Backpacking Course 119





Goal:

Enable you to lead an outstanding backpacking program in your unit.

Focus:

Backpacking principles, techniques and gear.



This course has four parts...

Program









Backpacking in your program



- O Buy-into the virtues of backpacking
- Wilderness First Aid certification
- O Start small
- O Go light
- Skills over gear
- O Destinations and activities
- Conditioning program
- O Marketing







- O Pack your backpack
- Adjust the fit of your backpack
- O Place and pitch your tent
- O Stay reasonably dry in the rain
- O Hang a bear bag
- Select and prepare food
- Make and break camp systematically



Skill: What goes where?

- Weight high, close and centered
- O Hurry/frequent use items in top/outside
- O Food above fuel
- O Break down larger items
- Stuff the spaces
- Weight loaded:

OK – 25-30% of your body weight

Better – 20% of your body weight

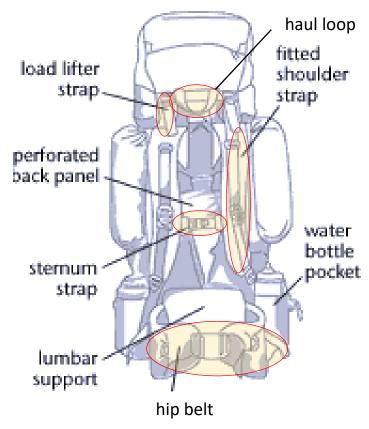
Best – 15% or less of your body weight





Skill: Adjust the fit of your pack

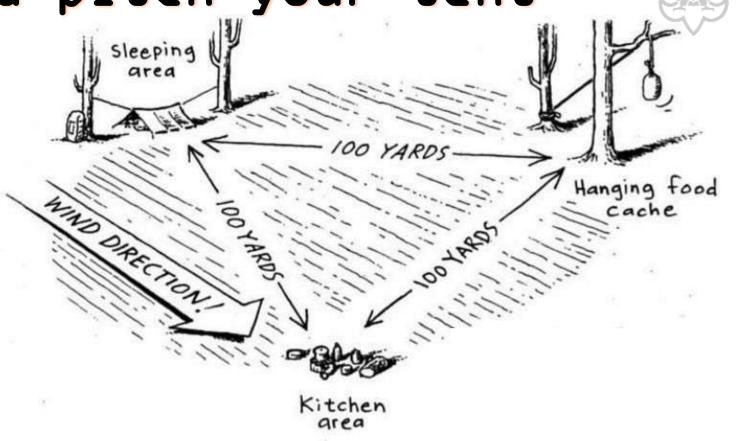






Skill: Place and pitch your tent

- O Five W's
- O Bugs and temperature
- "Bearmuda" triangle
- O Tight with an air barrier
- Ventilation
- O Pitching a tent in the rain



Skill: Backpacking in the rain

- Compared the compared of th
- O Stay warm and comfortable, if not dry
- O DWR your rain gear
- When to put on rain gear (avoid sweating)
- O Shorter breaks, more snacks
- Keep your important stuff dry
- O Pitch your backpacking tent right
- Compare the control of the contro
- O Get dry before you get into your sleeping bag

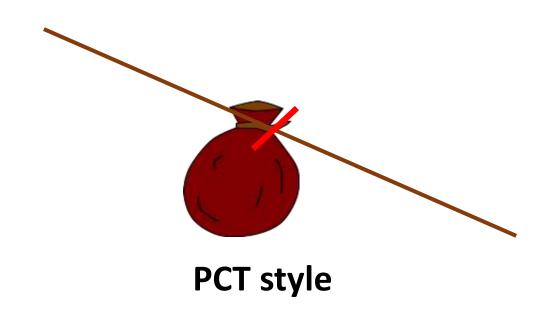




Skill: Hang a bear bag







PCT How To Video: https://youtu.be/yAhWqbtd2p0



Skill: Select and prepare food

- Your food philosophy
- O Freeze dried vs. regular
- O Cook vs. non-cook
- O Don't carry water in food
- Practice stove and meals at home
- Eat heavy/bulky food first
- Calorie-dense foods
- 2,500-3,000 calories per day (1.5-2 lbs per day)





- O Have a system
- O Pack the same every time
- O Practice, practice, practice
- O Duty Roster who, when and how?
- O Promote performance





What's in your backpack?

- 10 essentials (+ extra food, clothing)
- Sleep system
- O Tent (part)
- Cooking system
- Water purification system

Don't pack your fears.





Backpacking Checklist

Pe	Personal Equipment: Clothing (NO COTTON!!!)							
	1 Rain shell	Waterproof (not merely water resistant)						
	1 Rain pants	Recommend DriDucks (if you don't already have rain pants). No heavy plastic/rubber rain pants.						
	1 Insulating layer	leece or down sweater. Avoid heavy windproof fleece—blocking wind and rain is the job of						
		your rain shell, which can be placed over this insulating layer.						
	1 T-shirt	Synthetic						
	1 Long sleeve trekking shirt	Lightweight synthetic						
	1 Pants with zip-off legs (best)	Lightweight synthetic fabric						
	or 1 pair shorts							
	2 Underwear	Synthetic—no cotton; should be a dark color						
	2-3 pairs of socks	Light-to-mid weight synthetic running or hiking socks—no cotton						
	1 set base layer	1 light thermal top and bottom; 1 lightweight knit cap						
	1 Hat with a brim							
	1 pair shoes	Trail runners. In good condition. This should be the only pair of shoes you bring on this trip.						
	1 pair running gaiters	Not required but highly recommended to keep bits of gravel out of your shoes.						
	1 pair lightweight gloves or mittens	Synthetic, lightweight—glove liners work.						
	1 Bandana	Yes, this one item may be cotton.						



Pe	rsonal Equipment: Sleep System						
	1 Sleeping bag	Lightweight summer bag 20-35 degrees EN rating. Down or synthetic fill are fine.					
	1 Dry bag for sleeping bag	Roll-top dry sack made of silnylon-type fabric, just big enough to fit your sleeping bag					
		lternatively, you can line the inside of your pack with a trash compactor bag and put your					
		sleeping back in a stuff sack.					
	1 Sleeping pad	Recommend Thremarest Ridge Rest or insulated inflatable pad					
	1 inflatable pillow (optional)	If you choose to bring a pillow, please bring an inflatable pillow that weighs only a few ounces					
		and takes little space.					



