



LANDSCAPE, WEED, AND VEGETATION CONTROL PLAN

STEWARD CREEK SOLAR, LLC
ALTO AND WILLOW CREEK TOWNSHIPS
LEE COUNTY, ILLINOIS

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EXECUTIVE SUMMARY

Steward Creek Solar, LLC will construct, own and operate a 600-megawatt (MW) alternating-current (AC) solar photovoltaic (PV) power generation facility and associated electrical transmission facilities, collectively referred to as Steward Creek Solar (“Project”). The Project site is on privately owned land in Alto and Willow Creek Townships in Lee County.

This Landscaping, Weed, and Vegetation Control Plan is developed for the Site in compliance with the Lee County Solar Ordinance, which requires that, as part of a conditional use application for a solar energy system (“SES”), the applicant shall provide the County with a Landscaping Plan that addresses the vegetative buffering required in the ordinance, including the use of existing and newly installed vegetation to screen the facility. The Landscaping Plan will be implemented as part of facility construction and operation.

The Solar Ordinance of Lee County also requires that the Landscaping Plan address the use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs and wildflowers in the project area and in the setbacks and vegetative buffering as required in this article. This plan exists as a living document, which may need to be updated from time-to-time. Revisions and modifications to the plan are to be recorded and provided to the Zoning Administrator of Lee County.

INTRODUCTION

In order to promote and maintain healthy vegetation proper native grass and seed mix utilization, mowing, upkeep, and weed control and prevention procedures must be strictly followed. These practices are not strictly developed for aesthetic purposes, but rather, to ensure weeds are unable to establish themselves across the site and into adjacent parcels, as well as preventing vegetation from shading the solar panels. Outside of active maintenance, general site observation will occur, at minimum, once in the spring, twice in summer and once in fall. These visitation and observation periods will serve to identify vegetation growth rates (especially for vegetation designed for screening), noxious weed spread, and seed mix establishment problems beneath the panels and within the site. Areas requiring spot mowing or weeding will be identified and addressed following each observation.

Native species require several growing seasons to fully establish from seed. Therefore, during the initial three years, native vegetation will require active stewardship to promote growth over opportunistic and noxious weeds. During this establishment period, selective post-emergent herbicide application and mowing as necessary will be utilized to deter the growth of non-native and invasive species, allowing planted species to develop and thrive.

After the initial three-year period, we will continue vigilant and active management of the native vegetation to address invasive species.



POLLINATOR HABITATS

Where needed, setbacks and vegetative buffering will be seeded with appropriate pollinator-friendly plants, shrubs, trees, grasses, forbs, and wildflowers. The areas will be seeded with a mix of pollinator-friendly species as appropriate for the site conditions in that area (e.g. shade, soil type, drainage requirements, etc.), using County selected seed mixes as appropriate. The following proposed seed mix provides a diverse mix of grasses and forbs to provide overwintering habitat and year-long nectar and pollen sources for pollinators. At mature height, the species below will not typically exceed 3 feet in height.

Common Name	Scientific Name	PLS LBS/AC
Permanent Seed Matrix		
Black-eyed Susan	<i>Rudbeckia hirta</i>	0.250
Common milkweed	<i>Asclepias syriaca</i>	0.250
Copper-shouldered oval sedge	<i>Carex bicknellii</i>	0.188
Foxglove beardstongue	<i>Penstemon digitalis</i>	0.125
Golden Alexanders	<i>Zizia aurea</i>	0.125
June grass	<i>Koeleria macrantha</i>	0.125
Leadplant	<i>Amorpha canescens</i>	0.188
Little bluestem	<i>Schizachyrium scoparium</i>	4.000
Nodding onion	<i>Allium cernuum</i>	0.375
Ohio spiderwort	<i>Tradescantia ohioensis</i>	0.188
Partridge pea	<i>Chamaechaerista fasciculata</i>	1.000
Prairie cinquefoil	<i>Drymocallis arguta</i>	0.125
Prairie coreopsis	<i>Coreopsis palmata</i>	0.125
Prairie dropseed	<i>Sporobolus heterolepis</i>	0.188
Purple prairie clover	<i>Dalea purpurea</i>	0.125
Sand coreopsis	<i>Coreopsis lanceolata</i>	0.625
Side-oats grama	<i>Bouteloua curtipendula</i>	2.000
Smooth aster	<i>Symphotrichum laeve</i>	0.063
White prairie clover	<i>Dalea candida</i>	0.125
Wild columbine	<i>Aquilegia canadensis</i>	0.063
Wild lupine	<i>Lupinus perennis v. occidentalis</i>	0.125
Temporary Cover Crop		
Seed Oats	<i>Avena Sativa</i>	20.0
TOTAL LBS/AC		30.378



