

VI. Glossary

Broadcast Seeder: An implement for applying seed to the surface of a planting site. It consists of a hopper to hold the seed. Beneath the hopper is rotating disk. Seed is metered onto the rotating disk, which throws the seed in a circular pattern away from the device. Small broadcast seeders can be carried by a person and powered by a hand crank. Larger seeders are normally mounted on the rear of an ATV, tractor, or a pickup truck and powered by electricity or by a power take-off shaft.

Brush Disk: A heavy duty implement with circular, concave steel cutters mounted in series on a rotating shaft and pulled across the site by a prime mover. The discs cut into the sod and turn it over, exposing mineral soil. Disks can have one or two gangs (shafts with mounted disks).

Brush Hog: A heavy duty rotary mower, usually pulled behind a rubber tired tractor, and capable of chopping large diameter brush and saplings up to several inches in diameter at ground level.

Bulldozer: A prime mover fitted with a front-mounted steel blade that can be raised or lowered. It is used to push or excavate dirt, stumps, rocks, trees, and other items or materials.

Cable Plowing: Cable plows are commonly used by electrical utilities for installing underground electrical distribution cables along rights-of-way and to homes and businesses between transformers and electrical meters.

Conservative Forbs: Prairie or barrens wildflowers that are indicative of high quality plant communities. These species are some of the first to disappear in the absence of natural processes, i.e., fire or heavy disturbances such as grazing or cultivating.

Construction: Any action that involves grading, building, excavation, or other heavy disturbance activity.

Contiguous: "Contiguous" Karner blue breeding habitat is the total extent of an area supporting wild lupine (even if patchy and scattered) that is occupied by the Karner blue and uninterrupted by obvious barriers to adult butterfly dispersal (usually dense forest). Presume adults to be quite capable of dispersing at least 300 meters over open areas of suitable habitat, and so include such areas as "contiguous".

Disk Trencher: An implement consisting of two large diameter concave, toothed steel disks mounted on opposite sides at the rear of a prime mover. As the prime mover proceeds across the site, the disks gouge the soil surface and create a continuous shallow furrow of mineral soil.

Dispersal Corridor: A pathway in the landscape that Karner blue butterflies follow during their movement from one area of suitable habitat to another. A dispersal corridor may include unoccupied suitable habitat. Dispersal corridors might be useful for connecting habitat sites that are separated by unsuitable habitat. Characteristics that might improve suitability as a dispersal corridor include: a linear aspect, dominated by grasses, substantial number of flowering nectar plants, essentially canopy-free at least down the middle, having a dense wall of trees or shrubs along the sides, and being sunny for a significant part of the day. Presence of lupine in corridors is not essential, but is highly recommended (KBB Recovery Plan).

Dispersal Distance: A pathway of no longer than 350 meters that Karner blue butterflies can traverse when dispersing from one area of suitable habitat to another.

Early to mid-Summer: Pertains to growing-season burning and the timeframe beginning after June 21st through August 15th.

Emergency Response: Any action taken to remedy a facility or property emergency situation, or other unforeseen occurrence.

Extent of Site Disturbance: The amount of the surface area (in percent) of the site that is impacted by a site preparation activity.

Final harvest: A final cutting trees from a forest stand that extracts salable trees.

Fire Return Interval (FRI): The timeframe in which prescribed fire is returned to a landscape/unit that has been burned in the past.

Fixed Return Interval: As it relates to prescribed fire, A FRI (above) that occurs at a predetermined period of years. For example, a land manager may choose to burn a site once every three years regardless of whether the site requires a burn at this frequency.

Flail Chopper: An implement mounted on the front of a prime mover with a horizontal spinning drum. Attached to the drum are hardened steel cutting hammers that shred woody debris upon contact.

Fuel Loading: A buildup of fuels, especially easily ignited, fast-burning fuels.

Furrowing Plow: An implement mounted to the front or rear of a tractor that can be raised or lowered to control plowing depth. The plow is V-shaped and rolls sod, roots and debris to both sides as it moves through the ground, leaving an exposed strip of mineral soil.

Harvesting: The process of gathering a timber crop. It includes felling, skidding/forwarding, on-site processing, and removal of products from the site.

High Potential Range: Land in High Probability Range that is within 5 miles of known Kbb occurrences. Also known as the regulatory range.

High Probability Range: Lands in the KBB Probability Model that fall into 50% and greater probability classes.

Hydroaxe: A very heavy duty rotary mower mounted on the front of a rubber-tired prime mover and powered by a hydraulic motor. Hydroaxe is a brand name of the Pettibone Corporation.

Improvement Cutting: The removal of less desirable trees of any species in a stand of poles or larger trees, primarily to improve composition and quality.

Incidental Take: Take of a federally-listed species which occurs incidental to, and is not the purpose of, otherwise legal activities.

Incidental Take Permit (ITP): A permit issued by the USFWS, under Section 10 of the ESA, which allows the incidental take of an endangered species.

Intensity of site disturbance: The level of impact to vegetation at the point of disturbance. (Virtually all site preparation practices have a high level of impact, in that vegetation is removed and mineral soil is exposed at the point of application).

Intermediate Treatment: Any treatment or tending designed to enhance growth, quality, vigor, and composition of the stand after establishment of regeneration and prior to final harvest.

Metapopulation: A population of subpopulations; each individual population within a metapopulation is referred to as a local population.

Metapopulation Management: The management of large-scale properties or barrens landscapes that supports Kbb populations. Metapopulation management requires that a conscious effort be made to coordinate management efforts on the landscape to ensure the perpetuation of the metapopulation and are within dispersal distance of other Kbb subpopulations.

