

Developing a place for wildlife

BRIAN KIRKPATRICK CREATES HABITATS FOR WILDLIFE IN URBAN SPACES

By Dana Kobilinsky



Courtesy Brian Kirkpatrick

▲ As an environmental consultant, Brian Kirkpatrick helps development projects that accommodate wildlife.

As Brian Kirkpatrick was showing a Reuters reporter around a New Jersey solar facility, about 10 pairs of small brown-and-gray birds started swooping over their heads. Construction on the Toms River Merchant Solar Site hadn't even finished yet when the grasshopper sparrows came seeking the native grasses and forbs planted for them. That was exactly the response Kirkpatrick hoped to see.

"Finding uses and bringing what we call brownfields back to productive life, either for human use or wildlife use, has been one of the things that I've been interested in since the beginning," Kirkpatrick said.

This particular "brownfield to brightfield" redevelopment project was converting an old dye-making factory, which shut down in 1996 after contaminating the soil and groundwater, into a 120-acre

solar array able to generate 29 megawatts of power. Kirkpatrick, a senior project manager with GZA GeoEnvironmental, wanted to make sure the Superfund site could support wildlife, like northern pine snakes (*Pituophis melanoleucus melanoleucus*) and the grasshopper sparrows (*Ammodramus savannarum*) flying overhead, both of which are state-listed as threatened.

"We were starting to see birds nesting in some of those areas just as Brian predicted," said Scott Hesser, the real estate and development counsel at EDF Renewables, the company that started the solar project.

Becoming a consultant

Colleagues say Kirkpatrick can spot the tiny birds a mile away. He has an eye for nature that's not exactly typical in urban New Jersey.

"You might think I grew up on a farm," Kirkpatrick said. Instead, he grew up on a narrow lot in the South Jersey suburbs—just a couple of miles from another property that, like the Toms River area, was designated a Superfund site because of the long-term response required to clean up contamination.

One of his first jobs was maintaining the buildings and grounds at a New Jersey factory. Seeing the inner workings of industrial sites motivated Kirkpatrick to keep habitats on these lands safe for wildlife. It made him want to "do something good with dirty sites," he said.

Even as a child, though, he hunted, fished and always had a garden in his suburban home. At his first opportunity as an adult, he bought property in central New Jersey and managed it for bees and firewood. On a small farm he owns in Vermont, he manages the landscape for early successional

◀ Brian Kirkpatrick evaluates habitat for threatened and endangered species in a proposed renewable energy site in western Pennsylvania.



Courtesy Brian Kirkpatrick

vegetation that has attracted upland birds. His passion for wildlife pushed him to become a leader with The Wildlife Society. He currently serves as the president of the New Jersey Chapter.

After earning a bachelor's degree in wildlife resources at West Virginia University in 1986, Kirkpatrick soon began consulting work focusing on wetlands. Wetlands conservation was just in its infancy, and his career evolved along with it, from determining wetlands boundaries to designing wetlands restoration projects.

Since then, his career has taken him down highway medians and golf fairways in an effort to bring nature to developed areas. "I'm finding ways to squeeze in a little bit more wildlife habitat value in places you really wouldn't expect it," he said.

Cleaning up dirty sites

A Certified Wildlife Biologist®, Kirkpatrick has worked at multi-discipline engineering firms in New Jersey for about 28 years. Now at GZA GeoEnvironmental, he continues to make these differences for wildlife and humans—including at the Toms River site.

"It's that balance between providing the infrastructure we need as humans to make life work and creating, maintaining and managing wildlife habitat," he said.

Understanding that balance is what makes Kirkpatrick stand out, Hesser said.

"Most biologists that we work with absolutely have a solid understanding of their area of expertise," he said. "And that's helpful, but only to a certain extent. What really distinguishes a good biologist that's working as a consultant is how they're going to not just represent the information in their field of expertise. What comes with that is the capability of being able to learn quickly what's critical for the client."

Kirkpatrick first got involved at Toms River when the chemical manufacturer BASF bought the land and wanted to redevelop the 1,200-acre site, taking a largely undeveloped property and turning it into an urbanized development. Kirkpatrick gave them the news most developers don't want to hear. The presence of two state-listed endangered species



Courtesy Brian Kirkpatrick

on the site would make it virtually undevelopable. Northern pine snakes occupied primarily the forested areas on the site. Grasshopper sparrows occupied the former plant site, and they needed constant vegetation management to maintain an early successional landscape.

BASF contacted the renewable energy company EDF about creating a solar array on a portion of the site. With Kirkpatrick's help, the companies got permission to move forward. While research on the impacts of solar panels on these species was limited, Kirkpatrick worked to make sure the project aligned with the species' needs.

That wasn't always easy. To generate power, the solar panels needed to be free of shade, but mowing could alter the vegetation the birds relied on. Kirkpatrick sought out mixes of grasses and forbs that would benefit the birds and not block the sun from the panels. One year after the panels were put in place, he said, "I've got to say we were very, very pleased."

Working together

Urban areas can be a challenge for wildlife, Kirkpatrick said, but they're not incompatible. Often, they include greenways that have lots of resources for wildlife and plenty of opportunities for wildlife education. It's that combination that inspires him, he said, "meeting human needs in a compact footprint as well as improving wildlife habitat." ■

▲ Brian Kirkpatrick works at places like the Toms River Merchant Solar Site to ensure that native vegetation sustains wildlife, including the state-endangered grasshopper sparrow.



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