Personal Equipment: Gear	
☐ Backpack	45-65 Liters, 2-3 lbs empty
☐ 2 Dry bags (for sleeping bag, clothes) OR 1 backpack rain cover + 1 dry bag OR 1 pack liner	Backpack rain covers will keep your pack mostly dry for a while, but "mostly dry" is not good enough for your sleeping bag. Dry bags should be lightweight, roll-top silnylon.
☐ 2 Water containers	Must equal 3 liters capacity. Don't bring a single 3 liter container—you'll want one 1 liter container for holding flavored drinks, which must then be bear bagged at night.
☐ 1 Personal hygiene kit	Should fit in a Ziploc sandwich bag. Includes: Small soap (unscented Dr. Broners can double as toothpaste), Small toothbrush, Small unscented deodorant (optional), Personal medications (prescription meds need labels), 1 roll of toilet paper
☐ 5 one gallon Ziploc freezer bags	Make sure they are freezer bags, not the thinner sandwich bags.
□ 1 Spoon	Long handle
☐ 1 Small knife	Must be folding knife with <3 inch blade. Smaller is better.
☐ 1 Headlamp	Make sure it has fresh batteries
☐ 1 Compass	
☐ 1 First aid kit	(very) Smallshould fit in a Ziploc half-sandwich bag
□ 1 Sunscreen	Recommend repackaging into smaller container. A good hat and long sleeve shirt can alleviate the need to take too much sun screen.
☐ 1 Sunglasses	Polarized is a bonus, but recommend keeping it cheap here.
☐ 1 Lip Balm	Chapstick or similar with SPF of 25+
☐ 1 Bug repellent	Small, or repackaging into smaller container.
☐ 2 Fire starters	Small lighter, magnesium striker or waterproof matches
☐ Hand sanitizer	Small container that won't leak

Fo	od	
	5 Mountain House dinner	Pro-Pack preferred
	5 Breakfast-in-a-bag	Needs to be hearty cereal
	6 lunches	First lunch will be eaten at the trailhead Monday and does not need to be packed away.
	6 days of snacks	Should be packaged and labeled per day. Good variety. Equals 1,200-1,500 calories per
		day.



G	roup Gear (to be divided among p	patrol members)					
	Tent Tent part to be divided with your tent mates						
	Stove Lightweight backpacking stoves (1 stove for every 3-4 people)						
	Fuel	Canister fuel. 20 oz for 12 people for 5 dinners					
	Water Filter	1 high quality pump filter +1 Sawyer Squeeze as backup per patrol					
	Pots w/lid	One 4 liter pot and one 2 liter port per patrol					
	Trowels	1 per patrol					
	Bear bags + line	3-4 per patrol					
	Detail maps	Coated; 1 per patrol member					
	Group First Aid Kit	1 per patrol					
	GPS tracker	1 per patrol					





Backpack

O Price: Depends, but generally mid-range

O Volume: 50L-65L

O Weight: 2-3lbs

O Torso length: Fits or is adjustable

O Nice features: External mesh, diagonal pockets,

hydration port

Compare the compart of the comparent of the comparent





Backpack Baseline Sample

O Gregory – Denali 100
www.gregorypacks.com

O Volume: 100 liters

O Weight: 6 lbs 10 ounces

O Recommended max load: 60+ lbs

O Three torso and hip belt sizes

O Bells and whistles

O Price: \$400



Backpack - Top 5 Picks



Gossamer Gear Mariposa



Osprey Exos 58



ULA Circuit



Granite Gear Crown2 60



Hyperlite Mtn Gear Southwest 3400



Backpack - Top 5 Picks



Pack	Differentiators	Vol.	Material	Weight	Price
Gossamer Gear - Mariposa	Simplicity, 3 torso & hip belt sizes	60 L	Nylon	2 lb	\$255
Osprey – Exos 58	Comfort, AirSpeed back panel	58 L	Nylon	2 lb 10 oz	\$220
<u>ULA Equipment</u> – <i>Circuit</i>	Big, custom options (straps, belt, color)	68 L	Nylon	2 lb 9 oz	\$235
Granite Gear – Crown2 60		60 L	Nylon	2 lb 2 oz	\$200
<u>Hyperlite Mountain Gear</u> – Southwest 3400	Light, bombproof, nearly waterproof	55 L	DCF	2 lb	\$345



Sleep System

Sleeping bag

O Fill: Synthetic or down?

O EN rating: 20-35 degrees

O Weight: 2-3 lbs

Sleeping pad

O Type: Air or foam?

O R-value: 2.5–5

O Weight: 1–2 lbs









Sleeping Bags - Top 5 Picks



Sleeping Bag	Differentiators	EN Rating	Fill	Weight	Price
REI – Magma 10	Great value, warmth-to-weight	10°	Down 850	1 lb 14 oz	\$350
REI – Igneo 17	Duck down = lower price, footbox	17 °	Duck down	1 lb 15 oz	\$299
Kelty – Cosmic Down 20	Great budget down bag, heavier	20°	Down 600	2 lb 13 oz	\$160
Enlightened Equipment – Revelation 20	Quilt, versatility, lightweight, comfort	20°	Down 850	1 lb 4 oz	\$285
NEMO - Disco 15	Roomy comfort, vents, heavier	15 °	Down 650	2 lb 11 oz	\$xx





Sleeping Pads - Top 5 Picks



Pad	Differentiators	Packed	R-Value	Weight	Price
REI – Flash Insulated	Great value, light	9.5 x 4	3.7	15 oz	\$100
Sea To Summit – Comfort Light Insulated	Dual-chamber, fast inflate/deflate, comfortable	9 x 4.5	4.2	1 lb 6 oz	\$170
Big Agnes – Insulated AXL	Super light, comfortable, expensive	6.5 x 3	n/a	12 oz	\$180
<u>Therm-a-rest</u> – Z Lite Sol	Cheap, light, bulky, not so comfortable	20 x 5 x 5	2.6	14 oz	\$45
Klymit – Static V Ultralight SL	Price, thick materials, durability	8 x 5	4.4	1 lb 4 oz	\$68



Tents

O Type: Backpacking (dome or hybrid)

O Quality: Mid-to-high

O Size: 2-3 person

O Weight: ~ 2 lbs per person

O Nice features: Air vents, double side entry, roomy vestibules,

vertical walls

O Fly: Full-length (no toupee tents!!!)

