# CHAPTER 7 TENNESSEE SWAP REVIEW AND REVISION

THE U.S. FISH AND WILDLIFE SERVICE (USFWS) REQUIRES REVIEW of State Wildlife Action Plans (SWAPs) at intervals of 10 years or less. The Association of Fish and Wildlife Agencies (AFWA) recommends that state resource agencies form a working group to assess SWAPs and SWAP implementation, identify best practices, and recommend improvements to SWAPs. In addition, AFWA recommends that SWAP reviews align with other relevant internal conservation planning efforts, for example in Tennessee, TWRA's Strategic Plan. Also, for taxa for which the state has limited authority, staff, or funding (such as insects and plants), agencies are encouraged to engage outside partners and seek additional funding to address these needs. TWRA proposes to engage in a three year review cycle which will provide the foundation for the next ten year comprehensive SWAP review in 2025.

## 7.1. Integrating Conservation Implementation, SWAP Review, and TWRA Planning Cycles

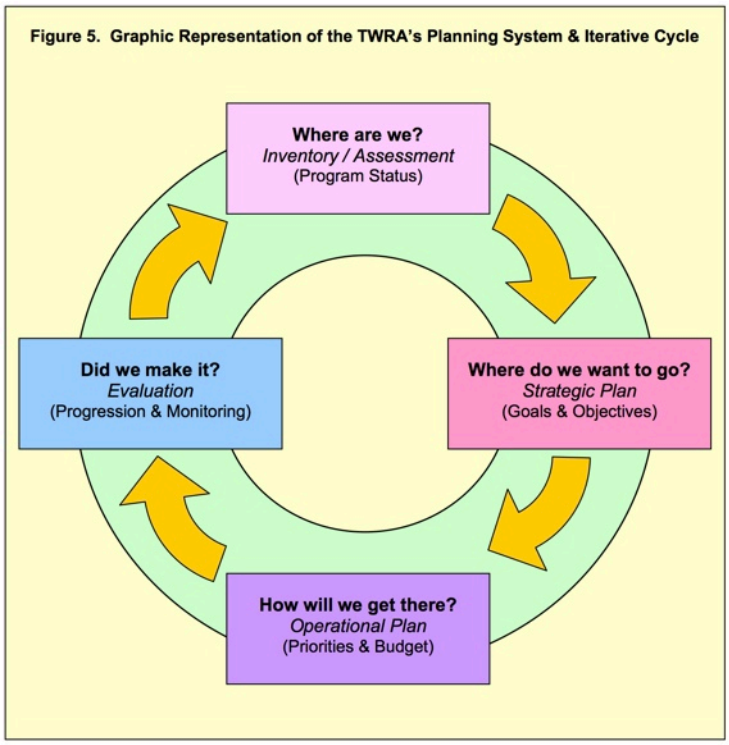
SWAP interim reviews and updates will be incorporated into the agency's comprehensive planning cycle (see Figure 11), by coordinating and sharing information across planning processes and departments within the agency. Table 20 shows the overlap and relationship of the various planning cycles over the SWAP's 10-year timeframe for implementation and revision. Coordination between the 2005 SWAP and TWRA's 2014-20 Strategic Plan has already resulted in a precedent: for the first time, TWRA adopted a habitat-based approach to define the priority management outcomes for its

Photo: Bald Cypress at Hatchie National Wildlife Refuge - Byron Jorjorian

**Summary: The SWAP Review and Revision Process 2015-2025**

1. Align SWAP reviews with the overall TWRA agency planning cycle. Specifically, integrate TWRA's cycles for SWAP planning with strategic planning, operational planning, and annual planning. The new SWAP planning schedule will include 3 triennial reviews to be rolled up into a draft SWAP update in year 10.
2. Improve partner engagement in SWAP implementation and planning. TWRA proposes to make the SWAP Planning Team as well as the Scientific and Technical Advisors into long-term standing committees. Teams will identify a subset of habitats for interim review (those likely to benefit from or require a shorter review period). Working groups that include conservation partners active in the COAs will review progress in a subset of COAs as part of each triennial SWAP review.
3. Improve and expand data sharing through shared databases and GIS information. TWRA will build upon relationships to reciprocally share and upgrade, on a regular basis, databases and GIS information with the most recent information collected by partners.
4. Identify emerging issues and lessons learned. Emerging issues will be addressed in the planning cycle described, documented with the USFWS, and summarized in subsequent revision documents. TWRA has identified several best practice approaches for improving SWAP implementation and future revisions.

