

Habitat-friendly solar option takes off



Left: From left: The Stearns County Soil & Water Conservation District's Nathan Hylla, project management supervisor, and Ryan Rothstein, Farm Bill wildlife biologist, discuss habitat-friendly vegetation management with BWSR's Dan Shaw, senior ecologist/vegetation specialist, Oct. 1 in St. Joseph Township. **Below:** Habitat-friendly vegetation is becoming established at a site in Stearns County's Brockway Township.

Photo Credits: Paul Erdmann, BWSR

Solar farms are blossoming across Stearns County. The 12 installed since 2016 diversify the county's energy resources, while their emergence has increased installation and site maintenance employment opportunities.



While these clean-energy generation systems provide direct benefits to the environment and the local economy, many surprising benefits transpire under the solar collectors. On these sites, which are often converted from farmland, there is now conservation cover that can increase wildlife habitat, stabilize the soil, and provide water quality benefits.

The most distinctive features of a solar farm are the panels, but Stearns County solar farm installers and operators are taking their environmental interests one step further by planting conservation-friendly vegetation on the entire parcel. Here, a precedent-setting ordinance states that any planned ground-mounted solar projects must

meet the state's Habitat Friendly Solar standards.

Many of the installers are using the Minnesota Board of Water and Soil Resources' (BWSR) Habitat Friendly Solar Assessment forms, found on the [Habitat Friendly Solar Program page](#), which allow them to meet pollinator/wildlife habitat certification.

A diverse stakeholder group led by the nonprofit organization Fresh Energy spearheaded the legislation that led to this program. The [Project Planning Assessment Form](#) that came out of this effort has been used as a model for at

least eight other states.

BWSR also has added sample habitat friendly project specifications on its website along with a new form, the [Established Project Assessment Form](#), to be used after projects are established (and every three consecutive years) to stay on the state's list of projects. Staff from the Minnesota Department of Natural Resources (DNR) and BWSR also worked together on new seed mixes for solar projects.

Some of the better-known species included in the pollinator friendly mixes are yarrow, milkweed, clover, coneflower, blue grama, side-oats grama, Junegrass and little bluestem.

The mix of grasses and forbs provides forage for different pollinator species throughout the year. The many solar farms that are being installed throughout the county will create an attractive habitat matrix beneficial for both migrating pollinators and those that like to stay closer to home.

The grasses and forbs planted under the solar collectors benefit more than just pollinators.

Many of the plants are deep-rooted, reaching 2 to 4 feet with some extending as deep as 8 feet. These



Black-eyed Susan blooms Oct. 1 under solar panels in Stearns County's Brockway Township.

deep-rooted plants will hold the soil in place under all but the most extreme conditions. The roots also provide deep organic

material, which, with surface organic material, enhance soil health over a period of many years.

The grasses and forbs

enhance water quality, too, by reducing the force of raindrops hitting the soil, facilitating the infiltration of rain into and through the soil, and filtering runoff that flows over the land.

The additional environmental benefits — pollinator habitat, soil stability, soil health and water quality — make solar farms an important option for conservation. Partners including the University of Minnesota's Department of Soil, Water, and Climate are planning research to better understand the multiple environmental benefits.

The Stearns County Planning Commission has indicated that solar farms are a part of the agricultural system in that the solar collectors — just like corn and soybeans — are harvesting the sun's rays.

In addition, solar farms are generally installed so they can be removed, making it possible to return the land to row-crop or other agricultural production. With conservation cover planted underneath, the soil under these collectors grows healthier every year providing additional return on a long-term investment in cover planting and maintenance.