WARNING: Tents must be unpacked, dried and cleaned after each use!!!







Tents - Top 5 Picks



2 Person Tent	Differentiators	Floor	Packed	Weight	Price
REI – Half Dome 2 Plus	Great value, roomy, vertical walls	36 sq ft	20 x 7	4 lb 14 oz	\$255
Big Agnes - Copper Spur HV UL 2	Lightweight, interior space, expensive	29 sq ft	20 x 4	2 lb 12 oz	\$450
MSR – Hubba Hubba NX 2	Lightweight, packs small, durable	29 sq ft	18 x 6	3 lb 7 oz	\$400
Marmot – Tungsten 2P UL	Price-to-weight ratio, interior space	32 sq ft	18 x 7	3 lb 4 oz	\$300
<u>Tarptent</u> - Motrail	Non-freestanding, uses trekking poles, light, fast setup, packs small	31 sq ft	16 x 4	2 lb 4 oz	\$259



Clothing

O No cotton!

O Shell: waterproof with sealed (taped) seams (3 layers best)

O Layers: base, mid and outer

1-2 sets

O Laundering clothes on the trail





Rain Shells - Top 5 Picks



Marmot Precip



REI Drypoint GTX



Arc'teryx
Beta SL



Outdoor Research
Foray



Marmot Minimalist



Rain Shells - Top 5 Picks



Rain Shell	Differentiators	Barrier	Weight	Price
Marmot - Precip	Good value, lots of colors	NanoPro	11 oz	\$65
REI – Drypoint GTX	3 layer durability, breathable, very stormworthy	3-layer Gore-Tex	10.5 oz	\$250
Arc'teryx – Beta SL	Stormworthy, range of motion, expensive	Gore-Tex PacLite	11 oz	\$290
Outdoor Research - Foray	Ventilation, versatility	Gore-Tex PacLite	11 oz	\$215
Marmot – Minimalist	Breathable, durable, great fit	Gore-Tex PacLite	15 oz	\$150





O Boots vs. Shoes

Weight

• Wet feet and blisters

Expense

Socks

O Gaiters

Orthotics





O Weight (biomechanics)

Comfort and blisters

Water

Support

O Trail debris

O Cost









Blisters & Friction Injuries

O Causes: Shoes, toenails and trail debris



Too small
Too big
Too stiff

Too narrow in the toe box

Too wet for too long

O Prevention: Socks and shoes that fit well and are well suited to hiking

Socks

- O No Cotton!
- O Wool or synthetic
- O Light-to-mid weight
- Form fitting
- O Toe socks







Foot Aches & Pains

- Supportive shoes
- Orthotics
- O Carry less weight
- O Foot maintenance



- Swap-out dirty wet socks
- Keep toenails trimmed
- Chilling your feet in streams
- Cover hotspots as they occur (athletic tapa
- Keeping your feet clean
- Keeping trail debris out of your shoes
- Use balm or wax







Top 3 Trail Runner Picks #2 Brooks

#1 Altra Lone Peak 4

Cascadia 13

#3 Merrell Moab 2 Ventilator





Footwear	Туре	Weight	Price
Altra – Lone Peak 4	Trail runner	11 oz	\$120
Merrell – Moab 2 Ventilator	Hiking shoe	31 oz	\$110
Asolo - TPS 520 GV Evo	Boot	66 oz	\$320

Stove

- O Liquid fuel vs. Canister
- O No alcohol stoves
- O What are you cooking?
- O How big are your pots?
- O What will the temperature be?
- O How important is weight?
- O How far are you going?
- O How careful are your Scouts?







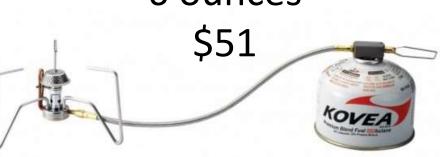
Top 3 Stove Picks

#1 Snow Peak Litemax 1.9 ounces





#2 Kovea Spider 6 ounces



#3 MSR Windburner 15.5 ounces \$120







- **♦** Filters
- **♦** Tablets
- ♦ Boiling





Top 3 Water Filter Picks

#1 Katadyn Hiker



#2 Sawyer Mini

2 ounces \$24



#3 Katadyn (Micropur)

Tablets (30 pack)

.5 ounce \$14





Resources

O CleverHiker.com



OutdoorGearLab.com



O BackpackingLight.com



O darwinonthetrail.com







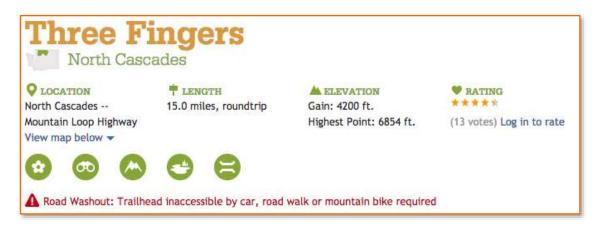


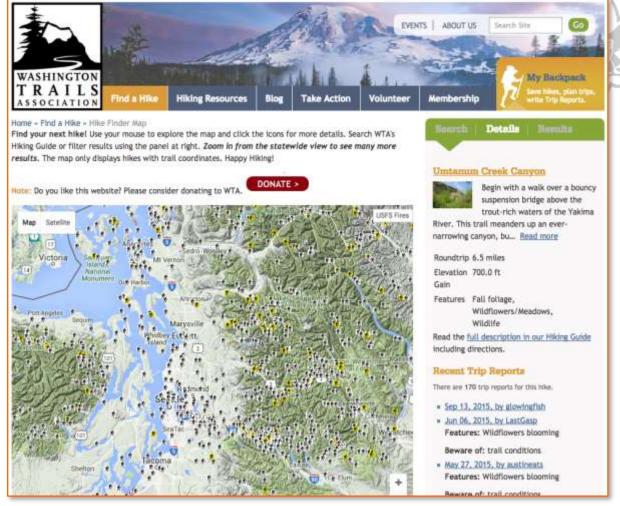
- Quick & easy backpacking trips
- O More adventurous backpacking trips
- O 50 mile backpacking trips