Figure 11. Graphic representation of the TWRA's planning system and iterative cycle




Wildlife Resources Program.

## Strategic Planning Cycle

TWRA's Strategic Planning cycle recurs at six-year intervals. The Strategic Plan sets forth legal responsibilities, policies, and program structure, and it identifies goals, objectives, problems, and strategies for each program. The SWAP helps inform the planning components for the next iteration of TWRA's strategic plan process, and both the Strategic Plan and SWAP help to guide annual budgetary and operational planning in subsequent years. In year three of the Strategic Planning cycle, a mid-term evaluation is conducted to determine program progress toward Strategic Plan goals. An end-of-cycle evaluation also occurs in year six.

## Operational Planning Cycle

Operational Plans are site-specific plans that guide the management of discrete state-owned units, such as Wildlife Management Areas (WMAs). The primary management objectives for WMAs typically focus on

game species management. The role of diversity staff in operational planning is primarily to ensure that the impacts to species of nongame/GCN animals, GCN plants, and significant natural communities are minimal, while promoting management strategies that improve GCN species habitat. Operational Plans are informed by both Strategic Plan Goals and SWAP priorities.

### Annual Project Evaluation Cycle

Within 90 days of the fiscal year closing, every TWRA project is subjected to an annual evaluation according to established performance measures. Beginning in 2016, this process will include evaluation according to the Effectiveness Measures guidelines recommended by AFWA (see Chapter 6), and project performance data will be entered into the TRACS reporting system, while project spatial data will be entered into the SWAP GIS relational database as well. These evaluations will assess the effectiveness of SWG-funded and other projects, inform future SWAP priorities, and provide a measure of progress toward Strategic Plan goals.

***By including partners in SWAP 3-year reviews, the agency is fostering the incorporation of SWAP priorities into the strategic planning efforts of other agencies and organizations.***

### SWAP Planning Cycle

The SWAP will be updated iteratively on a cycle of 3-year reviews and will focus on progress made in COAs; documentation of collaborative efforts and the work of partners in support of the SWAP; responses to emerging issues; and the incorporation of results from SWG and other project evaluations (to be assessed annually, with data loaded into TRACS). The results of three triennial reviews would then be rolled up into a draft SWAP update in year 10.

To accomplish interim SWAP progress reviews, TWRA proposes to make the SWAP Planning Team as well as the Scientific and Technical Advisors (drawn from many partner organizations and agencies) into long-term standing committees. The annual SWG project review

Partners from state and federal agencies participating in the 2015 SWAP revision. - Lindsay Gardner, Southeast Aquatic Resources Partnership

process and the triennial SWAP reviews will inform TWRA's annual budget planning cycles, as well as the activities of other TWRA divisions. For example, the Environmental Services and Real Estate divisions rely on GCN species location data and habitat priorities when reviewing permit applications, developing grants, and targeting land acquisition.

Big South Fork National Recreation Area is encompassed within the North Cumberland Plateau and Mountains Conservation Opportunity Area. - Byron Jorjorian

Habitats selected for review will be identified by the SWAP Planning Team and Scientific/Technical Advisors as those likely to benefit from or require a shorter review period. COA reviews will be developed by working groups that include conservation partners active in the COAs. By including partners in SWAP 3-year reviews, the agency is fostering the incorporation of SWAP priorities into the strategic planning efforts of other agencies and organizations. Multiple partnerships will also promote leveraging of SWG and other conservation funds, while increasing the state's capacity to achieve priority conservation goals.

Shorter SWAP review cycles within the 10-year update period will also foster:

✦More timely and effective response to unforeseen emerging issues, such as changes related to climate, pathogens, or other stressors;
✦Greater continuity and flexibility in dealing with staff turnover and the potential for loss of institutional knowledge;
✦The development of annual objectives that can build toward achieving more long-term goals.

