking tubes if they are not properly cleaned and can be more susceptible to leaking than plastic water bottles.

Denise Vowell requires her crew to carry at least one Nalgene or heavy duty recycled drink bottle to mix their Gatorade, even if they use a hydration system. Gatorade bottles are ideal because they weigh less than Nalgene which helps keep the bear bag weight down since all containers that have held drink mix are smellables. Carol carries a sharpie marker to label water bottles with names and label which ones are "smelly" so campers know which bottle to mix Gatorade in – so they don't end up with ALL the bottles being smellables.

Most packs have external pockets that provide easy access to a canteen if you need a drink while you are walking. Personally, Coop and Wally like to take a good slug of water from a canteen on their water break, whether it is a short "packs on" break or a longer "packs off" break. During the break, you can quickly assess each crewmember by looking at the water level if they're drinking from a canteen, to see how much water each person has consumed. An added benefit of Nalgene or other type of water bottle is that they are easier to carry to programs and side hikes than a hydration bladder. They are also much easier to fill, since some water sources at Philmont are shallow streams.

Miscellaneous Crew and Personal Gear

Although you will most likely going to sleep earlier than on traditional outings, there are night campfires and crewmembers will need a flashlight. Most crews are now using head lamps instead of carrying flashlights. If using an LED headlamp or flashlight, one set of alkaline batteries will likely last the entire trek. If using an older style headlamp or flashlight, you might consider using lithium batteries; although they cost more, they last 2–5 times longer than alkaline batteries eliminating the need to carry spares.

A butane lighter works better than matches and is more dependable. Get a see-through type so that it is easy to determine when the lighter is out of butane. The TSA rules for prohibited items change regularly, and you should check with your airlines and the TSA website for the latest regulations at <http://www.tsa.gov/traveler-information/lighters-and-matches>. If flying, you may need to pick up a lighter once you are finally on the ground depending on the current list of prohibited items.

A crew repair kit is a must. Make sure that the crew repair kit contains pack repair items, such as one or two replacement clevis pins and O-rings (for crewmembers with external frame packs), a bit of wire, and at least one spare pack belt buckle. Old JanSport packs require special nuts, bolts and wrenches that are not readily available at Philmont. A spare pair of boot laces and a tube of Shoe Goo can be a lifesaver in the case of boot failure. It should also contain a sewing kit with safety pins. If an advisor travels a lot, ask him to take one from a hotel where he stays. Heavy-duty thread and needles need to be added to this kit in case a pack comes apart. Dental floss is a popular, strong alternative to thread, but make sure to have needles with large eyes for threading. Duct tape comes in handy along the trail for all sorts of

jobs from patching tents to attaching a loose sole of a boot. Walter Underwood's crew found that tie wraps came in very handy for repairs on their crew. They are light, yet durable enough to re-attach a hip belt in the case of emergencies. Electrical zip ties are also very versatile.

Although many packs include removable lids for use as a fanny pack, it's really convenient to bring a nylon draw string book bag, Flash pack, or similar. Pete Lane regretted having left it off his packing list, as they're handy for carrying a water bottle, rain gear, lunch, and other miscellaneous items on side hikes. Mimi and Carol swear by them too.

There's no need for each crew member to carry a pocket knife or multi-tool. This is definitely "crew equipment" and it's handy to have one of each, for different purposes on the trail. Denise Vowell's crew carries their multi-tool in with their crew kitchen gear.

It's a good idea to have a small stuff sack for each crew member, or "me bag" as Denise calls it. It should be labeled with their name, and used for personal toiletries, meds, sanitary products, etc. These items are all smellables, and it's a lot more palatable to use your toothbrush when it's stored in your "me bag" than taking it out of the bottom of a bear bag, where it's trapped underneath a bag of trash!

Pete Lane's crew carry two extra stuff sacks. One is a small one for all personal smellables, like the "me bag" Denise describes above. Pete finds that the 6 liter size is about right. The second is an extra large (20 liter size) stuff sack for food, in case Philmont food packages accidentally rupture and leak. The stuff sack contains any spillage so it does not make the entire pack a smellable. Pete says the big benefit of the extra stuff sacks is that it makes it easy to get all smellables out of packs and up on the bear line and vice versa. It reduces the chance for stray items to get left in packs when they shouldn't be, and it reduces the amount of stray items that get kicked around in the dirt when the bear line comes down.

If you can find an old closed cell sleeping pad, you can make your own "Advisor's Pad" to sit on by simply cutting out a two foot square section. An alternate is a closed cell kneeling pad sold at most lawn and garden shops. It sure is a lot more comfortable than sitting directly on the ground. For those advisors who may have a "deep seated" problem, fold the pad in half to double the cushion. You'll also see a lot of Crazy Creek chairs on the trail. They provide both bottom and back support, can be used as a sleeping pad by those who are really trail nuts and are practically part of a Ranger's equipment. In recent years the Alite Monarch and Mantis chairs have become a popular "luxury" item at a fairly low weight.

If you are using a Therm-A-Rest pad, there is a kit that utilizes the pad for a seat. However, if you do use either of these items, be very cautious when eating. If you spill anything on them, they become "smellables" and must be bear bagged and are no longer available to be used for sleeping. Some rangers discourage the use of any camp seats during meals for this reason.

Be sure to mark all common items such as canteens, crew T-shirts, ragg socks and sock liners with a permanent marking pen. Things begin to look alike after ten days on the trail and it becomes hard to tell them apart. Many Philmont staffers recommend including your expedition number on gear, in case it ends up in Lost and Found. A suggested personal equipment list is contained in the appendices.

In addition to coaching the crew on what to bring, it's important to remind crew members and family what items should not be brought on the trail. Philmont states: **"No radios, tape/CD/MP3 players, video game devices, or hammocks. Cellular telephones are discouraged. Do not bring deodorant or perfumes."** George Stover shared that his crew suffered crew morale and leadership problems when the crew leader began using her iPod on the trail, and encourages advisors to enforce Philmont's practice of prohibiting this and similar devices. In addition to compromising the enjoyment of the trek, the inability to hear other crew members has a critical safety impact.

Youth crew members should not bring cell phones on the trail at Philmont. Sid Covington recommends that adult advisors not take them either. Some adults feel they "must" take a cell phone. If they do, it should be used ONLY for emergency purposes and should be powered off at all other times. The crew advisor will be provided with instructions on how to use the cell phone during Trip Planning in Logistics on Day 1 and it will be discussed in the evening Advisor's Meeting. These instructions include NOT calling 911 in the event of an emergency; calls should be made directly to Philmont's switchboard instead. Advisors should be aware that there are many places in the backcountry where cell service is not available and they should not count on being able to use a cell phone to handle an emergency but should always plan on using the emergency procedures they are taught by their Ranger. They should also be aware that reporting an emergency by cell phone will set off a set of events that will very likely tie the crew up for most or all of the remainder of the day. If it is something they can deal with themselves until they get to the next staffed camp they are less likely to ruin the entire crew's day. Philmont does not provide any place to charge cell phones or other electronic devices in the backcountry!

In the recent summers, a number of crews have taken emergency locator devices on their trek. Like cell phones, Philmont's Logistics discourages the use of these devices — at best they are additional weight (and expense) and, at worst, have a history of creating false alarm situations. One crew programmed their SPOT device to send a location report to all the parents of crew members hourly so they could track the crew's progress. Unfortunately, they selected the wrong message — the parents received an "emergency—call help immediately" text. The phone number that was programmed was the Colfax County Sheriff's Department. Needless to say, not only was the Sheriff's office upset at receiving dozens of calls from concerned parents but the Philmont staff that had to go to the backcountry and locate the crew (just in case it was a "real" problem) were also less than happy with the crew! In recent summers, there has been only one instance where one of these devices did what it was supposed to (and only helped find the injured staff member that was solo hiking by a few hours) while there have been numerous "false alarms."

Pack Weight

Finally, try to get your total pack weight as light as possible. Heavy packs just sap energy and strength, make you more prone to injury, and reduce your potential for having a good time on the trail. Both Bob Klein and Troy Hayes are real sticklers when it comes to reducing total pack weight. Bob even gives his crew a list of equipment with the maximum acceptable weight for each item of personal gear. He even brings a postal scale to gear shakedown and weighs each item to make sure that it meets his criteria! If an item is too heavy, it is rejected! You may think that this might be extreme, but Bob's crews typically leave Base Camp with water and food with packs that weigh less than 35 pounds, compared to most crews with packs in the 40 to 50 pound range. Mimi works with her crews to keep all packs under 40 pounds.

Some advisors are still in the car camping mode when they arrive at Philmont, bringing along that extra something "just in case." This is a huge mistake and the extra pounds will soon begin to affect their performance on the trail. Keeping your pack weight down is also a safety issue, as a lighter pack can reduce trail injuries and increase energy. The idea is to leave Base Camp, with the lightest possible pack, with the right amount of personal and crew gear for your trek and no more. Start eliminating ounces from your very first shakedown. A requirement for *Backpacking Merit Badge* is to discuss ten ways to reduce your pack's weight. Some ideas from Troy Hayes and Stephen Braunlich include:

- small rather than large (as in flashlight, knives, etc.)
- think at the "crew" level rather than the "individual" level. It isn't necessary that everyone carry essential items as long as they are available to the crew.
- right size (e.g., a 4 ounce bottle of sun screen instead of a 6 or 8, a small tube of toothpaste)

- just-as-good-but-lighter (coated nylon rain gear instead of PVC, grocery store water bottles instead of canteens)
- double duty items (bandanna can serve as a towel, handkerchief, and neckband/headband)
- avoid gadgets (such as Leatherman, hydration systems, heavy camp stools). However, a couple of multi-tools that have scissors for cutting moleskin and can double for a set of hot pot tongs are worth carrying.
- sharing (one set of toothpaste or Camp Suds bottle per tent, crew sunscreen and bug repellent)
- smart purchasing (mummy bag versus a rectangular bag)
- clothing system based on layers
- take only what you need (a cup and spoon for eating gear instead of a cup, bowl, spoon and fork)
- eliminate dead weight (music players, footballs – yes Troy Hayes has seen one!)
- only have two knives and two compasses per crew (one for use and one for redundancy)

Don't succumb to the "Weight of Fear." Fear of being cold – by carrying more warm clothing instead of a system built on layers. Fear of being injured – by carrying a large sophisticated first aid kit instead of considering other equipment that could be utilized if needed. Fear of being uncomfortable – by carrying unreasonably heavy camp chairs and thick sleeping pads. The more you carry, the more you will enjoy camping. The less you carry, the more you will enjoy hiking.

There are a growing number of ultra-light backpackers who would have a field day with the gear that some participants take to Philmont, and would likely veto our full-length Therm-A-Rest pads, our in-camp clothes and our camp shoes. Many minimalists, however, have the experience, confidence, and physical conditioning to compensate for any mistakes they might make in packing that the majority of Philmont hikers do not. Keep in mind that for many Philmont campers, it is their very first backpacking experience. That said, we are seeing an increasing number of hikers at Philmont who are incorporating some degree of ultra-light experimentation with the huge variety of newer, lightweight gear available. Rob Faris reported that he went ultra-light and felt that the decision (along with rigorous conditioning) allowed him to comfortably keep up with the youth in the crew. In addition to a Gossamer Gear pack, Rob carried fewer clothes with a commitment to do laundry daily. He went with a philosophy, shared with him by an AT section hiker, that suggests to sacrifice weight, even if it impacts quality – "there is no percentage in having certain gear last one day longer than your trek." Jay Schaefer, a Baltimore advisor with eleven treks behind him, went ultra-light but reverted back to a more traditional pack on his next trip, because he felt that he gave up more than the weight in his decision. As with any gear decision, it's always wise to test these choices on shakedown before implementing at Philmont. We encourage you to work with your crews to reduce the weight that each member will carry. Make sure your pack is rated for the weight you plan to carry, or you'll have an uncomfortable trek.

For those of you who might be tempted to try the ultra-light method of backpacking (on your own first before trying at Philmont), some recommend *Beyond Backpacking, Ray Jardine's Guide to Lightweight Hiking*, AdventureLore Press. While we don't agree with everything Ray Jardine has to offer, he does present a different way to approach gearing up. However, many of Philmont's established backcountry protocols rule out most of Jardine's suggestions such as tarp tents, hammocks, etc. Walter Underwood prefers *Lighten Up* by Don Ladigan and Mike Clelland, saying "Don't be fooled by the shortness of the book or the funny drawings. This book has all you need to drop pounds off your back. It teaches you how to start (weigh everything), what is most important (the big three), and when to stop getting lighter ('Take enough gear to be safe, comfortable and confident.')

Gear Philosophy

"You have your way. I have my way. As for the right way, the correct way, and the only way, it does not exist." - Friedrich Nietzsche

An important note for those who have the resources to bring all the latest equipment to Philmont: This guide is written for *all* who trek at Philmont and not just those who have purchased gear in the last several years. Although many experienced advisors purchase or upgrade equipment with the understanding that they'll use it repeatedly on subsequent treks, most people attend Philmont once and never have the chance to return – or never put on a backpack again. Equipment purchases must factor in this consideration. Each year at Philmont we see hundreds of people who have had extraordinary Philmont experiences despite the fact that they're carrying a pack which they've used for decades (or a pack "born" before they were born), have a sleeping bag that weighs five pounds, or heavy, non-breathable raingear. The quality of a Philmont experience is not measured in ounces, or competition to have bragging rights for the lightest pack. Many adults fondly recall their own mountaintop adventures at Philmont in the 1950's and 1960's, with military frame packs and a "sleeping system" that was called a sleeping bag – no sleeping pad included. We will continue to reference campers' use of both old and new products, materials, and philosophies with the belief that has been the foundation of the *Philmont Advisor's Guide*: There is no one "right way" to do Philmont, understanding that many who hike the trails of Philmont carry the best equipment they can afford or borrow, regardless of its age or weight.

Photography

Digital cameras have now become the mainstay of most Philmont participants. There is tremendous flexibility in the digital format, not least of which is the crewmembers' ability to get those photos up on Facebook when they get off the trail! The use of your digital camera at Philmont is only limited by your battery life, but this can be a serious limitation without proper planning. Before committing to a digital Philmont experience, you'll need to understand battery conservation options such as minimizing the use of your preview screen, extensive edits, and other battery drains. As you become accustomed to your camera, you'll be able to more readily gauge the battery life. Most digital camera owners purchase a spare battery; a Philmont trek requires additional backup batteries for an avid photographer. Since digital camera batteries are typically proprietary and costly, you'll need to weigh the costs and benefits. Photos are stored on media cards or sticks, which also must be able to accommodate a trek's worth of pictures and are a cost factor too.

Crewmembers love to bring cameras but often take few good pictures. Wally feels that a better way is to have the advisors take the pictures and offer the results to the crew. However, if you are the official crew photographer, you will find that you are the one that is continually left out of the crew pictures.

You should always take two cameras in the crew so that you will always have a backup in case one has a problem. Coop's trusty Olympus camera, a veteran of several Philmont treks, died while on the trail, and he had to borrow another camera for the remainder of the trek. With two cameras, you will also have an opportunity for more than one advisor taking pictures so that everyone will be featured in some shots. There are also always willing "photographers" in other crews who will shoot that special shot of your entire crew on a peak, using your cameras.

Troy Hayes's crew used a co-op approach with their digital photos. He shot over 400 pictures and all pictures were consolidated onto a compact disk (CD) and the best were made into a scrapbook, also on the CD. Each participant got a printed scrapbook and a CD with all the pictures.

Digital photography does provide a very flexible range of sharing options. Using large photo-sharing sites such as Shutterfly, Snapfish, Flickr, and Photobucket you can easily upload your photos into a shareable on-line album. Digital photos can be emailed, uploaded to websites, blogs, or social media sites, or put into PowerPoint presentations. In addition, you can get prints of any or all photos, through an easily used on-line selection process, and in a variety of sizes (including poster size). The cost per print has dropped dramatically, and you only print the photos you like, which is a big cost savings. With the exceptional quality provided by current photo printers and quality photo paper, many photographers are also

choosing to print their own pictures, with professional results. You can also use services such as Blurb to have your digital photos made into print books.

The following are some photographic tips for Philmont:

1. Cold temperatures (especially in the high country) eat weak camera batteries. When climbing Baldy or Mount Phillips, you may want to keep your camera inside your outer garment just to keep it warm. If you don't use proprietary batteries or you've used the same batteries for years, be sure and purchase new batteries before you go. Buy lithium batteries if your camera uses disposable batteries.
2. The best time to take pictures from the top of Baldy Mountain is between 9:30 am and noon because the sun will light up the spectacular scenery behind Baldy.
3. The best time to take pictures from Window Rock and Cathedral Rock is between 1 pm and 4 pm. WATCH OUT FOR AFTERNOON STORMS.
4. The ideal time to take pictures from Trail Peak, Shaefers Peak and the Tooth of Time is 11 am to 1 pm because these locations offer panoramic views and the sun is in the best location. BE CAREFUL OF LIGHTNING STORMS!!
5. You can take pictures of Baldy Mountain from the top of Comanche Peak from 7:30 am to 1 pm. After 1 pm, the sun is in the perfect position to take shots of Tooth Ridge.
6. Philmont offers some of the best campfire programs. However, a flash is required. Remember that flash shots are only good if the camera is 10 feet or less away from the subject. Most backcountry campfire performers will specify a time for flash photography during their show, and ham it up for the cameras.
7. Bring your camera to all program areas. They offer some great opportunities to take pictures of your crew in action other than hiking.
8. When photographing faces, especially within 15 feet, use the fill flash mode (if available on your camera) to avoid shadows on faces.
9. Make sure your camera is accessible. There are lightweight camera cases that Velcro onto pack shoulder straps; lanyards that allow you to slip the camera into an accessible pocket; use of carabineers to clip onto load lifter straps; and other creative solutions. Some hikers make "camera ponchos" with silicon coated nylon and Velcro pads along the edge.

ARRIVAL AT PHILMONT

Be Prepared

When you arrive at Philmont, you and your crew are going to be pretty excited. After months of planning, you have finally made it! However reality sets in when you realize that you will be just one of 35 to 45 crews that have arrived that day. Each one of these crews will have to go through the same in-processing routine. We have found that if you and your crew are prepared for in-processing, the time can be shortened and the amount of confusion can be lessened. Try and remember that the order of the in-processing activities described below will vary depending on the number of crews that arrive at the same time that you do. Although you may feel that in-processing activities look like chaos, it is very controlled. Your Ranger is following the rule of "scramble, be flexible" to get your crew completed as soon as possible. So stay calm and "Semper Gumby", always flexible.

Philmont instituted a number of changes to the Day One check-in process to improve efficiencies, with good results. Some of these changes were transparent to campers, while others are observable changes from past years.

Some of the noticeable changes included the following:

- Philmont now verifies crew arrival times a week in advance of arrival, to better schedule Rangers and judge resources. Crews arriving late in the day were informed that they should not expect an early bus on Day 2.
- A Ranger Trainer stationed at the Welcome Center was available to coordinate crews and crew Rangers.
- The crew Rangers were able to set an appointment time for the crew's Trip Plan session in Logistics before meeting the crew, and would pick up the information packet for the crew. This included a "Advance Advanced Crew Leader Copy" that was essentially an Advanced Crew Leader Copy form without names that could be used during check-in before receiving the "real" Advanced Crew Leader Copy during Trip Planning.
- Crew photos were permitted to be taken before going to Registration. This allowed crews to have their photos taken when they first went to their tents. The result of this was a reduced number of trips back and forth to the tents and an increase in the number of "contingent" photos (the crews were still together early after arrival). It also permitted crews to change into comfortable clothes early in the check-in process.
- Rangers were allowed a great deal of flexibility in routing through the check-in process. Having the "Advance Advanced Crew Leader Copy" form permitted them to go to any check-in department in almost any order (although crews still had to go to Registration early). This eliminated some of the historic bottlenecks where all crews tended to follow the same routes.

Welcome Center

When you first arrive at Philmont, get your crew to form a pack line outside the Welcome Center. You and your crew leader will go inside to receive the first of your administrative paperwork including your tent assignment in Trail-bound Tent City. You will also receive information regarding services available in base camp. The Welcome Center will contact the Ranger Office and your assigned Ranger will be sent to meet you. By the end of your Ranger's three-day stay with you, all your crewmembers will all want to return to Philmont and be a Ranger when they reach eighteen. These young men and women are cool and confident. They are experienced in the backcountry, have been taught the Philmont method of hiking

and LNT camping, and are skilled in dealing with group dynamics. Your Ranger will also be a godsend in base camp. He or she is skilled at getting your crew through Registration, Logistics, Medical Recheck, and Outfitting Services.

Tent City

After leaving the Welcome Center, your Ranger will want your crew to bring all their gear to their assigned tent area. Each canvas tent in the Trail-bound Tent City has concrete floors and two cots with mattresses. There are two people per tent, and in the case of an odd number of advisors or Scouts, one person may need to be in a tent alone. A Scout may not share a tent with an adult unless it is a parent of that Scout. Use the same tent-sharing arrangements that you will use on the trail. Tent City bath houses are separated by gender and by youth/adult, so make sure you read the sign to ensure you are in the appropriate facility, as there are four choices and the closest facility may not be the building close to your tent assignments.

When you arrive at your tent area, be sure and stress security of personal and crew gear. Keep packs inside your tents and make sure that your tents flaps are securely tied shut when you leave the area. This also prevents having gear damaged or soaked during unexpected storms. **Before leaving the tent area to begin in-processing, each person should have a water bottle, raingear, and ALL PRESCRIPTION MEDICATIONS for their medical re-check.** This includes inhalers and Epi-Pens as well. The lead advisor also needs to collect all in-processing paperwork before leaving the tent area, including medical forms. This will save a lot of time later so no one has to run back to the tent area to get these items. Crews using white fuel should bring their empty fuel bottles and fuel filter, so they're handy when they reach Outfitting Services. Tim Bell suggested that it's also a good idea for the crew to put on sunscreen prior to setting out on their base camp activities, as a bad sun burn from the blistering base camp sun can put a damper on the rest of the trek.