Find your own hike

www.WTA.org

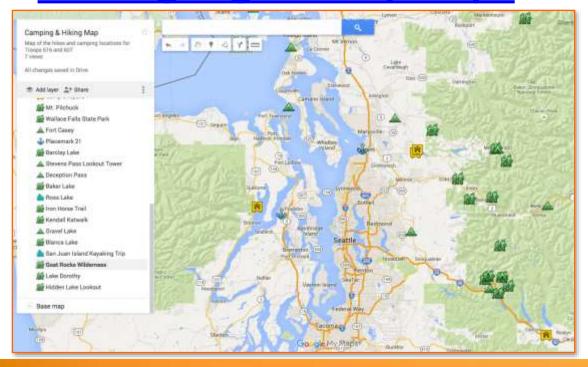


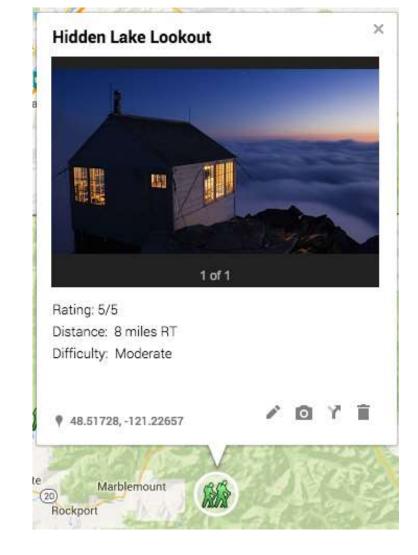




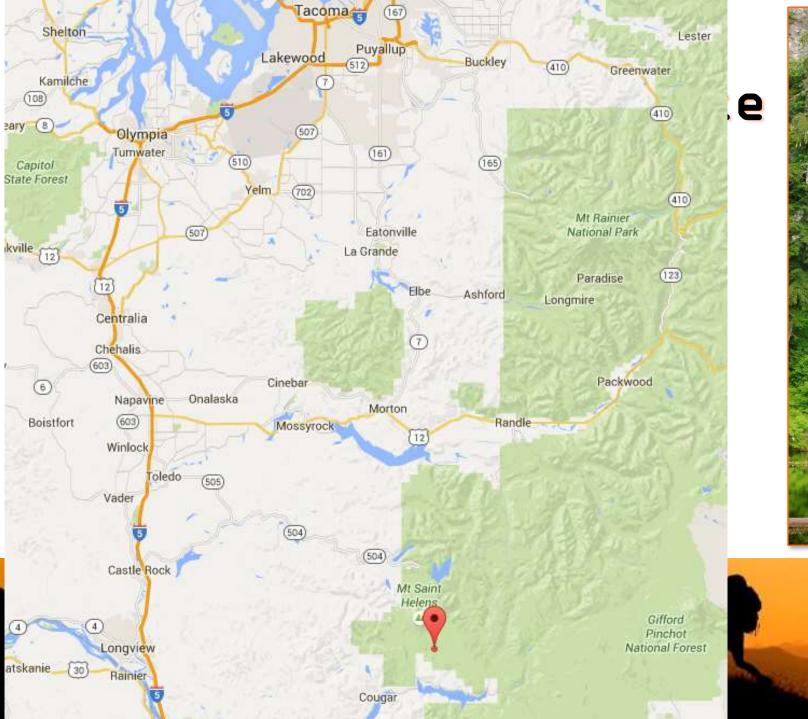
Make your own map

