

Southern Wings Resource Guide for Full Annual Cycle Avian Conservation: Incorporating annual life-cycle information into SWAPs gives states the most flexibility on where and how to implement conservation action for a species (especially when the limiting factors are on the nonbreeding or wintering grounds) with SWG, PR, and other funds available to the state. Southern Wings can provide non-federal match. We encourage states to acknowledge the full annual life cycle needs for birds and identify a few species that successful conservation requires that approach. Southern Wings works for habitat conservation and management and research on stop-over sites and the wintering grounds – “our” migrant breeding birds spend up to 8 months of the year outside of our states and they need our help. The bottom line is that supporting the conservation of migratory birds across their life cycle is critical to conservation success. An investment in a species stopover or nonbreeding area is part of a comprehensive strategy that includes investment in your state.

National Audubon Society

- <https://explorer.audubon.org/>
 - This resource is valuable for visualizing the connections between breeding and non-breeding areas for migratory birds, especially related to individual-level movements using telemetry data. Connections can be visualized either as tracks or as connected polygons.
 - Other species-specific tools include spatial and temporal visualizations of relevant conservation challenges (e.g., where and when a species may have high exposure to light pollution, forest management, urban footprints, etc.). Conservation challenges are tailored to each species.
 - Other information for each species includes climate vulnerability, global population size, US & Canada population size, PIF ACAD assessment, and IUCN status.

Cornell Lab of Ornithology

- <https://www.birds.cornell.edu/home/us-state-level-conservation-data-summaries>
 - This resource was specifically designed for integrating community-science eBird data into State Wildlife Action Plans.
 - It includes explainer videos for highlighted tools catered to state fish and wildlife agency needs. A webinar on how to use the data is available [here](#).
 - The main product is the state-level Status & Trends Database.
 - For each state, the database contains specific-specific maps of relative abundance.
 - For each state, Stewardship Maps show the migratory connections between that state and the rest of the hemisphere.
 - Stewardship Connections show the relative strength of connection between your state and the rest of the hemisphere for priority species.
 - Uniqueness of Stewardship Connections depict how uniquely-connected your state is to the rest of hemisphere relative to all other states for priority species.
 - State-level data is all available for direct download.

- <https://science.ebird.org/en/status-and-trends>
 - This tool is helpful for visualizing state-level trends in avian populations and the weekly migratory status of all species.
 - For each species, relative abundance maps are categorized by season allowing for easy depictions of where that species is concentrated during different times of the year at high resolutions. A user can also select a specific geography (e.g., country, state, or province) and a table will appear depicting percent of the global population found in that geography at each season. The same table also includes the percentage of that geography occupied by the species for each season, the percentage of the global range of that species that falls within that geography for each season, and the number of days that geography is occupied by the species.
 - Animations of weekly relative abundance visually depict the full cycle movements of each species at high resolution.
 - Trend maps depict the relative change in abundance of each species from 2012-2022 at high spatial resolution. A user can also select a specific geography (e.g., country, state, or province) and an estimate of the change in relative abundance for that species will appear alongside confidence intervals.
 - Most maps and animations available for direct download.

Southern Wings Outreach/Education and FAC resources

- <https://www.fishwildlife.org/afwa-inspires/southern-wings>
 - In the lower left corner of the website you will find template SWAP text, a species spreadsheet that provides information on annual cycle connections for priority species impacted by Southern Wings projects, a user's guide for these tools, and links to the SWAP FAC Webinar.
 - Sample text: Beyond planning, management of state resources requires working beyond the borders on a regular basis. Many of the landscapes of state lands along the border extend across the border and most SGCN have ranges beyond the borders of [NAME OF STATE], requiring partnerships with neighboring states and regional or international partners to accomplish needed actions to achieve shared goals. Watersheds and flyways often encompass all or parts of multiple states and require complex coordination among many partners and jurisdictions to improve conditions, regulate harvest and methods, and provide needed habitat. Much of this work may include efforts to protect and maintain migratory species habitat throughout their annual cycles, which is called full annual life-cycle conservation. Full life-cycle conservation of migratory species is one area of [NAME OF STATE], commitment to cross-border conservation and is imperative to the improvement and long-term sustainability of [NAME OF STATE] species. We have to complement and coordinate the actions here with those across the entire range of the species. Some key examples of this work and/or species are included in this section to build understanding of the importance of supporting these partnerships beyond [NAME OF STATE], borders.