Georgia Low Impact Solar Siting Tool
USER GUIDE

Solar power station © iStock

Purpose

Solar development is rapidly expanding in Georgia, bringing a beneficial source of jobs and revenue for communities as well as providing clean renewable energy. The Nature Conservancy believes that solar development can continue to accelerate while minimizing impacts to nature and threatened species such as the gopher tortoise. Awareness and avoidance of environmentally sensitive lands protects habitats and supports the resiliency of Georgia's ecosystems.

This framework also decreases uncertainty for developers by minimizing the risk of public opposition and species impacts that lead to project delays and unexpected costs. The Georgia Low Impact Solar Siting Tool (GA LISST) can help solar developers, local governments, landowners, utilities, and regulators identify sites that are ideal for large-scale solar facility development in areas of low conservation concern.

Using the GA LISST

The GA LISST, developed in partnership between The Nature Conservancy, the University of Georgia, the Georgia Department of Natural Resources, and the U.S. Fish and Wildlife Service, aims to encourage large-scale solar development in areas of lower environmental sensitivity. The tool compares the environmental sensitivity of lands to impacts from large-scale solar projects and their suitability for solar development. Solar suitability and environmental sensitivity criteria were determined from industry feedback, natural resource agencies, environmental organizations, and published literature. The GA LISST is designed as a screening tool which does not replace consultation with federal or state agencies and *should not be interpreted as project approval.*

When launched, the tool first displays the **Overall Preference** rankings for lower impact solar siting as well as introductory information about navigating the tool and accessing technical information. The **Overall Preference** rankings, derived from Land Use Conflict Identification Strategy (LUCIS) modeling, consider both the solar suitability and the environmental sensitivity of a given site. Green areas are ideal for low impact development due to high solar suitability and low environmental sensitivity. Blue areas are less preferred, and yellow areas are not preferred. Red areas are the most sensitive and should be avoided whenever possible. The **Solar Suitability and Environmental Sensitivity** layers used to develop the Overall Preference rankings are also available to be toggled on or off. The **Solar Suitability** layer provides land suitability rankings for large-scale solar projects ranging from *Most suitable* to *Less suitable.* These rankings derive from a weighted analysis of the following physical land characteristics: proximity to transmission (25%), solar insolation (15%), slope (20%), aspect (20%), and current land cover (20%). The **Environmental Sensitivity** layer provides rankings for relative sensitivity to large-scale solar projects ranging from *Most sensitive* to *Least sensitive.*
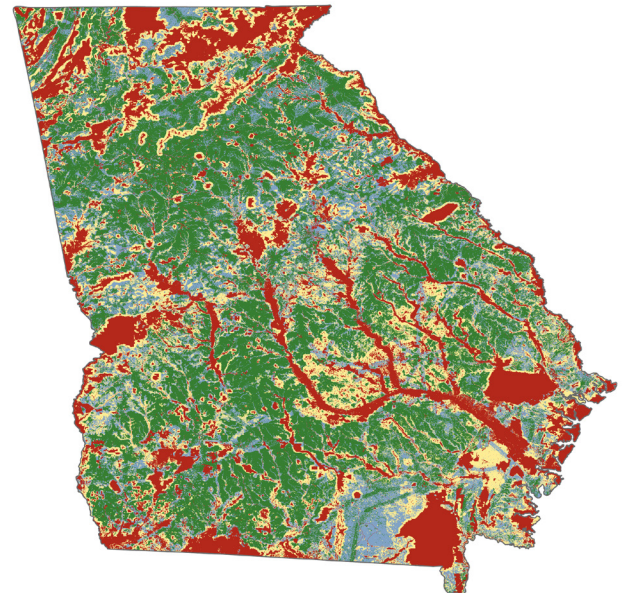

Overall Siting Preference	
🟩	Preferred for low impact
🟦	Less preferred for low impact
🟨	Not preferred for low impact
🟥	Avoidance recommended