www.google.com/maps



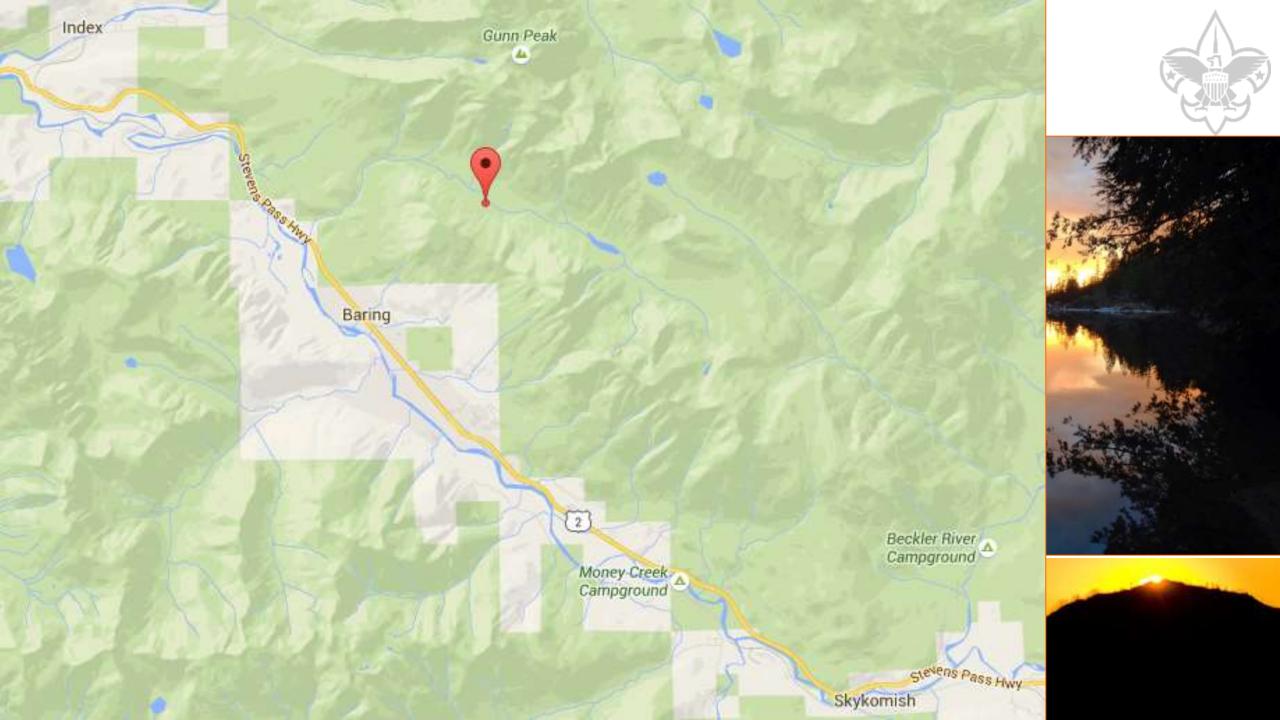


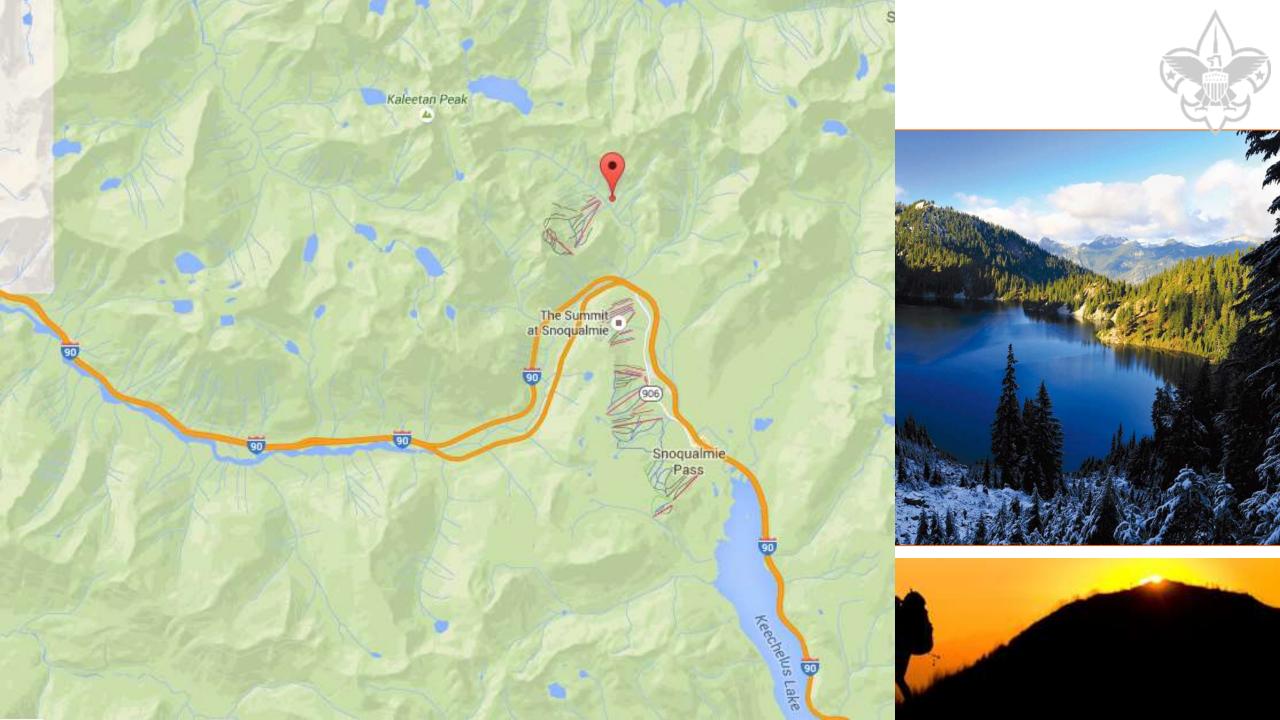


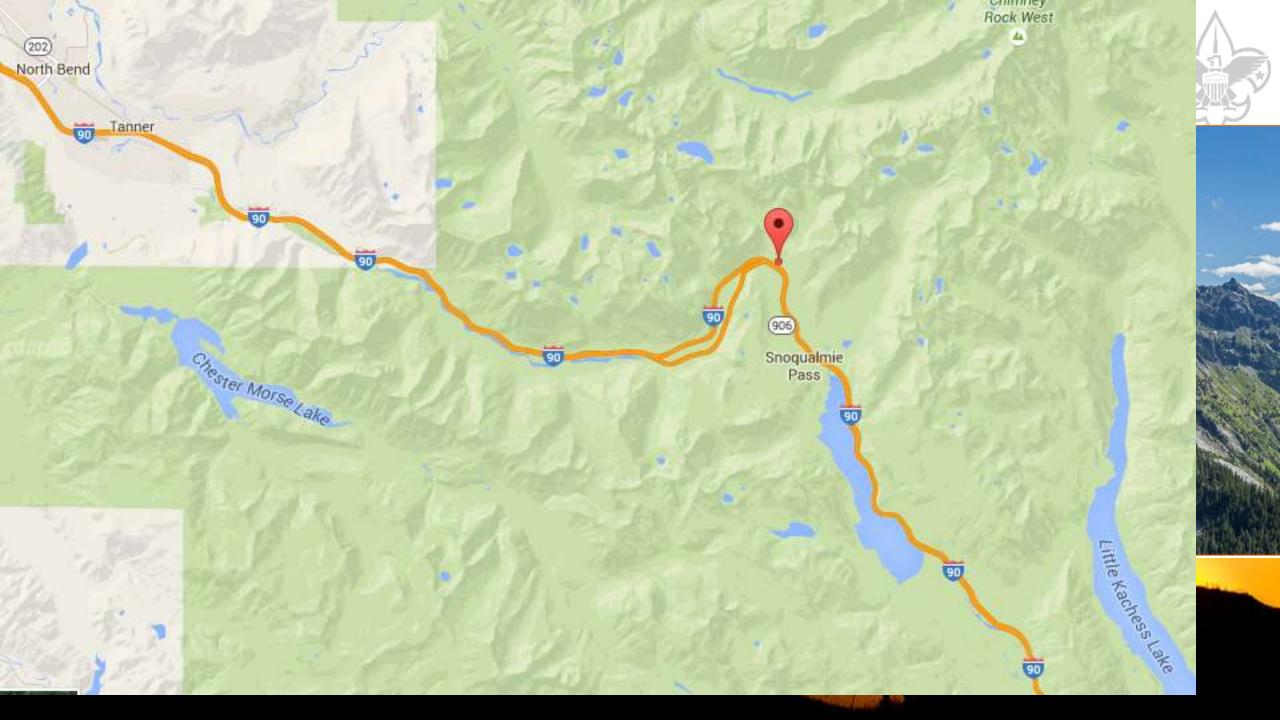






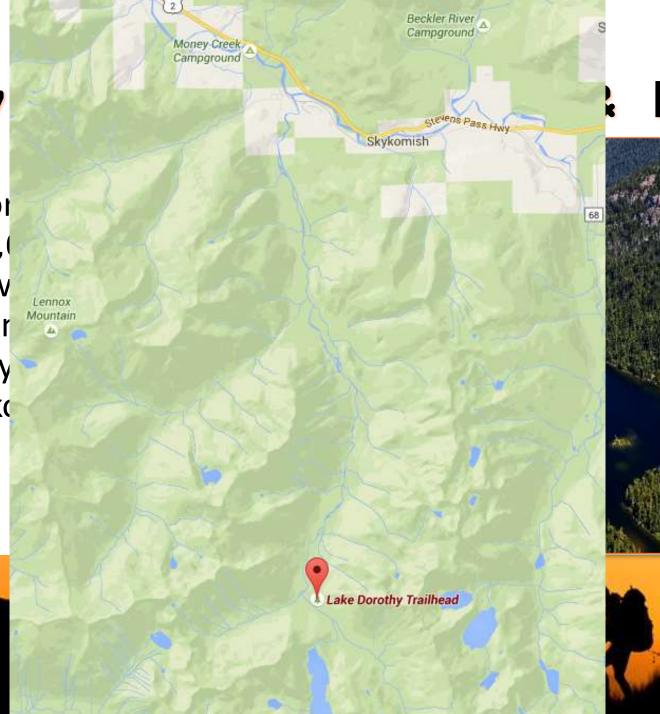