Registration

Shortly after arrival, your Ranger will take you into Registration where the lead advisor will go over important administrative paperwork. You must display your tour permit at this time, and if traveling with a contingent, your ranger may have you go with your other contingent crew lead advisors since you share the same tour permit. You will receive envelopes to secure valuables like crewmembers' vehicle keys, locker keys, airline or bus tickets and money that aren't being taken out on the trail. At Registration, Philmont will also check your crew's first aid and CPR certification, so have your cards ready. Make sure that you bring your completed multi-color Expedition Crew Roster to Registration. Names on the crew roster and medical forms should be put in the following order; crew advisor, assistant advisors in alphabetical order, crew leader, and the remainder of the crew in alphabetical order. You may consider assigning one advisor with the responsibility for reviewing and maintaining the roster along with your crew's medical forms. An incomplete entry will significantly increase your in-processing time. You'll also have a chance to order additional crew photos during the Registration process. Your final step in Registration will be to go over your crew's financial statement to make sure that you are paid in full. If you have a contingent leader, that person will do this.

Mimi and Denise Vowell bring a small binder, organized with pocket folders or clear sheet folders, which hold all the paperwork divided into categories like Admin, Philmont Infirmary, Travel, Sightseeing, Roster, etc.

Logistics

Because of the large number of crews that in process each day, you and your crew leader need to be ready and waiting at the door outside of Logistics when your appointment time arrives.

Logistics is where your itinerary gets finalized. Prior to going to Logistics, purchase a new "Overall" Philmont map at the Tooth of Time Traders, or use the "Overall" map sent with your *TREKS* book, and bring it with you when you go to Logistics. Make sure to bring an "overall", not sectional map — it must not be marked. The Logistics staff will use this map to mark the locations of your commissary stops, conservation site, and camps. Your Crew Leader should transfer this information to the sectional map(s) later in the day/evening. If he encounters something he can't remember, he should return to Logistics for clarification — this is much better than getting on the trail before realizing he doesn't remember! Take as much time as you need in Logistics to get the details of your trek nailed down.

Crews with advisors who have not trekked at Philmont in the last decade may have heard that Logistics will allow you to modify your trek by swapping out different camps in the itinerary, but this is no longer true. Philmont has a tough policy regarding itinerary changes, allowing none. Making changes on your own while on the trail is **ABSOLUTELY NOT ALLOWED**. This policy has been even more stringently enforced since the fires in 2002, when several crews were not located in their assigned camps during fire evacuations. **Your crew will not receive their Philmont arrowhead patches if they're found camping at a location that had not been approved by Logistics.** Philmont needs to know where your crew is in the event of an emergency, so don't make changes on your own. Side hikes are fine, but your crew needs to be at its assigned camp each night and make its assigned food pickups. The single largest infraction of this rule – that still occurs each year – is when crews hike past their assigned camp on the final night to camp at Tooth Ridge. If you want to camp at Tooth Ridge, then pick an itinerary that does so! There are plenty. Ranger crews sometimes camp near Tooth Ridge to check that only crews who are supposed to be there are camped there.

The lead crew advisor and the crew leader are the only ones allowed in Logistics. Whenever possible, Logistics will go over the itinerary with sister crews at the same time. In keeping with Philmont's youth-led philosophy, the staff prefers to deal directly with just the crew leader, so make sure that he or she is ready. Generally, the adult advisor should take a seat near the wall while the Crew Leader sits across from the Logistics Trip Planner. This is the beginning of Philmont's "youth led" program and insures that the Crew Leader is the focus of attention. Decisions that may seem to be minimal to you may seem to be a real responsibility for your crew leader. You can coach your crew leader before arriving at Philmont to ensure that he asks the right questions. The following are some considerations:

Water Board

Philmont water sources are posted on a water board immediately inside Logistics. The board indicates the type of water source (faucet, well, spring, streams), its flow rate (ample, trickle, dry), and the date it was last checked. All water sources must be purified unless a staff member lets you know that it has been chlorinated. If you pass a water source, always refill all your canteens and drink up.

Always plan for the unexpected: It can be very hot at Philmont and there is no way to know if the next water source will be dry. Recording water sources will only take a few minutes, but that information can save you a lot of needless hiking and the possibility of becoming dehydrated. Pay particular attention to recording water sources before and after a dry camp. Denise Vowell suggests taking a picture of the water board with a digital camera on zoom, for later review.

While you are in the backcountry, check with the staff at Staffed Camps about the water conditions where you will be going next, as they may have changed since you made your notes in Logistics. If the camp staff does not know, they can radio Logistics for the latest updates. You can also talk to crews who are coming from where you are going.

Horses and Burros

Horse Rides – Horse rides are reserved during Trip Planning in Logistics. If a horse ride is practical, based on your layover schedule/camp, a “morning” or “afternoon” ride will be indicated on the itinerary. They are on a first-come, first-served basis — another reason to get to Logistics as early as possible. Even if your Ranger has been instructed to take your crew somewhere following Registration, they will check in at Logistics so you can make horse ride reservations. Make sure that the crew leader understands the distance that has to be hiked to get to the horse riding location. Horse riding times are generally at 8 AM and 1 PM. The morning times are generally better because the temperatures are cooler and the afternoon times may be canceled due to thunderstorms. One year, Wally's crew had to hike 5 miles to get to an 8 AM horse riding appointment. Because it always took the crew 2 1/2 hours to leave camp, they would have had to get up at 3 am just to meet the start time for the horse ride! If the crew is scheduled to camp at the horse riding staffed camp, consider riding the next morning. That will give the crew enough time to get to the camp, relax and participate in the other programs offered such as boot branding and chuck wagon dinner. Note: There is a STRICT 200 lb. weight limit for anyone who rides a horse at Philmont, regardless of height.

Burros – Some Philmont treks include Burro Packing, where the crew takes burros on the trail for a short portion of their trek. The burros can carry a portion of the crew food bags, and provide a unique experience. If you selected an itinerary with Burro Packing, Philmont requires your crew to take at least one burro. You may be assigned two if Philmont needs to move burros from one camp to another. Your crew will be taught how to care for the burros before you pick them up. Several years ago, crews with burro packing itineraries had an epidemic of “burro allergies”. They would go through the discussions in Logistics then, during Medical Recheck, would mention that one of their crew members was allergic to burros. The Philmont Infirmary would tell them they could go ahead with the itinerary but not pick up the burro. This is no longer the case. Now, if there is a “burro allergy” (particularly one that's not noted on the medical form), the crew will be returned to Logistics and will be assigned a different itinerary that has no contact with burros.

Here is some invaluable advice from “Prospector John” Wisinger, who served as a roving prospector: “There is one basic thing that everyone hiking with burros should know. There is no difference between the stubbornness of a “been there done that” grumpy old fart (aka advisor); the stubbornness of an “I could do things better” teenager (aka Scout), the stubbornness of an “I know everything” college student (90% of the Phil-staff including myself), and the stubbornness of a “just let me eat grass and poop” burro (100% of burros). To be successful in life, most people have learned to deal with the first three groups of people. Basically, most problems can be solved by better communication. Since burros don't speak English, you can't talk at them or yell at them. They also respond quite poorly to physical violence or rope tugging. They are herd animals, and they like to follow their friends. If you have a big group of burros and you lead one, the rest will follow him anywhere (assuming that you lead the one established as the leader). So to get a burro to follow you, you just have to establish yourself as the leader. Based on the odor and facial hair of most people in the backcountry, that's a lot easier than you might think. In short, be nice to your burro. Feed him, take care of him and don't yell at him.”

“When you start walking, keep moving. Every time you stop, that's a signal to the burro that it's time to eat, so don't stop unless you want to take a noticeable break. To get the burro started, face away from him with your head down. That's the way a lead burro would do it. If you look at the burro and pull a rope, or if half of your crew is standing around behind the burro not ready to go, he won't realize that it's time to move. Stay on the trails/roads and avoid getting too close to high grass. If you were hiking through a field of cheeseburgers and someone forced you to trek on to get to Supper #9, you'd be mad too. And remember, not everyone who has dealt with that burro in the past is as nice as you are (which is very unfortunate). Therefore, it may take a little while to gain its trust. And most importantly,

remember that your burro is your friend, but sneaking up behind him will get you a quick hoof in the crotch ... and burros kick hard."

Special Meals and Returning Lunch

There are opportunities for a special chuck wagon dinner or breakfast on many treks, at camps such as Beaubien, Clarks Fork, Ponil, and Abreau. Crews can take advantage of signing up for these special meals at Logistics. Your crew leader will receive instructions on arrival times required for special meals, which will get reinforced when the crew checks in at the staffed camp where it's served. Since crews provide volunteer cooks and cleanup help, it's important to make sure that the crew arrives at camp in time for these volunteers to report for duty. There are some itineraries that have an "OR" condition involving chuck wagon dinners. On these itineraries, the crew must make its decision while in Logistics and that will be marked on the Advanced Crew Leader Copy form. These "OR" conditions are in place simply because there is not enough time to do all the program features.

During Trip Planning, the Advanced Crew Leader Copy will show the type of lunch for the last day on the trail – trail lunch, or lunch back in base camp. If your crew is being bused in, this decision is based on your return time. However, if the crew hikes over the Tooth of Time to get back into base camp, it is based on the camp the crew is hiking from.

When you leave Logistics, your crew leader will be given the approved itinerary called your "Advanced Crew Leader Copy" listing all assigned camps and commissary stops, your scheduled horseback ride time, dates and locations of special chuck wagon meals, and the bus times for your trip out and back in. It also shows the specific meals your crew will pick up at commissaries. The back of the form shows your conservation project location(s) and has a blank duty roster form. This is an extremely important document and must be presented by your crew leader at every staffed camp and when you pick up food. Your crew leader should keep his Advanced Crew Leader Copy in a waterproof plastic bag at the very top of his pack.

Crew Photograph

Philmont takes crew photographs in the morning when the sun's rays illuminate the Tooth of Time in the background for your photograph. Although in the past crew photos were typically scheduled during morning hours, photos are now taken throughout the day for the convenience of crews.

If you want your crew photograph done in your Class A uniform, it is best to get it taken on the first day, so you can get out of your Class A uniform for the remainder of the in-processing. If a contingent photo is needed that includes multiple crews, it's easiest to take this before Registration while all contingent crews are together before splitting up during base camp procedures. Unlike the past, crews may now be photographed before Registration. Many crews choose to have their photos taken in Contingent or Crew shirts, and this makes it easier. The crew should plan ahead so that they're ready in the selected shirt when called. Since Philmont uses this photograph for emergency identification, no sunglasses, hats, or transition lenses are allowed.

Medical Recheck

Health forms are passed directly to Philmont Infirmary staff. Please make sure every item in the health form is completed! Hopefully, you have already reviewed each form prior to leaving for Philmont and already have obtained any missing information. Parts A, B, and C must be completely filled out. Items often needing additional information are:

Name, address, family insurance policy and number, and person to be contacted in case of emergency with phone number (including area code) must be completed for each crewmember. Be sure the emergency contact is NOT someone on the trail with the crew! Although there is a place for social security numbers, this information is optional.

Health history must have a yes or no for each item. Any allergies should be indicated and should be known by the advisor prior to leaving home. Two members of Roy Fisher's crew had ACL surgery in the fall prior to coming to Philmont. Since the scar was easy to notice, each one had a letter from their orthopedic physician specifically clearing them to participate in all activities. Both boys cleared the Philmont Infirmary without a problem (although they did bring knee braces with them). Be sure to indicate any injuries or illnesses that occurred during the past year.

If one of your crewmembers is taking any form of prescription medication, make sure he carries it down to the health recheck, in its original bottle. To reiterate: TAKE ALL PRESCRIPTIONS TO MEDICAL RECHECK. Mimi says that every year she sees people making a mad dash from the Philmont Infirmary waiting area on one side of base camp, to their tents on the far side of camp, because they forgot to bring their meds to recheck. Philmont Infirmary personnel will check to ensure that the medication is up to date and that there is enough to last in the backcountry. Once medical recheck is done, pills can be transferred into container(s) more suitable to the trail if desired. The Philmont health form says: "Each participant who has a condition requiring medication should bring an appropriate supply for the duration of the trip. Consider bringing duplicate or even triplicate supplies of vital medications. People with allergies that have resulted in severe reactions or anaphylaxis must bring with them an EpiPen that has not expired."

Be absolutely sure that the date of last tetanus inoculation is completed and the date is within the past 10 years (the 10 year requirement was still in place on the 2014 BSA health form, but check your latest form received from Philmont for change, as some medical facilities are now recommending inoculation every five years). If a tetanus shot is not up-to-date, the crewmember will be required to get one at Philmont.

Make sure that the physician certifies that the crewmember is cleared to physically participate in each activity listed on the back page. He should then sign the form, print his name legibly, and include his office address and telephone number (with area code).

Ensure that a photocopy of each crewmember's insurance card is attached to the medical form. If it is not, you will wind up spending lots of time at the Philmont Infirmary waiting to get a copy faxed from home. If a crew member does not have medical insurance, be sure they have marked "NONE" where indicated on Part B.

Each member of the crew will be called into the Philmont Infirmary individually for screening. Even if you have discussed any existing medical pre-conditions earlier with Philmont by phone, bring your doctor's business card, copies of your medical records, EKGs, and anything else that is relevant. Wally's crew leader, who had minor surgery a month before arriving at Philmont, had been cleared by his doctor (who himself had completed a Philmont trek). Despite the completed form with the doctor's signature, the Philmont Infirmary still called the doctor to confirm his clearance!

Every advisor is weighed during medical re-check and there is no flexibility if an advisor is over the maximum weight on the Philmont weight chart. "Growing taller" is not an option, as Philmont has a convenient wall-mounted height ruler!

Each advisor will be required to have their blood pressure taken. If it is high, the advisor will be immediately taken to discuss the findings with Philmont Infirmary personnel. One of the first questions you will be asked by the doctor is to thoroughly describe your pre-Philmont exercise program, so be

ready. If you already know that you have a high blood pressure problem, bring as much documentation as possible so the doctor or medic is better able to make an informed decision regarding whether you should be allowed to go on the trail. Wally and his local doctor knew that he had high blood pressure, so when he failed the blood pressure test at the Philmont Infirmary, he was able to give Philmont's doctor his cardiologist's report, a stress test report, an EKG, his blood pressure log and his exercise log. After reviewing all the documentation, the doctor released Wally for the trail. Having a detailed exercise log can greatly assist the Philmont Infirmary personnel in determining whether you will be allowed on the trail.

Philmont requires that your blood pressure be less than 140/90 to be allowed on the trail (see the "High Adventure Risk Advisory to Health-Care Providers and Parents" in the BSA Annual Health & Medical Record Form). However, the effects of altitude, excitement, and stress from being with crewmembers for a few short days can elevate your blood pressure above your normal pressure back home. Advisors are often asked to have their pressure retaken the next morning. DON'T WORRY, this is a common occurrence. Here are some actions that you may consider before getting your pressure taken at Philmont:

a. Caffeine makes the heart beat faster and raises the blood pressure. Cut out caffeine two weeks before you arrive at Philmont.

b. Retention of water will elevate blood pressure. Be very careful of salty foods eaten enroute to Philmont. The night before arriving at Philmont and the morning of the medical recheck, eat a banana and drink a glass of orange, grapefruit, or pineapple juice. The fruit provides your body with potassium that will help rid your system of any excess water.

c. Separate yourself from your crew while waiting for your medical recheck. During this time, meditate, pray, sleep, or just generally rest. This is probably tough to do because of your anticipation to get on the trail.

If your pressure is too high, you will be asked to lie down for about 30 minutes. Try to sleep if you can. If it is still too high, you will be told to return the next morning when your blood pressure should be lower, especially if you've had a good night's rest. However, if it is still elevated, you will be asked to lie down for 30 minutes and your blood pressure will be retaken once more. If still too high, you will be referred to a doctor or a medic who will review your medical form and your blood pressure results.

Be assured that the medical staff will do everything possible to get an advisor in the backcountry with his crew. This may even include prescribing medicine to regulate your blood pressure (if this happens, you will incur a co-payment). If you know that you may have a blood pressure problem while at Philmont, talk to your local doctor before you go about what he recommends should you need some medication. Should you or your doctor have doubts about your blood pressure, contact Philmont before you arrive.

HIPAA has caught up with Philmont, just like the rest of the United States. Because of recent medical privacy laws, should you have someone come off the trail, the only way that you will be able to discuss his or her situation with the Philmont Infirmary from a staffed camp radio in the backcountry is in code using their initials and birth date. So be sure to carry a small card with that information with you or include such a card in your crew's first aid kit. Your Crew Leader may want to carry a copy of the Philmont Crew Roster with his Advanced Crew Leader Copy, it contains the initials and birthdate.

Outfitting Services, Food Pick-Up, and Mail Room

With your itinerary finalized in Logistics, your crew will head to Outfitting Services (prior to 2013 this was called Services) where they will pick up crew equipment and receive their first food issue. If you brought the majority of your crew gear, this should not be a lengthy process. Whether you brought your crew

gear or not, your crewmembers should carefully inspect each item of issued crew gear for several very important reasons. First, if it won't work in base camp, it certainly won't work on the trail. Secondly, your crew will wind up buying a piece of gear that is found to be defective when you return. Finally, make sure your crew leader knows what he is signing for. If he signs for items he doesn't receive, the crew will wind up paying for them when you return from the backcountry.

Starting in 2013, Outfitting Services no longer distributed the 2-qt pots and lids (that most crews left in their lockers) unless requested. They also started distributing the "new" version of the Philmont Thunder Ridge tents. Campers really appear to like them a lot based on survey results and Philmont will continue to make improvements as needed.

While at Outfitting Services, you will have an opportunity to go to Packs and Gas and buy white gas fuel for your crew's stoves. You may be able to get fuel for free from crews who are coming off the trail. Have the crew bring the empty fuel bottles and fuel filter with them when they leave the tent area. It is a long walk back! Canister fuel can be picked up at the Tooth of Time Traders or at the Advisor's Lounge where homebound crews often leave partial canisters that are free for the taking.

Your crew leader will need his Advanced Crew Leader Copy when he goes to pick up food. Please note that all food comes in two-person packets. The crew should carefully count the number and type of food packets by meal to ensure a correct issue. Each bag will be labeled with the meal and menu number ("Supper 1", "Lunch 3", etc.). The bags should be separated by specific meal and checked off against the list on the Advanced Crew Leader Copy form (if it is a 12-person crew, they should have 6 bags of "Supper 1", "Breakfast 2", etc.). If there are any missing or extra, they should resolve this with the Services staff before leaving. They should also return any package that is torn or has holes in it. You do not need food leaking in packs on the very first day. Crews should follow this same food pickup procedure at their backcountry commissary food pickups to be sure they aren't carrying extra weight or missing any meals.

By the way, if you pick up your food the day before you go out, you need to ask your ranger if you may load your initial commissary pickup in your packs the night before you leave for the trail. Some crews have been required to store all food and smellables in their crew lockers overnight and pack up in the morning when they leave to protect the food from the many chipmunks, squirrels, and skunks found in base camp. Because locker space is pretty small, you may want to pick up your food after breakfast in the morning if you have a late bus time out of Base Camp.

At the Mail Room, an advisor will be able to pick up crew mail. Coop, Mimi and Wally have made it a point to talk to parents ahead of time to ensure that there will be a letter waiting for each crewmember when he arrives at Philmont and when he comes off the trail. These letters do have a powerful effect on the crew because it lets them know that there are people back home that are thinking about them. It is also a good idea for crewmembers to purchase postcards and stamps here since they are sometimes not available in the backcountry. If you want to mail postcards home, mail them on Day One. Otherwise you will get home before they do. You can mail them from backcountry staffed camps which is neat but it may take a while for them to arrive!

Security

At Security, you will receive key for your crew locker to store everything that will not be taken on the trail. The lockers are 21 inches wide by 22 inches high by 31 ½ inches deep. If your crew has arrived by chartered bus, they should be issued two lockers. (If this doesn't happen, ask for a second locker – sometimes security assumes you came in private vehicles.) If you come by private vehicles, Philmont may not issue a locker to your crew, expecting you to store items in your vehicles. This simplifies the check-in and check-out process. Even with two lockers, there is not a lot of storage space, so try and limit the

amount of extra junk that your crew brings to Philmont, and make sure everyone brings collapsible, reasonably sized luggage – no suitcases. You can also store extra items at Security if needed. Philmont no longer allows personal padlocks to be added to storage lockers, and will cut them off. You must use the keys provided by Security.

Villa Philmonte

During your in processing, make sure to get a time to visit the Villa Philmonte, Waite Phillips' home. It is a beautifully restored home and will give you an appreciation for the man who donated the land that came to be Philmont. For those crews hiking through Hidden Valley, be sure to check out the view from the villa's Window Rock window. Please don't wear your dirty trail clothes when you visit. The furnishings inside the Villa are priceless and can be damaged easily by dirt and grime. We suggest visiting the Villa before your trek, as thoughts after the trek seem to revolve on showers, mail, ice cream and pizza! If your Day One is too full, be sure not to miss the Villa after you come off the trail. If you have a late bus to your starting bus turnaround, you may be able to reserve a tour your second day at Philmont. Reservations are required and can be made at the Seton Museum across the road from the main gate. With your Ranger, determine a good time. After your first two crew members complete their Medical Recheck, send them across the road to the Seton Museum to make your tour reservations. That saves you a long walk!

Ranger Training

While at base camp, your Ranger will begin his Ranger training by conducting a thorough shakedown of your crew's personal and crew gear to ensure that you are prepared for the trail. Although you may feel that your Ranger's attention to detail is not needed, please remember that the majority of crews that come to Philmont have very little practice in backpacking. In the past, some advisors (especially the more experienced advisors) have resisted their Ranger's efforts because they felt as if the Ranger was trying to undo all the training that they had tried to instill in their crews. Advisors really needed to give their Rangers the space to teach their crews the "Philmont method." Having an advisor interfere with training or not accept what a ranger says to a crew is a Ranger's biggest annoyance when working with a crew.

You should know that although we try and keep the *Philmont Advisors' Guide* as current as possible, Philmont is constantly changing and upgrading their training even during the time period that your crew is at the ranch so that you and your crew can have the best and safest experience possible. Even experienced advisors should not expect to know everything that will be taught. If you should disagree with some of the training given by your Ranger, do not argue with him or her in front of the crew. A better way is to quietly share with your Ranger away from crew why you do things a certain way. Karl Cheng, one of Wally's rangers, stated that Rangers want to be included in any discussions on backcountry training methods and do not shoot down your ideas just because they are different.