## 7.2. SWAP GIS Relational Database Updates

In addition to documenting project evaluation data annually, and to ensure that Tennessee's SWAP remains a "a living plan," TWRA will build upon relationships already established between the Agency and The Nature Conservancy, the Natural Heritage Inventory Program within the Tennessee Department of Environment and Conservation Division of Natural Areas, and the Tennessee Valley Authority to

reciprocally share and upgrade, on a regular basis, databases with the most recent information each organization has collected. TWRA will also explore the possibility of expanding this partnership to other pertinent agencies, such as the Tennessee Division of Forestry, Tennessee Department of Transportation, U.S Department of Agriculture Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, and other partners as appropriate. TWRA also will explore opportunities to share information on priorities and projects through different types of website interfaces for partners and the general public, with access and data protocols designed to protect sensitive information and ensure appropriate application of the data.

## 7.3. Emerging Issues

Inevitably, new issues will arise in between the 10-year comprehensive review cycles for State Wildlife Action Plans. SWAP Best Practices guidance indicates that these emerging issues can be addressed through "documented coordination with the U.S. Fish and Wildlife Service . . . as long as the issue is included in the next revision" (AFWA 2012).

The devastating onslaught of White-nose Syndrome (WNS) in bat populations across the eastern U.S., and its arrival and impacts in Tennessee since early 2010, illustrates the dynamic nature of wildlife conservation management and the need for effective responses to emerging issues. "Parasites and pathogens" were identified as a problem during the 2005 SWAP effort; however, WNS had not yet advanced and caused drastic population declines in cave-dwelling bats. In less than 10 years, however, even those bat species whose populations were stable prior to the onset of WNS have declined significantly. TWRA and its conservation partners have invested heavily in population monitoring, cave management, and disease abatement strategies for the past five years, and WNS is now identified within this 2015 update as an ongoing management challenge.

Holiday Darter - Jeremy Monroe, Freshwaters Illustrated

Eastern Meadowlark, like many grassland animals, a species of Greatest Conservation Need - Thomas Blevins

With time, emerging issues likely will include challenges associated with both temperature and precipitation shifts from a changing climate, and potential conflicts between resource uses and habitat needs. For example, more frequent and prolonged droughts may increase the demand for irrigated agriculture in Tennessee, which can result in more pressure on groundwater resources in the western part of the state and surface water streams in middle and east Tennessee. At the same time, these water resources provide public drinking water supplies, wastewater assimilation, recreation, and diverse species habitats.

Other examples of potential emerging issues in the future may involve consideration of the special habitat needs of insect pollinators. Pollinators play a crucial role in the health of overall ecosystems and maintenance of plant diversity in many habitat types (The Heinz Center 2013). Assessing the status of pollinators in Tennessee and their potential management needs could be considered emerging issues in future plan iterations.

Addressing these types of challenges requires a commitment to collaboration among many agencies and stakeholders, particularly through advance planning and a willingness to share information in trans-parent decision-making processes. For the SWAP, emerging issues will be addressed on the planning cycle described, documented with the USFWS, and summarized in subsequent revision documents.

Eastern Carpenter Bee - Bob Peterson

## 7.4. Lessons Learned from Tennessee's SWAP Review and Revision

The following is a list of ideas and potential next-step actions from Tennessee's SWAP planning team that could improve TWRA's processes in preparing for the next iteration of SWAP revision:

✦Organize all plans, monitoring reports, and other useful documents on a

comprehensive internal server and staff-accessible drive to facilitate compiling pertinent information for the next revision.

✦Improve TWRA staff training in use and application of SWAP GIS data and TRACs.

✦Maintain regularly updated maps of conservation action and project locations.

✦Have staff or interns compile status survey data results by project, so that not only accomplishments but results of conservation management can be incorporated into SWG funding, project planning, and future SWAP goals.

✦Ensure that data entry protocols for projects are established and clear, and that all individuals conducting data entry work are trained in data quality control standards as appropriate.

✦Develop a culture of documenting conservation stories to share with partners and the public. For example, what are the interesting management activities (involving odd equipment, rare animals) that TWRA biologists and partners undertake, which the public does not know about or understand, and how can they be captured in photographs and stories? Organize and archive field photos, with credits, of TWRA and partners for use in a variety of media communications.

✦Communicate regularly and intentionally with agency partners, non-governmental organizations, and other stakeholders about ongoing work and to foster collaborative efforts and engagement in conservation efforts.