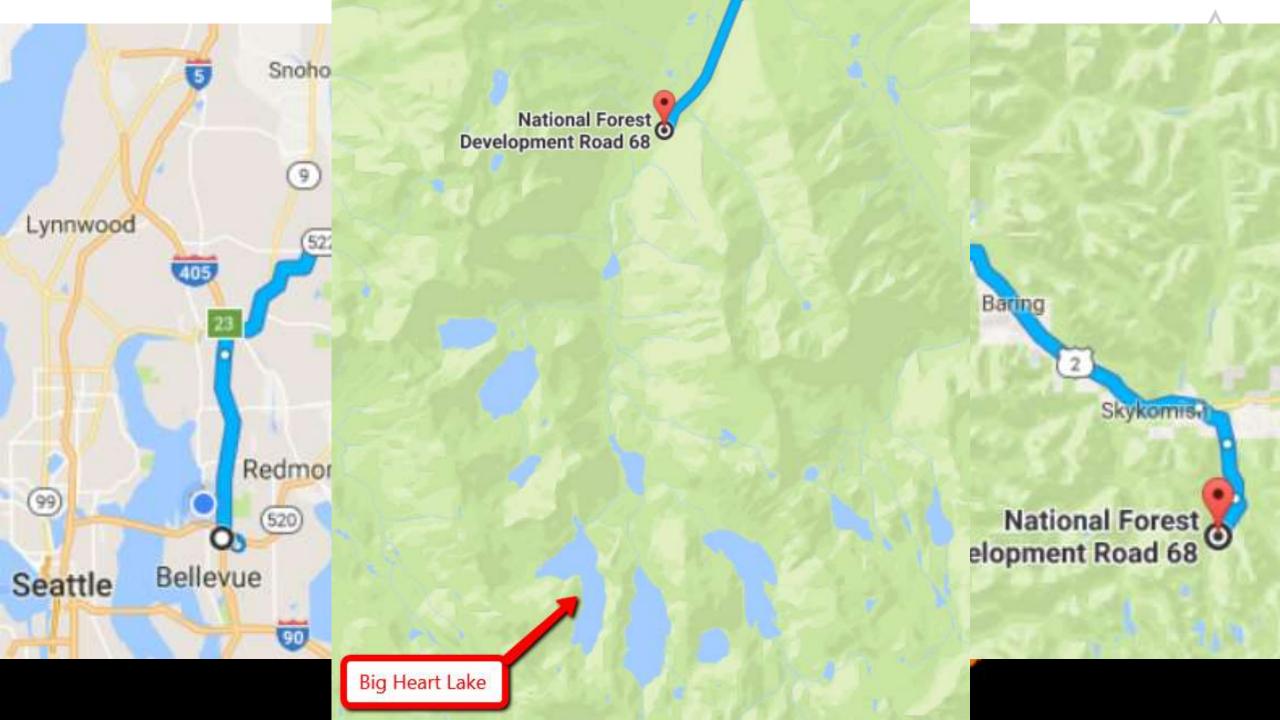
More Adv Lakes

- Length: 7.5 or
- Elevation: +1,
- Highlights: Tw exciting strear
- Location: Hwy south of Skyke