Remember, Ranger training is another voice teaching the latest methods of LNT camping that have been found to work at Philmont. So coach your crew not to "tune out" subjects that they already know. Pete Lane encouraged his crew leader to sit down with their Ranger right before he left to return to Base Camp and pick his brain about advice on trails and activities for the remainder of the trek. Show your Ranger that you are willing to listen and learn. Respect their jobs!

Evening in Base Camp

Immediately after dinner at 5:45 PM on the day of arrival, the crew leader, all advisors, the crew chaplain's aide, and the Wilderness Pledge Guia have special meetings to attend where they will be briefed on their responsibilities and conditions at Philmont. It's very important to attend these meetings.

In 2013, new Hardesty Casa Central replaced the old Advisor's Meeting Room building and was a great success. Crews who went in 2013 may have noticed some minor acoustic issues but Philmont has now added speakers for the "PA" systems and upgraded the A/V equipment.

There are always a few advisors who mistakenly look for the Advisor Meeting at the Advisor's Lounge. The Lounge had some upgrades too. Philmont threw out all the old furniture and replaced it, put in new storage cabinets, added a new coffee maker, and put in charging power strips for people to use for phones, computers, etc. They also added a book rack with loaner books.

Following these meetings is an optional but highly encouraged chapel service at 7:00 PM each evening. There are separate chapels for Jewish, Protestant, Catholic, and LDS services. At 8:30 PM, all arriving crews leave for their Opening Campfire after meeting at the Welcome Center pavilion.

ON THE TRAIL

Hiking Techniques

The first rule of hiking is that the crew must always stay together regardless of the pace. Every crew will have its slowest hiker and that person is almost always an adult. Even with intense physical preparation, youth will always seem to recover faster than the older advisor. Around day seven, some adults may have a hard time overcoming the aches and pains that the younger crewmembers do not have. Advisors may want to bring an anti-inflammatory such as Advil, Aleve, Motrin, or Nuprin. If taken before hiking and at the end of the day, this supplement can reduce the pain and inflammation of body joints.

Crewmembers are smart. They will know who has physically prepared for Philmont and who has not. A helpful hint to the advisors: It is OK to apologize to your crew for being slow. They really appreciate it when you take the time to thank them for slowing down to give you a break. Some of them would rather walk at your pace anyway. Wally was the slowest hiker on four of his trips to Philmont. After apologizing to his crews for being so slow, he was overwhelmed by their response when they began encouraging him. The crews realized that they had to hike at his pace and they remained at that pace for the rest of the treks. Another approach is to tell your crew that they need you more than you need them. That does not work too well though. The key is to have done your best in preparation. As long as the crew knows you have prepared and helped them to prepare, they won't mind slowing down for you.

Your Philmont Ranger will recommend the 5/20 rule for breaks – breaks should be no more than five minutes, or at least twenty minutes. This is because the lactic acid that builds up in muscles must be given a chance to dissipate if the muscles stop working for more than five minutes. Quick “packs on” breaks can be taken as needed for water or retying a boot, depending on the heat and the steepness of the trail. These breaks are limited to no more than five minutes and carefully timed by the crew leader. If the crew stops for more than five minutes, you'll be expected to stay stopped for at least twenty minutes for a “packs off” break.

We recommend taking a “packs off” break every hour to check feet, get fully hydrated, and make any necessary clothes or pack adjustments. It is important that the crew leader continuously monitor the performance of the crew, including the adults. When a stop is needed, the crew leader announces what kind of stop (packs on or off) will be taken and for how long. If the crew takes a “packs off” break, the crew leader needs to watch the clock and give a 2-minute warning to get everyone started up again.

Most crews are unaccustomed to the continual elevation changes provided by Philmont trails, particularly if they come from the east coast or coastal areas. The challenges of the steady uphill climbs on many days can test a crew's fitness levels. Many crews employ various hiking techniques to assist on their uphill days. These hiking techniques may get you up the hill slower, but you will find that you can hike longer without requiring numerous breaks.

One technique that can be used to rest leg muscles on long uphill climbs is the “rest step” or “lock step.” When crews begin climbing uphill, there is a tendency to support the weight of the hiker on the front part of the foot. This is a natural reaction on steep inclines because the ground slopes away from the heel of the foot. Because the entire bottom of the foot is not on the ground, the calf muscle must provide the support for the leg. This is an easy way to tire you out, and the “rest step” fixes this problem. When climbing uphill, get your crews to keep their foot flat on the surface of the ground. As you step forward on your foot, lock your knee for a moment before taking the next step. This move does two things. First,

when your knee is locked, the skeletal frame of the leg takes all the weight allowing your muscles to relax for an instant. Second, it provides an opportunity to slow down the pace and take a rhythmic breath. The "rest step" technique may be done every step, every third step, or every fifth step depending on the steepness of the climb and the altitude. The "rest step" technique is advocated by Philmont.

Philmont also recommends using "rhythmic breathing" in conjunction with the "rest step" as a way to conserve energy. To breath rhythmically, synchronize your breaths with your steps. On moderate slopes, take one breath per step; on steep slopes, take two or three breaths per step to take in more oxygen.

Some crews use a technique called "the caterpillar" to stay together at a steady pace up steep hills. While popular with many crews – especially advisors who have difficulty with the rigors of uphill climbs - the caterpillar is discouraged by Philmont due to concern over trail margin erosion as crewmembers step out of the way of the next hiker. If you must use the caterpillar, it should be limited to areas such as extremely wide trails or jeep roads (which should never be used if a hiking trail is available). The leading member of the crew steps to the side of the trail. The next hiker takes 3 steps past the crew leader and then steps off the trail. As each hiker becomes the first in line, he takes 3 steps and steps off the trail, remaining standing. When the last person in line has passed the leading member by 3 steps, the leading member rejoins the moving section of the hiking line.

Your ranger will also remind you that a good way to stay together without overtiring on uphill trails is the simplest technique: Hike slower. Don't forget the lesson of the tortoise and the hare. Philmont recommends putting the slowest hiker in the front, but that can lead to complaints and hurt feelings. It's also awkward since the slowest hiker is often an adult, and advisors typically hike toward or at the rear of the crew. We recommend using shakedown to find which Scout can set an appropriate pace as lead hiker, and this will keep the group together and not punish the slowest hiker or irritate the faster members. Many crews employ the use of this lead pace setter, followed by the day's navigator. Ideally the crew leader should hike in a position that allows control of the crew. That's typically about mid-crew, so that both the front hikers and rear advisor are in the crew leader's sight, which also assists in keeping the crew together while hiking.

As a courtesy to other hikers on the trails, crews hiking downhill always move off to the side when meeting a crew coming up the hill. The trails are too narrow for two crews to pass each other and it is a lot harder to get started uphill once you have to stop. When you do step off the trail to allow another crew to pass, you should face inward toward the trail. If you face outward, your pack will hang over the trail making it difficult for the other crew to pass. Besides, if you face inward, you can see if the other crew looks worse off than you do. You may also meet crews or staff on horses. Horses always have the right of way. Crews should move on the downhill of the trail so as not to spook the horses, and keep quiet, unless given specific instructions by a Philmont horseman or wrangler leading the group on horseback.

Another courtesy that is appreciated by staff members in the backcountry is not to come up on a staff cabin porch unless invited. During the summer months, staff members must call these cabins their home and it is tough to have 25,000 guests tramping in and out of their house!

Terrain Awareness

In the past, traditional Philmont navigation relied solely on a combination of map and compass skills, augmented by rustic wooden trail signs with arrows. In recent years, the use of GPS devices has become increasingly popular at Philmont, and is now included as part of ranger training for crews who have brought a GPS.

Regardless of technology, map and compass skills are still the backbone of a crew's navigation.

It's important for the crew to know how to use basic map and compass skills along with the natural features of the wilderness environment to help determine location via terrain awareness. For most crewmembers and in some cases for their advisors, basic map and compass skills are lacking. If the map indicates that Bonita Peak will be on your left as you walk along the trail and all you see is a beautiful mountain meadow, chances are that you are on the wrong trail. This actually happened to Wally's crew. When it was pointed out to the crew by an advisor that the peak wasn't to their left, it was their first indication that they were not on the right trail. The crewmembers simply did not know what terrain features to look for as they walked along the trail.

In 2011, Philmont began replacing and augmenting the wooden signs with simple vertical posts, engraved with UTM coordinates (see "Philmont Geospatial Mapping Project"). UTM coordinates are shown on all Philmont maps, and crews should become familiar with how to find the UTM coordinates of any point on their map. The Philmont website has a link which provides the UTM coordinates of all camps, available at <http://www.philmontscoutranch.org/filestore/pdf/utm.pdf>.

We feel that it is important for each crewmember to have the opportunity to be the navigator (or in some cases better named as the "naviguesser" or "Magellan") for the day. The navigator is responsible for carrying the map and compass and leading the crew while on the trail. The navigator hikes second in the crew, behind the pace setter. We have found that the best way to teach terrain awareness skills is by hands-on practice. It also gives the navigator a chance to assume a leadership role within the crew for the day. Finally, the use of a navigator satisfies one of the requirements for Backpacking Merit Badge. After supper, the advisor should sit down with the navigator and help him go over the route to be covered the next day and prepare a Time Control Plan.

A "Time Control Plan" predicts how long it will take you to complete your hike (or any portion of it). It includes important trail features such as water locations (very important), stream crossings, trail intersections, and staffed and trail camps. It also includes time spent for program, planned breaks, meals on the trail and just time spent "smelling the roses." To prepare a Time Control Plan, the navigator will need to estimate the total distance to be covered as well as the approximate changes in elevation. You can determine the horizontal distance by simply reducing the trail into a series of sequential straight-line segments and estimating the mileage to be traveled using the scale at the bottom of the map. Coop now uses a map wheel made by Silva that records the distance for several different map scales. Next the navigator will need to determine the approximate changes in elevation over the length of the hike. This is a little more difficult and requires the navigator to be able to read and understand the contours shown on the map. Again it is easiest to break the total hike up into sections of climbs and descents (you are never going to be flat for very long).

Once you have both the horizontal distance and the elevation changes, your navigator should estimate the total time on the trail. A good rule of thumb is one hour for every two miles traveled plus an hour for every 1,000-foot change in elevation. For example, if your hike is eight miles long, with an elevation change of 2,500 feet, it should take your crew 6.5 hours to walk (8 miles divided by 2 miles per hour plus 2,500 feet change in elevation divided by 1,000 feet per hour). You will probably have to modify this rule based on your crew's capability. While this sounds complicated, your crew can get pretty good at making SWAGS (Scientific Wild Ass Guesses).

Each evening, the following day's navigator should review the route using his Time Control Plan and map with the entire crew. Taking this time each day is extremely important. It provides the crew with an understanding of how difficult or easy the day will be. Instead of blindly following each other down the trail, each crewmember becomes more of a participant in the trek. It also provides the crew with the information they need to plan out the day. Donna Sengelaub also recommends exchanging "best practices" on route selection with other rangers and advisors during Advisor Coffee at staffed camps.

Using the Time Control Plan, the crew (not the advisor) takes ownership for the hike and decides what time to get up, when and where (and what) meals should be eaten, when they should arrive at scheduled programs, and when they will arrive at the next day's camp. Finally, it provides an opportunity to reinforce map and compass skills that are little used anywhere else.

At each trail intersection, the entire crew should stop and examine the map. The selection of the new trail should be a consensus of all crewmembers and reviewed with the advisor. The crew's navigator should always ask, "Does anyone not agree" before proceeding down the selected trail. If the crewmembers make a wrong selection, let them live with their mistake until your feet tell you it's time to stop and have them explain where they are. After the first few times that you let them make a mistake, the crew will begin to get serious about terrain awareness.

Philmont sells two different types of maps. All maps are updated annually, including any new camps and trails. The first is a single map sheet (1" = 4000' or 1:48,000), which covers the entire ranch (the "Overall" map). This map, with 80' contours indexed every 400', is great for planning your trek and to get a good idea of surrounding terrain features. It is also the one that you will take into Logistics when you get your itinerary finalized. The second is a set of three map sheets (1:24,000), which cover the North Country, South Country and Valle Vidal, which are now printed on two sides. Each sectional map is 36" x 26" open, and be purchased flat, or 9" x 4" closed and folded. All map information is surveyed and processed by the Philmont GIS department, with 40 foot contours, indexed every 200 feet. Maps have waterproof ink and are printed on water resistant paper. The maps support GPS use down to the exact location of every sump and bear bag cable. The 1:24,000 scale maps are used on trail because they provide much more detail than the 1:48,000 scale map. While on the trail, the maps should be folded so that the route is clearly visible, and held in the hand for frequent checking. Donna Sengelaub recommends also considering a plastic map cover or map lamination. Carol's crew uses a Ziploc Freezer bag, gallon size, which is inexpensive and holds up to the rigors of the trail. The crew leader, the navigator for the day, and an advisor all should carry a map during the hike.

One of the skills that your crew will have to learn is how to compensate for the difference between true north displayed by the grid lines on your map and magnetic north. This difference is known as declination. True north and magnetic north are the same only in a line that runs off the East Coast of Florida, through Lake Michigan, and on up to the Magnetic North Pole located north of Hudson Bay. Declination is not static and changes over time. The 2014 maps for Philmont show magnetic north at 8 degrees east of true north. There are several ways to account for this difference. We strongly recommend that your crew have an orienteering compass, with a built-in declination device, so that your compass and map speak a common language. If you have a regular compass, you can set it to 352 degrees and line it up with the north-south gridlines to orient your map. Another more difficult way is to subtract the declination degrees from a bearing taken from a map to that set on a compass. "Declination EAST - Compass LEAST."

If you don't have an orienteering compass with its built-in declination device, the simplest method to have your map talk to your compass is to put magnetic-north lines on your map and use them instead of the true-north grid lines. We suggest that you order your Philmont maps ahead of time and do this at home where you will have the right materials that include your Philmont maps, a compass, a yardstick, and a pen. You can use your compass as an accurate protractor. First, turn the compass housing until 8 degrees (the declination) lines up with the direction of travel arrow on the compass base plate. Set your compass on the map, aligning the north-south lines in the compass housing with the map's north-south grid lines. The long plastic edge of the compass base plate should now point exactly 8 degrees east.

Using a pen, carefully draw the first magnetic north-south line along the length of the compass' plastic base plate. Place your yardstick along this line and continue the line across the length of the map. Continue moving the yardstick and drawing lines until they are parallel magnetic north-south lines spaced

evenly across the map. Do not use the magnetic north-south arrow of the declination diagram to draw your magnetic north-south lines as discussed in the *Scout Handbook* and the *Fieldbook*. We have found that the angle between the arrows in the declination diagram seldom matches the given declination angle. The U.S. Geological Survey uses a series of standardized diagrams that come closest to the actual declination when adding a diagram to a particular map.

Once you know your assigned trek, purchase the Philmont maps covering your trek from the Tooth of Time Traders so you and your crew can do a thorough map reconnaissance of the entire trek. Be sure the annual updates have been published before ordering. Your crew will be better prepared and will understand long before departure day, what is in store for it each day from a distance, altitude change, and water availability.

If Terrain Appreciation sounds like Greek to you, you need to take some time to get yourself and your crew more familiar with using a map and compass. There are many fine books on this subject; a good reference is Bjorn Kjellstrom's *Be Expert with Map & Compass*. At Philmont, you will need to have these skills mastered. One of the very first things that your Ranger will ask your crew to do is to orient a Philmont map using a compass, so be prepared.

If your trek takes you into the Valle Vidal, you may want to practice using a Global Positioning System (GPS) device on your shakedown hikes at home before you arrive at Philmont and bring it along as part of your crew's gear. The Valle isn't like Philmont proper and doesn't come with trail signs or even well designated trails, so "Be Prepared."

If you are planning to take your GPS to Philmont, you should load it with the coordinates of the camps you will be going to (and possibly some nearby camps and landmarks). A list of these coordinates (waypoints) provided by the Philmont Logistics staff is available in an Excel spreadsheet. You can also download a transparent (able to be loaded on top of a topo map) trail network at Philmont at no cost, at <http://www.gpsfiledepot.com/maps/view/570>.

As mentioned earlier, UTM coordinate signs are replacing traditional wooden Philmont trail signs around the ranch. New, accurate information is available thanks from a project conducted by Northrop Grumman, and shared with us by Baltimore Scouter Bob Mosier. Although the project data is not currently available for public access, we wanted to share the background on this project. Note the final paragraph, which explains Philmont's reasoning for limited dissemination of the data, which we fully support!

Philmont Geospatial Mapping Project

The following is an excerpt of the announcement published in ESRI ArcNews magazine in the summer of 2011 edition about the Philmont Geospatial Mapping Project: *"To commemorate the BSA's 100th anniversary in 2010, Northrop Grumman presented the Boy Scouts with high resolution geospatial data of Philmont Scout Ranch. The Philmont data, collected, processed, and exploited by Northrop Grumman's geospatial business, will be used by the ranch's personnel to better manage the property and otherwise enhance the experience of those who venture to the ranch each year. The idea for the project grew from Northrop Grumman's desire to collect, process, and exploit data from a single area that would showcase the company's full range of end-to-end geospatial capabilities. Philmont Scout Ranch was chosen, in part, for its variety of topological characteristics such as mountains, range land, and lakes and rivers that provide diversity for the different types of data collected. Several of the Northrop Grumman employees working on the project also are former Boy Scouts or have ties back to the Boy Scout community through troop leadership or parenting a Scout. In addition to providing a common data set for showcasing corporate capabilities, this project enabled the company to give something back to the organization during their centennial celebration.*

Northrop Grumman collected the data over a several month period in late 2009 and early 2010. Northrop Grumman's fleet of planes collected the data using advanced light detection and ranging (LiDAR), electro-optical and infrared (EO/IR) sensors to gather four-band imagery at the one foot (330 square miles) and six inch (70 square miles) resolution and one meter elevation postings (400 square miles).

The Philmont staff is currently in the process of building "flythrough" models of each of their pre-planned itineraries to better illustrate the trip. The Scouts will have a chance to see their trek as they in process through logistics during their first day at the Ranch. Other examples of how the data will be utilized include:

- *Managing land use activities such as forest typing for logging;*
- *Erosion detection and control;*
- *Better understanding of the current configuration of Philmont's land;*
- *Aid in understanding ways Philmont can expand their operation to bring more Scouts to the ranch; and*
- *Helping to build better maps for Scouts to use on the property.*

Currently Philmont is not going to open the data up to the public access. The reasoning behind this is that the ranch tries to control how much information they give to the Scouts prior to getting to the ranch. A significant part of the Philmont experience is for the Scouts to find their way across the property with a map and compass, basic skills every Scout needs to know. The staff recognizes that more and more people are transitioning to global positioning systems (GPSs) and, though it is a good skill to have, ranch officials feel the importance of using a map and compass outweighs the need for publishing all the data for people to download and plug into a GPS. As time progresses, the Philmont staff does plan to publish some of the data for public viewing, but at this time they are still examining the various options to determine what best method to publish the data without lessening the Philmont experience."

In spring of 2014, the Philmont website was updated with a new page saying: "In celebration of the 75th Anniversary of Philmont Scout Ranch, the Geographic Information Systems (GIS) department is releasing a portion of our trail and camp data to the public." The download link and associated disclaimers are at <http://philmontscoutranch.org/Camping/TrekPlanning/PhilmontSpatialData.aspx>.

Water Purification

Most staffed camps have a purified water source available for campers' use. Never assume water is purified unless this is confirmed by the staff. Crews with itineraries that include a lot of staffed camps, and those that fill water bottles and hydration systems whenever passing through a staffed camp, may find they can minimize the amount of times they need to purify water. Be warned though - even camps that normally have purified water can have system malfunctions that require water purification to be used. That's why you need to always check with the backcountry staff.

Philmont provides all campers with means to purify water via chemical purification, in addition to teaching crews to boil water for meal preparation and cookware sterilization.

Chemical methods

In the summer of 2005, Philmont began issuing Katadyn MP1 Emergency Drinking Water Tablets (Micropur). These chlorine dioxide tablets replaced Polar Pure, the previously used iodine-based disinfection system. This is part of Philmont's ongoing assessment of backcountry protocols. Micropur disinfects against bacteria, viruses and giardia, like Polar Pure, but additionally kills cryptosporidium. Micropur is packaged in foil blister packs, with a shelf life of three years. The use of Micropur represents a significant cost increase for Philmont, and as such, Philmont encourages crews to bring and use their

own disinfection systems/filters. Additional information is at <http://www.katadyn.com/en/katadyn-products/products/katadynshopconnect/katadyn-micropur/>.

The simplicity and versatility of Micropur makes it an ideal disinfection system for Philmont campers. Each tablet is pre-measured and designed to purify one quart/liter of water. Because disinfection time varies, depending on the contaminant, level of contamination, and water temperature, Philmont recommends waiting 30 minutes after adding a tablet, prior to drinking. However if the water to be treated is very cloudy or cold, or cryptosporidium has been identified in the area, the recommended contact time is four hours.

Philmont issues Micropur in foil packets for each crewmember. You can trade in empty foil packets at any staffed camp or commissary, so there is really not a problem with running out. Philmont does ask that you keep the foil packet intact when removing the tablets. This simplifies the trade in so the staff does not receive a handful of pieces of foil and reduces the potential for litter. Keeping the tablets centralized as "crew gear" allows individual packets to be fully used, avoiding a lot of half used packets that cannot be traded in.

The simplest way to open a foil packet is to use scissors to cut a slot on the side of the packet and pop out a tablet. The tablet is then added to a liter or quart Nalgene bottle which has been filled with water that has been screened with a bandana (if necessary). The tablets are quite small and will fizz like Alka-seltzer. After 5 minutes, once the tablet is fully dissolved, the Nalgene bottle is shaken and inverted. The lid is carefully opened allowing the treated water to flow over the threads. The lid is retightened and the Nalgene bottle is allowed to sit another 25 minutes before using. There may be a slight chlorine odor which will dissipate if the bottle is allowed to breathe for a moment right after the treatment is complete. There is no discernible taste to the purified water like there was for Polar Pure.

Advisors should assess whether their crews have the maturity to take responsibility for their individual water purification by having each member carry their own Micropur, or whether to collect the tablets for crew-based purification. Ranger Trainer Becky Morrow said that Micropur was to be considered a "smellable."