Mowing and Brushing: For the purpose of this protocol mowing and brushing includes the use of mowers, trimmers, choppers, and other mechanized equipment or hand tools to control woody vegetation, forbs and grasses as a vegetation management practice.

No-till Drill: A heavy duty seed drill that exerts downward force on the seeding disks, allowing penetration through sod, corn stubble, and other debris on the

ground. These drills are normally used after herbicide applications to eliminate grasses and unwanted forbs from competing with the planting. Several makes of no-till drills are modified to accept “fluffy” prairie and barrens seeds. Currently those makes are Truax, Tye, and certain models of Brillion no-till drills.

Patch Scarifier: A forestry implement that, when pulled across the landscape, gouges out patches of sod at periodic intervals, exposing mineral soil. These patches can be used as micro-sites for planting or seeding of trees or other vegetative species.

Permanent take: An impact to Karner blue butterfly habitat, through land management or land use activities, that precludes Karner blue butterfly occupation. Such long-term impact involves taking that does not allow for the restoration and reoccupation of the site for a minimum of five years. Activities or projects that may fall within the definition of permanent take include, but are not limited to:

- Construction of roadways or parking lots
- Construction of buildings or structures and associated facilities
- Other construction or development projects that cover or replace the habitat in a permanent manner (at least five years), such as an airport or a flowage; and
- Commercial or residential developments. [Note: This category does not include a permanent or second home or structure that are owned or built by the owner for his or her own use. This provision applies only to those housing developments approved after the date of permit issuance.]

Pesticide Application: For the purpose of this protocol pesticide application includes the use of any Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) approved chemical used to control both woody and herbaceous vegetation as a vegetative maintenance practice. Pesticides can be applied with hand held sprayers, or boom sprayers mounted on any type of vehicle.

Pruning: The removal, close to the branch collar or flush with the stem, of side branches and multiple leaders from a standing tree.

Prime Mover: A motorized tractor with either steel tracks or rubber tires.

Recolonization: The emigration of Kbb’s from refugia to suitable habitat where populations have been reduced due to management activities or that are unoccupied.

Refugia: Kbb occupied, unburned lupine (2/3 of total lupine on site) that is adjacent to or within 350 meters (\leq 200 meters is preferable) of the burn unit (see dispersal distance).

Release: A treatment designed to free young trees (not past the sapling stage) from undesirable, usually overtopping, competing vegetation.

Roller Chopper: A large diameter steel drum with horizontal steel blades set perpendicular to the circumference of the drum and parallel to each other. The drum is mounted within a steel frame and is pulled across the site by a motorized prime mover. As the drum rolls along the ground, the steel blades cut into the sod and chop brush and woody debris lying on the surface. Roller choppers often have a tandem arrangement, with two chopper drums mounted within the frame for more effective chopping in a single pass.

Root Rake: A front-mounted implement that attaches to a prime mover. The implement consists of a horizontal steel bar that can be raised and lowered. It is fitted with vertical teeth that can be lowered into the ground to “root out” stumps and brush. It can also be pushed along the surface to collect woody debris for deposit in piles.

Salvage Cutting: The removal of dead trees or trees damaged or dying because of injurious agents other than competition, to recover economic value that would otherwise be lost.

Sanitation Cutting: The removal of trees to improve stand health by stopping or reducing the actual or anticipated spread of insects or diseases.

Seed Drill: A farm implement that is towed behind a tractor. It consists of one or more wide bins to hold seed. A metering system drops seeds into tubes that lead to paired sets of discs spaced closely together beneath the seed bins. The disks penetrate the soil and open a slit into which the seeds drop. The slit in the soil closes behind the disks covering the seed.

Short-Term Incidental Take: An impact to occupied Karner blue butterfly habitat resulting from land management or land use activities, which provides habitat disturbance that renews declining habitat and/or creates new habitat to replace habitat lost to succession or as a result of management activity. Short-term take is conducted following approved conservation measures in the HCP in a manner to avoid and/or minimize harm to the Kbb (e.g. through appropriate timing of activities, selective routing and siting of projects, etc) and maintain, enhance, and/or restore Kbb Habitat.

Old Definition: Short-term take is an impact to occupied Karner blue butterfly habitat resulting from land management or land use activities, which provides habitat disturbance that renews declining habitat and/or creates new habitat to replace habitat lost to succession or as a result of a management activity. Short-term take is conducted following approved conservation measures in the HCP in a manner to avoid and/or minimize harm to the KBB (e.g. through appropriate timing of activities, selective routing and siting of projects, etc.) and maintain, enhance, and/or restore KBB habitat. Such short-term impacts allow Kbb survival or the restoration and reoccupation of the site within five years.

Site: A spatially explicit, relatively homogeneous portion of land characterized by specific physical and chemical properties that affect ecosystem functions, and where a more or less homogeneous vegetative type may be expected to develop or persist.

Site Preparation: Hand or mechanized manipulation of a site, designed to enhance the success of regeneration. Treatments may include bedding, burning, chemical spraying, chopping, disking, raking, and scarifying and are designed to modify the soil, litter, or vegetation and to create microclimate conditions conducive to the establishment and growth of desired species.

Subpopulation (local population): A self-reproducing population of Karner blue that is associated with a site / area (KBB Recovery Plan).

Thinning: A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

Timber Harvest: The process of gathering a timber crop. It includes felling, skidding/forwarding, on-site-processing, and removal of products from the site.

Timber Stand Improvement (TSI): For the purposes of this user's guide TSI means a non-commercial intermediate treatment made to improve stand composition, structure, condition, health and/or growth.

Take: To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage.

Unit: A defined management area incorporating a portion of or the entire property of an occupied Kbb site.

Weeding: A release treatment in stands not past the sapling stage that eliminates or suppresses undesirable vegetation (including shrubs and herbs) regardless of crown position.