Bear





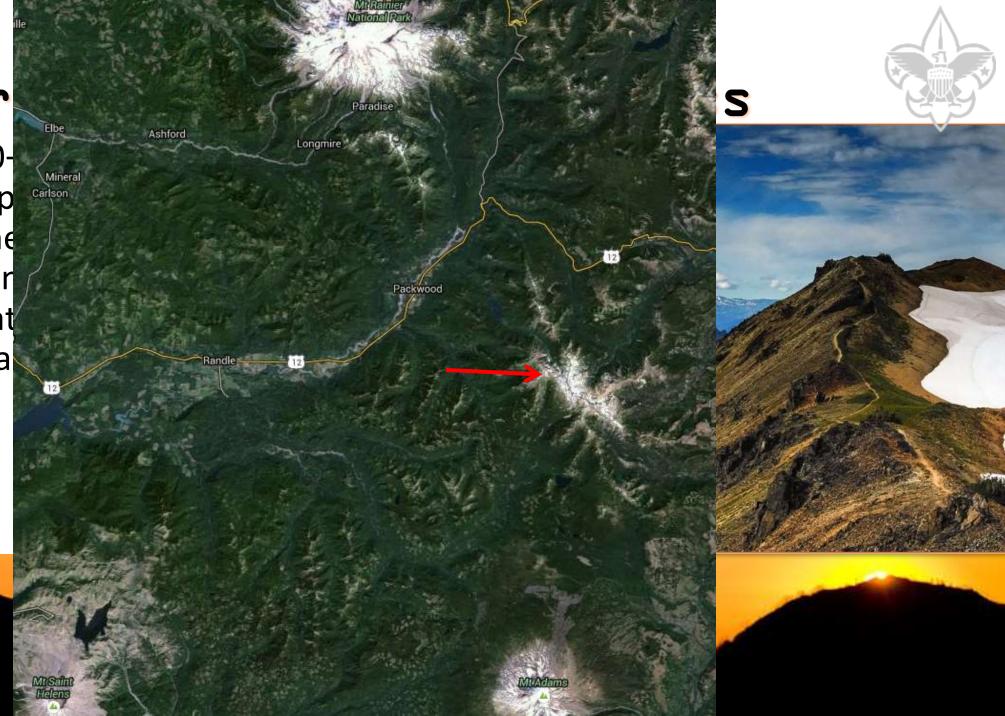


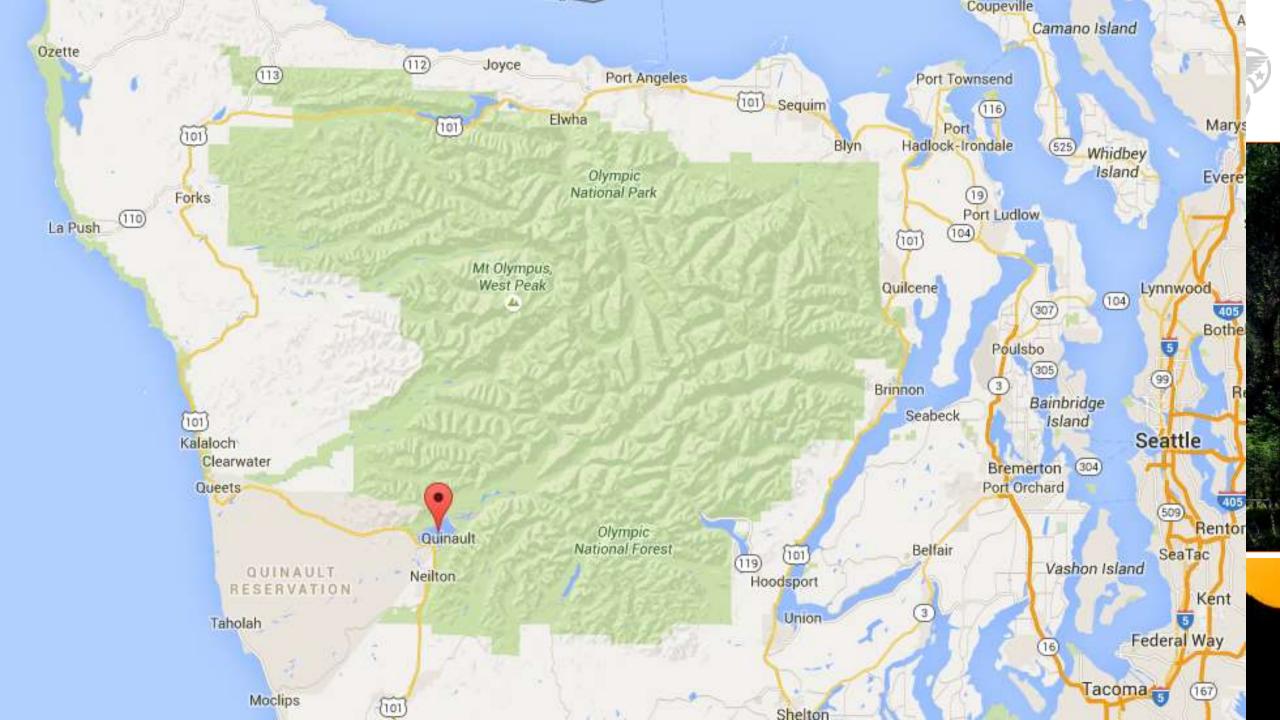
Length: 24-50-

Elevation: Dep

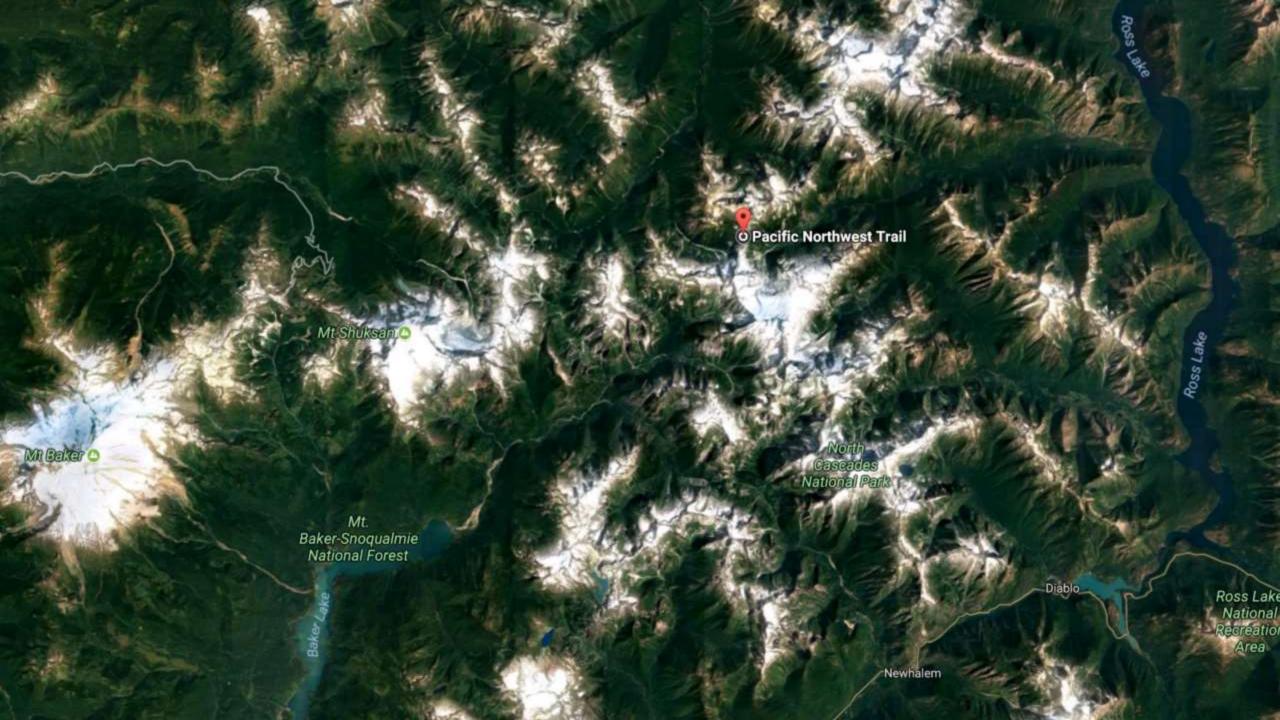
• Highlights: The amazing mour

Location: Goat near White Pa











Backpacking

Course 119



Appendix



Backpack Recommendation

O Gossamer Gear - Mariposa www.gossamergear.com

O Volume: 60 liters

O Weight: 2 lbs

O Recommended max load: 35 lbs

Various torso and hip belt sizes

O Ingenious closure system



Backpack Recommendation #2

Ultralight Adventure Equipment (ULA) - Circuit www.ula-equipment.com

- O Volume: 68 liters
- O Weight: 2 lbs 8 ounces
- O Recommended max load: 35 lbs
- Various torso and hip belt sizes
- O J- and S-curved shoulder straps
- O Price: \$235



Backpack Recommendation

Osprey – Exos 58
www.ospreypacks.com

O Volume: 58 liters

O Weight: 2 lbs 10 ounces

O Recommended max load: 40 lbs

Various torso and hip belt sizes

'Airspeed' suspension









O REI – Igneo www.rei.com

O Fill: WR 700-fill duck down

O Weight: 1 lbs 10 ounces

O EN Lower Limit Rating: 35 degrees

Primaloft on bottom of bag





Sleeping Bag Recommendation #2

O Sea to Summit – Spark SP II

<u>www.seatosummit.com</u>

O Fill: WR 850-fill down

O Weight: 1 lb

O EN Lower Limit Rating: 35 degrees

O Half length zipper



Sleeping Bag Recommendation #3