BOOKMARK THE TOOL:
GALowImpactSolar.tnc.org

Environmental Sensitivity Analysis

Georgia is located in one of the most biodiverse areas of the country and is home to more than 4,000 known species of plants and animals. At least 10 percent of these are in danger of extinction, largely due to habitat loss or deterioration. For the Environmental Sensitivity analysis, countless data sets and methods were tested to determine the best way to represent the relative sensitivity of Georgia's natural resources to large-scale solar development pressure. Regional conservation data provided the baseline rankings to ensure regional consistency across partners, and then select state resources were incorporated to ensure the species and habitats of greatest potential conflict were sufficiently represented. The following eight datasets contain population and/or habitat characteristics that contribute to the likelihood of impacts to that resource:
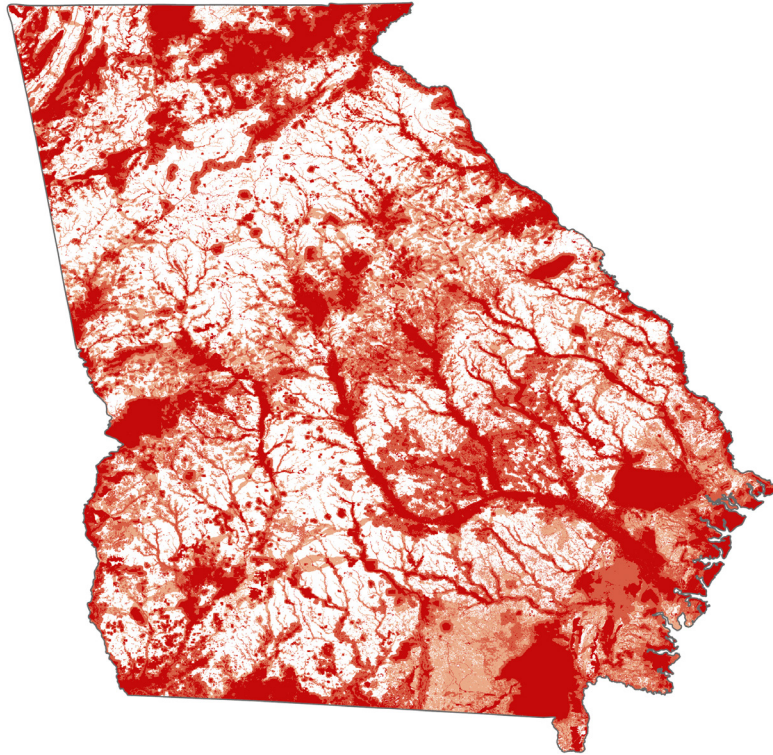
SPECIES SENSITIVITY

Gopher Tortoise
Known population data combined with habitat suitability modeling and sandhill surveys for this keystone species of conservation concern.
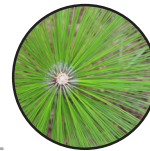

Eastern Indigo Snake
Rankings based on population conservation units and habitat suitability modeling from The Orianne Society.
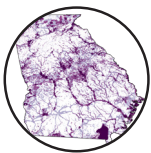

Hairy rattleweed
Known population data combined with habitat suitability of this federally endangered plant found only in two counties in Georgia.

Longleaf pine
Species occurence data and habitat suitability across the historic range of the longleaf pine ecosystem.

REGIONAL CONSERVATION DATA

Southeast Conservation Blueprint
Regional spatial conservation plan that identifies high-impact conservation priority areas based on a suite of natural and cultural resource indicators representing terrestrial, freshwater, and marine ecosystems.

**Resilient and Connected Lands**
Regional conservation analysis focused on key resilient and connected landscapes designed to sustain biodiversity and ecological functions into the future under a changing climate.

STATE CONSERVATION DATA

Rivers
Stream buffers and Active River Areas which consider present and past floodplains and adjacent areas that protect, nourish, and accommodate the streams.
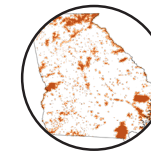
Conservation Lands
Private, state, and federal lands that are protected for conservation with buffers based on nearby connected protected areas.

Learn more at **nature.org/georgiasolar**