One way to cut down on the amount of MicroPur required on the trail (and the amount of time spent purifying water) is to use unpurified water for cooking and wash water. Since you will be boiling the water anyway prior to adding food or washing dishes, it will be purified from the heat and will not require chemical purification.

Always separate those canteens that already contain purified water from those that are in the process of being purified. If you can't remember which canteens are okay to drink from, you must assume that all canteens are in the process of being purified.

A final note on water purification tablets: Chemical purification can react with the ascorbic acid, sugar, coloring agents, flavoring agents, binders and preservatives found in most powdered drink mixes, reducing the concentration of chemical available to purify the water. Any residue of the drink mix left in a canteen could significantly reduce the tablet's purifying capability. Therefore it's important to purify all water in containers that have never held drink mix. Coop's crews used their canteens for carrying water only and used a two-quart plastic container (also known as the Drink Master) to mix all drinks, serving them directly into cups. Only the drink container needed to be put in the bear bag instead of every canteen that had a powdered drink mixed in it. Mimi's crews use another option, having each crewmember bring a distinctive additional Nalgene (or similar) bottle, and always use that bottle for mixing and drinking their Gatorade, while keeping other canteens strictly for water and purification.

Mechanical

Philmont encourages the use of alternate water purification, both as a cost-saving measure and backup plan. This can include pump-style water filters and purifiers, gravity filters, SteriPEN products, and more. If you plan to use mechanical methods, you should practice on your shakedown. It can be cumbersome to pump water through a filter for a crew of twelve. In addition, proper care should be taken to minimize clogging mechanical filters, such as letting water settle out before filtering, and making sure that input hoses are not placed in fast-moving turbid water. Mimi recommends bringing a small supply of coffee filters and rubber bands, so you can wrap a coffee filter around the intake device on any water filter to eliminate fine particles and extend the life of your filter insert.

The steriPEN is a fairly quick and easy method to purify water using UV sterilization. A drawback to using at Philmont is that crews must be trained to really pay attention to instructions and make sure the correct light sequence has occurred. Since this method is reliant on batteries, be sure to carry a supply of backup batteries since a large crew and cold temperatures will drain batteries more quickly than expected.

Denise Vowell shared that having used pumps, steriPENS, and several other methods over the years, she is now sold on the Platypus GravityWorks filter. Denise feels that it's fast and idiot-proof, so long as you remember to back flush the filter at least once a day. It purifies four liters in 2.5 minutes. She suggests hanging the dirty water platypus on the pole for the dining fly, and clamping off the clean platy on the ground below, allowing those with platys to simply fill theirs from the clean side hose as needed. Once you want to put the filter away, just purify what is remaining in the dirty bag, and hang up the clean bag for use in refilling water containers. Mimi's crews are also a big fans of the GravityWorks filter while in camp, and use MicroPur on the trail.

Dry Camps

Several treks will have a dry camp, which calls for some advance planning on the part of your crew. Instead of carrying in water for cooking dinner and cleanup, have the crew cook dinner for the lunch meal at the last camp with water before arriving at your dry camp. This will reduce the amount of water that has to be carried while at the same time keeping everyone hydrated. Philmont's rule of thumb is one quart/liter of water per hour of activity. Walter Underwood's crew took six liters of water per person for their dry camp on Mt. Phillips, swapped lunch and supper to conserve water, and still arrived empty at Cypher's Mine. Their sister crew took three liters of water and one member required a medevac for dehydration.

Hiking Baldy

If your crew gets a trek that includes a hike over Baldy, you will probably spend two nights at Miranda, Ute Meadows, Copper Park, Baldy Camp or Ewells Park. Blackhorse is a beautiful trail camp that leads to Baldy. From your campsite, you will side hike over Baldy with a commissary pick-up at Baldy Camp. Because of the probability of afternoon storms above tree line, Philmont now requires crews to verify that the top of Baldy is visible before departing from Baldy Town. In no case will a crew be allowed to depart from Baldy Town LATER THAN 8:00 a.m. so they can leave Baldy's summit before noon. That might mean leaving your campsite at first light. Denise Vowell suggests packing the day pack you will carry up Baldy the night before. If you include lunch, hang the day packs in one bear bag, to facilitate getting out of camp early.

Each crewmember needs to bring polypro long underwear top, pants, sweater, 2 quarts of water, trail lunch, knit hat, and rain gear in addition to their normal hiking clothes. Before leaving Baldy Camp, have your crew leader ensure that each crewmember gets hydrated and review the proper "lightning position" (catcher squat with hands around the ankles-see the "Weather" section). When you return back to Baldy Camp, make sure you have enough packs to handle your commissary refill and provisions for a shower if

desired. After doing a traditional Baldy hike one year, Mike Earp's crew enjoyed an opportunity to come down Baldy on the Copper Park trail their next trek, enjoying the view, as did Mimi's crew.

It may be warm enough when you leave camp to begin your hike wearing only a T-shirt and hiking shorts. Depending on the weather conditions, you may find it necessary to stop along the way to add another layer of clothing. You will usually need rain gear or a windbreaker once up on top of Baldy to cut down on your body's heat loss due to wind and lower temperatures. A hint to all crews going over Baldy: Don't miss the meadow just after you come out of the tree line on the eastern approach to Baldy. Too often, crews focus entirely on getting to the top of Baldy and miss this high altitude, open meadow with spectacular views to the west. Wally and Coop walked by this meadow on three different times before we realized it was there. Our crews have been known to take up to an hour just relaxing in the grass before making the final assault on the summit.

Program

Program doesn't happen automatically. Like other aspects of a well-run trek, your crew programs should be planned in advance. In some cases, it's a matter of arriving at a camp in time to sign-up for the offered program before slots are full. Most programs are impacted by afternoon thunderstorms, so if your rock climbing, spar-poling, horseback riding, etc. are at the top of your crew's bucket list, an earlier arrival at your program camp increases the likelihood that you'll be able to complete your program. Speaking of horseback riding, all riders are limited to a maximum of 200 pounds, regardless of whether they otherwise meet the Philmont weight requirements. Fishing is another program that requires advance planning since you will need the New Mexico five day fishing license plus the Habitat Management and Access Validation, according to Jim Van Hecke, the 2013 Manager of Outfitting Services. If you are going to fish in the Valle Vidal, you will need the Habitat stamp, too. The online licensing system can be found at <https://onlinesales.wildlife.state.nm.us/>. Adults requiring fishing licenses may also purchase them at the Tooth of Time Traders prior to leaving Camping Headquarters.

Always try and fit in program if you can. Morale is generally lifted anytime the crew gets to do their scheduled program. Likewise, a crew can hit rock bottom if it constantly misses program or gets into camp late. In the past, we recommended that crews attempt to fit in extra program by "double dipping" or attempting "pass-through" programming. Crews would check their Philmont map to see if they'd be hiking past or very close to a staffed program camp, and if so, would try to stop and pick up another program. According to Sid Covington, Philmont has mostly done away with "passthrough" programs as of 2013. Due to the camp loads, Philmont restricted program to those crews that had selected an itinerary with the program. There had been a lot of unfairness in the past when a crew that had selected an itinerary with a particular program couldn't fit in because "passthrough" crews had filled all the capacity. Sid said that surprisingly, there were very few complaints from "passthrough" crews and the camp staffs were actually able to accommodate a number of them without keeping the non-passthrough crews from participating. If you do get the opportunity for a "passthrough" program, you can't leave your packs unattended to go to program. Always bear bag your food and smellables unless indicated otherwise by a staff member.

One note about end of season treks: Mark Melendy cautions that his crew took one of the abbreviated treks offered at the end of the summer camping season, and was disappointed to find that some programs were not available. Some of the staffed camps had run out of resource materials, and there were no logs available at Pueblano's Continental Tie and Lumber Company, while the hand-holds had been removed from the man-made climbing wall at Dean Cow.

There were several new camps introduced in 2014, with the most excitement surrounding itineraries going to the new Metcalf Station camp. The program for the camp is a "theme" camp based on railroading in the Ponil Canyon and north central New Mexico. Crews will learn about the history of

railroading in the region, the Cimarron and Northwest Railroad specifically, and the evolution of railroads to present day. Eventually campers will be building tracks to the south of the camp and other similar activities. There wasn't a "station" (cabin) at the camp in 2014 but there was a "company store" tent and another tent for the railroad "office." These are false front tents and have initial telegraph stations that campers can use to learn Morse code & telegraphy. As Philmont extends the rail line, they'll move one of the telegraph stations south. Philmont has had a ½ mile of track donated and hope to link the program into the railroad tie making at Pueblano & Crater Lake (Continental Tie & Lumber Co. owned the Cimarron & Northwest Railroad). It will take Philmont at a number of years to have the camp fully in operation and they are planning on a total of about 2 ½ miles of track. The camp is located just south of the present Old Camp and the rail line will extend toward Indian Writings. When complete, campers arriving at the south end of the track will be taught Morse code & will telegraph their arrival to Metcalf Station. A lever car (and trailer car) will be sent down the line and they will load their packs on them and "push" them back to the camp. In the future, they hope to have vintage boxcars near the stations to be used for sleeping — much like the Adirondack's at Cypher's Mine.

Camp Setup

When does camp setup begin? Many crews arrive at a camp tired from hiking and immediately take off their packs and rest. Meanwhile, the advisor has the urge for a double flusher and starts looking for the toilet paper. The crew can't remember who carried it last or is too tired to look for it. The advisor begins to panic and starts yelling at the crewmembers to immediately unload all of their gear. The crew then laughs as the advisor runs to the latrine.

Camp setup begins in the morning with the crew leader reviewing the duty roster with his adult advisor. About a mile from camp, the advisor mentions to the crew leader that he should begin thinking about arriving at camp. As you enter an established camp, you will find a large scale laminated topographic map indicating the campsites, bear bag cables, sumps, latrines, water sources and trails nailed to a tree. Denise Vowell's crew took a photo of each campsite map when first encountered, to eliminate arguments when (1) the preferred campsite is already occupied; (2) no one can find the bear bag cable upon arriving at dusk; or (3) someone is in urgent need of the latrine.

When the crew arrives at their chosen campsite and even before anyone takes their pack off, the crew leader surveys the area and locates the three points of the "Bearnuda" triangle, which are the fire circle, the sump, and the bear bag cable (which can be disregarded if the cable is more than 200 feet away). The dining fly is always set up inside this triangle and tents are pitched 50 feet outside of the triangle for obvious reasons. All cooking, eating, and clean-up activities are confined to the area inside this triangle.

Once the crew leader has established the triangle, he tells the crew their assignments and the order that they will be done. It is absolutely essential that crew duties be done first, before individual tents go up. This may be difficult if the day has been long and the crew (and advisors) is tired.

a. The crew leader locates the three points of the "Bearnuda" triangle and the crew empties their packs placing food, crew gear (which now includes personal canteens), and personable smellables (including personal plastic eating gear which can retain food odors) into three separate piles at the fire ring.

b. Food and personal smellables that are not going to be immediately used are placed in bear bags and hung up. Smellables that will be used immediately after camp setup can remain in the fire ring until they are used, but they must be put up in the bear bags as soon as possible. In past years, Philmont allowed you to leave your food and smellables on the ground near the tarp until you were ready for bed, as long as someone remained in the campsite. However, with the increased bear activity, crews are now

required to have bear bags up at all times, except when food is needed for meal preparation. If you have just received a food resupply, you will need the entire crew to hoist the bags up on the cable.

c. The crew sets up the dining fly inside the "Bearnuda" triangle and the crew quartermaster puts crew gear underneath the fly.

d. All water containers, including personal canteens, are filled and may also need to be purified. Water purification takes 30 minutes. Often there is confusion as to which water bottles are purified and which ones are not. The water crew must clearly designate which canteens contain purified water and those that are still in the process of purification. Coop's crews always separate the canteens containing the purified and non-purified water into two distinct areas, to avoid confusion.

e. Crewmembers set up their tents outside of the "Bearnuda" triangle. In keeping with Philmont's bear policies, tents are placed randomly in a cluster as opposed to a circle, with no tents isolated from the group. This way, should bear or any other wildlife like a deer come through the campsite, it would not feel "trapped" and would be able to find a way out.

f. Cook crew and cleanup crew should be aware of their responsibilities as well as time available to ensure that supper is prepared and dishes cleaned before it starts to get dark and the temperature drops.

Rigging a tarp Philmont style is much different than how a patrol tarp is normally set up back home. Philmont issues a 12' by 12' nylon crew tarp with lines and poles. We use crewmembers' walking sticks instead of Philmont issued poles. Philmont provides no pegs for your tarp, so your crew will have to bring them from home. George Kain uses aluminum gutter nails that weigh next to nothing and can easily be hammered in the hardest ground, although they are getting more difficult to find. A 40' length of parachute cord is placed under the ridgeline of the tarp. The cord is pushed through the grommets at each end of the ridgeline and tied to a small stick with a lark's head knot. The cord is then tied with a clove hitch to the top of the poles at a height of 4 feet off the ground. This set up reduces the shock on the ridge grommets since the stick will break first in the event of high wind. If the tarp had been placed directly over the pole tips, the grommets could be ripped out of the tarp under stress. A 25' length of parachute cord is laced through the grommets along each side of the tarp and tied to both ends using a taut line hitch. This provides several places where the side edges can be staked down using only one rope per side. Despite your best intentions, there may be times when the strong, shifting winds from a storm result in tarp stakes pulled out of the ground. If they're bent in the process, Pete Lane recommends using the joint between the corrugated metal fire ring and angle iron for straightening.

Be sure and set up your tarp 15'-20' away from your fire ring. Also position your tarp so that the corner of the tarp faces the prevailing winds. We have yet to have a tarp become damaged or go down in a storm when set up in this manner. A final note on the crew tarp: Do not tie the ridgeline to trees. If every crew tied their tarp to a tree, the tree bark could be damaged ultimately causing the tree to die.

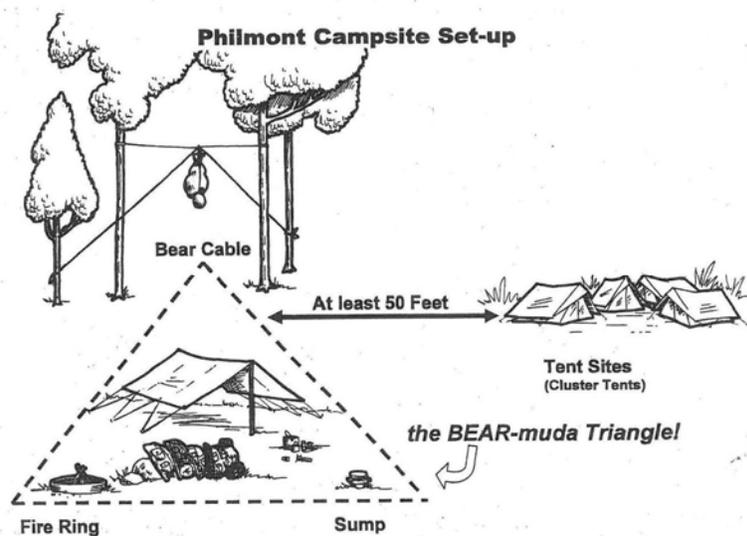
When setting up crew tents and tarps, remember the 6 Ws:

- Water: Look for where it will flow (trails, around tree roots, where it has pushed away pine needles) and where it will pool (where water has pushed pine needles to form U shapes)
- Wind: Set your tarp's corner to the wind so that you won't have a massive sail or wind tunnel
- Weather: Don't set up under the tallest tree or be the tallest thing in the middle of a meadow; camp at the edge of trees or in a stand of evenly spaced trees
- Widowmakers: Camp away from dead branches that can fall during a storm
- Wanimals (wildlife): Keep away from nut producing trees (including oaks), berries, water, dead and rotting wood (grubs) or other food sources for critters. Also, keep away from trails (bears do travel on them) and don't camp by yourself.

- Wows (views): Try and set up your tents so that others can enjoy the sense of being in a wilderness rather than in a crowded public camping area so everyone can enjoy the views of the backcountry.

Crew packs are kept within the Bearmuda Triangle, and not near tents. Although this may seem inconvenient to the crew, it ensures their safety, in the instance that a smellable is accidentally left in a pack. The packs are typically set against a tree, and should always have the rain cover on when in camp. Some rangers advocate putting the packs under the dining fly, while other say that packs do not belong under the crew tarp. One crew reported that their crew's ranger discouraged putting packs under the tarp because of an incident where a bear destroyed a crew tarp trying to get to a pack where a food item was forgotten. That same year, Pete Lane's crew was told to disperse the packs against trees inside the Bearmuda Triangle so that if a bear gets into one, it's less likely to get into them all. But the next year, Walter Underwood's crew was instructed to place packs under the dining fly by their ranger. Either way, the packs are INSIDE the Bearmuda Triangle.

Here is Philmont's view of the proper campsite, courtesy of *Guidebook to Adventure*.



Prior to going to bed, the crew should ensure that the campsite is properly secured. This includes:

- Water bottles are kept in the fire ring, unless they are smellables. Denise Vowell's ranger explained that bears have come to associate Nalgens with Gatorade, and by hiding them inside the fire ring you can hopefully prevent the bears from taste-testing your Nalgene. Note: Be prepared and flexible if you receive different instructions from your ranger. Pete Lane's rangers instructed his crews to put canteens out of sight in packs unless they're smellable.
- Nalgens and other drink containers that have held Gatorade must go in the bear bags, or be clipped to the bear bags by carabineers. Pete Lane's ranger suggested wrapping duct tape around smellable water bottles, to help everyone remember which have held drink mix. Since duct tape is also a smellable, it's a great place to store your crew's emergency supply of duct tape.
- Dishes, pots, utensils and such go by the sump at night.
- Fuel bottles and stoves are placed in the fire ring
- One roll of toilet paper is placed in a Ziploc bag and stored in the fire ring, for overnight use.
- Packs inside Bearmuda Triangle as described above, with pack covers secured. Many campers put their hiking boots between the tree and angled pack, to keep them dry, while putting their camp shoes under their tent fly in case nature calls during the night.

One of the best ways we have found to keep order in the camp setup process is through the use of a duty roster. Maintained by the crew leader, the duty roster lists the jobs to be performed each day by crewmembers. Jobs include cooks, cleanup, water collection and purification, and "naviguesser." In some crews, these jobs are rotated daily, while in others, crewmembers choose to keep the same job throughout the trek, but take turns on cleanup. This is another decision that often becomes clear on shakedown.

We have found that when your crew leader makes up the duty roster, it is best not to have tent mates working together on the same job. By placing tent mates on separate jobs, the crew gets to know one another a little better, thereby improving crew dynamics. In addition, it helps speed up getting out of camp in the morning because there is at least one tent mate who is not working and is therefore available to help pack up the entire tent's gear. Some crews include all the crew members (including adults) in duty roster duties. If this is done, be sure that a problem is not created by assigning the adults "after dinner" duties while in staffed camps; the adults will leave for Advisor Coffee after dinner. If they don't do their duties because "I have to go drink coffee and eat cookies", it will create tension! Carol's crews always make a copy for each crew member, shrinking it down to a 4"x5" card and laminating it, adding a tag holder so that everyone can attach it to the outside of the packs. That way everyone can see what's up with duties at any time, without having to bother the crew leader.

Another technique in the camp setup process that works well is the assignment of crew gear to individual crewmembers. After a day or two on the trail, everyone knows who is carrying the shovel and toilet paper! Assignment of crew gear also helps when leaving camp to ensure that nothing gets left behind. Mimi and Denise Vowell are both big proponents of this practice. You can start this on your shakedowns.

Despite both these measures, we have found that crews may have to be reminded that crew duties always come first. As Bob Klein says, "Everything is everybody's job. The crew comes first!" In T.W. Cook's ranger drilled into his crew "Crew before you." Depending on the maturity and experience of your crew, individual members may neglect their responsibilities when they are tired, wet or cold. It is the responsibility of the crew leader to keep the crew functioning, despite the conditions. If the duty roster is made before leaving for Philmont and pocket-sized, laminated copies are made for each crew member, the job of managing the duty roster is much easier.

Backcountry Commissaries

Commissaries are resupply depots located at various points along each trek. They provide restocking of food, fuel (a separate purchase), all purpose (AP) paper (better known in the civilized world as toilet paper), and trash bags. There are swap boxes where crews can drop off unwanted food and pick up favorites that others have turned in unwanted, since each crew seems to have its own preferences. Depending on your trek, commissary pickups will usually be 2-3 days apart. Normal hours of operation are 8 am - noon and 1 pm - 5 PM, but they may open up early or stay open late if you have special requirements. You must resupply on the days indicated on your itinerary. The crew leader and two to three crewmembers should make commissary pickups, unless the entire crew is passing by the commissary during the day's hike. The commissary staff is usually very busy and will not be pleased if the entire crew, with backpacks on, comes up to the issue window. The crew leader must bring his Advanced Crew Leader Copy with him since this lets the commissary staff know what food items are needed. The crew leader should always count the food packets upon receipt and check them off against the meal list on the Advanced Crew Leader Copy. Commissaries will often have supplies of fruit (usually apples and oranges) the crew can have for the asking. The crew leader should also prepare a want list of the additional non-food crew items. While the crew leader is getting the food pickup, the crew quartermaster can head over to the Tooth of Time Traders with the crew's empty fuel bottles and a fuel filter to pick up fuel. White gas fuel is available for purchase, as is canister fuel.

Finally, backcountry commissaries will typically offer batteries, postcards, stamps (sometimes), snacks, an assortment of replacement gear, and mail drops.

Backcountry Meals

The variety and palatability of Philmont's backcountry meals has come a long way since the time when current advisors were scouts. In addition to using high quality dehydrated foods by top manufacturers, the meal packages include popular commercial snacks and nutrition bars. The most recent season's menu and ingredients are available at: <http://www.philmontscoutranch.org/Camping/Hikers/Dining.aspx>.

If you have a picky eater in your crew, now is the time for him to get over it. He will need all the calories he can get from the food provided by Philmont to keep his energy level up on the trail. If he can't eat trail food on the shakedown, perhaps he ought to rethink his Philmont decision. Walter Underwood suggests bringing Probars or Larabars on shakedowns, to "red flag" your picky eaters. You can't have this crewmember lagging behind or getting cold because he refuses to eat what is given him at Philmont.