These types of specific activities, in conjunction with a more standardized review process aligned with TWRA's overall planning cycles, will help the agency more efficiently address the U.S. Fish and Wildlife Services's SWAP revision requirements over time, improve public awareness and engagement with species and habitat conservation in Tennessee, and ultimately increase the success of conservation efforts.

Green Anole next to a TWRA badge - Josh Campbell, TWRA

## Table 20. TWRA Planning Cycles

| | The Strategic Plan focuses on priority habitats identified in the SWAP; uses project evaluations and SWAP 3-year reviews to assess progress | Operational plans guide specific stewardship activities to achieve Strategic Plan goals; GCN species and habitat priorities are guided by the SWAP | Project evaluations inform TWRA management, COA projects and partnerships; are entered spatially in GIS relational database and reported | Annual budgets are informed by past project priorities and results; they factor in SWG and partner funding proposals | SWAP triennial reviews/updates: include key partners, review of annual project evaluations, response to emerging issues, and development of new projects and funding partnerships as needed |
|---|---|---|---|---|---|
| **Year** | **Strategic Plan Cycle (2014 = year 1)** | **Operational Planning (WMA and other plans)** | **Annual Project Evaluations, (SWGs +)** | **Annual Budget Planning Cycle** | **State Wildlife Action Plan Cycle (2016 = year 1)** |
| **2015** | | SWAP GCN species habitat priorities, objectives, and stewardship recommendations developed for incorporation into Operational Plans developed to achieve Strategic Plan goals on TWRA-owned lands | | Data/results from previous year project evaluations informs budgeting | SWAP Update Approval; establish permanent planning & science advisory committees |
| **2016** | | | First annual review of projects under SWAP 2015, according to Effectiveness Measures guidelines; TRACS data entered | Data/results from previous year project evaluations informs budgeting | Establish working groups that include partner participation for a subset of high priority COAs |
| **2017** | 3-year evaluation of agency program progress toward achieving Strategic Plan goals | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | |
| **2018** | | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | 1st triennial review: COA work groups assess conservation progress; evaluate TRACS project data; assess emerging issues/potential new partnerships; coordinate with Strategic Planning |
| **2019** | Next Strategic Plan Cycle begins; incorporates annual project reviews and SWAP review data | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | |
| **2020** | End-of-cycle evaluation assesses achievement of Strategic Plan goals | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | |

| | The Strategic Plan focuses on priority habitats identified in the SWAP; uses project evaluations and SWAP 3-year reviews to assess progress | Operational plans guide specific stewardship activities to achieve Strategic Plan goals; GCN species and habitat priorities are guided by the SWAP | Project evaluations inform TWRA management, COA projects and partnerships; are entered spatially in GIS relational database and reported | Annual budgets are informed by past project priorities and results; they factor in SWG and partner funding proposals | SWAP triennial reviews/updates: include key partners, review of annual project evaluations, response to emerging issues, and development of new projects and funding partnerships as needed |
|---|---|---|---|---|---|
| **Year** | **Strategic Plan Cycle (2014 = year 1)** | **Operational Planning (WMA and other plans)** | **Annual Project Evaluations, (SWGs +)** | **Annual Budget Planning Cycle** | **State Wildlife Action Plan Cycle (2016 = year 1)** |
| **2021** | New Strategic Plan approved (2021-2027) | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | 2nd triennial review: COA work groups assess conservation progress; evaluate TRACS project data; assess emerging issues/potential new partnerships; coordinate with Strategic Planning |
| **2022** | | SWAP GCN species habitat priorities, objectives, and stewardship recommendations developed for incorporation into Operational Plans developed to achieve Strategic Plan goals on TWRA-owned lands | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | |
| **2023** | | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | |
| **2024** | 3-year evaluation of agency program progress toward achieving Strategic Plan goals; coordinate with SWAP Update | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | 3rd triennial review: COA work groups assess conservation progress; evaluate TRACS project data; assess emerging issues/potential new partnerships; coordinate with Strategic Planning |
| **2025** | | | Annual review of projects/ effectiveness; TRACS data input | Data/results from previous year project evaluations informs budgeting | SWAP Update #2: incorporate 3 previous triennial SWAP reviews |