

Biobased Chain and Bar Oil: The Right Choice for North Cascades National Park Service Complex

(Article Extract)

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The North Cascades have long been known as the North American Alps. Characterized by rugged beauty, this steep mountain range is filled with jagged peaks, deep valleys, cascading waterfalls, and glaciers. North Cascades National Park Service Complex (NOCA) contains the heart of this mountainous region in three park units which are all managed as one and include North Cascades National Park and Ross Lake and Lake Chelan National Recreation Areas. The park spans the Cascade Crest of Washington from the temperate rainforest of the wet west side to the dry ponderosa pine ecosystem of the east, encompassing landscapes with over 9,000 feet of vertical relief. Much of the landscape is forested, and there are groves of old-growth trees such as Douglas-fir and western red cedar towering over shade-tolerant hemlocks. Old-growth forests are not defined solely by the size of their trees, which are only one component of the forest ecosystem: Lichen in the forest canopy absorb the surrounding air's nitrogen, which is washed into the soil and used by forest vegetation; symbiotic fungi attached to plant roots supply their host with water and nutrients and, in return, take in carbohydrates; animals eat plants and help spread seeds across the forest to begin a new cycle of growth (*park information quoted from www.nps.gov/noca*).

NOCA maintains a backcountry trail system of nearly 400 miles. We also have numerous campgrounds (car, boat, and hiker/horse access), many of which are in forested areas. Because of the sensitive nature of the forest, lake, and stream ecosystems, our Environmental Management System (EMS) piloted the use of biobased chain and bar oil for chain saws in 2006. In 2007 we expanded the program to mandate biobased bar oil for all sawing performed in the park complex, from clearing downed trees to building fire line.

Biobased chain and cable lubricants were added to the BioPreferred product catalog in Round 5. The biobased content of bar oils listed on biopreferred.gov ranges from 77% (required minimum) to 100% and is generally from seed-based oils such as soy, canola, linseed, palm, safflower, jojoba, and/or rapeseed.

Initially biobased bar oil was difficult to find locally or online. Today there are more products available and more stores carry them, but it is beneficial to develop a relationship with local vendors and encourage them to stock several biobased options.

The out-of-pocket cost for biobased bar oil is typically higher than traditional petroleum-based products (~\$25/gallon compared to ~\$12 for traditional lubricant), but the environmental cost is much lower. It biodegrades quickly, is non-irritating to human skin, and is less polluting than petroleum.

Our users prefer the odor and easy removal of biobased residue from their clothes compared to petroleum-based lubricants. We have found that performance is comparable and viscosity at low temperatures is better. Our trail and fire crews like it and enjoy knowing that their environmental footprint is smaller!

" I think biobased bar oil is a great product – I like it, I use it, and I believe in it." - Andrew Cambo Trails Laborer, NOCA.