For first time crews and advisors, we recommend purchasing meals directly from Philmont for use on your shakedowns. You can check the Philmont website for complete information and order form. <http://www.philmontscoutranch.org/~link.aspx?id=D5BEC69924704397B0C27E881D87CB69&z=z>
You can also use the following contact info:

Phone: (575) 376-2281 ext 1252
Fax: (575) 376-2602 – Attn: Barry Harper
Email: barry.harper@scouting.org

Philmont food is packaged in two-person portions, which makes it easy to split up to carry, as each person can have a food buddy (or "smelly buddy" as Mark Bennett's ranger joked). This makes it easy and efficient to split up and share breakfast and lunch meals. If you have an odd number of people in your crew, Philmont rounds up when distributing your food, i.e. a crew of 11 receives food for 12. Some crews find that members "inhale" every ounce of food provided, while others have smaller appetites and sometimes adjust their food pickups accordingly. Don't base this decision on shakedowns, where calorie expenditure may not match the rigors of Philmont. It's best to take all your food in base camp, and then make adjustments on subsequent commissary pickups in the backcountry. Mimi notes that it's important to accept all breakfast and lunch packets, since they contain individual food items like bars, jerky, granola, etc., and although someone might not like a specific item, they can trade items between crew members. However, supper packets can be downsized by one packet if you find that the crew has continually been unable to finish all the food provided.

There are two types of breakfasts at Philmont. The first is the no-cook breakfast that contains dry cereal, Pop-Tarts, or food bars. Although Philmont provides powdered milk for dry cereal, it's not good for much besides adding to the mac and cheese. If you have members in your crew that can't handle dry cereal alone, you may want to visit a Greek or Middle Eastern food store and bring whole dried milk from home. No-cook breakfasts are great because a crew can leave camp quickly because there is no clean up and you can eat while walking on the trail. The second type of breakfast is the boiled water breakfast, such as "breakfast scramble" or instant oatmeal. The latter is pretty easy and the crew can clear camp fairly quickly because it is unnecessary to formally wash dishes. Crewmembers can add water, rub out their bowls using a finger that is assumed to be clean, and just drink the leftover soup (more about "gut sumping" in the Dishwashing section). Mimi and Richard Schlosser reported that their crews didn't cook in the morning on hiking days, and saved cooked breakfasts for layovers, or used cooked breakfasts for other meal times. Mimi's crews mix their oatmeal with the boiled water right in the oatmeal packet, so only spoons got dirty – with the added benefit of instant "hand-warmers!"

Some breakfasts also include hot cocoa or apple cider mix. The breakfast drink made with hot water is a great pick-me-up for cold mornings. A note for adults: At the advisor's meeting during your first night at Philmont, be sure and pick up enough coffee supplies to last the ten days on the trail. Twice Coop's crews ran out and he and his other advisors went through caffeine withdrawal until they ran into another crew with extra coffee. A newer addition to Tooth of Time Traders and backcountry commissaries is Via coffee from Starbucks. It's an upgrade to the standard coffee provided at the Advisor meeting and comes in several strengths, so try it out in advance.

Philmont has no-cook lunches that come with crackers. They typically include squeeze cheese, canned meat like chicken, smoked ham, or spam, tuna or salmon in pouches, and various nut butters (no jellies). All of the lunches have been augmented with extra food like trail mix, GORP, cookies, and granola bars. Some breakfasts and lunches also include jerky.

All suppers require hot water. Philmont Rangers recommend that only one pot be used for all ingredients. Although in past years this made for some interesting combinations (like pasta mixed with mashed potatoes), dinners now rarely include combinations or added vegetables – too many packets of unused green beans or corn ended up in swap boxes over the years. When combining the main course with a side dish, it's important to remember that you do not add the full amount of water that would be added if the two courses were cooked separately. Ranger Greg Hoyt suggests eliminating the water amount specified for the side dish, and just adding those items to the main course, since "you can always add more water, but you can't take it away." If there are any type of dehydrated vegetables, add to the water first to allow them to fully cook and soften. Note: It does make a difference in the number of "flavor bursts" encountered in dinner if you follow the directions regarding adding food to water or water to food. Mimi's crews have found that an extra five minutes of rehydration time often improves the consistency and decreases "flavor crystals."

Seasonings can really spice up the suppers. Philmont only provides small paper packets of salt and pepper which are almost impossible to reseal and leak over everything. One way to seal that seems to work is to use duct tape. We recommend leaving Philmont's spices at base camp and bringing your own. Dehydrated food tastes much better when you add some of your own spices. Wally's wife Mary has created her own seasoning that was really a big hit with his crew. She combined two parts of McCormick's seasoned salt with one part of McCormick's seasoned pepper. Most suppers can be improved with just this mixture. A small bottle of Tabasco Sauce doesn't weigh much and works well, especially at the chuck wagon supper. Joe Flaig always brings his dried peppers, which can definitely add a zing to any meal! Baltimore crews almost universally show up at Philmont with their Old Bay seasoning!

Cooking

Cooking supper isn't complicated. If you can boil water, you can make a great tasting meal. There are only five rules:

- a. Cooks **must** wash their hands before handling any food. Philmont now provides anti-bacterial hand sanitizer for the cooks. Remember, cooks must also wear closed toe shoes.
- b. Read preparation instructions **TWICE** before starting to cook. You want to ensure that the cooks understand the timing for your meal instead of just blindly charging ahead. Also, you want to ensure that cooks understand how much water to add. If you added too little, you can always add more. The opposite doesn't work and results in a soup when there should have been a stew!
- c. **Never** light the stove until the pot with water is ready to be placed upon the stove.

d. Always measure the water to be heated so that no excess water is heated, thus wasting fuel. Be sure not to measure by removing water from a "supposedly" known quantity in the pot. You'll probably be wrong and wind up with a watery main dish.

e. Never simmer food on a stove. The water will retain its heat long enough to rehydrate the food and trying to mix food in a hot pot on an even hotter stove can be dangerous – and be a mess to clean.

Coop and Wally have traditionally used 4-quart pots because they are better suited for backpacking stoves, are easier to pack than larger pots, and take less time to heat water because of their reduced surface area. Some crews prefer to use 6-quart pots, which can be useful if you have a 12 person crew and want to do one-pot cooking. Mimi uses 6-quart pots with her 12 person crews, but has also successfully used 4-quart pots with smaller groups. Either size is more convenient and packable than the 8-quart pot option. Philmont typically issues 8-quart pots to crews who sign out Philmont cook gear. However, they may have 4-quart and 6-quart pots available, so ask for them instead when you sign out your gear.

Supper Preparation

Your ranger will teach you the traditional one-pot method for preparing cooked suppers, which is the method endorsed by Philmont. Philmont now publishes an official cooking guide on YouTube which demonstrates the approved method and explains why other methods are discouraged, at http://www.youtube.com/watch?v=UA_Q1ZnJDvQ. The video recommends boiling about 6 quarts of water, pouring all the food packets into an empty pot, and adding boiling water until it just covers the food, stirring well, and covering while it rehydrates. Some crews pre-measure (per manufacturer instructions) and boil their water, and then food packets are emptied into the pre-measured water, stirred well, covered and rehydrated. The advantage of the first method is that leftover hot dishwashing water is already ready, whereas the second method requires you to heat dishwashing water in a second pot, using more fuel. For either way sure to get all food packets opened and ready to go while the water is boiling, and **make sure that dishes/cups and utensils are sterilized in the boiling water before rehydrating food.**

The traditional cooking method is actually the simplest method of preparation. The danger of burns from boiling water is greatly decreased because the water isn't being transferred into bags or bowls.

Background on Alternate Supper Preparation Methods

In recent years, Philmont has seen a growing number of crews arrive with plans to use alternate supper preparation methods, in most cases driven by an interest in decreasing or eliminating dishwashing chores. Although use of one-pot meal preparation was always encouraged in the past and taught to crews by rangers, crews were given a lot of latitude to use alternate methods after demonstrating these options to their ranger. Philmont has now moved to a policy which strongly discourages the use of alternate methods, as evidenced in the [Guidebook to Adventure](#).

Online forums and other advisor-led discussions are sometimes critical of the fact that Philmont is not advocating the use of common alternate cooking techniques. This argument neglects to factor in the scale on which Philmont operates and the fact that Philmont needs to target training toward the least common denominator, i.e. those who arrive with little preparation, equipment or training. Additionally, the Philmont techniques are geared toward a larger crew size than is supported by many trail systems where backcountry camping is limited to smaller groups.

Here is background on why some of these methods are discouraged at Philmont.

"Turkey bag" or Cooking Bags:

"Turkey bag" cooking refers to rehydrating suppers in food grade bags designed for oven cooking. These bags are brought by the crew (1-2 per meal) and used in place of rehydrating in pots. At the conclusion of the meal, the bags are emptied as much as possible and discarded as trash. **Philmont discourages this method** because, if used improperly, they can melt, break, and spill food. Also, this method does not promote sustainability. If every crew used 2 turkey bags/meal, it's approximately 46,000 turkey bags per year that get deposited as trash in the backcountry. This requires more vehicles in the backcountry to remove the additional trash, and more trash that gets landfilled. In the big picture, a lot of things are being compromised by the convenience of saving a few minutes and avoiding washing a pot in the backcountry.

"The Tupperware Method" or Fair Share mugs:

"The Tupperware Method" refers to splitting the two-person supper packs for individual rehydration in lidded containers such as Tupperware bowls, Gladware, or the popular GSI Fair Share mug. By the end of the 2012 camping season, this method of cooking was also strongly discouraged by Philmont. Although mishaps including spillage, popping lids, melting plastic, and inadequate rehydration were noted, Ranger Trainer Jane Schaefer shared that the main concern is that this method does not promote the Patrol Method. Jane shared, "We're trying to promote as much crew-togetherness as we can to make them aware of how dependent you must be on the others in your crew to accomplish your goals."

Rehydrating in food bags:

Most dehydrated food available in outfitting stores and online is intended to be rehydrated in its own packaging, and states so on the item. Since Philmont purchases suppers from many of these same vendors, including Richmoor, Backpacker's Pantry and Mountain House, some crews have chosen to rehydrate each two-person food pack in the original packaging, assuming that this was the manufacturers' intention. In reality, Philmont contracts with these companies to provide packaging to their own specifications and these bags are not the same as those available commercially in stores. In addition to missing the pleated bottoms which allow a stable platform during the rehydration process, both Richmoor and Mountain House indicated that the Philmont bags have NOT been tested for being utilized for rehydrating. They are specifically made thinner than their normal commercial offerings in order to reduce the purchase cost, and because of the intended meal preparation method (i.e. the traditional Philmont method) is to re-hydrate in a pot. The companies officially recommend rehydrating in a pot and do not recommend using the bag to rehydrate.

Some crews take the "no dishes" a step further, and eat the meals directly out of the bag, sharing between each two-person buddy team. To save the effort of washing a bowl or cup, the crew increases health risks.

Dishwashing

The extent of dishwashing really depends on the type of meal that you are eating. No cook breakfasts and lunches are simply "eat and go" affairs. Boiled water breakfasts usually involve a hot cereal and a drink, both of which can be mixed in a crewmember's cup, avoiding getting any crew gear dirty. When a boiled water breakfast is over, any oatmeal or cereal particles can be removed from your cup by simply adding hot water or other drink and consuming the result before dipping the cup in the remaining hot water and hitting the trail. The only meal that really requires organized dishwashing is supper.

Dishwashing typically ends up a lot simpler than imagined. After a couple of meals, most crews learn to do a better job of eating everything, and "spatulating" all dishes and pots immediately after finishing,

before food hardens. Depending on the skill of the dishwashers and intervening factors like darkness, muddy weather, or the call of an after dinner program, the end result rarely resembles the clean dishes in Mom's sink. That's why all crews learn the importance of the true priority: **sterilizing dishes and spoons in boiling water BEFORE the supper meal** to handle any bacteria that might have built up while carrying the backcountry-cleaned pots and personal eating gear in packs during the day.

At the end of the meal, you need two large pots. One was used to boil water and rehydrate the food. Any leftover food should be eaten and scraped from the pot. There are usually plenty of volunteers! After this scraping or "spatulating," this pot should be empty of everything except a thin film of leftover food. If there is any leftover food, the "scrapeage" is placed in a Philmont-provided plastic bag for wet trash, better known in trail lingo as the "yum-yum" bag. The idea is to get the personal and crew gear as clean as possible before washing and rinsing them.

The pot that held the food is your wash pot. A small amount of the boiled hot water is poured into the wash pot, and then additional cold (unsterilized) water is added to the $\frac{3}{4}$ level, along with 2-3 drops of Camp Suds provided by Philmont. Do not add more, because excess soap can cause stomach problems and diarrhea. Philmont provides a large nylon green scrubbie that can be used in place of a sponge. If you cut the scrubbie into 10 pieces before you leave base camp, you can use one for each supper meal and discard it in the "yum yum" bag after completing the supper meal. (Dirty scrubbies can easily trap food particles and bacteria that can affect an entire crew on the trail.) After removing from the wash pot, dishes are rinsed in the remaining hot water that sits in the (second) rinse pot.

Personal dishes and spoons are washed and rinsed first. After individual gear is finished, the crew's cooking pots and utensils are done. The utensils are washed and rinsed, and then the scrubbie is used to remove any residue on the inside of the wash pot. The wash water is then poured through the sump strainer (a Frisbee drilled with holes), down the sump. The rinse water is poured into the wash pot to remove any remaining residue, and that too is then poured down the sump. All dishwashing occurs at the sump and the rinsed dishes are then set on the ground at the sump to dry. Many crews set them on top of an unused bear bag or bring a 3' x 3' sheet of plastic ground cloth for this purpose. Dishes and pots remain at the sump overnight.

The last step is to clean the sump strainer and the top of the sump of any food particles and place them in the "yum-yum" bag. In the past, when cleaning the screen on the sump, it was scraped with a pinecone to add a natural pine scent. This practice has since been discontinued at Philmont. Be sure and put the sump strainer and plastic scrubbie up in the bear bag. Once the dishwashers are done, they should thoroughly rinse their hands and arms with the final rinse water to wash away any food particles or smells.

Trash

All trash, including the "scrapeage" in the "yum-yum" bag, and the boxes, foil and food pouches, must be disposed of. All the empty clear plastic meal bags, except for the 1-2 (per meal) being used as a trash containers, should be kept separate for recycling at backcountry staffed camps. At Philmont, you are not allowed to burn, bury or discard trash in the latrines. Trash is carried by the crew and turned in at staffed camps.

Dan Bennett shares that while previously Philmont staffed camps and commissaries requested well-compacted trash, "hyper-compaction" is no longer encouraged. This is part of Philmont's increasing emphasis on long-term sustainable practices, since extreme compaction hinders breakdown in landfills. A good plan is to fit the trash from a crew's meal into 1-2 meal bags, depending on the number of bulky trash items such as empty cans. It is highly recommended to keep all food packets and containers as "one-piece trash" to decrease the likelihood of stray trash pieces. As always, if your ranger tells you

something different once you're in the backcountry, assume that the rules have shifted and follow their instructions. All trash is treated as a "smellable" (more on that later).

When you arrive at a staffed camp or commissary, always ask the staff if they will take your trash and recyclable clear plastic meal bags. Most staffed camps (and of course commissaries) accept your trash, with the exception of those that don't have vehicle access. As a courtesy to their staff, make sure that it is neatly bagged. If you are at a trail camp and must keep trash at your campsite overnight, your trash bag should be placed at the top of your bear bag (more on this in the next section).

Bears and Wildlife

The bear population at Philmont is still essentially wild, and must be treated with the utmost respect not only for your health and safety, but also for the bear's. Over the past several years, Philmont has undertaken an aggressive program to reduce the factors that would lead to a "bear incident." First, the availability of human food has been sharply curtailed by the installation of stainless steel bear bag cables at all campsites on Philmont property providing reliable and bear-inaccessible hang points for bear bags. Crews going into the Valle Vidal will still need to use trees to hang their bear bags. Second, a policy of harassment has been instituted to increase the bears' natural wariness of humans. Philmont staff vigorously pursues any bear that approaches a staffed camp. Such bears are tagged and radio collared. Third, nuisance bears or those bears that have repeatedly raided camps are captured and removed to Taos County, 50 miles away, or in some cases are destroyed.

After many years without significant bear activity, New Mexico has been faced with an unusual amount of interaction between bears and humans in the last decade, due to diminished food sources for the bears in early summer caused in part by drought and fire conditions. Bears have been sighted in downtown Albuquerque and Raton some years, and there have been several "bear incidents" at Philmont. During the summer of 2000, bears injured six crewmembers. One of these incidents proved to have involved "bear baiting," in which a crew sprinkled Gatorade on the ground under their bear bags, in a purposeful attempt to attract a bear for a photo opportunity. After thorough investigation by the Philmont staff, the other incidents appear to have involved unintentional carelessness on the part of campers. Two of the bear incidents are still questionable as to direct human error, but in both cases the campers were sleeping in tents located slightly inside or on the border of the Bearmuda triangle. In June of 2001, a nuisance bear, which may have been attracted to a campsite by human vomit, attacked and injured two crewmembers.

In 2010, there were also increased bear/human interactions at Philmont and in surrounding areas, including camper injuries. An advisor was scratched on the face through his tent wall by a bear that subsequently killed a goat, and the bear was shot and killed by staff. Eight days later a Scout was bitten on the hand and scratched on the face after a bear jumped on his tent, and that bear was also killed by authorities. In both cases, investigations showed that all bear procedures had been followed. Mimi reported that all but one of her fifteen 2010 contingent crews reported seeing bears in their camps, on the trail, or both. Pete Lane reports that there were many bear problems at the Tooth of Time and Tooth Ridge camp in 2011. Mimi's 2012 crew was warned of "high bear activity" in the area of many camps, but experienced no evidence of visits in the campsite or bear sightings. At her mid-July pre-trek Advisor Meeting, the Philmont staff reported that about 37% of 2012 crews were reporting bear sightings. Staffed camps were diligent with campsite inspections, and at Black Mountain, the staff required two of Mimi's crew tents to be moved into a tighter cluster, to prevent isolated tents.

Philmont has published rigid bear protocols which will be shared by your ranger, as seasonal conditions can impact instruction to campers on a daily basis. Clearly, your crew's major responsibility towards bears lies in making sure that you never create or encourage nuisance bears. It is important to recognize that

bears are intelligent, tenacious, and stubborn. Once a bear gets into a food cache, it reorients its entire lifestyle towards raiding.

At Philmont, "a fed bear is a dead bear." It is critical to avoid providing food to a bear, not just because of the inconvenience to your crew, but also because you are helping to create the most dangerous kind of bear, one that has become both dependent on and overly familiar with human beings. After tasting food, these bears never change their raiding habits and may have to be killed. Your crew should know that in New Mexico, providing food to a bear that has to be destroyed could result in a fine of up to \$500.00, possible jail time, and probation from future Philmont treks.

A few notes on Philmont's bear population:

- There are between 150-200 bears on the 215 square mile ranch at any one time. Therefore, there is a bear within 2 square miles of you at any one time.
- There is one alpha male who roams the whole ranch but stays away from staffed camps. Consequently, these camps are prime environments for the adolescent male bears. Even if they are removed from the ranch, they will usually find a way back to the environment that is best for them.
- Female bears have smaller ranges and are more scattered
- Bears grow into their ears. Therefore, big ears mean a young bear.
- The darker the coat, the more active the bear is at night as opposed to day
- Bears are cyclical, sleeping a couple of hours, and then foraging for a couple of hours. They are most active and least visible from ~ 1:00 AM to ~ 7:00 AM.
- There is a three-strike policy for Philmont bears. Philmont will move them twice and on the third incident, they will be killed. Since young male bears do return to the ranch, one strike quickly leads to the next two. Bear incidents that threaten humans automatically result in death.

Practicing Bear Safety

A few points to remember: Always maintain food security and personal and campsite cleanliness. DO NOT apply sunscreen, lip balm, or insect repellent; bathe with soap (including Camp Suds); or brush your teeth with toothpaste after 5 pm. Do not take toilet paper from home on the trail! Philmont wants you to use their unscented toilet paper in the backcountry. Crewmembers need to make a real effort not to contaminate themselves with food dust when handling or opening food packages. Eat only around the fire ring area and pick up **all** spilled food. Mix your drinks in a separate "Drink Master" 2-quart container that can be stored in the bear bag, or designate one canteen per person exclusively for drink mixes. Any canteens that have **EVER HAD ANY DRINK MIXES IN THEM** must go up in the bear bag. Plastic is porous and retains scents.

A bear's nose is 50 times more sensitive than yours and even if you don't smell something, a bear can smell it. Clean canteens must be left inside the fire ring or put away in packs, depending on the instruction provided by your ranger. Stoves and fuel must also be in the triangle, either under the dining fly or in the fire ring. Place your cleaned pots and personal eating gear by the sump where the food smells are concentrated. Make sure that your supper meal dishwashers have no food smells left on their bodies. Be sure and change into your sleep clothes and put your in-camp clothes in your pack before going to bed so that no food smells will be brought into the tent. Packs should be covered with a pack cover and stored inside the "Bearmuda" triangle at night. ***Never get anywhere near a sow and her cub. This may be the single most dangerous situation involving bears.***

Never shine a flashlight or use a flash camera on a bear at night. Persistent bears in camp can usually be chased away by shouting and banging pots and pans together. Do not use a whistle or throw anything at a bear. Never try to chase after a bear if it has already gotten your food. It is not worth the risk; the Philmont staff can always replace your food. Notify a Ranger or a Philmont staff member of all bear

sightings or bear raids. Any information regarding approximate size, coloration or tag number (if any) will be useful in keeping track of problem bears. If a bear comes into your camp more than once at night, wake up the entire crew and start a fire.

Because of the bear activity, staff at all staffed camps have become more vigilant in their bear protocol. It's typical in areas of high bear activity to have a campsite inspection during setup, to make sure that tents are properly clustered, far enough away from the Bearmuda Triangle and close enough to each other. The staff may also conduct unannounced late night inspections of campsites for smellables, waking up the entire crew, including the advisors, if any bear procedures are violated. Some violations are so egregious (bear baiting to attract bears for photographs) that Philmont has removed crews from the backcountry and sent them home. Don't let your crew be one that gets awakened up at night.