PROJECT AREA

Steward Creek Solar will be constructed in phases to limit the acreage disturbed at any given time. As each section is completed, it will be seeded in non-invasive groundcover to meet erosion and sediment control and stormwater management requirements. After construction is complete and the soil has been stabilized in disturbed areas, Steward Creek Solar will work with Lee County to introduce additional pollinator habitat within the project area.

VEGETATION ESTABLISHMENT AND MANAGEMENT PLAN

ANNUAL INSPECTION

Local landscaping or vegetation maintenance professionals will walk and inspect the site each spring to identify potential weed problems and develop a vegetation and weed control program and maintenance schedule for the year.

INVASIVE AND NON-NATIVE SPECIES CONTROL

First Growing Season: Mow the planted areas to a height of 6-8 inches 2-4 times during the early growing season and as needed to control non-native and invasive species. Mowing (including weed whipping) shall take place prior to or when non-native and invasive species are flowering so as to prevent seed proliferation. Control undesirable plant species, when present in small quantities, by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all aboveground and belowground stems, roots and flower masses prior to development of seeds. Apply herbicide (as necessary) to non-native and invasive species within the naturalized areas with appropriate herbicide. Management site visits should be conducted at a minimum of 3-4 times annually.

Herbicide should be applied by a trained and licensed applicator to control perennial target species. Herbicide should be applied selectively by means of backpack sprayer or spray tank with boom attachment, with careful attention to minimize off-target species damage. Selective herbicides can and should be used where practicable to minimize off-target damage during treatment. Non-selective herbicides can be used but with utmost caution where necessary to target non-native species, particularly grasses.

Second–Third Growing Seasons: Control of undesirable plant species during subsequent growing seasons shall consist primarily of herbicide application. Mowing (including weed whipping) shall be conducted two to four times during the early growing season and as needed to a height of 6 to 8 inches to prevent undesirable annual species from producing seed. Management site visits should be conducted at a minimum of 3-4 times annually. Following



the third growing season, established native plantings can generally be transitioned into a long-term management program.

LONG-TERM MANAGEMENT PLAN

As the planted areas mature, required supplemental management will be significantly reduced. The plant communities will stabilize and be effectively managed through spot mowing, spot herbicide application, and hand pulling as necessary. Beginning after the third growing season, every 2-3 years a late fall mowing with thatch removal (or mulch) may be conducted, if site conditions dictate. Management site visits should be conducted at a minimum of 1-2 times annually to conduct selective mowing and herbicide application operations. Annual inspections are recommended to assess the planted areas and make future management recommendations.

SPRING INSPECTION AND UPKEEP

During the spring, mowing will be performed where necessary for weed control or in areas where vegetation is shading the solar panels.

SUMMER WEED CONTROL AND MAINTENANCE

Over years one and two, visits to the site will occur once per month throughout the growing seasons to control and prevent invasive weeds. Once native grasses and vegetation are deemed to be established, visits to the site in early summer and fall will occur to perform either the pre or post emergent treatment of invasive species or weeds.

GENERAL MOWING

General mowing is necessary to maintain access the site or prevent the shading of the solar panels. Spot-mowing will be performed as required and done at a height greater than 5 inches or as otherwise prescribed. Scarification, or the removal of excess thatch from the soil should be performed when necessary. During annual inspections, soil cores should be taken to determine if there is an excess buildup of thatch.

FALL MAINTENANCE

Proper fall maintenance is essential for proper preemergent weed and invasive species control. Similar to annual spring inspections, a site walk should be performed to identify and apply select pre and post emergent herbicides. Native vegetation shall be left in place throughout winter and dormant months to provide food, cover, and habitats for local wildlife.