Enlightened Equipment – Revelation 20 <u>www.enlightenedequipment.com</u>

O Fill: WR 850-fill down

O Weight: 1 lb 3 ounces

O EN Rating: 20 degrees

Quilt attaches to your pad





O Therm-a-Rest - NeoAir XLite

www.thermarest.com

O Type: Air

O Weight: 12 ounces

OR Value: 3.2

O Top of every "best" list



Sleeping Pad Recommendation #2

O Sea to Summit – Comfort Light Insulated www.seatosummit.com

O Type: Air

O Weight: 1 lb 5 ounces

O R Value: 4.2

O Dual chamber, fast inflate/deflate



Sleeping Pad Recommendation #3

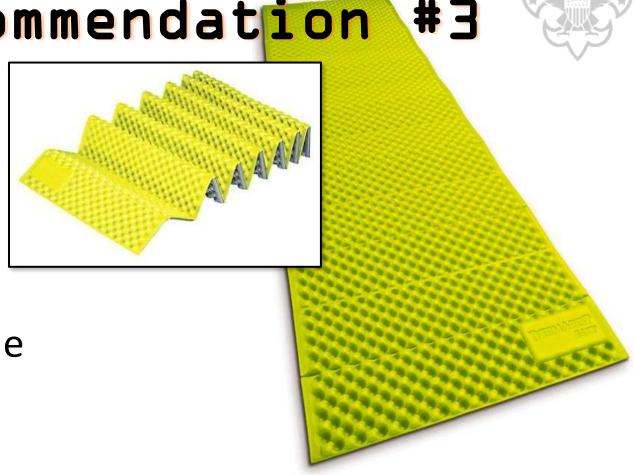
O Therm-a-rest – *Z-lite*<u>www.thermarest.com</u>

O Type: Closed cell foam

O Weight: 14 ounces

O R Value: 2.6

O No leaks, bulky, flattens over time



Tent Recommendation #1

O REI – Half Dome 2

www.rei.com

O Sleeps: 2

O Packed Weight: 5 lbs 7 ounces

O Doors/Vestibules: 2/2

• Freestanding

Also 2 Plus and 4 person models



Tent Recommendation #2

- O Marmot Limelight 3P www.marmot.com
- O Sleeps: 3
- O Packed Weight: 6 lbs 11 ounces
- O Doors/Vestibules: 2/2
- Freestanding
- Near vertical walls on all sides
- O Price: \$299



Tent Recommendation #3

O Tarptent – Cloudburst 3
<u>www.tarptent.com</u>

O Sleeps: 3

O Packed Weight: 3 lbs 4 ounces

O Doors/Vestibules: 2/2

O Non-freestanding

Super fast setup



Top 3 Rain Shell Picks