A final note on personal smellables: If a crewmember has a medical requirement to carry an inhaler or an epinephrine pin, these items should be placed in a boot and covered with a used sock and kept inside his or her tent at night. You do not want to be trying to lower a bear bag when seconds count in the event of a medical emergency. As a minimum, the crewmember's tent mate and an advisor should be trained in the proper use of both items. We recommend that the entire crew be trained and know the locations of these critical first aid items.

Bear Bags & Bear Cables

Bear bags must be hung up as the first step of the camp setup process to prevent chipmunks (better known as mini-bears) from getting to your food. Having your bear bags up early also ensures that your crew will still have food if a bear visits your campsite. Bear bags are just what the name implies; large sacks in which you place all your smellables that are hung high to keep them inaccessible to bears and other animals. Smellables include food, water bottles that have contained drink mixes, trash, "Drink Master", Frisbee sump, sunscreen, toothpaste, film, Band-Aids, moleskin, foot powder, duct tape, extra batteries, Camp Suds, hand sanitizer, insect repellent, and anything else that has any kind of smell. What are left over are pretty much uncontaminated clothes, sleeping gear, and water.

Up until the last two decades, hanging bear bags involved throwing a rope over a limb and hoisting the bag up as high as possible. As one might imagine, the results were often hit-or-miss, and the bears had a field day with the many bags that were either hung too low or too close the trees. Some of the truly hilarious tall tales involving bears recounted their magical abilities to get bear bags. The Kamikaze Bear was known to climb to the top of the nearest tree and dive down onto the bear bag. The First Class Bear, with his knowledge of all Scout knots, was able to untie any bear bag rope.

Today, at each staffed and trail camp on Philmont property, there is a designated bear bag site, with a stainless steel cable suspended between two trees. The cables are hung about 20 to 30 feet off the ground and have several chocks to prevent the rope from sliding to within reach of the trees. The hanging process is simple. Philmont has begun adding sheaths over the cables to help prevent rope from catching on the rough cables. The new cables have a pulley that allows it to be lowered if a bear rope become entangled with the cable.

Double the bear bag rope and tie Figure Eight knot with a loop at the midpoint. Wrap several turns of the rope around this knot to help weight it and toss it over the cable between the chocks. Don't use rocks to weight the rope. If the rock should come off in the throwing process, you now have an unguided missile flying around in the bear bag area. If it stays on, it will swing back and wrap itself around the bear cable or swing back and hit the guy holding the rope. In either case, you have problems. Tie each of your bear bags onto the rope with a lark's head knot as close to the midpoint as possible.

As part of Philmont's bear protocols, crews now use an "Oops Bag" for any last minute or forgotten items such as the sump Frisbee, yum-yum bag, trash, advisor coffee dishes, food or vomit soiled clothes etc. Crews are issued two bear ropes because of this. The traditional bear bag rope now has a loop tied at its midpoint for the "Oops Bag." The bear rope and bags are hung normally leaving the loop at the midpoint open. Philmont suggests that you bring a climbing carabineer (not one of the small gadget types) and attach it to the loop. Using the loop/carabineer as a pulley, the "Oops Bag" rope is then fed through so the "Oops Bag" can be hoisted or lowered without dropping the rest of the bear bags. Use of the carabineer reduces the rope on rope friction generated using Philmont's "Oops Bag" method, making it easier to raise and lower the "Oops Bag." Some crews prefer to use a distinctive marking on their "Oops Bag" to make it readily identifiable. There is nothing worse than accidentally undoing the ropes to the wrong bear bags in fading light.

To get all the bear bags up usually takes the entire crew, especially if you have recently made a commissary stop. Once the bags are up, tie the free ends of the bear bag rope to two different trees, thereby avoiding losing your food should a bear cut one end. Ranger Becky Morrow shares that bear bags should never be more than a hand fist away from each other. When strung up, "they should look like a bunch of grapes." Becky also shared Philmont rangers require tying the "Oops Bag" ropes to two different trees too.

Philmont added an additional step to the tie-off of bear bags in 2012. Small sticks (thumb diameter or a bit larger) are placed vertically, in a circle around the tree trunk under where the ropes are wrapped. This technique is used for tying off the full set of bear bags AND the Oops bag. This was instigated to protect the trees, after Philmont noted that many trees near the bear cables were dying due to the damage caused by the constant rope wraps each summer. This change complicates the prior simplicity of the Oops bag because it can no longer be tied off by one person. You may hear these sticks referred to as "WP" or "Wilderness Pledge" sticks.

Philmont provides woven polyethylene bear bags. If you want to use these same bags on your shakedown hikes, most large agriculture feed stores will sell them to you or may simply give them to you if you explain that you need them for Scouts. Many crews also prefer to bring their own bear bags to Philmont so that they start with no existing smellables in those bags (make sure to ask for UNUSED bags at the feed store, or you may receive bags that have previously contained grain). If you bring your own bear bags, be sure that they're similar to those provided by Philmont. Mark Anderson shared with Mimi that bringing your own feed bags to use as bear bags is fine, but Philmont is "hesitant" about the variety of other bags that people sometimes want to use in place of feed bags, as they often don't have the capacity to hold the entire food pickup. Therefore you're likely to be discouraged from their use by your ranger. Philmont has seen crews attempt to use stuff sacks from sleeping bags or tents in lieu of bear bags, but this is a really bad idea, as you can imagine, since it can quickly turn the sleeping bag or tent into a smellable.

Personal Hygiene

Most crewmembers will smell in the backcountry. Some crewmembers will *really* smell in the backcountry! While there are showers at many staffed camps, most are solar powered and are generally not available to crewmembers during periods of severe drought. It is still important that your crew bathe each day after they set up camp. In discussing personal hygiene, your Ranger may refer to P.T.A. as the three parts of your body that should be washed each day. P stands for your pits or underarms. For the sake of decorum, we will refer to T and A only as your chest and backside, respectively.

When your crewmembers wash, please don't let them bathe in streams or near cattle troughs. Someone downstream will wind up using your bath water for drinking and the cows don't like it when the water tastes like soap. The bottom of a plastic gallon milk container or bleach container makes a great

washbasin. Philmont requires that all bathing be done at the sump. However, most sumps are in the open and visible to all. Each year, more women come to Philmont, so it may be difficult to find enough privacy for a bath. A simple sponge bath using a bandanna or pack towel by reaching under clothing will go a long way towards personal hygiene

Always use unscented biodegradable soap like Camp Suds for washing. One of Coop's crew members brought along a mint scented biodegradable soap. After its first use, that crewmember and his clothes smelled like a peppermint stick, a bear's favorite candy. Needless to say that was the last time that soap was used. Philmont provides a large bottle of Camp Suds to each crew, so if you bring some small empty bottles to Philmont, you can divide up the large bottle for showers or for when people are cleaning up in shifts at the sump. Each group will then have access to soap without waiting on another, and cooks will have the main bottle in the kitchen for their own hand washing, and for dishwashing.

Remember not to use soap after 5 pm, since the scent may remain by the time you go to sleep. If you come into camp late, just rinse off your body salt with water without using any soap. Finally, there is **NO DEODORANT OR HAIR GEL** on the trail. It is just another smell that will attract bears. Advisors may need to check their crews **BEFORE** you hit the trail. Some folks can't go anywhere without smelling good. Just understand that everyone is going to stink, even if you bathe every day. After a while, you will get used to it.

Some crewmembers may develop "hiker's rash" between the legs and even under their arms. It feels like diaper rash and no one wants to talk about it. Hiker's rash can also be a problem on hips, from hip belts, which becomes a surprise because the hiker may have been wearing more layers during shakedown in cooler climates. The rash usually develops around day three. It comes from not washing and wearing dirty underwear and cotton hiking shorts and T-shirts that absorb sweat and body salt. The salt dries on the clothing and irritates the skin.

Our crews don't wear underwear or cotton hiking shorts. We wear nylon blend hiking shorts with a nylon brief because they are easy to keep clean and dry out quickly. Some crewmembers, especially the adults, may find that the combination of the change in diet, amount of water consumed, and heavy exercise can produce diarrhea. A few packaged flushable wipe or Desitin can provide some relief. **If you do use these wipes, they cannot be placed in a latrine, but must be bagged and packed out.**

Socks should be washed, especially the liners. Believe it or not, your feet have more sweat glands than any other part of your body. Washing your socks will ensure that there will always be a clean set available to wear. Clean socks and feet also help reduce the possibility of blisters. Keeping feet clean can also reduce the possibility of athlete's foot. Use medicated foot powder or an anti-fungal treatment such as tolnaftate (Tinactin) or miconazole (Lotrimin spray) should symptoms occur. Our crews wash their clothes and themselves immediately after they set up camp. Remember that washing must be done before 5 pm. If your hiking shorts and shirt are moist when you put them on the next morning, don't worry. They will dry out very rapidly while you are hiking. Damp socks can be pinned to your backpack to dry out as you walk to your next campsite.

Keeping yourself and your clothes clean can be a little more of a problem in rainy weather. Clothes don't dry out as fast and often have to be put back on damp. Mary Lane resorted to setting up a line under the dining tarp to dry out her clothes during a period of sustained rain. If your socks are just damp and you have a synthetic sleeping bag, you can wear them to bed at night and they will be dry in the morning. Don't try this with a down sleeping bag. Taking a bath with your bandanna can be a bit chilly because the air is cooler. But just taking the effort to good hygiene pays off in helping promote a positive attitude. You just "feel better."

Since body odor is caused by bacteria, an old farmer's trick can be useful. Just a little rubbing alcohol (before 5 pm of course) on a cotton pad or bandana will quickly destroy the bacteria. Gary Boyd's

grandfather kept a bottle on his tractor for all the field hands to get an underarm splash just before coming in to supper. Gary carried a pint Lexan hip flask that added only a few ounces. He was really a hit with the young women in his crew when after a couple of days on the trail, he pulled out the cotton pads and alcohol and let them clean their faces. It was part of his "maintaining the positive morale" equation. Philmont's hand sanitizer can sterilize armpits too, provided you don't forget to leave enough sanitizer for its primary mission!

Some crews prefer to bring a limited supply of unscented baby wipes. Again, morale is greatly improved with a quick wipe down. Denise Vowell mentioned that given the water shortage on her trek, her crew felt guilty about wasting water and bathing on the trail, using wipes instead. Mimi has also experienced treks in other years where Philmont water restrictions prohibited use of water for anything besides drinking and cooking, so having a backup bathing plan is a good idea. Remember that although products are labeled "unscented," there is still a discernable smell to a bear's sensitive senses, so these items are smellables. Some advisors have commented that the CVS unscented baby wipes seem to have the least amount of (human detectable) scent.

Scout Skills

We have found that older crewmembers can be pretty rusty on their basic Scout skills. One skill that is particularly important on the trail is fire building. Although gas stoves have replaced the need for building fires for cooking, inclement weather may require that a fire be built for warmth. On one of Wally's previous treks after a particularly cold and rainy day, it took hours for his crew to finally build a fire. Work with your crew and review methods for building a fire under wet and windy conditions.

During any one camping season, the fire conditions and fire ban decision can change daily, due to the high desert climate at Philmont. Information will be communicated to crews upon arrival at Philmont and when they check in at staffed camps. If the summer has been extremely dry, building a fire for warmth should be a health and safety call and should only be used in extreme circumstances. It will probably result in a rather quick response from the PhilSAR staff once the smoke is started.

Crews were instructed to use small sticks (no bigger than about 1" thick) and to keep the fire small and within the fire rings. Before breaking camp, all ashes were to be gathered and scattered more than 100 yards from the camp. A stick was then driven vertically into the ground inside the fire ring. The part of the stick underground will not burn in the event of a wildfire and allow your crew to prove that your fire was out when you left.

For camp set up, crewmembers should know four basic knots. The taut line hitch, lark's head and clove hitch are important for setting up the dining fly. The two half hitches are best employed for a clothesline. The lark's head is also used for hanging bear bags.

First Aid

Like any summer camp, you will be exposed to your everyday first aid situations like cuts, burns, and scrapes. However because of Philmont's high altitude, low humidity, and extended miles on the trail, you can expect to see some wilderness first aid situations that you probably have not seen before. The best treatment is always prevention. Each year, some crewmember will not make his trek because he gets injured fooling around before he arrives at Philmont or while at base camp waiting to go out. A quick game of ultimate Frisbee is not worth missing the ten days on the trail! Campsites are also areas where crewmembers can get hurt. Never let your crew walk around in socks or bare feet. Make sure that your cooks take proper precautions when using backpack stoves. Crewmembers should be reminded to always stay out of the fire circle when food is being cooked.

There are several wilderness first aid situations that may occur while you are on the trail. The daily rainfall and cool temperatures at higher altitudes provide all the ingredients needed for hypothermia. Left untreated, hypothermia can cause death. A cooling of the body's core temperature causes hypothermia. Although moisture takes away body heat rapidly, it is not required to make a person hypothermic. Lack of food, overexertion, cold, rain, wind, sweating, and exhaustion may all be factors. Usually, the person who is becoming hypothermic will not be aware that he is being affected. Therefore, all crewmembers must be able to recognize the symptoms and watch out for each other. Shivering is a signal that a person is becoming hypothermic. If a crewmember should begin to shiver, immediately take steps to increase the body's core temperature.

If you are on the trail, have him put on another layer of clothes or raingear, and pick up the pace. If in camp, have him head for his tent. If the shivering becomes uncontrollable, it is a sign that the body has lost its capability to generate heat. At this point, you have a potential medical emergency on your hands. Simply adding clothes or finding shelter will not help. You must provide the needed heat to raise the body's core temperature. Remove the crewmember's wet clothes and put him under a tarp or inside a tent in a dry sleeping bag to generate warmth. You can place canteens filled with warm water in the affected crewmember's groin area and under his armpits. You can also give him warm food and liquids, if he is able to take them. Most WFA courses teach to use a hypothermia wrap (the human burrito approach) by layering tarp, sleeping pads, sleeping bag, hypothermic person in one sleeping bag, and finishing with another sleeping bag and tarp on top. If he does not respond or becomes unconscious, send for help. Again, prevention is the best cure. When it starts to rain, the entire crew should put on rain gear immediately. Eat plenty of food. Layer your clothes to avoid overheating. Make sure crewmembers put on their knit hats and fleece sweaters. When one person gets hypothermia, everyone in the crew should be treated for it.

Unless you have hiked in high elevations before, Philmont may be your first exposure to altitude sickness. The reduced oxygen content in the air affects each crewmember differently. Your biggest and strongest crewmember may be the one who is affected while your "willow" walks down the trail with no problem at all. Coop saw one of his better hikers come down with altitude sickness when the crew was camping above 10,000 feet for the first time. He complained of an almost blinding headache and nausea. We put him in his tent, and fed him Advil and soup for the remainder of the day. After a good night's sleep, he was ready to go again in the morning and was not affected again. Sometimes, crewmembers do not recover quite so well and must be brought down to lower altitudes. An adult in a Baltimore contingent had a serious, life-threatening reaction to the altitude, but was brought back to the Philmont Infirmary, put on medication, and able to continue her trek successfully. The most important step in treating suspected altitude sickness is to return to lower altitude as quickly as safety allows.

Dehydration is a problem because of Philmont's low humidity. In the East, when we exercise and it is hot, we sweat and get thirsty. At Philmont, although we may be exercising just as strenuously, the sweat evaporates without leaving much moisture on the skin. We may be losing even more of our body's fluids and not even begin to feel thirsty.

Hydration should start before leaving camp, once crew members leave their tents. Some crews have the crewmembers stand in a circle with the crew leader in the center and drink at least a half a quart of water. Denise Vowell's crews make a morning ritual, with the crew leader starting the "toast" such as, "To a night without rain and putting away dry tents." Each person takes a drink after the toast, and then the next person proposes another cheer of their choice ("To a red roof when you need one!"), followed by similar fervent "cheers." At the end, fill Nalgene's back up and hit the trail.

Another way to monitor fluid intake of your crew is noting whether they are urinating regularly. If they have to stop and take a leak, chances are they are drinking enough. A quick self-check for your own water intake is to note the color of your urine. If it is clear, you are drinking enough. If it is dark yellow, you need more water. Finally, be sure and have your crew fill their canteens at every water source. One

of the responsibilities of the crew leader is to have strict discipline about enforcing water breaks, starting on shakedown hikes.

The dry humidity and high altitude can also be a factor in causing nosebleeds. The lining of the nose simply gets dried out causing a surface rupture of the small blood vessels. If you have a crewmember that has experienced nosebleeds in the past, he can increase the moisture level of his nose by putting a light coat of petroleum jelly or Carmex in each nostril. If a crewmember should get a nosebleed, have him stop whatever activity he is doing and sit down. He should gently pinch the nostrils together while tilting his head forward. If bleeding persists, he should be taken to a staffed camp for additional medical treatment. Donna Sengelaub's crew included Afrin nasal spray, Q-tips, cotton balls and Vaseline in the crew first aid kit, for treatment of nosebleeds. Donna and many other advisors have found that tampons are great for stopping nose bleeds, and Donna also recommends carrying feminine napkins for severe cuts and wounds, making sure that there is a sterile layer of gauze between the wound and napkin. Nosebleeds can also be caused by dehydration. Make sure that your crew stays fully hydrated.

As was mentioned earlier, diarrhea can be a problem for some crewmembers. After a day or two on the trail, the body adjusts and other than being an inconvenience, it usually goes away. However, should it persist, diarrhea can cause substantial dehydration and lead to serious complications. If one of your crew has a problem with diarrhea, stop by a staffed camp early in the situation for some medical assistance.

Dehydration, altitude sickness, and heat exhaustion all produce the same symptoms: fatigue, nausea, and headaches. At Philmont, it is likely that someone with these symptoms has a touch of all three, so treat for all three: drink more, breathe deeply, and slow the pace. At Philmont, you should be drinking up to 8 quarts a day (almost a quart an hour while on the trail) depending on the weather conditions and the amount of strenuous activity that you are undertaking. The body's reaction to less oxygen in the air due to altitude is to breathe more often, but this automatic compensation may not be enough. Teach your crewmembers rhythmic or power breathing, forcing the air out of the lungs on their rest step, so that they will breathe deeply and more often. Finally, to avoid heat exhaustion, hike early in the day with its cooler morning temperatures and hike at a pace that everyone can handle.

You will find that the most common injuries that you will have to treat are simple cuts and blistered feet. Crewmembers should carry their own personal first aid kit – Walter Underwood's crew referred to this as their "ouch kit." Cuts should be cleaned in soap and water (it is amazing how dirty you will get), cleansed with an antiseptic wipe, treated with antibiotic ointment and covered with a Band-Aid. Blisters are another story. The best treatment is prevention. This process begins during your shakedown hikes when the crew's boots and socks are checked out. Crewmembers should know where their boots will rub their feet and put on moleskin BEFORE they hit the trail. Additionally, crewmembers should know that it is **their right and responsibility** to stop the crew while hiking if they begin to develop a foot problem. It is much easier to re-tie a boot or apply moleskin than to treat a full-blown blister. Remember, if someone develops a foot problem, the whole crew will be affected.

Teach your crew how to take care of their feet. Washing their socks each day is a good place to start. Personal first aid kits should include hot spot treatment items and everyone should know how to put on moleskin. There is only one rule when it comes to moleskin (or its equivalent); more is better. Crewmembers will usually use only enough moleskin to cover the affected area. This is ineffective since it will not provide enough surface area to ensure that the moleskin will stay on and the blister will generally increase in size.

If a crewmember begins to develop a hot spot, stop, remove the socks and powder the feet. Keeping the feet dry will help reduce the chance that a hot spot will develop into a blister. Next, use tincture of benzoine to coat the affected area. Tincture of benzoine will toughen the skin and add to the sticking capability of the moleskin. Finally, cover the area with a moleskin patch. The patch should have rounded

corners to reduce the chances of it coming off when putting on socks. You will need a small set of scissors to cut moleskin effectively.

If the skin appears loose around the hot spot, make a moleskin donut by cutting a hole the size of the affected area and place it on the foot. If a full blister has developed, use a mole foam donut instead of moleskin. Unless the blister is extremely painful making it difficult to walk, it is generally best not to drain it. The fluid inside the blister acts as a lubricant and helps improve the healing process. Draining it creates a non-sterile open wound that must be treated. Coop has also found that duct tape does a great job holding moleskin in place and it can be applied to the inside of the boot to reduce friction.

Instead of "pretreating" potential hot spots with moleskin, Mimi paints those areas with New Skin. This pretreatment worked like a charm and did not leave any sticky residue on her socks like moleskin and tincture of benzoine can. She reapplied New Skin each morning before putting on her socks. Coop now carries New Skin in his crew's first aid kit. Again, the best treatment is prevention. Another terrific product is Spyroflex, found in some pharmacies and outfitter stores. It is a breathable substitute for moleskin, but it is thinner, more flexible, and more durable. It works best for preventive care and is not bulky under socks. Richard Schlosser recommends using BodyGlide on feet to keep friction to a minimum. Mimi tried it and agreed it works great. Walter Underwood shared that Body Glide is also good for chafing in "other places" too.

Compeed is an excellent product for blister care, with its moisture control technology, which allows the wound to remain naturally moist, while blocking outside dirt, water, and bacteria. It is an adhesive product that stays in place for the entire healing cycle. Until recently, it was difficult to find in stores. Band-Aid brand now produces an Advanced Healing Band-Aid product, found in the Band-Aid or foot care sections of stores. The Advanced Healing strips are actually made of Compeed in various sizes and shapes, and are quite convenient to use. Compeed Band-Aids are also terrific for trail cuts and other shallow wounds, protecting the injury for the rest of the trek after the initial treatment. One drawback to Compeed is getting the adhesive on socks, so be careful to check that it has remained in place after hiking. Walter Underwood shares that ultra-long distance hikers swear by Leukotape P sports tape for blisters, which is breathable, stretchy and resilient.

Each crew should have its own first aid kit, which is normally carried by an advisor. Much like stoves and packs, the contents of a first aid kit are left up to personal preference of the crew, with input from the advisor who has been assigned overall responsibility for first aid. Ideally multiple crew members have been trained in Wilderness First Aid and can share input on the kit contents, familiarizing themselves with those contents. (Coop's suggested First Aid kit is contained in the appendices.) The rule of thumb is that no item should be in the first aid kit unless someone is trained how to provide treatment with that item. However all first aid kits should contain the basics such as Band-Aids, gauze, adhesive tape, OTC pain relievers, an Ace bandage for sprains, and triple antibiotic ointment, such as Mycitracin or Neosporin to handle everyday problems such as cuts, scrapes, blisters, and burns. All items in the kit should be regularly checked for expiration dates, and commonly used items or medication need to be replaced before each outing. Walter Underwood recommends keeping the crew first aid kit in a readily identifiable kit, such as a bright orange dry bag, making sure that it is always in the same pack location or same bear bag where any crew member can find it quickly.

