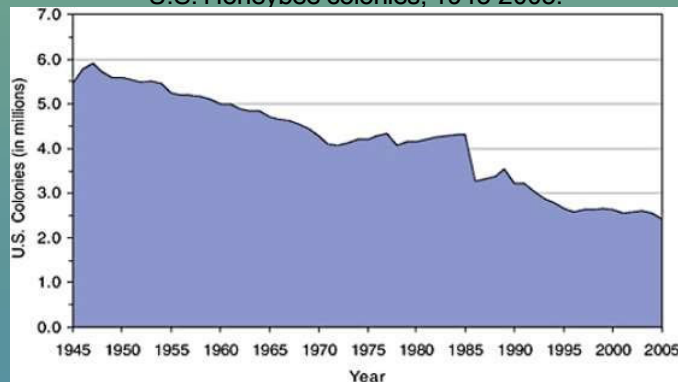


Encouraging Sustainable Development

Virginia's Department of Environmental Quality and the Department of Conservation and Recreation have teamed up to develop guidelines for incorporating native plants in solar installations. Native plants support more wildlife species than non-natives, generally do not require pesticides, and are already adapted to the environment which equates to more efficient use of natural resources.

Solar facilities do not use pesticides in any case to support biodiversity. Thoughtful management of solar facilities will lead to increased biodiversity from microorganisms to insects, reptiles and perennial plants.

U.S. Honeybee colonies, 1945-2005.



How can solar help?

Pollinators suffer from exposure to parasites, pesticides, and loss of floral abundance and diversity due to increased land use. Studies show that pollinators are in decline globally; more than half of native bee species in the U.S. have seen sharp population declines since 2005. Solar facilities utilizing native seed mixes, which include flowering plants in addition to grasses, can serve as safe havens and re-establish habitats for pollinators.



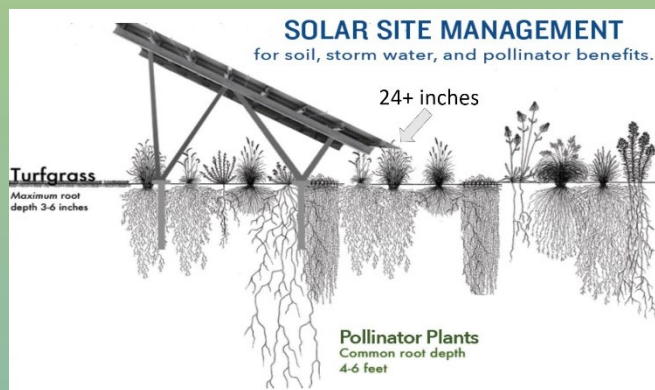
Benefits of Biodiversity

Between more diversified organic matter decaying, healthier plants and deeper roots limiting stormwater runoff, higher microbial activity and nutrient retention allow soils which may have been exhausted from years of monoculture and fertilizers to rebound and replenish.

Benefits extend to reduced operation and maintenance costs from selecting species with a maximum height below that of the panels to reduce mowing; measurably reduced stormwater runoff associated with superior soil stabilization; the potential for increased energy generation efficiency at the level of the panels due to heat mitigation; and perhaps most evident of all,

enhancing the visual aesthetic of solar facilities by mirroring natural meadows which feature an abundant variety of vegetation.

Research shows that raising pollinator numbers at solar facilities equates to higher yields for nearby farmers cultivating crops like fruits and nuts.



For further reading in the compilation of this information sheet, we have used scientific reports, journals and facts. Inovateus Solar is a solar company and proponent of clean, sustainable energy generation, the regeneration of soil and biodiversity and of sustainable local development. We recommend the Science and Facts section of this publication.

Science & Facts

- “VDCR Pollinator Smart Program” <https://www.dcr.virginia.gov/natural-heritage/pollinator-smart>
- “Globally, pollinators are in decline” <https://ento.psu.edu/pollinators/resources-and-outreach/globally-pollinators-are-in-decline>
- “Why is Pollination Important?” <https://www.fs.fed.us/wildflowers/pollinators/importance.shtml>
- “Solar Farms Shine a Ray of Hope on Bees and Butterflies” <https://www.scientificamerican.com/article/solar-farms-shine-a-ray-of-hope-on-bees-and-butterflies>
- “Status of Pollinators in North America (2007). Chapter: 2 Status of Pollinators.” <https://www.nap.edu/read/11761/chapter/4#40>
- “Can solar energy save the bees?” <https://www.anl.gov/article/can-solar-energy-save-the-bees>

