# SOLAR AND POLLINATORS IN VERMONT

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- Opportunities exist for solar projects to take the lead in addressing the pollinator crisis, while supporting the agricultural community.
- Promotes Best Practices for ground cover and increases public awareness of pollinator habitat requirements.
- Solar facilities have extensive open ground area, providing opportunities for habitat establishment.
- Planting native grass and wildflower pollinator habitat with season long blooming assists pollinator populations and enhances biodiversity.

## BENEFITS OF SOLAR PROJECTS WITH POLLINATOR HABITAT

- Supports both Vermont and national pollinator initiatives by providing safe habitat and food sources.
  - VT Pollinator Protection Report issued recommendations for pollinator land management.
- Improves nearby crop pollination, which increases yields and improves crop quality.
- Enhances long-term soil health by adding nutrients and organic matter from plants.
- Deters non-native species from becoming established.
- Reduces and improves storm water runoff and water quality with deep rooted vegetation.
- Reduces wind and surface erosion.
- Improves the visual appearance of the site.
- Creates land that is preserved, recharged and well-prepared to return to farming in the future.

## BENEFITS TO THE VERMONT AGRICULTURAL COMMUNITY

- Pollinators play a substantial role in the Vermont agricultural economy.
- Vermont has over 6,800 farms that produce food, feed, seed, and fiber crops dependent on animal pollination.
- Vermont pollinator-dependent crops include apples, blueberries, peppers, pumpkins, strawberries, sunflowers, squash, buckwheat, tomatoes, cucumbers, alfalfa, melons, and clover.
- Pollinators are responsible for pollinating 60 to 80 percent of Vermont's wild plants and are critical in the propagation of fruits and vegetables.
- Major crops pollinated by bees in Vermont include apples, blackberries, raspberries, blueberries, cucumbers, pumpkins, squash, tomatoes, peppers, watermelons, and more.
- Turkeys, deer and songbirds all rely on the nuts, seeds, and berries that are provided from plants through pollination from bees.
- Vermont Center for Ecostudies survey indicated that 5 of the 17 bumble bee species historically found in VT are now absent.

## EXAMPLES OF POLLINATOR BENEFITS TO CROPS

- Soybeans show an 18% higher yield and heavier seeds when honeybees and wild bees are present.
- Apple flowers are self-sterile and depend heavily on cross-pollination by bees to have marketable fruit.
- Watermelons require at least 8 visits from pollinators for proper fruit set.
- Green bean seed yields are 9%-35% higher when bumble bees are present.
- Strawberries require at least 20 bee visits per receptacle and receive complimentary pollination benefits from honeybees and wild bees.
- Raspberries set more and heavier fruit when pollinated by bees.
- Cucumbers tend to be malformed when not fully pollinated by bees.

For more information contact Marcia Haas at 610.984.4755 or email info@freepointsolar.com