Advisors should note that they are **NOT ALLOWED** to give medication orally to any non-adult crewmember, unless they have been given written permission ahead of time. This includes over-the-counter (OTC) pain relievers and fever medications such as ibuprofen (Nuprin, Motrin, Advil), acetaminophen (Tylenol), aspirin (Bayer, Bufferin, Ecotrin), naproxen (Aleve, Naprosyn); Imodium AD for diarrhea; and antihistamines such as Benadryl for treating colds and allergies. Coop shares this information with the parents of crewmembers before the crew heads off for Philmont.

Coop, Mimi, Walter Underwood and others have developed a consent form that all families sign, listing the OTC medication carried in the first aid kit. A sample is located in the appendices. Coop recommends listing the specific dates of the trip, including travel out and back, the list of the over-the-counter medications that he carries in the crew first aid kit and having the parents to initial in either the "yes" or "no" column to indicate whether he will be permitted to dispense these medications, based on his judgment and training. Without an initialed "yes", no medications will be provided.

In the unlikely event that you that you are faced with a first aid situation that requires more skill or resources than you possess, don't worry. Philmont is fully prepared to handle any situation. Each staffed camp and each vehicle traveling in the backcountry is equipped with a radio that can be patched into the Philmont Infirmary at base camp. During your Ranger training, your crew leader will be instructed how to fill out the information that is printed on the back of the sectional maps that the Philmont Infirmary will need to know to properly evaluate your specific first aid situation. Simply fill in the blanks, send four crewmembers to the nearest staffed camp and keep your patient comfortable. Help will soon be on the way. Advisors are also given a list of the primary and secondary evacuation sites for each backcountry camp and told to check each morning to pre-plan which camp would be closest during the day's hike, in case of an emergency.

During the Advisor's Briefing the first night at Philmont, you will be given information that outlines the procedures to use when reporting an emergency via cell phone. **DO NOT** dial 911 because you could reach Emergency Services as far away as Colorado! Call the Philmont switchboard (575-376-2281) and ask for the Logistics Radio Room instead, tell them that you have an emergency and provide the information as requested. You might be instructed to turn off your cell phone and turn it back on at a predetermined time to save batteries. It should be noted that cell phone coverage in the backcountry is spotty at best and that crews should be prepared to head to a staffed camp when help is required.

Women at Philmont

Every year more and more women come to Philmont, usually as part of a co-ed crew or a Rayado Crew. This trend is reflected in the large number of female Rangers that prepare crews for the backcountry. Even though you may not be a co-ed crew, you could be assigned a female Ranger. Women clearly have established that they are as capable of handling the same strenuous Philmont conditions as their male counterparts.

Sexual harassment or sexually explicit remarks of any type will not be tolerated toward female campers or staff, and can result in the loss of the Arrowhead Award. Advisors should lead by example and also tell crewmembers that they are expected to live by the Scout Oath and Law while on the trail. That means **all** people, regardless of sex, race or religion should be treated with the same level of respect and dignity, whether in base camp or on the trail.

Co-ed Crews

If you are an advisor to a co-ed crew, you need to be comfortable discussing women's issues. Some advisors may feel that it is just not their place to discuss topics such as menstruation with both male and female crewmembers. This is simply not the case. Right from the very start, advisors need to be frank and honest with their crewmembers and provide any information that will make the trek more successful. Open communication with the entire crew will help to encourage better understanding and cooperation among its members.

Gary Boyd found it advantageous to have a meeting with the mothers of his female crewmembers. He had a past female advisor present along with the female advisor going out with his crew to discuss women's issues. In this way the female crewmembers' mothers could go over the issues with their

daughters first. Additionally they knew that they could always approach the female crew advisor or Gary if need be.

The stress of hiking in the backcountry may induce or delay a woman's menstrual cycle or it may have no effect at all. Therefore it is important to know how to deal with it under wilderness conditions. Each female crewmember, despite the timing of her last period, should carry a supply of sanitary products in a waterproof container inside of her pack. Both tampons and sanitary pads are approved for use at Philmont. A smaller container, such as a Ziploc bag, can be used for daily needs and should be kept handy in a pack's outside pocket. When the crew arrives at its camp for the night, the daily container can be resupplied and the used products can be removed and stored in the waterproof container. Sanitary products (both used and unused) are considered as "smellables" and must be placed in the bear bag at night. Products needed during the night should be placed in a hiking boot, wrapped in a dirty sock, to mask the smell.

In the *NOLS Wilderness Guide*, it is recommended that women bring along small Ziploc bags for the storage of used tampons and pads. They have also found that placing several crushed aspirins in the Ziploc bag can help eliminate the problem of odor. Outward Bound recommends storing used sanitary products in a Ziploc bag with dry tea bags to absorb the odor. Used sanitary products and toilet paper used by menstruating women must never be placed in latrines or buried in the backcountry. They should be packed out and discarded – double bagged – at a staffed camp or commissary. Some staffed camps in the backcountry maintain an emergency supply of sanitary products. Women may want to consider discussing temporary oral contraceptive use with their doctor to prevent the start of their menstrual cycle while on the trail. This method is NOT 100% effective and sanitary products still need to be readily available.

Hiking at Philmont is tough but it can be made even more difficult with cramping. Advisors need to be aware that women can experience cramping between menstrual periods. The pain can occur on either side of the abdomen or lower back. Women who regularly experience cramping are familiar with its symptoms and are better able to cope with the associated pain. Cramping usually goes away within 36 hours. Sometimes when cramping occurs on the right side it can be mistaken for appendicitis. However, with appendicitis, other symptoms including low-grade fever, diarrhea, and vomiting are present. Cramping has none of these symptoms.

If a female crewmember experiences severe cramping, it may be necessary to hike at a slower pace or even off load some crew and personal gear. While this situation did not come up with Wally's five co-ed crews or Coop's one crew co-ed crew, they both had discussed the situation ahead of time with their entire crews. While the some of the guys were not happy with the idea of increasing their personal loads to assist a female crewmember, they at least understood the reasons why.

Cotton hiking shorts and underwear promote an environment that can cause several unpleasant and debilitating medical conditions for female hikers, such as candidiasis and urinary tract infection (UTI). Because of this, some women may prefer to hike in nylon blend hiking shorts with a built-in nylon brief, as discussed earlier in this guide. Many women, particularly those in co-ed crews, may prefer the comfort and discretion provided by independent briefs. Additionally, independent briefs provide more flexibility for the use of sanitary products during the menstrual cycle. Many female campers also prefer independent briefs so that they can wear disposable panty liners since it's not possible to wash clothes or underwear each day.

Both Cathie Cummins and Mimi have used CoolMax briefs on previous treks and have been pleased with their durability, moisture wicking and drying attributes, and ease of laundering. REI, ExOfficio, and Patagonia are some of the companies that make trail-worthy synthetic briefs. They come in a variety of color and sizes, and dry almost instantly when laundered on the trail. Others prefer lightweight nylon briefs, with little or no decoration.

The combination of climate, physical exertion, and sanitary conditions at Philmont, provides an increased possibility of candidiasis, or yeast infection, in women. The first-aid kit for co-ed crews should contain a non-prescription anti-fungal medication, such as Monistat 7. Most adult women know whether they need to carry this item for themselves, but teenage girls might be surprised by the infection, so travel prepared. Choose a one time or three time treatment option – it's more expensive, but it works faster. Like all medications, be sure it's not expired.

Philmont is known for its wide open spaces and does not afford very much privacy. This was not a big problem when Boy Scouts alone hiked the trails alone. With the influx of women on the trail, there has been a change in the backcountry. Most youth who attend Philmont are mature enough to handle the change. As an advisor to five co-ed crews at Philmont, Wally was particularly impressed by how other crews camping nearby went out of their way to respect of the privacy of the female members of his crew.

Latrines have also had to change at Philmont. Although Philmont is slowly replacing backcountry latrines, and building newer versions with separate, closed-door stalls, there are still some open air latrines at some campsites. These rustic latrines come in two varieties; the pilot to bombardier (two holer, back to back) and pilot to copilot (two holer, side to side) and are the source of some great campfire skits. In fact, some these latrines are so close to the trails that one can watch a crew walk by while doing his daily constitutional. The good news is, Philmont has replaced all wooden seats with fiberglass toilet seats.

Unless latrines at a camp are enclosed, many female crewmembers may prefer to use nature instead. The crew leader of a co-ed crew should keep privacy needs in mind when selecting a campsite, preferably choosing a site that is unpopulated on at least one side. If such a site is not available, crewmembers of a co-ed crew should be a little more aware of who is using the latrine before just walking up. Crewmembers may want to go to these rustic latrines in pairs, with one as the lookout who stands between the latrine and the campsite.

Washing up can also present a problem for a co-ed crew. Philmont requires hikers to wash up at the sump so that odors can be concentrated. However, the sump is usually out in an open area with absolutely no privacy. Wally's and Coop's co-ed crews simply washed in shifts using a large opaque ground sheet that was set up around the sump to provide for some privacy.

Lack of privacy also makes it difficult for women to urinate on the trail. For a male crewmember, it is no big thing. He can relieve himself while leaning nonchalantly against a tree, taking in the great views of the mountains and not even taking off his pack! For female crewmembers, it can be a little more of an effort. As a result, some female crewmembers may not drink enough water, just to keep from urinating on the trail. Insufficient water intake can result in dehydration and increases the risk of urinary tract infection (UTI), which must be treated with antibiotics, and would undoubtedly result in that female crewmember coming off the trail.

There are several small plastic funnel-type devices available such as the "GoGirl," "Lady J" or the "Freshette" that will allow a woman to urinate while standing, with a minimum of exposure. The GoGirl is made of medical grade silicone, which has an advantage to the hard plastic of the other devices, allowing it to conform to the body. Mimi says that she is seeing a growing legion of female "believers" in the female urination devices (FUD) on the trail.

Since urination for a woman generally involves a state of partial undress, female crewmembers need to be out of sight of the crew. This usually means heading up around the bend in the trail. In Coop's co-ed crew, during short packs off breaks or called pee breaks, the rule was guys head down the trail and women head up the trail. Female crewmembers usually headed out in groups, providing another set of eyes and ears for other crews that might be approaching on the trail.

You want all of your crewmembers to have urine output that is "clear and copious." If a crewmember needs to stop, have the remainder of the crew hike ahead while another crewmember stands lookout for any crews coming from behind. Let your crew know that becoming dehydrated can cause severe problems and will slow the crew down even more than stopping to take an occasional leak on the trail.

A quick note on latrine use for **both sexes**: Urine is basically a sterile product and does not contain the pathogens found in feces. However, it does contain salts that do attract animals. If you are on the trail and need to urinate, the best way is to pee on a rock off the trail. In the old days, we used to tell a camper to just "find a tree." However, urinating on a tree puts salt on the bark that will attract animals that will ultimately eat the bark and destroy the tree. So find a nice rock that won't splash back!

If a crewmember needs to defecate on the trail, he or she needs to take the shovel, toilet paper and a small stick, and find a spot at least 200 feet from a water source or the trail. Use the shovel and remove the top cap of soil that contains the microorganisms that will ultimately reduce the feces. Dig the hole approximately 6 inches deep. After defecating and cleaning with the paper, add dirt to the hole and mix it in with the feces using the stick. The crew shovel should never come in contact with feces! To the uninitiated, this might sound like a disgusting task, but adding the soil will immediately eliminate any odors. Mixing the soil, feces and paper together into a "poop soup" will facilitate the decomposition of the feces and the paper. Once you have used up all of the soil, replace the top cap.

NEVER urinate in Philmont's backcountry latrines. The salt in the urine will act as a preservative, increasing the decomposition time for the feces and the acids will kill the bacteria decomposing the feces. Any urine that gets on the latrine's wood will attract animals. In many latrines, you can actually see where porcupines and other animals have chewed the seat area.

As we discussed in the Personal Hygiene section of this guide, it is extremely important to wash off the salt and grime that accumulates each day to prevent "hiker's rash." Cathie and Mimi recommend that female crewmembers bring bras to Philmont that can be washed and dry quickly. There are an increasing variety of sport bras available. Mimi is a big fan of Patagonia's Barely Wireless Bra. Regardless of the brand, there are many options which offer choices with the look of a lingerie bra and the features of a sports bra.

Check the fabric content in each style. Look for Lycra for support and CoolMax for breathability, rather than cotton, as both dry quickly. Cathie and Mimi suggest bringing two bras; one as a "hiking" bra and the other as an "in-camp" bra. The hiking bra should be rinsed out each day. Although it may wet first thing in the morning, it will not matter because it will either dry quickly or just get wetter when you begin sweating.

When choosing long pants, female crewmembers may want to consider pants with ankle zippers, which allow the flexibility to change on the trail without removing shorts and boots in areas where privacy is hindered. Convertible pants are popular for the same reason. When in the Philmont campsite, changing is done inside personal tents, and clothing stored inside packs, per the Philmont bear protocols. If you have questions about woman-specific Philmont issues not mentioned in the Guide, please feel free to drop a line to Mimi Hatch, philmontadvisorguide@gmail.com.

Weather

Weather at Philmont is unlike that experienced by those on the east coast. You may start the day hiking in the heat and the dust only to find yourself being pounded by hail in an afternoon thunderstorm and finally going to sleep in the high country with the temperatures falling below freezing. Your crew must be prepared to handle these weather conditions. Rain gear and pack covers should be located in a pack's

outside pocket to allow crewmembers to quick access. It is extremely important that crewmembers stay dry in the event of bad weather because of the risk of becoming hypothermic.

The early Philmont season (late June, early July) is generally dry. The real rain begins after the second week in July. As you approach your departure date, you can check on the conditions on line by going to Weather Channel (www.weather.com) and typing in Cimarron, NM and looking for the link to Cimarron Canyon State Park. The park is off Highway 64 about 16 miles west of Cimarron at 8,000 feet, so the conditions should match much of the ranch. You can also get up to the minute weather from the automated weather station at Philmont's Head of Dean camp at <http://tinyurl.com/PhilmontWeather>.

You can expect rain and possible thunderstorms each afternoon at Philmont, even in the dry season. Lightning has injured Philmont hikers in the past. Remember that mountains may block your view of an approaching storm and that most lightning strikes occur on the leading edge of a storm, so take immediate action to seek protection once you see dark clouds heading your way or hear thunder.

The time between seeing a lightning flash and hearing the thunder it produces is a rough guide to how far away the lightning was. Normally, thunder can be heard up to 10 miles from the lightning that makes it. Lightning heats the air around it to as much as 60,000 degrees, producing sound waves by the quick expansion of the heated air. Since light travels at 186,000 miles per second, you see the lightning the instant it flashes. But sound, including thunder, travels about a mile in five seconds near the ground, so count one mile for every five seconds between lightning and "boom." Successive lightning strikes are often two to three miles apart. If the first stroke is three miles away, the next one could hit you.

Lightning can also result in forest fires. If your crew sees a fire or smells smoke, do not try to fight the fire, but report it to the nearest staffed camp. It is helpful if you can provide the map coordinates of where you were when you spotted the fire or smoke and a compass bearing to the fire or smoke. Your crew Ranger will provide your crew with a sheet that lists the assembly areas and primary and secondary evacuation routes for each camp. Philmont has gotten serious about formal fire evacuation procedures as a result of the Ponil Complex fire in 2002, the Rivera Mesa fire in 2005, and the fires on the ranch in 2011.

Lightning is attracted to objects that will conduct electricity to the ground along the path of least resistance. Since trees are usually the tallest conductors, they will usually take the worst beating in a thunderstorm. Wire fences and bare, exposed mountaintops are also likely targets for lightning. Lightning has been known to follow the face of a cliff down to the ground, so stay out from under cliffs and overhangs. If you are on a ridge or a peak, make a beeline down the hill, staying on the side of the hill opposite the approaching storm. You should be safe if you are under some sort of forest cover, at least 100 yards down from the peak or ridgeline. Never begin an ascent in the face of a threatening thunderstorm. Save that peak for a day when the weather is better.

Most camps at Philmont are located under trees and are not on exposed mountaintops. If you are in camp when a thunderstorm hits, you should be in good shape. Stay away anything that can conduct electricity including metal tent poles, bear bag wires, and backpack frames. Keep everyone within eyesight of each other and spread out. This way, if one person is hit, the others can administer first aid. If you are bunched up, one stroke of lightning could injure the entire crew. If you are caught in the middle of a meadow, you become the most prominent object. If the threat of lightning is imminent, try to seek a stand of trees. If this is impossible, squat down on your sleeping pad with only your feet touching it; this is the "lightning position." Do not lie down since lightning can travel along the ground. Thunderstorms at Philmont commonly bring hail. For quick cover, head for a stand of even-sized trees. If you get caught in a hailstorm, the temperature can drop rapidly so get everyone into rain gear. If lightning is not present, get into a tent or under a fly.

Tooth Ridge can be an unfriendly place during a lightning and thunderstorm. The trail is a rugged, rocky, majestic path offering magnificent vistas of the valley floor to south and as far as the eye can see to the north. This trail straddles a classic "hogback" ridge. Because its sides slope abruptly away, there is little opportunity to get off of the ridge. Doug Cox's crew was caught by a storm while hiking over Tooth Ridge. Early in the morning, his crew had left Webster Parks with the destination of Tooth Ridge Camp. At about 1:30 pm when his crew was halfway down the Tooth Ridge, the storm hit. Because his crew could see the storm coming, they had plenty of time to form a pack line and cover it tightly with their rain fly. The crew then moved as far off the ridge as possible, put on their rain gear, squatted on their sleeping pads, and rode out the storm. Lightning struck close enough for them to smell the ozone in the air. The lesson learned by his crew was not to panic. While they would rather not have been on that ridge, they took the correct actions to protect themselves. Doug says that his crew still talks about that afternoon, but the storm gets bigger with each re-telling.

Rain can also cause drastic changes in watershed areas. Camps located in canyons or narrow valleys usually get the most water. If you are in one of these camps and the stream begins to rise unusually fast, it is a sure sign of imminent flooding. The air will also smell like dirt and ash and there will be a thundering noise. If you see the stream about to crest its banks, evacuate the area immediately. DO NOT attempt to save crew gear in a flash flood. The gear is replaceable, you are not. Get to high ground IMMEDIATELY.

The Middle and North Ponil and their tributaries frequently experience flooding as a result of the 2002 fire damage. Staff along the Middle Ponil observed a 15-foot high wall of water during one storm, while Horse Canyon, which has no stream had a 3-foot high wall of water. Mimi saw a crew split by a flash flood, when an advisor lagged behind and the crew crossed under the highway into Bear Canyon right before the flood, without noticing his absence. When he got to the bridge, it was washed out, the under-highway tunnel was flooded, and he was trapped on the south side of the river with no way to reach his crew. This re-emphasizes the need for crews to hike together!

If the flooding is widespread, you may have to spend several days on your own before you are rescued. Even a small amount of supplies and gear can make the group more comfortable. However, 99% of the flash floods will be over quickly.

In the event of extended rain, it is important to keep morale high. One of Wally's crews experienced seven straight days of bad weather. Crewmembers can sink into depression, if someone doesn't keep the morale up. Crewmembers should understand that rainy days are a part of nature. In fact, it is the comparison with rainy days that makes the sunny days that much more sweet.

Troy Hayes' troop has a saying that "weather determines what you wear, not what you do." Warm clothes and warm meals help to keep people operating with a positive attitude. Cook and eat your meals together under the dining fly. Move meals around to make sure the crew has something warm to eat when it is cold and wet. When the weather breaks, take the time to dry out wet gear. Your personal attitude and that of your crew leader will have a big impact on how inclement weather affects the crew.

Leaving Camp

Leaving camp is the advisor's main source of aggravation. Watching crews take hours to vacate the campsite is very frustrating. If you are not cooking breakfast, leaving camp should not take any longer than 45 minutes. The crew leader should wake up at least ten minutes before the rest of the crew so that he is dressed and ready to wake up everyone else.

Each crewmember should not take more than 10 minutes to wake up, put their clothes on, and stuff their sleeping bag. It should not take any longer than 20 minutes to retrieve the bear bag and for the crew

leader to distribute the gear. While the bear bag is being retrieved, the dining fly and tents should be taken down. Once the gear is divided, it should not take more than 10 minutes for everyone to finish packing and make a pack line. It should not take any longer than 5 minutes to do a clean sweep of the campsite. And that takes 45 minutes. Even at high elevations when it is below 40 degrees and wet, the crew must just decide to do it!

There are several good reasons for getting on the trail early. By leaving camp early, you avoid the heat of the day. It can really get hot on the trail after 11 am. It also avoids hiking during afternoon thunderstorms that typically occur between 1 pm to 5 pm. By leaving camp early, you arrive at program areas before they become crowded with other crews and while the staff is generally less fatigued and more enthusiastic. By leaving camp early, you also have a chance to see more wildlife. Finally, by leaving camp early, you have more options for your trek; perhaps a side hike up Trail Peak, a chance to wash clothes and dry out, a good game of volleyball with the staff, or maybe just a lazy afternoon watching the clouds drift by.

But if I leave camp early, what do I do about breakfast? In recent years, most Philmont breakfasts have become multi-item meals, with an emphasis on bars that can be eaten on the trail at the time and pace of each crew members. Although there are still several breakfasts that require hot water, there is no rule that breakfast has to be eaten as the first meal each day. On the trail, food is simply food. Why not substitute a no cook lunch for your hot water breakfast? Or if the next staffed camp with a program activity is only a mile or two away, get up and leave your overnight trail camp early so you can arrive and quietly eat your breakfast waiting for the program to start. Please do not disturb the staff cabins. Remember that backcountry personnel work 13+ hour days from 8:00 AM program start to advisors' coffee and campfire.

When hiking out of the camp, pass by the water supply and be sure to fill your water bottles and purify them if required. If you are leaving a staffed camp, the crew leader will need to sign out. Because of the fires in recent year, Philmont now wants to keep track of crews and signing out helps that happen.