LONG-TERM MANAGEMENT PLAN

As the planted areas mature, required supplemental management will be significantly reduced. The plant communities will stabilize and be effectively managed through spot mowing, spot herbicide application, and hand pulling as necessary. Beginning after the third growing season, every 2-3 years a late fall mowing with thatch removal (or mulch) may be conducted, if site conditions dictate. Management site visits should be conducted at a minimum of 1-2 times annually to conduct selective mowing and herbicide application operations. Annual inspections are recommended to assess the planted areas and make future management recommendations.

GENERAL MAINTENANCE

General, post establishment, maintenance of vegetation typically begins four to five (4-5) years into the project. In addition to general mowing practices, vegetation requires periodic disturbances, which may include scarification, aeration, haying, etc. Once General Maintenance begins, in either years 4 or 5 depending on the level of establishment, the maintenance of trees, shrubs, and native grasses and forbs ratios should be addressed every three (3) years. Mower settings should be kept high, approximately five inches or higher (>5"), in order to combat invasive plants and protect desired native species. Spot mowing should be performed annually, or as required, to prevent the establishment of invasive or noxious weeds. During maintenance, never cut more than one-third of the desired plant during any single mowing session, and, in periods of drought and/or high temperatures, it is best to reduce the frequency of mowing, as this can cause damage. Hayed or mowed vegetation should be either mulched or bagged and removed off site to prevent excess thatch. Prior to the use of equipment used off site, equipment should be cleaned to prevent the spread of non-native and invasive species. Specific, strategically placed, pollinator areas will receive reduced and limited management to foster the growth and establishment of pollinator habitats.

PREVENTATIVE AND PRESCRIBED SPOT-MOWING

Spot-mowing, which is the practice of mowing only in the specific areas where invasive or noxious plants or weed are present, retards aggressive-fast-growing-invasive plants and allows for native species to properly establish. Mower settings should be kept high, approximately five inches or higher (>5"), in order to combat invasive plants and protect desired native species; this is especially important during the establishment period. Spot mowing should be performed annually, or as required, to prevent the establishment of invasive or noxious weeds. During maintenance, never cut more than one-third of the desired plant during any single mowing session, and, in periods of drought and/or high temperatures, it is best to reduce the frequency of mowing, as this can cause damage.



PRESCRIBED SPOT-SPRAYING

Spot-spraying, which is the select targeting of only noxious and invasive plants and weeds, should only be performed by a licensed professional. As a guide, the Midwest Invasive Plant Control Database has compiled a list of control methods for common invasive plants.

INVASIVE SPECIES CONTROL TECHNIQUES

MANUAL REMOVAL

The manual removal of weeds is an effective way to eradicate individual plants and weeds. However, the entire root system of the targeted species must be removed and disposed of. Any overlooked roots may allow the plant to regenerate and spread. For post emergent weeds that have developed seeds, they should be bagged to prevent the dispersal of seedlings and properly disposed.

SPOT SPRAYING

The most effective method of eradicating large, established individual plants and areas of invasive plants and weeds is to spray them with a herbicide. Local experts should be consulted prior to selecting an herbicide, and all selected herbicides shall be sanctioned by the State. Herbicides shall be applied to green, actively growing foliage, especially those designed to prohibit photosynthesis. Applying herbicides during shoulder months, i.e. early spring and fall, are most effective, as most weeds develop low to high levels of resistance during the hotter months. Prior to use, herbicide labels should be carefully reviewed to ensure that they will not cause harm to adjacent desirable native plants. If the prescribed herbicide will cause harm to all plants, particular care should be taken and general applications should be avoided.

SPOT MOWING

Spot-mowing clusters of weed infestations may be performed during the summer months and times where temperatures are generally above 85 degrees. However, this will not lead to the long-term death and control of weeds and invasive species. Some weeds, such as thistle crabgrass and nutsedge, are not easily killed by herbicide when sprayed during hot weather. Therefore, they should be actively mowed to prevent them from flowering and or producing seeds. Once temperatures are consistently below 85 degrees, plan to spray identified weeds and plants with an appropriate herbicide.

REMOVAL OF WOODY PLANTS

Typically, the growth of woody plants can be prevented through annual maintenance and mowing. However, in the event that a woody plant is greater than 1/4 inch in diameter and cannot be hand-pulled, they should be marked for removal. These plants can then be removed



manually or with low volume basal and basal cut stump herbicide application. In the event that the plants attempt to regrow, annual mowing and maintenance should prevent excess growth.

