For Discussion at 2023-04-03 Planning Board Workshop: 2023-04-01 - Solar Site Seeding Protocol

WAREHAM TOWN CLERK
2023 APR 3 AM10:03

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Mon 4/3/2023 7:53 AM

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1 attachments (22 KB)

2023-04-01 - Solar Site Seeding Protocol.docx;

Ken,
Mike,

!!! I know it is after Thursday !!!

I would like to review the attached protocol at the meeting tonight with the intention of conditioning any approved Solar Project or Special Permit extension. This protocol would update any Operations Plan submitted for the project. [Ref: Article 5 Section 593.10 and Article 10 Section 1030, 1050, & 1070].

If appropriate please post to the web for projects 07-20, 09-20, and 33-21.

Respectfully Submitted,

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SOLAR ARRAY SEEDING SCHEDULE AND PROTOCOLS
WAREHAM, MASSACHUSETTS
REVISED: April 1, 2023

For seeding of the array fields, the "Northeast Solar Pollinator 3' Mix" by Ernst Conservation Seeds (Ernst) or equivalent agreed to by the Wareham Planning Board, will be utilized. This particular mix will be suitable for the six (6) inches of topsoil over sandy loam (per test pits and soil boring data) and slopes at a 15% grade as experienced at the site. Please see **Table 1** attached for the Northeast Solar Pollinator 3' Mix.

Following tree clearing and subsequent grading work, Ernst recommends an initial cover crop of either grain oats *Avena sativa* (1 Jan to 31 Jul) or grain rye *Secale cereale* (1 Aug to 31 Dec) be used for initial site stabilization. This initial cover crop is recommended to be spread across the site using a broadcast method spreader. This cover crop is to be mowed at the end of its first blooming period (July for grain oats and August for grain rye), or prior to construction activities, whichever occurs first.

Following construction of the solar facility, Ernst recommends that the Northeast Solar Pollinator 3' Mix be seeded at 40 lbs/acre using a seed drill with an additional 30 lbs/acre of the cover crop of either grain oats *Avena sativa* (1 Jan to 31 Jul) or grain rye *Secale cereale* (1 Aug to 31 Dec) depending on the time of year.

Ernst recommends a standard spring or fall dormant seeding period for the Northeast Solar Pollinator 3' Mix (November-June). If seeding between July-October is required due to the construction schedule, Ernst recommends increasing the seeding rate by 20% (to 48 lbs/acre for the pollinator and 36lbs/acre for the cover crop) to allow for seedling die off due to summer heat (if seeding in July) or fall frost (if seeding August-October). Mid-summer maintenance mowing (at a 4-6" height) during the first growing season of the pollinator mix is also recommended to reduce weed pressure at the site. A summary of the seeding phases can be found below:

Construction Phase	Purpose	Seed	Seeding Rate	Method
Post-Tree Clearing & Grading Work	Cover crop for initial site stabilization	*Grain Oats- Avena sativa* (1 Jan to 31 Jul) Grain Rye- *Secale cereale* (1 Aug to 31 Dec)	30 lbs/acre*	Broadcast Spreader
Post-Construction	Perennial cover, pollinator friendly habitat creation	Northeast Solar Pollinator 3' Mix & Grain Oat (1 Jan to 31 Jul) or Grain Rye (1 Aug to 31 Dec)	10 lbs/acre* + 30 lbs/acre* of cover crop	Seed Drill

* If seeding between June-October is required, Ernst recommends increasing the seeding rate by 20% (to 48 lbs/acre for the pollinator and 36lbs/acre for the cover crop) to allow for seedling die off due to summer heat (if seeding in July) or fall frost (if seeding August-October)

Table 1: Wareham, MA Northeast Solar Pollinator 3' Mix - ERNMX-612

Botanical Name	Common Name	Percentage of Mix (%)	Plant Type	Color	Height	Flower Season	Sun Requirement
Festuca ovina	Sheep Fescue	94.90	Perennial Grass	Blue, Green	10-12"	May-June	Full Sun to Partial Shade
Asclepias tuberosa	Butterfly Milkweed	2.50	Perennial Weed	Orange, Yellow, Red	12-30"	June-August	Full Sun
Chamaecrista fasciculata	Partridge Pea	2.00	Leguminous Herb	Yellow	12-36"	June-September	Full Sun to Partial Shade
Oenothera fruticosa	Sundrops	0.30	Perennial Wildflower	Yellow	16-36"	June-July	Full Sun to Partial Shade
Tradescantia ohiensis	Ohio Spiderwort	0.30	Herbaceous Perennial	Purple	24-36"	May-June	Full Sun to Partial Shade