Trail Meditations

It always has been the responsibility of Boy Scouting's adult leadership to provide an opportunity for their Crewmembers to observe the twelfth point of the Scout Law, "A Scout is Reverent." This is especially true at Philmont where the use of daily meditations has been found to be an excellent means to provide a time of thoughtful reflection for individual crewmembers. Daily meditations have also helped crewmembers bond themselves into a harmonious unit that can overcome the challenges of fatigue, bad weather or rough terrain.

During the Chaplain's Aide meeting conducted the first night at base camp, each member of the crew will receive *Eagles Soaring High, Trail Worship for Christians, Muslims and Jews*. This is an excellent resource that can be used by the crew to conduct short meditations while on the trail. The booklet has been specifically written to mirror the needs of crewmembers. For example the meditation for Day 4 on the trail speaks of forgiveness. By this time, everyone has somebody they need to ask forgiveness from! As you hike along the trail in the first part of the morning, stop at an overlook and take a couple of minutes to do a meditation. You will find that the natural beauty of Philmont provides the ideal outdoor place of worship. Walter Underwood shared that Gary Snyder's "Mountains and Rivers without End" provides an excellent source of appropriate Buddhist meditations.

Another way that a crew can display reverence and build unity as a group is through the use of grace at meals. No matter how difficult the day or how hungry the crewmember, time should be taken to give thanks for the food and those who prepared it. Saying grace together can become almost magical after a

while. Several suggested graces for meals in addition to the Philmont Grace are contained in *Eagles Soaring High*.

Conducting daily meditations, saying grace at meals and attending chapel services are all requirements for Philmont's "Duty to God Award" that is available to all crew members who complete the requirements. The crew's Chaplain's Aide completes the application for the award which can be purchased at the Tooth of Time Traders.

A Philmont trek is really a workshop in group behavior and dynamics. If the weather has been bad or if the terrain has been difficult, a crew can come apart at the seams. The cooperation and enthusiasm that was present on the first day of the trek can disappear only to be replaced with frustration or even anger. Adults can be especially vulnerable to this frustration. It is up to the advisor to help the crew leader keep the crew working together as a group, so that the Philmont experience will be one in which the crewmembers will have grown, both physically and emotionally.

A non-threatening technique that is now being taught by Philmont Rangers as a means to share feelings and resolve conflicts is "Thorns, Roses and Buds" or simply "Thorns and Roses." Each day, no matter how tired you are and no matter how much a crewmember wants to go to bed, the crew should pause and allow each member to reflect on his feelings. "Thorns and Roses" can be done immediately following a daily meditation or perhaps at the end of the day. The crew sits in a circle and each member has an opportunity to say the worst (thorns) thing that has happened to him that day, the best (roses) thing, and voice future expectations (buds). There are only three ground rules. First, if a crewmember does not want to speak, he does not have to. Second, only one person speaks at a time and no one can question what is being said. Third, what is said in the circle, is left at the circle and not discussed again.

"Thorns and Roses" works. It allows the crew to discipline themselves, without adult intervention. In fact, during one of Coop's treks, several crewmembers asked for a "Thorns and Roses" session because there were problems in the crew that needed to be solved. Start using these techniques from your very first training hike. Walter Underwood's crew added "Feet" to Thorns, Roses and Buds," with the "Feet" report being non-optional and covering everything that didn't feel right. This eliminated hidden blisters and other medical issues that might be considered "unmanly" to bring up.

Denise Vowell's Chaplain's Aide collected a small book of poems and short stories, including favorites of crew members, and each night they read from the book after Thorns and Roses. The Chaplain's Aide read the first night, and then handed the book to someone they thought particularly deserving (with or without giving a reason). That person got to select and read the first reading of the evening. Then others had the opportunity to make a selection and read. The next night, the crew member with the book got to select the next recipient. Denise's ranger added several items to the book before leaving them, which the crew treasured.

Philmont chaplains will tell you that those crews who conducted daily devotions, said grace before meals, and used "Thorns and Roses" exhibited stronger group dynamics and did not fall apart when conditions got tough. Philmont chaplains are available should your crew experience some form of human dynamics problem in the backcountry. Usually by that time however, the crew as a team is broken and cannot be fixed. It is your job as the advisor to be sensitive to what is going on with each person within your crew including adults and use the techniques like "Thorns and Roses" to allow each person to express their feelings.

Hiking into Base Camp

Philmont is truly an adventure, so celebrate in your accomplishments. As a matter of personal pride, Doug Cox suggests that your crew look their best the day they come back into Base Camp. This is

especially true if they hike in from the Tooth of Time. Most crews will return ragged, dirty, and weary looking, and rightfully so. But you hiked Philmont's trails - the trails did not hike you. You made it! Come in with your head held high and not looking whipped.

The secret is to plan your return. By now, your trail clothes are pretty disgusting, even if you have washed them every day. On the morning of your return, why not wear your in-camp clothes instead; or your sleep shirt, since it is probably your cleanest shirt. Trust us, people will notice and your crew will have the same excitement about coming in as they did going out.

BACK AT BASE CAMP

Returning to Base Camp

Sometime around Day 5, one of your crewmembers will begin talking about the ice cream cone (or two) that he is going to get as soon as he gets into base camp. If you let your crew disperse when they arrive back in base camp, the only one available to do the base camp in-processing will be you! One of the best ways to bring order out of this chaos is to hold a crew meeting in the shade of the trees behind the Outfitting Services building and work with the crew leader to assign all tasks that must be completed before the crew can be released. At Outfitting Services, the crew leader receives the crew's tent assignments and a detailed out-processing sheet that must be completed and turned back in at the Welcome Center upon checkout before returning home.

All crew gear, whether borrowed from Philmont or brought from home, must come out of packs and be cleaned and inspected. Be prepared to scrub out all pots and pans with steel wool and dry out your tents and crew tarps. If you borrowed gear from Philmont and it was damaged while in the backcountry, have some money available to pay at Outfitting Services. Any extra food and fuel can also be returned at Outfitting Services.

At Logistics, the crew is logged in as returned and the crew's itinerary is reviewed on the Advanced Crew Leader Copy to determine whether the crew has met all requirements necessary to receive their Philmont arrowhead patches. At the Registration desk, wildlife census cards and Philmont evaluations are turned in, and the safekeeping envelope that was stored while the crew was on the trail is picked up. It should be noted that four evaluations forms; one for program and one for your Ranger that have to be filled out and turned in by the advisors and youth members of the crew. If you are conscientious about these forms, it can take 30 to 45 minutes to complete. For crews that met the requirements for the Philmont arrowhead patch, Registration will distribute the patches. The crew's BSA Annual Health & Medical Record forms are also returned to the Crew Advisor.

At the Security building, the keys to the crew's lockers are picked up. At Packs and Gas extra gas and any rental equipment can be dropped off. The crew leader and lead crew advisor can then return to the crew at Outfitting Services, stopping at the Mail Room to pick up mail received while on the trail. After all equipment, including any rental gear, is cleaned and turned in, the crew can head for the lockers to pick up the items left in storage and head for their tent site. **Only then**, should the crew leader release the crew for the Tooth of Time Traders and snack bar.

Many crews visit the base camp Laundromat after coming off the trail. It's a good idea to bring a roll of quarters from home. Denise Vowell's crew sorts dirty laundry before hitting the showers and assigns a couple of crew members to wash it while others shower or finish the out-processing tasks, and those people were relieved by those first out of the showers. By the time everyone was clean, so were the clothes, which was a great morale booster. If your crew decides to instead pack their dirty clothes for the trip home, you'll want to make sure they are fully enclosed in thick plastic bags, because they STINK.

A final note: Base camp tents are now set on concrete platforms instead of the old wood platforms, which make them a lot cleaner and more level. However, this also means the Base Camp critters now come inside your tent looking for goodies instead of being content to rummage under the old wooden platforms. Don't get lazy after you come off the trail and keep junk food in your tents. Bob Klein had a skunk in his tent on homebound night!!!!

Security

Not all participants in the Philmont experience are completely trustworthy. On the trail, security problems are quite uncommon. Incidents that do occur can probably be attributed as much to simple loss as theft. Common sense is the rule: Keep the crew away from unoccupied neighboring camp sites and keep your own site buttoned down when you are away. If you are doing a side hike, or stopped at a camp you are passing through, set up your pack line well off the immediate trail and cover everything with your tarp. It is also a good idea for keeping an unexpected rain from becoming a problem. Remember to hang your bear bags if you are going to leave your packs unattended.

Base camp is an entirely different situation. First, there is the simple reality of a very large group of crewmembers and advisors, all crammed together in an unfamiliar and featureless tent city. With a million things to do and no readily identifiable markers to your area, it is natural and unavoidable for both crewmembers and advisors to occasionally find themselves entering the wrong tent. It happens all the time. Normally, an incident like this is nothing more than a somewhat exasperating inconvenience.

For the sake of your crew, keep truly valuable items at the security office or in the crew locker. Your crew should always keep as much of their gear zipped up in their packs or under cover, especially while you are at meals, at a base camp activity or campfire. This goes double for wallets, cameras, and patches.

IN CLOSING

Hopefully this guide has provided you with a better understanding of some of what a Philmont trek is all about. In the final analysis, it is impossible to fully describe or appreciate *"Philmont"* without actually experiencing it for yourself. And regardless of how many times you've been before, your next experience will be different because each trek is unique. As stated earlier, the purpose of this guide is to provide crew advisors with our opinions regarding things that your crew can do to help them make their Philmont experience the best possible one. Plan on having the time of your life in "God's Country" because...you will!

Appendix A - Physical Preparation for a Philmont Trek from the Philmont Website

To enjoy the Philmont experience, participants must be physically prepared to carry a 35- to 50-pound pack over steep, rocky trails at elevations ranging from 6,500 to 12,500 feet. A regular program of physical conditioning for at least three to six months prior to taking a trek is essential. A longer period is required for those unaccustomed to physical exercise.

The first step is to get a physical examination from your physician using forms provided by Philmont that will be mailed in December. Complete the health history on page 3 of the form and schedule a physical exam. Bring the entire form (all six pages) to your physical exam.

Staff physicians at Philmont reserve the right to deny access to the trails to any adult or youth on the basis of the physical recheck at Philmont. All medical evaluation forms will be checked by Philmont medical staff.

Areas of concern include but are not limited to heart disease, seizure disorder, sickle cell anemia, and hemophilia. Blood pressure without medication must be less than 150/95 for any participant to be permitted to hike at Philmont. If there are any doubts after the individual has had a physical examination, contact Philmont.

A program of regular aerobic exercise is highly recommended to become physically conditioned for Philmont. Plan to exercise 30 to 60 minutes three to five times a week.

Jogging, running uphill, climbing long flights of stairs, walking along abandoned railroad tracks, and hiking with a full pack are all excellent preparation. How fast you run or how far you go is not nearly so important as regular exercise. Other aerobic exercises such as swimming, bicycling, stationary cycling, and aerobic exercise classes can supplement your training. Start slowly and gradually increase the duration and intensity of your exercises. Start a journal to record your progress. If anyone has questions, have them contact their family physician or exercise physiologist.

Backpacking is the best way to prepare for a Philmont trek. It is highly recommended that everyone in a Philmont crew fulfill the requirements of the Backpacking merit badge. These include three 15-mile treks with two overnights each, and one five-day trek covering at least 30 miles. Fulfilling these requirements will enable you to enjoy a Philmont trek. The Venture Backpacking pamphlet also has excellent tips for preparing for a Philmont trek. Be prepared!

Select a hilly area for your training. Start with a short hike and a light pack. Increase the mileage and your pack weight as your training progresses. It is important to hike often enough while carrying a pack and wearing the boots you will use at Philmont to toughen your feet and to break in your boots.

Up to 90% of crews indicate on their evaluation forms that additional physical training by all members of their crew would have been helpful.

Suggested Conditioning Program

December/January - Complete health history on individual medical form (Part A) and get parental approval (signature) on Part B.

Be examined by a physician or osteopath. Call attention of the physician to Part D of the medical form that describes the rigors of a Philmont trek and to the boxes that indicate areas of medical concern. Ask the physician about any special medical needs or areas of concern. If overweight, get the physician's recommendation on how to lose weight through dieting and exercise.

Walk, jog in place, swim, or pedal an exercise bike indoors for 20 minutes or more at least three to five times a week. Gradually increase the length and the intensity of exercises.

Buy a pair of quality hiking boots. A pair of boots 6 to 8 inches high with sturdy soles is recommended. Lightweight hiking/running footwear is excellent for the dry, rocky trails prevalent at Philmont. Lightweight footwear is not recommended for people with weak ankles, who need heavier leather boots. Wear your boots to school or work and when walking anywhere to break them in and to condition yourself.

February/March - When weather permits, jog, run, or walk outdoors. Start with 20-minute sessions and gradually increase the length and the incline or speed.

April - Continue exercising. Schedule a couple of five- to 10-mile day hikes. Carry a full backpack on the second hike.

May - Continue exercising. Schedule at least two overnight backpacking treks of 10 to 20 miles. Plan the second trek to cover more rugged terrain or increase the mileage. Consider meeting the requirements for the Backpacking merit badge, which include three three-day backpacking treks of at least 15 miles each, and one five-day trek covering at least 30 miles.

June/July - Continue exercising right up to the day you depart for Philmont. Come to Philmont in top physical and mental condition, ready for carrying a 35- to 50-pound pack over steep, rugged trails at high elevations (6,500 to 12,500 feet).

Tips for Physical Conditioning

To ensure that physical training is not neglected, each member of your crew should schedule regular periods of time to exercise and prepare and follow this schedule faithfully, from beginning to end.

Although it is possible to exercise individually, it would be more productive to make preparations as a crew. In addition to being more enjoyable, working together as a group will encourage participation and will help develop a spirit of teamwork.

It is highly recommended that everyone in a Philmont crew fulfill the requirements for the Backpacking merit badge, which requires three three-day backpacking treks of at least 15 miles and one five-day trek covering at least 30 miles.

Appendix B - Coop's Suggested Personal Equipment List

Here are Coop's recommendations for personal equipment. The Philmont version is available at: <http://www.philmontscoutranch.org/Camping/Hikers/WhattoBring.aspx>

Helpful crew and personal equipment information can also be found in the [Guidebook to Adventure](#)

Equipment Worn or Packed for Travel

- 1 Scout uniform
- 1 pair Scout socks (if shorts are worn)
- 1 neckerchief/slide
- 1 pair sneakers/moccasins/Crocs
- 3 pair underwear shorts
- 3 T-shirts
- 1 large towel
- 1 Scout red jacket (optional)
- 1 Scout belt

Equipment for Travel and Trail

- 1 sleeping bag inside a plastic bag, in a waterproof stuff sack
- 1 set of sleep clothes (inside sleeping bag)
- 1 sleeping pad
- 1 toiletry kit
 - toothpaste and brush
 - biodegradable soap (Camp Suds)
 - comb or hair brush
 - small mirror
 - extra sanitary products (women)
- sun glasses
- chap stick (Carmex recommended)
- \$ 75-125 for souvenirs
- watch
- camera with film and extra camera
- batteries (optional)
- 1 small flashlight (with new batteries)

Equipment Worn or Packed for Trail

- 1 pack with padded hip belt (*can be rented*)
- 1 pack cover
- 1 hot spot kit (moleskin, band-aids, etc.)
- 6-12 1 gallon size Ziploc bags for clothes
- straps for holding sleeping bag on pack
- sun screen (30 SPF or higher)
- 1 pair hiking boots (recently waterproofed)
- 2 or 3 pair wool/nylon ragg or Thorlo socks
- 2 or 3 pair sock liners (optional)
- 3 1-quart/liter canteens + 1 additional collapsible
- 1 pair long pants (or zip-off style)
- 2 pair nylon shorts (1 pr. if using zip-off pants)
- 1 rain suit (jacket & pants)
- 1 long sleeve synthetic fleece/light wool sweater
- 1 pair synthetic long underwear
- 1 knit hat
- 2 T-shirts (one synthetic, one 50/50)
- 2 bandannas
- 1 pair camp shoes
- 20 feet of 1/8 " nylon line (parachute cord)
- 1 small towel (can use a bandanna)
- 1 hat (baseball or wide brim)
- spoon
- large plastic mug or bowl (advisors use both)
- 1 emergency blanket/ground sheet
- safety pins (for hanging wash on pack)
- extra trash/Ziploc bags
- 1 pair wool in-camp socks (optional)
- 1 pair of gaiters (optional)
- hike log and pen (optional)
- pillow (optional)
- Advisor's Pad (optional)
- 1 pocket knife (optional; 2-3 per crew)
- Whistle (optional)
- Daypack for side hikes (optional)
- Small camp towel (optional)
- 5 post cards with stamps (optional)

Appendix C - Information on Wildlife from Philmont Website

Bears are unique and natural parts of the Philmont environment! Like all wild animals, they must be treated with respect. Black bears are not normally aggressive, and most crews will not even see one.

Anything with an odor (except the human scent) may attract bears. It does not matter if the odor is food-related. Any odor may generate curiosity in a bear, which may result in a closer examination of that odor.

At Philmont Scout Ranch, all items with a smell, "**smellables**," are placed in a bear bag at night. It is recommended for all crew members to have their own ditty bags with their personal "smellables" in it to put in the bear bag. A few of these "smellables" are food, soaps, toothbrushes and toothpaste, lip balm, sunscreen, mosquito repellent, unused film cartridges and first aid kits.

The following camping practices are the best ways to avoid contact with the bears:

- Avoid carelessness that results in improperly disposed food.
- Burn or store all uneaten food in a bear bag.
- Cook close to the fire ring and away from the sleeping area.
- Clean up only at the sump.
- Never eat food in a tent; the odor remains after the food is gone.
- Tents must be used only for sleeping.

Human scent does not attract bears. However, the superficial application of scented lotions, soaps, deodorants, shampoo or spilled food **does attract bears**. Washing your body with various products should be done before mid-afternoon in order for the residual smells to dissipate before nightfall. Avoid perfumed products with strong odors. Any clothing that has had food spilled on it must be placed away from the sleeping area at night.

If a bear does visit your campsite, **stay away from it and make noise**. Protect your food by hanging it from a cable that has been erected by Philmont Scout Ranch for that purpose. Crews that stop for a program or a conservation project should leave one or two persons with the packs at all times. Crews hiking into the Valle Vidal area off Philmont Scout Ranch will need an extra rope for hanging bear bags. In Philmont camps, the weight of the rope alone is sufficient to carry it over the cable. In the Valle Vidal, where there are no cables, crews will be instructed to put several handfuls of dirt in a bandanna, tie the corners and attach it to the bear rope to serve as a weight. **Never risk injury by attempting to protect your food or equipment from a bear.**

When you arrive at Philmont, your ranger will thoroughly train you on the camping practices that are most effective in keeping wildlife away from your camp.

Rodents

Rabies and bubonic plague can be transmitted by rabbits, bats, ground squirrels, chipmunks and other rodents. **Do not handle or feed any animals.**

Rattlesnakes

Some parts of Philmont Scout Ranch are inhabited by prairie rattlesnakes. They generally live at elevations below 8,000 feet. Prairie rattlesnakes are not aggressive unless provoked and will usually sound a warning rattle before they strike. If you see one, give it a wide berth! Rattlesnakes are beneficial

in controlling rodent population. **Do not try to kill one yourself!** Instead, please report it to the nearest Philmont Scout Ranch staff member. Rattlesnake bites are rare at Philmont.

Repel Mosquitoes and Bees

Mosquitoes are common during wet periods. They are also potential carriers of the **West Nile virus**. Insect repellent is recommended for the trail. Repellents with DEET are the most effective. Wearing long-sleeved shirts and long pants in the evening is another wise precaution.

There are also bees and wasps at Philmont. **If you are allergic to stings, be sure you have antitoxin and that a crew member is informed of your condition and the treatment you may require.**

Appendix D - Coop's Suggested First Aid Kit

Each crew must bring a first aid kit. Here are the items that Coop recommends. The [Guidebook to Adventure](#) also contains a recommended first aid kit supply list. Many over-the-counter medications are available at the Tooth of Time Traders.

- 24 Combination of ibuprofen, naproxen, aspirin and acetaminophen pain reliever tablets*
- 24 Benadryl or other antihistamine tablets for colds and allergies*
- 24 Imodium AD or other over the counter medication tablets for diarrhea*
- Mycitracin or other triple antibiotic ointment or cuts, scrapes, and burns
 - Tolnaftate (Ting), miconazole (Lotrimin spray), or clotrimazole (Mycelex cream) for athletes foot or jock itch
 - New Skin or Spyroflex for blisters
 - roll of adhesive tape
- 24 Compeed Band-Aids
- 10 2" by 2" gauze pads
- 10 butterfly Band-Aids
- Cortaid or other non-prescription hydrocortisone cream for rashes
- Visine or other type eye wash
- tincture of benzoine to toughen skin and help glue on moleskin
- moleskin and molefoam
- needles for removing splinters
- set of tweezers
- Ace bandage
- nail clippers
- scissors for cutting moleskin and adhesive tape
- Monistat 7 (for female crewmembers)
- Latex gloves

*must receive permission before giving to non-adult crewmembers

Appendix E – Sample OTC Permission Form

PERMISSION FOR TREATMENT FORM

Dear Parents,

To help us take care of your child if he needs medical care, we are asking your permission to treat your child for minor health problems. These are the types of problems that we would treat normally at home.

If my child becomes sick while attending any Crew function and I'm not present, I give permission for the Crew's Health/Safety representative to issue the following non-prescription medications:

- | | |
|--|---|
| <input type="checkbox"/> Acetaminophen (Tylenol) | <input type="checkbox"/> Antihistamine (Benadryl) |
| <input type="checkbox"/> Ibuprofen (Motrin, Advil) | <input type="checkbox"/> Anti-motion (Dramamine) |
| <input type="checkbox"/> Naproxen Sodium (Aleve) | <input type="checkbox"/> Imodium |
| <input type="checkbox"/> Antacid (Mylanta) | <input type="checkbox"/> Donnagel |
| <input type="checkbox"/> Calamine lotion | <input type="checkbox"/> Throat Lozenge |

_____ Other (please indicate) _____

NOTE: names in parenthesis are examples of a brand name, an equal substitute may be used.

This permission covers the period from _____ through _____.

CREW MEMBER NAME: _____

PARENT SIGNATURE: _____

PARENT PRINTED NAME: _____

DATE: