

*Northeast-Midwest State Foresters Alliance and
United States Department of Agriculture (USDA), Forest Service,
Northeastern Area State and Private Forestry*

Guide for State Forest Action Plans

August 31, 2018

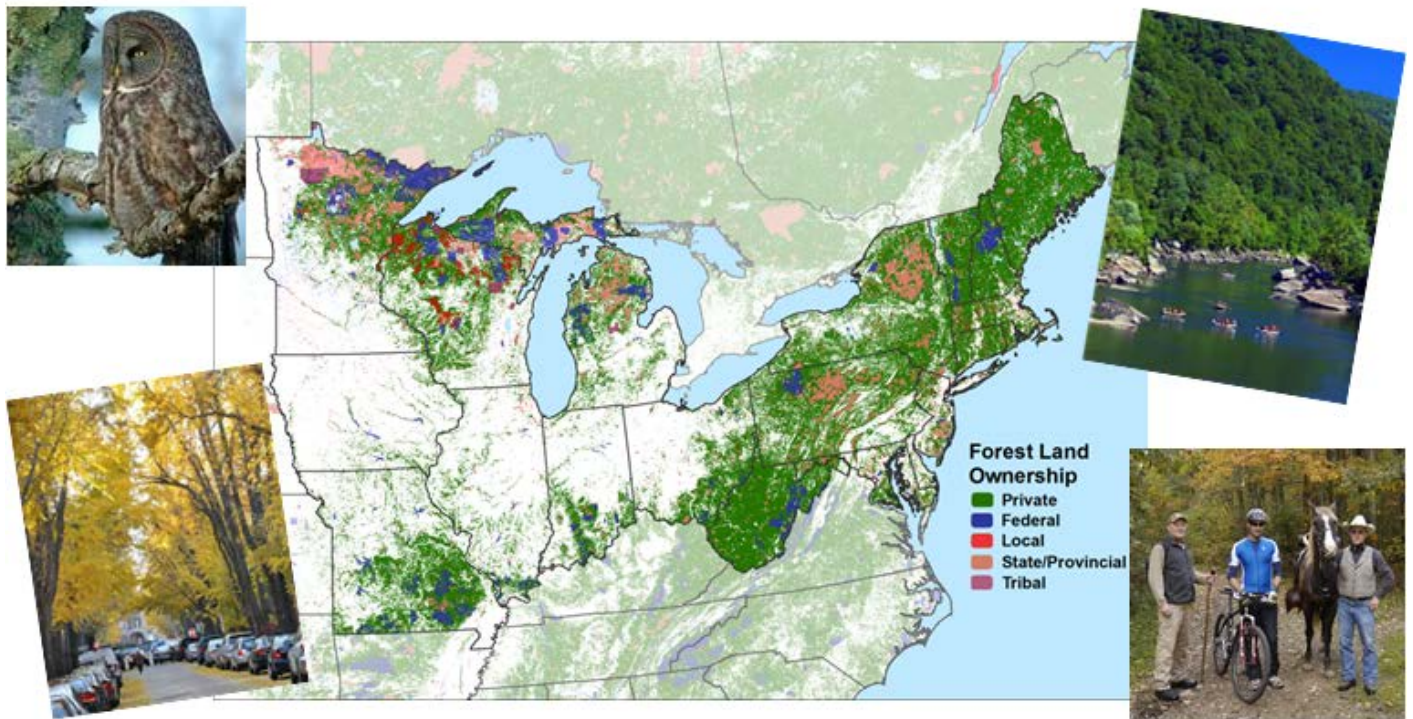


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A. Background and Requirements for State Forest Action Plans

Background

The Cooperative Forestry Assistance Act (CFAA) provides the authorities for a broad range of State and Private Forestry programs. As amended by the 2008 Farm Bill, the CFAA requires each State forestry agency to develop a “Statewide Assessment and Strategies for Forest Resources,” collectively referred to as State Forest Action Plan (SFAP), to be eligible to receive funds under the authorities of the Act.¹ Program direction, funding, and accomplishment reporting information is posted each year on the USDA Forest Service, Northeastern Area State and Private Forestry (NA S&PF) [Financial Advice to States website](#). This includes references for the program grant narratives to address priorities identified in the SFAP. Additionally, many competitive funding opportunities such as Landscape Scale Restoration, Great Lakes Restoration Initiative, and Wildfire Risk Reduction grants require applicants to demonstrate how projects advance goals and priorities established in the SFAP. Information about competitive funding opportunities administered by NA S&PF is available on the [Grants website](#).

The SFAPs provide an analysis of forest conditions and trends, identify issues and priorities, and outline strategies to ensure healthy trees and forests into the future. The SFAPs developed to date and a regional-level summary of the SFAPs across the Northeast and Midwest are available on the [National Association of State Foresters \(NASF\) website](#). The NASF also has a [SFAP 10 Year Revisions web page](#) with the national-level memos, requirements checklist, and other resources.

This Guide for State Forest Action Plans provides an overview of the requirements along with tips for State planners to consider as they update their SFAP. This was developed collaboratively by the USDA Forest Service, Northeastern Area State and Private Forestry (NA S&PF) and the Northeast-Midwest State Foresters Alliance, Forest Resource Planning Committee (NMSFA FRPC). The tips provided in this guide are intended as helpful advice, not additional requirements. The [NA S&PF Resources for SFAP Portal](#) provides additional resources including geospatial data, webinar recordings, and tools for engaging stakeholders in the SFAP process. This guide and the online portal replace prior regional-level SFAP guides.

¹ The [Cooperative Forestry Assistance Act of 1978 \(Public Law 95-313\)](#) was amended by the Food, Conservation, and Energy Acts of 2008 and 2014, referred to as the Farm Bills, requiring Statewide forest assessments and strategies and codifying the national priorities for State and Private Forestry programs.

State Forest Action Plan Requirements

Requirements for the SFAPs come directly from the CFAA (as amended by the 2008 and 2014 Farm Bills) as listed in the [Statewide Forest Resource Assessments and Strategies Requirements Checklist](#) on page 5.

The Statewide assessment must include: Conditions and trends of forest resources in the State, threats to forest lands and resources in the State consistent with national priorities (see Sidebar 1), any areas or regions of the State that are a priority, and any multistate areas that are a regional priority. See [Section B](#) for information about multistate priority areas and issues across the Northeast and Midwest.

The long-term Statewide strategy must include: Strategies for addressing threats to forest resources in the State (outlined in the assessment), a description of the resources necessary for the State Forester to address the Statewide strategy, and must address the three national S&PF priorities.

Sidebar 1. National S&PF Priorities¹

- Conserve and manage working forest landscapes for multiple values and uses.
- Protect forests from threats.
- Enhance public benefits from trees and forests.

In developing the assessment and strategy, State forestry agencies must coordinate with the following:

- State Forest Stewardship Coordinating Committee
- State Wildlife Agency
- State Technical (NRCS) Committee
- Lead State agency for the Forest Legacy Program, if not the State forestry agency (unless the State does not have a Forest Legacy Program)
- Applicable Federal land management agencies with forest land in the State, including National Forests, National Fish and Wildlife lands, Bureau of Indian Affairs lands, and National Park lands. A [map of Federal Lands is available on the USGS National Map website](#) and a listing of the [R9 National Forest planning contacts is on the NASF SFAP 10 Year Revisions web page](#).
- Military installations (as appropriate and feasible)

As described in [Section D](#), in addition to the above required groups, it has proved valuable to engage leadership and staff across programs in the State forestry agency (internally) and with other groups, such as the State urban and community forestry council, Tribes, forest products groups, and others. It is also recommended to offer an opportunity for the NA S&PF Field Office Representative and program managers to provide input on drafts of the SFAP and ask [Sherri Wormstead](#) for an early requirements check.

In developing the assessment and strategy, State forestry agencies are required to incorporate:

- Community Wildfire Protections Plans within the State
- The [State Wildlife Action Plan](#)

To do this, consider how these plans integrate with the SFAP assessment and contribute to priorities or goals in the SFAP strategy. Note: The Community Wildfire Protection Plans and State Wildlife Action Plan need to be referenced in the SFAP but the full plan documents do not need to be embedded or attached in the SFAP.

Program Planning: Prior to 2010, some S&PF programs required State forestry agencies to develop program plans. Now however, aside from the specific requirements for the Forest Legacy Program (see below), the Statewide Assessments and Strategies are “deemed to be sufficient to satisfy all relevant State planning and assessment requirements under [the CFAA].” It is important for program goals and priorities, especially for Federally-funded S&PF programs, to be identified in and/or consistent with the SFAP. This allows for the required reference back to the SFAP in the annual S&PF program grant narratives and in proposals for competitive grants. This requirement to tie Federal S&PF programs to the SFAP is stated in the S&PF

“Financial Advice” or program direction (posted annually on the [NA S&PF Financial Advice to States website](#)) and also in some of the individual program guidance documents, such as the [Forest Stewardship Program National Standards and Guidelines](#) and the [Urban and Community Forestry Program Guidelines](#).

Forest Legacy Program Requirements: To be eligible for Forest Legacy Program (FLP) funding, all required Forest Legacy Assessment of Need components must be current and either integrated into the SFAP or attached as an appendix. According to the [2017 Forest Legacy Program Implementation Guidelines](#), “In order to participate in the FLP, a State documents its need for inclusion in the FLP through an evaluation of current forests, forest uses, and the trends and forces causing conversion to nonforest uses as part of its SFAP.” This includes:

- Assessment elements required for Forest Legacy, which can be integrated as part of the SFAP assessment, rather than a separate assessment.
- Eligibility Criteria the State will use to identify and delineate Forest Legacy Areas (FLAs).
- Delineation of Forest Legacy Areas and identification of goals for each FLA.
- Specific goals and objectives to be accomplished by the FLP.
- Outline of the State’s project evaluation and prioritization procedures. Note: The prioritization process should implement a strategy that enhances existing protected forestlands or local and State conservation strategies, as outlined in the SFAP.

When integrating the FLP pieces in multiple sections of the SFAP, it is strongly encouraged to include a listing of where the FLP components are located in the SFAP. A table template for this is provided in [Appendix I](#).

The State lead agency for the FLP must coordinate with the State Forest Stewardship Coordinating Committee (SFSCC) to identify the Forest Legacy Area eligibility criteria, the identification of proposed FLA, and recommendation of priority lands to be considered for enrollment in the FLP. These elements are reviewed by the USDA Forest Service Region/Area staff as part of the assessment and strategy certification process. In addition, the State Lead Agency must solicit involvement and comments from the public, including State and local governments. The goals of public involvement include hearing concerns and views from interested and affected individuals and organizations, receiving new information, and identifying and clarifying issues. Therefore, if any FLP requirements are revised as part of the SFAP revision process, in addition to consulting with the required stakeholder groups for the SFAP revision (see page 3), the State must also solicit involvement and comments from the public. It must be clear to those providing input that they are commenting on both the SFAP and the FLP component regardless of whether the FLP is incorporated into the SFAP document or added as an appendix. States must provide evidence and documentation that this public outreach occurred in satisfying the FLP requirements, even if no specific questions or comments regarding the FLP surfaced through this outreach.

The State lead agency for FLP and the SFSCC must also review the FLP Assessment of Need and related components at least every five years to assess whether amendments or updates are necessary. Review procedures must be determined by the State Lead Agency and the SFSCC to assess whether amendments or updates are necessary and the results of reviews must be provided in writing to the Region/Area. Therefore, if the FLP components are not going to be updated in tandem with the SFAP update, i.e., a FLP Assessment of Need already approved by the USDA Forest Service will be attached to the SFAP as an appendix, then it is helpful to include documentation of this five-year review of the FLP in the SFAP.

For more details on the FLP requirements, including specific requirements of what to include for each Forest Legacy Area, refer to the State Forest Action Plan section of the [Forest Legacy Program Implementation Guidelines](#) (May 2017).

Statewide Forest Resource Assessments and Strategies (State Forest Action Plans) Requirements Checklist for <insert State/equivalent>

State Forest Assessments and Strategies must be updated at least every 10 years and submitted to the relevant USDA Forest Service (FS) Region, Area, or IITF with this checklist signed by the State Forester. Federal review will focus on these requirements as outlined in the [Cooperative Forestry Assistance Act](#) SEC. 2A. [16 U.S.C 2101a] (amended by the 2008 and 2014 Farm Bills).

Submitted by the State Forester: Name: _____ Date: _____

State Forester certifies the required elements below are included. FS Region, Area, or IITF fills out the checklist.

Statewide Forest Resource Assessment Includes:

- The conditions and trends of forest resources in the state Yes No
- The threats to forest lands and resources in the state consistent with national priorities Yes No
- Areas or regions of the state that are a priority Yes No
- Any multi-state areas that are a regional priority Yes No

Statewide Forest Resource Strategy Includes:

- Long-term strategies to address threats to forest resources in the state* Yes No
- Description of resources necessary for state forester to address statewide strategy* Yes No
- Strategy addresses national priorities for state and private forestry Yes No

* Can be presented in a strategies matrix with columns for (a) programs that contribute, (b) resources required, (c) national objective it supports, and (d) performance measure(s) that will be used for each strategy.

Stakeholder Groups Coordinated with for the Statewide Assessment and Strategy:

Note: this can be identified in the body of the documents or in an appendix.

- State Forest Stewardship Coordinating Committee (required) Yes No
- State Wildlife Agency (required) Yes No
- State Technical Committee (required) Yes No
- Lead agency for the Forest Legacy Program (if not the state forestry agency) (required) N/A Yes No
- Applicable Federal land management agencies (required) Yes No
- Military installations (as appropriate and feasible) Yes No

Other Plans Incorporated in the Statewide Assessment and Strategy:

- Community wildfire protection plans (required) Yes No
- State wildlife action plans (required) Yes No
- Other Yes No

Forest Legacy Program (FLP) Requirements Included (for States with FLP) N/A Yes No

See Forest Legacy Guidelines and the toolkit provided for State Forest Action Plans. Some options include:

- All required Forest Legacy components are integrated into the State Forest Action Plan (Assessment and/or Strategy), including Eligibility Criteria to identify Forest Legacy Areas, delineation of Forest Legacy Areas, and outline of the State's project evaluation and prioritization procedures. These elements are reviewed by the FS Region, Area, or IITF FLP staff as part of the assessment and strategy certification process. It is helpful to provide a crosswalk to identify location of FLP components in the State Forest Action Plan.
- A separate Forest Legacy Assessment of Need document (with above Forest Legacy requirements) is included as an appendix of the State Forest Action Plan. This document has been previously approved by the FS Region, Area, or IITF Forest Legacy Program staff. Documentation of FS approval and most recent review by the State Forest Stewardship Committee review should also be provided.

Review by FS Regional Forester, NA S&PF Director, or IITF Director (as relevant):

Deemed Sufficient (all requirements met)

Comments:

Deemed Not Sufficient (missing one or more requirements)

Corrective Action(s) Necessary to Meet Sufficiency Requirement:

Certified by Regional Forester or NA or IITF Director: Name: _____ Date: _____

DECISION BY FS DEPUTY CHIEF FOR STATE & PRIVATE FORESTRY:

Approval authority delegated from the USDA Secretary.

Approve: **Disapprove:**

USDA FS, Deputy Chief for State & Private Forestry:

Name: _____ Date: _____

SFAP Highlights by National Priorities Report: As referenced in the [May 2017 SFAP memo](#), every five years State foresters are required to submit a report that describes SFAP implementation success stories that contribute to each national priority. This is also referred to as the “National priorities section or report.” All national priorities reports were first submitted in fall 2015. A new or revised national priorities highlights report is required every five years, and so should be submitted along with the revised SFAP and again during the five year review. The [2015 SFAP memo](#) provides the requirements for the National Priorities report:

- “The National Priorities section will include three sub-sections based on the national priorities” ([Sidebar 1](#)).
- “Each State, territory, and the District of Columbia have flexibility to describe actions and success stories contributing to each national priority. This can be a text-only narrative or may also include photos, graphics, and numeric measures.”
- “The National Priorities section can either be incorporated into the [S]FAP as a new section or can be included as a separate addendum to the document.”

NASF Performance Measures: The [May 2017 memo](#) on the ten-year revisions of SFAPs notes that, “Once the NASF performance measures reporting system is operational, these performance measures must be incorporated into future versions of the Forest Action Plans.” As of mid-2018, the project to develop performance measures that demonstrate effective outcomes from S&PF programs is in development. Three main “stories” with six key performance measures were identified and work is underway on the data and calculations to refine the measures and develop data standards and guidance for reporting. See the [NASF Performance Measures folder on the NA S&PF Resources for SFAP Portal](#) for the latest information about these performances measures. As this or other efforts related to performance measures are completed, additional guidance will be sent out by the S&PF Board for reporting on the measures as part of the national priorities report.

Timeframe: The first round of SFAPs to fulfill the CFAA requirement were developed by June 2010. The State forestry agencies must review their SFAP at least every five years and update at least every 10 years. Therefore, most SFAP updates are due by June 2020.

USDA Approval: As described in the [May 2017 memo](#) on the ten-year revisions of SFAPs, the submission and approval process for the State Forest Action Plans for States served by NA S&PF is as follows:

1. The State Forester completes the top of the checklist and submits it, along with the Forest Action Plan document(s) to the NA S&PF Director. See the [NASF SFAP 10 Year Revisions web page](#) for instructions for digital submission of SFAPs and accompanying documents.
2. NA S&PF will review the SFAP to ensure it meets the checklist requirements and will fill out the checklist. This will include review for compliance of the FLP requirements. The NA S&PF Director will sign the checklist and forward it to the Deputy Chief for S&PF.
3. The Deputy Chief for S&PF approves on behalf of the Secretary of Agriculture.

It is also recommended that the State Forester offer the opportunity for NA S&PF staff to provide input on drafts of the SFAP earlier in the process, as other partners are engaged. E.g., invite the NA S&PF Field Representative to stakeholder meetings and offer opportunity for NA S&PF Field Office program managers to provide input on a draft of the SFAP.² In addition, NA S&PF encourages State planners to provide a draft of the SFAP to [Sherri Wormstead](#) for an early requirements check.

² The NA S&PF Field Office service area and phone numbers are available on the [“About” section of the NA website](#).

State-Level Flexibility: Aside from the requirements outlined above, there is flexibility for the State Forestry agency in the process, data and content to include, and format of the SFAP. For example, in addition to the required groups and plans to include, State forestry agencies find it valuable to engage other groups and reference other plans in the process. Also, the assessment and strategy may be presented in separate documents or in one, “State Forest Action Plan” document. This flexibility allows each State to use the best data available, work with stakeholders, and adequately consider other State assessments, plans, and priorities as relevant so the SFAP can serve as an important strategic planning document to guide State forestry activities. This also applies to more frequent SFAP revisions, as noted in the [May 2017 memo](#), “The S&PF Board understands the importance of flexibility for States to format and time Forest Action Plan updates to best suit State needs, while also meeting Federal requirements. Due dates for this 10-year revision, and future five-year reviews, are based on when each individual State last completed a full update or full revision to their Forest Action Plan.”

SFAP Five-Year Reviews: State forestry agencies are required to review their SFAPs and update or prepare a new *SFAP Highlights by National Priorities* report at least every five years. For States completing a revision in 2020, the next five year review should be completed in 2025. As noted in the [2015 SFAP memo](#):

“Each State Forester is required to: (1) review the status of the SFAP (this does not entail *changes* to the SFAP); and (2) “check in” with the appropriate regional [USDA] Forest Service staff. The following elements are recommended, should be documented briefly, and provided to the appropriate regional...[USDA] Forest Service staff/Director:

- Provide a brief summary (list) of implementation highlights from the past five years, listed by...the three national priorities...[the *SFAP Highlights by National Priorities* report referenced on page 6]
- Provide a brief summary of implementation challenges discovered over the past five years
- Identify the implementation focus for the next five years
- Identify data needs or new issues revealed since the SFAP was completed (to inform future updates)
- Conduct informal “check-in” with stakeholders regarding plan implementation (appropriate format determined by State).

It is important to note that the five-year review should focus on an internal review of the SFAP as well as coordinating with FS staff to identify opportunities for technical assistance. Review documentation may be brief, and [USDA Forest Service] *approval* is not required for the five-year review process.”

As relates to the FLP, at least every five years the State Lead Agency for the FLP and the SFSCC are required to assess whether amendments or updates to the FLP required components are necessary. Review procedures must be determined by the State Lead Agency and the results of the reviews must be provided in writing to the USDA Forest Service, NA S&PF. If the FLP Assessment of Need was updated on a different timeline than the SFAP revision, then the FLP 5 year review may be due a different year than the SFAP five-year review. For example, if the FLP Assessment of Need was completely updated and approved in 2018 and then attached to the 2020 SFAP, the FLP five year review is required by 2023, whereas the SFAP five-year review is due by 2025 (although it could be done sooner).

The overall State Forest Action Plan development, implementation, and review process is shown in Figure 1.

Future SFAP Revisions: As addressed in the [2015 SFAP memo](#), minor changes and full revisions can be made by States at any time prior to the 10-year update cycle. Whether USDA Forest Service approval is required depends upon the nature and extent of the revisions to the SFAP:

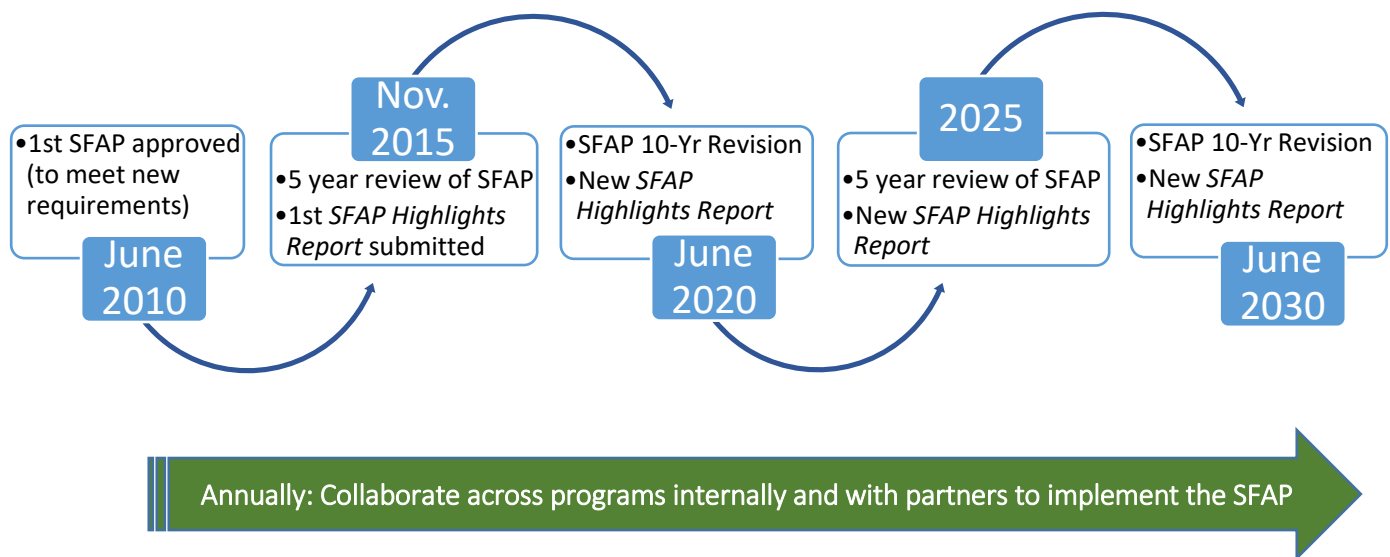
- **Significant changes or full revisions:** USDA Forest Service review and approval based on the requirements checklist is required when the SFAP is completely revised or significant changes are made, such as changes to priority areas, re-writes of complete sections, or addition of new strategies.
- **Minor changes:** If only minor changes are made, such as small text edits that are grammatical in nature, or to clarify existing strategies, then the State Forester will provide a digest of the changes made and a copy of the updated SFAP document(s) to the appropriate USDA Forest Service Regional Forester/Area/IITF Director and NASF (for posting online). No further action or USDA Forest Service approval is required.

There are separate procedures and requirements for changes in the FLP components. Refer to the [Forest Legacy Program Implementation Guidelines](#) (May 2017) for more information about amendments and changes to any of the FLP components.

If there is any question about whether revisions would be considered significant or minor changes, reach out to [Sherri Wormstead](#), Sustainability and Planning Coordinator, USDA Forest Service, NA S&PF and/or the appropriate NA S&PF Field Representative to discuss. The [NA S&PF website](#) has phone numbers for each Field Office.

Figure 1. State Forest Action Plan Process and Timeline Overview

Note: States that have completed a full revision prior to 2020 are on a different timeline for future 5-year reviews and 10-year revisions.



B. Suggested Statewide Assessment and Strategy Components

The following provides an outline of components or sections to consider including in the Statewide Assessment and Strategy (either as separate documents or combined into one). These are components, not an example table of contents. For example, one SFAP document could have a section with the assessment components and then a section with the strategy components. Another could organize the whole SFAP by criteria or goals with conditions and trends followed by the strategies for each criteria or goal.

Suggested Statewide Forest Resource Assessment Components

- **Introduction/Executive Summary**
- **Forest Conditions and Trends (including benefits and services):** Analysis of present and future forest conditions and trends on all ownerships in the State, including analysis of market and non-market forces. Qualitative, quantitative, and geospatial data can be used. The criteria and indicators of forest sustainability provide a framework for organizing the forest conditions and trends (see [Sidebar 2](#)). Consider including benefits and services of trees and forests including ecosystem services.
- **Issues, Threats, and Opportunities:** Identifying the key forest-related issues, threats, and opportunities is an important part of the Statewide Assessment. Considering the analysis in the forest conditions and trends section, outline the key forest-related issues, threats, and opportunities (which can then provide the framework for the Strategy) and how they relate or tier to the National S&PF Priorities ([Sidebar 1](#)).
- **Priority Landscape Areas in the State:** A description of the priority areas in the State, spanning ownerships and the urban to rural continuum, identified as a result of the geospatial analyses, non-geospatial data, and qualitative inputs. See [Section C](#) for tips for geospatial analyses for the SFAP. Any priority areas for specific S&PF programs should be identified in or at least consistent with the SFAP. This includes the Important Forest Resource Area map required for the Forest Stewardship Program, as noted by the NA S&PF Fiscal Year 2018 Financial Advice to States:

“State partners are encouraged to further focus program assistance and outreach efforts and/or initiate landscape-scale approaches to program delivery in Important Forest Resource Areas that have been defined by State Forest Action Plans.”

“Important Forest Resource Areas are those landscape areas that are considered to be of high program potential or priority by State Forest Action Plans, and as defined by National Forest Stewardship Program Standards and Guidelines.”
- **Multistate Priorities:** Following up on efforts prior to 2010 to facilitate dialogue with the State Foresters and planners to identify multistate priority areas and issues, NA S&PF has published three compendiums on the [NA S&PF Landscape Scale Conservation website](#): Federally led landscape scale conservation initiatives, multi-state priority areas, and multi-state priority issues. These are resources for identifying potential multi-state priority areas to include in SFAP revisions.
- **Summary:** Highlight and summary of key issues, threats, opportunities, and resulting priorities; including priority landscape areas identified as part of the geospatial assessment and priorities that are not illustrated geospatially.
- **Stakeholder Engagement:** Description of stakeholder engagement in the assessment process.³ See [Section D](#) of this document for tips and resources for engaging internal and external stakeholders.

³ If the Assessment and Strategy are in one SFAP document, you could have one section to describe the stakeholder engagement in development of the SFAP update (either at the beginning, at the end, or in an Appendix).

- **References Cited**
- **Appendices:** For example, methodology for geospatial analysis, data gaps, and Forest Legacy Program Assessment of Need (if it is not integrated into the main body of the SFAP).

Suggested Statewide Forest Resource Strategy Components

The Statewide Strategy serves as a planning document for S&PF programs, but can also serve as a broader strategic planning document to guide all State forestry activities. It is recommended that the strategies outlined in the SFAP be long term, broad, and flexible; perhaps function as guidelines, but not be operational or prescriptive. These are suggested components for the Statewide Forest Resource Strategy:

- **Introduction:** Outline long-term strategies for addressing priority landscapes identified in the Statewide Assessment and the national priorities and associated management objectives.
- **Goals and Priorities:**⁴ Provide an overview of key goals and/or issues that provide the framework for the Statewide Strategy, including a summary of the priority landscape areas and issues brought forward from the Statewide Assessment (if identified, include desired future trends/conditions).
- **Strategies:** Provide a description or list of strategies for addressing priority issues and landscapes and reference how they contribute to the three National S&PF Priorities. Given the 10-year timeline for SFAP updates, it is recommended that these strategies be developed considering a long-term (5-10 year) timeframe. A strategies matrix provides a nice way to summarize the strategies (in rows) as well as: programs that will contribute to implement the strategy, resources required to implement the strategy, National S&PF Priority/objective the strategy supports, and performance measure(s) that will be used to measure strategy accomplishments (if relevant). See Table 1 on page 12 for an example strategies matrix.
- **Implementation:** If known, provide a general description of how the State will implement the SFAP (internally and in collaboration with partners).
- **Resources Necessary:** A description of resources necessary, such as an overview of how the State will invest Federal funding; funding from other sources; and other resources to address the strategies and priority areas, is required. This can be included as a separate section, included in a section that describes SFAP implementation, or can be included as a column in a matrix of the strategies. Specific budgetary information (dollar amounts) is not required. Also consider briefly describing the capabilities and limitations within the State to address the threats and opportunities, including capacity (legal, financial, staffing, partners, etc.). There could also be a description of anticipated unfunded needs to outline what could be done if additional resources were available.
- **Stakeholder Engagement:** Description of stakeholder engagement in the strategy.³ See [Section D](#) of this document for tips and resources for engaging internal and external stakeholders.
- **References Cited**
- **Appendices:** Glossary of terms and acronyms, list of other plans consulted, and *SFAP Highlights by National Priorities* report (which may be included as an appendix or may be a separate document).

⁴ If the Assessment and Strategy are in one SFAP document, you wouldn't need to repeat the priority areas information.

Additional Tips for Assessment and Strategy Components

Assessing and Planning across Ownerships: Goals, issues, and priority landscape areas likely include a mosaic of State, Federal, private, and other ownerships (e.g., tribal, municipal, etc.). Cross-boundary work that includes collaboration with these owners to coordinate activities is an important component of SFAPs. For example, priority landscape stakeholder groups could be developed to coordinate activities using a “green infrastructure” approach, and to collectively apply for grants. This also includes the results of any coordination with relevant Federal land management agencies such as the National Forests and the U.S. Fish and Wildlife Service.

Forest Sustainability Criteria and Indicators: Forest sustainability criteria and indicators can be used as a framework, or even a list of elements to consider including, for the forest conditions and trends section of the SFAP. NMSFA and NA S&PF have worked collaboratively for more than a decade to assess and support forest sustainability at regional and State levels using agreed upon Criteria and Indicators (C&I). The Criteria in Sidebar 2 provide broad categories or goals for sustainable forest management. Commonly referred to as the Montreal Process Criteria, they are used at national and international levels. NMSFA and NA S&PF use 18 base indicators of forest sustainability to measure the criteria (see [Appendix II](#)). The following national and regional-level reports with conditions and trends for the C&I provide broader context for the SFAP:

- [Future Forests of the Northern United States](#): An assessment of forest across the 20 States and a future forests report.
- [National-level C&I for Forest Sustainability reports](#).

Consulting Other Plans: Consulting and potentially incorporating or tying to other plans can be helpful for integration across Departments and partners in the State, e.g., for collaboration on common goals with stakeholders. This can be done throughout relevant sections of the strategy and/or by providing a list and brief description of the plans consulted in an appendix. As required by the Farm Bill, this includes at a minimum the State Wildlife Action Plan and Community Wildfire Protection Plans. Other plans to consider include management plans for State lands, the Statewide Comprehensive Outdoor Recreation Plan (available on the [Society of Outdoor Recreation Professionals website](#)), forest plans for Federal lands, State climate or greenhouse gas plans, plans for Cooperative Weed Management Areas, and plans by partners, such as The Nature Conservancy.

Geospatial Considerations: A range of spatial resolution and methods will likely be used in presenting how each priority landscape area will be addressed. For example, invasive species or forest health issues may be spatially explicit, while wood utilization and other issues may be broad. Maps and the results of further geospatial analysis can be incorporated into the Statewide Strategy document where relevant to illustrate and better define and describe the areas addressed. See [Section C](#) for tips for geospatial analyses for the SFAP.

Desired Future Trends/Conditions: Setting desired future conditions is not required, but is often a part of Statewide forest planning. Identifying the desired future conditions, and even desired outputs or roles of the forest within a selected landscape, sets the basis for identifying the issues, threats, and opportunities on the path towards achieving those desired conditions and outcomes. Following this process, the State can

Sidebar 2:

Forest Sustainability Criteria

1. Conservation of biological diversity
2. Maintenance of productive capacity of forest ecosystems
3. Maintenance of forest ecosystem health and vitality
4. Conservation and maintenance of soil and water resources
5. Maintenance of forest contribution to global carbon cycles
6. Maintenance and enhancement of long-term multiple socioeconomic benefits
7. Legal, institutional, and economic framework for forest conservation and sustainable management

See [Appendix II](#) for NMSFA and NA S&PF Indicators for each criterion.

then identify the strategies to achieve the desired trends/conditions. The desired future trends or conditions provide a longer term strategic direction.

Strategies Matrix: A strategies matrix is a nice “at a glance” way to summarize information for the strategies, such as resources, programs, and partners for implementation; and contribution to the National S&PF Priorities. Table 1 shows an example strategies matrix. To aid in monitoring progress on the strategies over time and for use during the five-year review of the SFAP, measures of success can also be included in the strategies matrix. If the NASF Performance Measures are finalized in time to incorporate, those measure(s) could be listed for relevant strategies, along with other measures the State may wish to use.

Table 1. Example Strategies Matrix: This example is from the Wisconsin Statewide Forest Strategy 2010.

Theme A: Fragmentation and Parcelization				
	Strategy	Resources Available	Associated S&PF Programs	Supports National Priority (1, 2, 3)
FOREST LAND: The amount of forest land increases and is focused in desired landscapes.				
1	Encourage planting to enhance, protect, and connect larger tracts of forested land in appropriate locations consistent with ecological landscapes.	State; Federal (S&PF, NRCS, FSA); Private; Tribes	Stewardship, Watershed Forestry	1, 3
2	Reduce the rate of conversion of forestland to alternative uses.	State; Federal; Local government; Private; Tribes	Stewardship, Forest Legacy, Fire (SFA)	1, 3
PARCEL SIZE: The rate of forest land parcelization is reduced.				
3	Reduce the rate of ownership parcelization of large forest blocks (i.e. greater than 500 acres).	Federal; State; Private; Tribes	Forest Legacy	1, 3
4	Reduce the rate of ownership parcelization of small forest blocks (i.e. less than 500 acres).	Federal (S&PF, NRCS); State; Local government; Private; Tribes	Stewardship	1, 3
LARGE BLOCKS OF FORESTS: Large blocks of forest are maintained/increase.				
5	Pursue the conservation and protection of large, unfragmented blocks of forest lands.	State; Federal (S&PF); Private; Tribes	Stewardship, Forest Legacy, Fire (SFA), Watershed Forestry	1, 3
6	Strengthen collaborative and large scale planning at the town, county, state and federal levels.	Federal (S&PF); State; Local government; Tribes	Stewardship, Forest Legacy, Health, Fire (SFA), Watershed Forestry	1, 3

C. Geospatial Analysis to Identify Priority Areas

States are encouraged to conduct geospatial analyses on all ownerships to identify priority landscape areas across the urban to rural continuum where Federally-funded cooperative forestry program outreach and activity can be emphasized and coordinated. Establishment of these priority areas is intended to enable the efficient, strategic, and focused use of limited USDA Forest Service program resources and serve to demonstrate to appropriators that resources provided through S&PF Programs are being utilized wisely. The geospatial analyses are one component of the SFAP and support the information needed for the assessment (based on issues of importance to the State and the National Priorities). The identification of priority areas is important for focusing coordinated Federally-funded USDA Forest Service efforts where possible and appropriate, but is not intended to replace efforts by State forestry agencies to serve other areas of the State. Priority areas may include non-forested lands, such as grasslands, agricultural lands, and riparian areas, where forestry efforts will produce environmental benefits. It is recommended that data used in SFAPs generally be at a scale of 1:100,000 or better and overlay analyses conducted at the 30-meter cell size or finer. States are also encouraged to include a description of the priority areas and methodology for the geospatial analysis in the SFAP.

The following core themes are suggested for the geospatial overlay analysis (States are encouraged to include additional themes to address State-specific issues, concerns, and priorities):

Forest Resource Benefits:

- Fish and wildlife habitat
- Forest-based recreation
- Forest products and rural economic development
- Tree cover in urban areas
- Water quality and supply

Drivers of Change:

- Climate change
- Development pressure
- Forest fragmentation and parcelization
- Forest health risk
- Wildfire risk

The [NA S&PF SFAP Resources Portal](#) provides information and links to data that are available at regional or national levels for use in Statewide assessments.

Approaches for the Geospatial Analyses

There are several ways a State may conduct geospatial analyses to identify priority areas. A State's geospatial assessment can include one or more weighted overlay analyses that delineate priority landscape areas. A State may choose to conduct separate analyses to address specific resource management or unique program-related questions, or use analyses already completed for individual programs, such as those completed for the Forest Stewardship Spatial Analysis Project.

Here are three example approaches for States to consider for the geospatial analyses to identify priority areas (see the [Statewide Forest Resource Assessments and strategies in the Northeast and Midwest: A Regional Summary](#) for a summary of how States approached identifying priority areas in 2010):

1. Build on the Forest Stewardship Analysis Project and Conduct a Separate Urban Analysis

For Rural Lands: Build on the Forest Stewardship Spatial Analysis Project (SAP) methodology that used a weighted overlay analysis of 12 core themes, but include the public lands in the area of analysis to identify priority forest areas across ownerships (public to private). Public lands can be incorporated by re-running the geospatial analysis on all ownerships and then overlaying a State-available public lands layer or the Protected Areas Database (PAD) layer. There are some new data sets available and States are encouraged to include data layers as relevant to address State-specific issues and concerns.

For Urban Lands: States may wish to consider a two-phased approach to identify priority urban areas. Phase one may be a geospatial overlay analysis at the 30-meter cell size level including data key to the urban and urbanizing landscape (e.g., impervious surfaces, urban tree cover, impaired waters, population density, road density) to identify broad priority urban landscapes across the State. Other factors States may wish to consider for identifying broad priority urban landscapes include:

- Areas in need of increased urban tree canopy.
- Areas expected to experience an increasing rate of development (development pressure).
- Areas infested by or under threat of invasive insects.
- Focus on more highly populated areas/metropolitan areas.
- Underserved communities (income level, minority populations - Census data). [iTree Landscape](#) is a tool that can be used to identify these areas.
- Capacity for program delivery, i.e., Community Accomplishment Reporting System (CARS) elements: Staff, Ordinances, Advocacy, and Plans (SOAP).
 - Staff—people trained in urban forestry (such as an arborist)
 - Ordinances (and policies) that protect trees or wooded areas
 - Advocacy—any kind of group, committee, or non-profit (such as a conservation commission) working to support and promote urban forest management
 - Plans—urban forest management plan (typically based on a tree inventory)
 - State assistance in the past year, i.e., has the community received a State technical assist in the past year?
- Areas where they have staff and skills (either their own or partners). For example, universities, non-profit partners, regional offices, etc.

In a second phase, States could then complete a higher resolution analysis to further focus efforts within high priority urban areas that were identified in phase one.

States may consider conducting a separate geospatial analysis for a third landscape position, such as the “intermix” and “interface” classes in the Wildland Urban Interface (WUI) that identifies land in between rural and developed areas.

A final composite of priority rural and phase one urban lands could be displayed together on one map.

2. Separate Analysis For Each National Priority

Conduct a separate geospatial analysis to identify priority areas for each of the national priorities ([Sidebar 1](#)). Identify the data layers needed to address the issues for each priority and utilize data from the SAP and other available sources. A composite map could show priority areas for each of the three priorities as well as areas with overlapping priority for two or three of the national priorities.

3. State Issue-Based Analyses

Geospatial analyses based on State issues could be completed by:

- Identifying a few key issues in the State and then conducting a geospatial analysis to identify priority areas for each issue (e.g., climate change, fragmentation, etc.).
- Conducting separate geospatial analyses for regions within a State to identify priority areas for each sub-State region. The analysis for each sub-State region would include data layers to support key issues unique to the region.

A composite map could show priority areas across the State.

Composite Map: The development of a composite map of priority areas is encouraged to facilitate the identification of priority areas across the State and across State boundaries. Priority areas can be displayed in different ways on the composite map (and for different objectives depending upon the State’s issues and priorities):

- As one single class of priority areas (all priority areas displayed equally)
- As high, medium, or low priority areas
- By type of priority or defined by issue, e.g., biological diversity, loss of open space, threats to forest health
- Long-term versus short-term priority areas

A State can take the composite map and overlay other layers depicting boundaries of areas of interest such as Wildland Urban Interface (WUI), political jurisdictions, watersheds, or ecological units to identify opportunities for cooperation and collaboration across programs and agencies. This use of GIS as a tool can be helpful for identifying the short and long-term actions and stakeholders to work with, which can then be outlined in the Strategy. These can be included in the Assessment document or provided in an online format such as a story map as discussed in the “Using Technology to Communicate SFAPs” paragraph in [Section G](#).

Non-Geospatial Data and Analysis to Identify Priority Landscape Areas: States may have information critical to forest resource conditions and trends that cannot be adequately shown geospatially. In addition to the suggested geospatial themes, States can consider other information available for environmental, social, and economic factors related to forest resources. A combination of qualitative and quantitative information will likely be used to identify key issues and the geospatial analysis would support data needed for identifying related priority areas. Non-geospatial information can be used in combination with the geospatial information to identify priority areas, for example, areas identified through work with stakeholders could be included in the map of priority areas.

Leverage Existing Efforts

States should draw from existing data sources and assessments, including data available from the Forest Stewardship Analysis of Important Forest Resource Areas; Forest Legacy Assessments of Need; Forests to Faucets Assessment; Urban Tree Cover analyses; Forests on the Edge; National Insect and Disease Risk Map project (NIDRM); and State Wildlife Action Plans, as relevant. Some known data sources are provided on the [NA S&PF SFAP Resources Portal](#). Additionally, State geospatial specialists are encouraged to share sources of data that they plan to use in their assessments. There are also trend data and some projections available as part of the USDA Forest Service Resources Planning Act (RPA) reports.

Data Gaps: States are encouraged to identify information gaps as part of their assessment process. These geospatial and other information gaps will help focus future data development work at local, State, regional, and national levels.

D. Engaging People in Forest Planning

It is recommended that State forestry agencies consult with key internal staff and external stakeholders and other groups to ensure the SFAP (1) integrates, builds upon, and complements other relevant State natural resource assessments and plans and (2) identifies opportunities for program coordination or integration and partner collaboration.

As described in [Section A](#) of this document, States are required to coordinate with the State Forest Stewardship Coordinating Committee, State wildlife agency, NRCS State Technical Committee, applicable Federal land management agencies, and military installations as applicable and feasible. The Forest Legacy Program requirements are reviewed/developed by the State lead agency in consultation with the State forestry agency and the State Forest Stewardship Coordinating Committee and also must solicit involvement and comments from the public. Beyond these requirements, each State has flexibility to decide which stakeholders to work with, and to what extent, in development of the SFAP.

It is important to engage with leadership and staff across programs in the State forestry agency and with other relevant State agencies and departments. States are also encouraged to reach out to the State urban and community forestry council, Tribes⁵, forest products groups, and others. Sidebar 3 provides a listing of stakeholders and other groups that were engaged in the development of the 2010 SFAPs as an example for consideration for SFAP revisions.

There are different ways that people can be involved in the SFAP process. For example, a State may choose to draw primarily on internal expertise to update the assessment and then share the draft assessment with stakeholders to get input and prioritize issues and areas (and eventually to develop the strategies). Another approach is to conduct stakeholder scoping sessions early in the SFAP update process to identify and agree on key issues and then conduct and frame the assessment according to those issues. Stakeholders could then be engaged again when the assessment is completed to develop lists of potential strategies to address each priority issue and area.

It can also be effective to closely collaborate with either an existing State forest advisory council representing a range of forestry stakeholders in the State, or to establish such a council for the SFAP revision and implementation.

Sidebar 3:

Groups Engaged in 2010 SFAP Development

- State Forest Stewardship Coord. Committee*
- State Urban and Community Forestry Council
- State lead agency for Forest Legacy Program*
- Other State departments: State wildlife agency,* Parks, Agriculture, Environment, Transportation, and Land Use Planning
- Tribes
- NRCS State Technical Committee*
- Applicable Federal land management agencies*: national forests, U.S. Fish and Wildlife Service (National Wildlife Refuges), National Park Service, U.S. Department of Defense, and Bureau of Land Management
- Military installations* (as applicable and feasible)
- USDA Forest Service NA S&PF Field Office
- USDA Forest Service Northern Research Station, Forest Inventory and Analysis, State Analyst
- Universities and Cooperative Extension
- Forest products and industry groups
- Woodland owner associations
- Society of American Foresters, State Chapter
- State community and economic development orgs., local planning orgs., and local government associations
- Arborists
- Non-government/non-profit organizations in the State: The Nature Conservancy, National Audubon Society, outdoor recreation groups, Wild Turkey Federation, Ducks Unlimited, Ruffed Grouse Society, Trust for Public Land, and local land trusts

**Required groups to coordinate with.*

⁵ There is a directory of Tribal Leaders on the [U.S. Bureau of Indian Affairs \(BIA\) website](#) and a [Tribal Connections interactive map](#) on the USDA Forest Service Tribal Relations website. In addition, BIA Regional Office websites provide some additional resources and contacts: see the [BIA Eastern Region website](#) and [BIA Midwest Region website](#).

The advisory council can be closely engaged throughout the process along with some opportunities for broader stakeholder input.

In order to gain meaningful input and build relationships that can continue into implementation of the SFAP, it is recommended to engage partners and stakeholders in a variety of ways throughout the process (e.g., rather than a one-time survey). Evidence for this approach comes from many sources and was first proposed in Sherry Arnstein's [The Ladder of Participation](#). Arnstein suggested that public participation actually falls along a spectrum from minimal input to empowerment. The [International Association for Public Participation \(IAP2\) Spectrum of Public Participation](#) further develops this idea and is a helpful tool to consider the level of engagement you are seeking: informing, consulting, involving, collaborating, or empowering.

Doug Sarno with The Participation Company shared the following recommendations for engaging stakeholders (during a June 2016 workshop for the NMSFA FRPC):

- **Set clear goals for public participation:** Based on the level of public participation you are conducting, it is important to create a very clear goal for the role that the public will play, and to communicate this goal so that it is widely understood.
- **Make an explicit promise to the public:** The cornerstone of meaningful public participation is the promise to the public made by the sponsor agency. Based on the level of public participation and your goal, it is important to make a specific and explicit promise to the public to make sure that the public's expectations match what will actually occur in public participation. A specific and explicit promise allows you to establish clear expectations among all stakeholders, and to communicate the steps you have taken to meet this promise.
- **Commit to your goals and promise to the public:** Promise only what you can deliver; deliver what you promise; demonstrate what you deliver. Once a promise is made, all levels of the organization must be committed to achieving that promise. It is important to work internally to ensure all levels of the project have a common understanding of this promise and their obligations in helping to meet and communicate that promise over the course of the project.
- **Focus on stakeholder values, not positions:** Meaningful public participation is based on understanding and incorporating public values into decision making, rather than responding to and working through people's positions on a topic. This foundation in public values allows us to craft solutions that people can understand and accept.
- **Design a process, not a meeting:** If stakeholders are to provide meaningful input to an action or decision, public participation must be designed as a process of learning, discerning, and deciding. It is not possible to learn everything at once, learning must build as the project progresses.
- **Communicate way more than seems necessary.**

The [NA S&PF SFAP Resources Portal](#) has additional resources and tips for engaging stakeholders in the SFAP process, webinar recordings on tools for engaging stakeholders, and the full handout from the June 2016 workshop on engaging the public in meaningful participation (cited above).

E. Program Integration: *Tell the Whole Story*

In keeping with the intent of the Farm Bill, the SFAP should integrate different S&PF programs to address identified priority landscape areas and issues through a collaborative approach. Prior to 2010, some S&PF programs required State forestry agencies to develop program plans. Now however, aside from the specific requirements for the Forest Legacy Program, the SFAP is “deemed to be sufficient to satisfy all relevant State planning and assessment requirements under [the Cooperative Forestry Assistance Act].” Although a State may still choose to develop program-specific plans, such plans need to be complementary to the SFAP (overarching strategies from the program plan included in the SFAP).

While each S&PF program has core functions and purpose, there are SFAP goals and issues that may be addressed best through integration across multiple programs. The common themes in issues, goals, and strategies in the 2010 SFAPs are listed in Sidebar 4. In addressing the SFAP priorities, such as these issues and goals, States will likely have some strategies that are implemented by a single S&PF or other program as well as strategies that are implemented by multiple programs. States are encouraged to creatively employ the S&PF programs to address the priority issues and landscape areas in the SFAP. For example, to address ecosystem services, a State may use (1) the Forest Stewardship program to encourage forest management techniques that extend beyond public lands and encompass full landscapes, (2) the Fire Management Program for prescribed burning that can cultivate and restore healthy ecosystems, and (3) the Forest Utilization and Marketing Program to develop and maintain markets for forest products such as fiber and food products.

The focus is on integrating the S&PF programs to address priority issues and to complete cross-boundary work across land ownerships to achieve lasting benefits for forest health, water quality, habitat restoration, fire prevention, and forest products. In order to integrate, it is important to understand the key expertise, concerns, and focus of each S&PF program. The following section provides a list of elements to consider related to S&PF programs for the State planner to reference while drafting long-term strategies. The text in each section below was collaboratively written by the relevant NMSFA Committee chair and Federal program specialist.

Along with these strategies and elements for consideration, the [NA S&PF SFAP Resources Portal](#) includes additional links, documents, and resources for each program. This portal will be updated and remain current as new resources and information become available. SFAP leads are also encouraged to add documents, websites, or other resources to this portal (for other States planners to reference).

Sidebar 4: Common Themes in Issues, Goals, and Strategies in the 2010 State Forest Action Plans

- Keeping forests as forests
- Forest ecosystem health and productivity
- Urban and community forest health and sustainability
- Water, biodiversity, recreation, and other ecosystem services
- Forest products industry and markets
- Sustainable forest management across all ownerships
- Climate change
- Wildfire threats to forests, public safety, and property
- State and private capacity for forestry
- Awareness of and support for forests

Conservation Education: Environmental Education and Awareness

Conservation education elements to consider for the SFAP:

- Consider Conservation Education in every program area, e.g., education of fire mitigation and prevention, forest health issues, benefits of stewardship activities, economic impact of forest products in communities, and consider education opportunities on Legacy and Community Forest properties.
- Consider sharing information about the SFAPs with the State department of education or educator organizations
- Consider use of [North American Association of Environmental Educators \(NAAEE\) Guidelines](#) for Excellence in Education when developing educational materials, planning educational programs, engaging communities, and/or searching for high quality curriculum to use in programs.
- Consider collaboration with [NAAEE State affiliates](#) and other partners for assistance in education goals.
- Consider citizen science opportunities to enhance public knowledge of forest programs.
- Consider demonstration areas on State (or land trust) lands to educate landowners and the public.

Fire Management Program

The Fire Management Program is about more than suppression. Fire management practices, while also addressing wildfire risk areas, are part of the larger forest management strategy. The Fire Management Program includes preparedness, suppression and support, equipment, training, community mitigation, prescribed burns, fire prevention, and hazardous fuels reduction. Cross-boundary (State, local, Federal) and landscape level collaborative planning activities that achieve the goals of ecosystem restoration, protecting communities, and efficient and effective response to wildland fire should be considered. These activities may also support multiple SFAP objectives.

Fire Management Program elements to consider for the SFAP:

- Critical preparedness needs—including firefighter safety, fire planning, firefighter training, increased initial attack capability, and mobilization readiness for the efficient suppression and prevention of wildfires on non-Federal forest lands and other non-Federal lands. Included in critical preparedness is the support and partnership with the structural fire community utilizing the Federal Excess Personal Property (FEPP) and the DOD Fire Fighter Property (FFP) Programs. It is recommended that SFAPs also identify the existence of any cooperating agreements for suppression activities on Federal lands.
- Hazard mitigation—Community mitigation and hazardous fuels activities that focus on creating fire adapted communities by reducing hazardous fuels; developing Community Wildfire Protection Plans (CWPPs), FEMA wildfire mitigation plans, or other collaboratively developed hazard mitigation plans; providing prevention and mitigation education; and achieving Firewise programming.
- Prescribed burning—hazard mitigation; ecosystem maintenance/restoration; control of invasive species; wildlife habitat improvement; silvicultural practices including site preparation, restoring native plant communities, and oak regeneration; management activities for rare, threatened, and endangered species; watershed management; and forest health practices all can be achieved with prescribed burns.

More guidance is available in the National Cohesive Wildland Fire Management Strategy: Northeast Regional Action Plan (Action Plan), tiered from the National Cohesive Wildland Fire Management Strategy. The Action Plan provides a regional perspective and serves as a guide to priority implementation actions, management options, and desired outcomes for wildland fire management in the Northeast. Both the National Management Strategy and the Action Plan are available on the [NA S&PF Resources for SFAPs Portal](#).

Forest Health Programs

Forest Health Program elements to consider for the SFAP:

- Address both native and exotic invasive pest species (including insects, diseases, and plants) and the impact they have on forest resources.
- Detect, monitor, evaluate, and report forest pests and forest health conditions, and conduct activities to improve or maintain forest health conditions and sustainability.
- Coordinate with USDA Forest Service, Forest Inventory and Analysis (FIA) in reviewing annual FIA and Forest Health Monitoring data to detect and evaluate forest health problems.
- Reduce damage through effective integrated pest management, including prevention, suppression, and/or eradication.
- Represent the forest health, forest entomology, and forest pathology expertise within the State, and review forest stewardship plans and best management practices for forest health guidance.
- Include education efforts where needed, such as the “Do Not Move Firewood” campaign to limit the spread of invasive insects.
- Involve the State Department of Agriculture as a partner where they are the lead agency for Cooperative Forest Health. Elsewhere, engage them as a key stakeholder, as most States share pest management responsibilities between agriculture and forestry agencies.
- Collaborate regionally and nationally, as pest impacts extend beyond State boundaries. Collect geo-referenced forest health data using national standards provided by the USDA Forest Service so that cross-boundary comparisons can be made.
- Ensure flexibility to respond to emerging situations that threaten forest health, such as new insect/disease outbreaks or introductions.

Forest Legacy Program and Community Forest and Open Space Program

The Forest Legacy Program has specific requirements that are outlined in [Section A](#) of this document.

Through the Community Forest and Open Space Conservation Program (CFP), the USDA Forest Service is authorized to provide financial assistance grants to eligible entities to establish community forests that provide continuing and accessible community benefits. This program provides grants to eligible entities to acquire forest land through full fee title acquisition and requires a minimum 50% non-Federal match. The CFP can provide a way for States to protect threatened forests and increase public access to forests and greenspace by non-State partners. The State can benefit those partners by providing resources to identify public benefits that public forests provide and clearly identifying landscape scale conservation initiatives that would benefit from the addition of new public forests. Information on the CFP and descriptions of the entities and lands eligible for the CFP can be found on the [National CFP website](#).

Community Forest and Open Space Conservation Program elements to consider for the SFAP (Community benefits for CFP purposes include but are not limited to):

- Economic benefits
- Environmental benefits
- Forest-based learning
- Public participation in community forest planning
- Strategic contribution of the forest to and connection to broader landscape conservation initiatives

Forest Stewardship Program: Private Landowner Assistance

In considering strategies, it is recommended that States favor those that will dramatically increase the stewardship of private forests (as shown by more public support, more acres under active management, more forest landowners assisted, more technical information on the ground, more private sector financial support, less fragmentation, etc.).

It is recommended that SFAPs consider all forest lands within the priority forest landscape by integrating the stewardship of traditional private family forest ownerships with management of rural-to-urban transition lands, industrial forest lands, public forest lands, etc.

Forest Stewardship Program elements to consider for the SFAP:

- The role and strategic importance of private forest lands in achieving the desired outcomes and future conditions for forests statewide, with a focus on the identified priority forest landscape areas.
- Strategies to reach/motivate landowners to apply principles of sustainable forest management.
- The role of individual and/or landscape Forest Stewardship Plans to help landowners achieve their resource conservation objectives.
- The role of voluntary incentive programs, regulatory, and cooperative programs; and the role of government, business, NGOs, and partners in the implementation of on-the-ground conservation projects and the sustainable management of forest land.
- Opportunities to demonstrate to the larger public the many benefits that forests provide, and the importance of forest stewardship to maintaining those benefits on all lands.

Forest Utilization and Marketing

Maintaining, expanding, and developing forest products and markets provides economic opportunities for land managers to meet management objectives of key program areas. The NMSFA Forest Utilization and Marketing Committee encourages States to recognize the forest products industry as vital to the sustainability of the nation's forests.

Forest utilization can include traditional forest products (pulpwood, sawlogs, etc.), non-traditional and special forest products, wood utilization for renewable energy, and emerging markets. Utilization includes commercial and non-commercial activities on both public and private lands. Key stakeholders include forest-based industry, landowners, foresters, and economic development professionals.

Forest utilization and marketing elements to consider for the SFAP:

- Identification of forest landscape areas where there is a real, near-term potential to access and supply traditional, non-timber, and/or emerging markets (i.e., wood energy, mass timber construction, or ecosystem services), and develop and sustain these markets in the State for forest products.
- Employment and economic importance of standard timber-based economic sectors, and carbon sequestration benefits, forest-based recreation, watershed protection, open space retention, and other ecosystem services where quantified.
- Maintenance of robust and resilient markets for forest products in both rural and urban communities that provide economic options to address issues such as invasive species outbreaks, hazardous fuels reductions, and natural disaster recovery.
- Monitoring, assessing, and encouraging utilization activities within the State, including: engaging with industry and maintaining awareness of issues affecting the industry (certification, workforce, transportation, etc.); gathering and reporting harvesting, utilization, and industry trend data;

recognizing new and innovative market opportunities ([mass timber construction and wood energy](#)) and providing technical, marketing and resource assistance; promoting business opportunities for forest industries in the State; and participating in NMSFA Forest Utilization Committee activities.

State and Other Public Lands Management

The NMSFA Public Lands Management Committee suggests that States assess the role that State- and other publically-owned forests play and their benefit to the environment, economy, and society.

Public lands management elements to consider for the SFAP:

- **Green infrastructure:** can provide significant blocks of protected land and contiguous forest for carbon storage, wildlife habitat, back-country dispersed recreation, endangered species refugia, etc.
- **Economic significance:** In tough economic times, the industry may have a difficult time finding reliable sources of wood, while the State and other public forests can potentially provide a steady stream of wood to the marketplace.
- **Identify certified forest lands:** Certified lands are becoming increasingly more important as both the social license to manage public lands and to the marketplace.
- **Characteristics of State and public lands:** Often public lands provide many various forest structures. Managers may want to identify landscape characteristics of State and other public forest ownership compared with other ownerships in the SFAP.
- **Recreational opportunities on public lands:** State and public lands offer significant opportunity for outdoor recreation, providing benefits to local economies and society.

Urban and Community Forestry Program

Healthy trees and urban forests are essential components of communities, from our smallest villages to our largest cities. State Forestry Agencies can support this vision among a wide range of audiences by engaging in cooperative efforts with local governments and other partners to plant, protect, and maintain trees and forests at the landscape scale, and by encouraging the utilization of wood from these trees. Approaches include targeted assistance for tree planting, tree maintenance, tree inventory and canopy assessment, public education, training, program planning, and active management of the urban forest resource for a suite of environmental, social, and economic services. It is recommended that States specify strategies where their Urban and Community Forestry Program will contribute.

Urban and Community Forestry Program elements to consider for the SFAP:

- Increase the number of communities and affected populations achieving ‘developing’ and ‘managing’ status. Review data in the Community Accomplishment Reporting System (CARS).
- Strengthen the value that urban residents place on trees, forests and forestry, and advance the use of tree and forest inventories, monitoring and assessment tools across all lands.
- Protect and enhance urban tree canopy cover to maximize benefits, and protect and enhance watersheds in urban and developing areas with green storm water infrastructure.
- Support the creation and maintenance of green jobs and economic opportunities for planning and sustainably maintaining trees and forests, and producing and using forest products.
- Address exotic invasive pest species that typically affect and emanate from urban forests.

- Work across jurisdictional boundaries, leveraging ideas and resources to provide benefits across the larger landscape and at a greater geographic scale, and support planning, goal-setting, and skill sharing with other professions such as urban planners, engineers, and public health officials.
- Encourage preparation for severe storms and the recovery of damaged or deteriorated landscapes to more healthy and resilient conditions. Note: NMSFA has endorsed the Storm Readiness and Response Framework and Checklist documents which are available in the [Urban and Community Forestry folder of the NA S&PF Resources for SFAPs Portal](#).
- Encourage individuals, groups, and organizations in the communities served to become engaged participants in urban forestry, especially those in communities that are under-resourced.

Watershed Forestry

Watershed forestry plays a key role in all program areas to help protect and enhance water quality and quantity. Priority watersheds can be identified in the SFAP. Priority watersheds may be watersheds that are impaired (listed on the State's 303d list) or deforested with the potential to be measurably improved through planning and active management, or they may be forested watersheds that are not yet impaired but could be protected from impairment.

Watershed Forestry elements and strategies to consider for the SFAP:

- **Water quality and healthy watersheds:** Tie watershed priorities for wildlife habitat to State Wildlife Action Plans if possible. Set goals for restoring/conserving valuable forests, and focus on keeping forests healthy for all-around water quality benefits like reduced sediment and nutrient pollution. Where appropriate, collaborate with National Forests to maintain water quality across watersheds.
- **Conservation:** Minimize conversion of forest land by supporting local conservation efforts; support small private forest management and conservation with technical assistance; increase funding for working forest conservation in Farm Bill programs; facilitate the development of ecosystem services markets; and emphasize efforts that provide domestic water supplies (source water protection).
- **Riparian Corridors:** Protect, enhance, and restore forest and riparian corridors and buffers (green infrastructure). Identify opportunities to coordinate State forestry program actions on a watershed basis and in coordination with other conservation practices along the rural to urban continuum.
- **Partnerships:** Facilitate watershed-based partnerships that foster an understanding of the value of water, citizen stewardship, citizen science, and other shared learning opportunities (especially the importance of forests to water quality and healthy aquatic systems).
- **Programming:** Develop a program and/or establish a watershed forestry position to provide support for State and local watershed groups including technical assistance, informational materials, and program presentations.
- **Laws and regulations:** Adopt a legal requirement to include water resource protection plans for forest access systems associated with timber sales when submitting cutting plans for tax purposes. Inclusion of water resource protection components and BMPs in cutting plans as legal requirements when the State Forester approves the plan.

Sidebar 5:

Addressing Climate Change Mitigation and Adaption in SFAPs

SFAPs can identify potential effects of climate change on forests and highlight opportunities for carbon management to help mitigate climate change and sustain forests under changing conditions. Climate change presents serious risks to forests in the Midwest and Northeast U.S., and large-scale forest planning requires consideration of these potential impacts and opportunities for adaptation and mitigation. Climate change will directly impact forests through changing temperature, precipitation, and severe weather conditions, and indirectly through more intense stress, shifting disturbance patterns, and effects on pests and diseases.

In a [2008 resolution](#), the National Association of State Foresters articulated a vision for management of forest land across ownerships in light of the need to both utilize forests for global carbon management and plan for forest management in the face of changing climate conditions. Their recommendations provide a basis for States to consider carbon stewardship in their planning efforts. They include: keeping forested areas forested and healthy by protecting from fire, insects, and diseases; maintaining or increasing onsite forest carbon stocks; managing forests sustainably; and expanding sustainable wood energy.

In keeping with these recommendations, land managers have many tools available to address both climate change adaptation and climate change mitigation. Several suggested actions for helping State agencies pursue climate-informed forest planning are provided in the [Principles for Climate-Informed Forest Planning](#) document in the [NA S&PF Resources for SFAPs Portal](#). This folder also provides further documents, reports, and web resources, which States are encouraged to consider as they articulate potential effects, impacts, and responses of a changing climate in their SFAPs.

F. Tips for Statewide Forest Planning

The following tips and considerations are from a regional summary of highlights, challenges, and lessons learned from development of the 2010 SFAPs (from the [Regional Summary of 2010 SFAPs and 2012 summary of early implementation lessons learned](#)). These are based on the experience of planners involved in the development of 2010 SFAPs and decades of State planning experience, and they are meant to serve as recommendations and advice when working on SFAP updates.

- **Organizational relevance is critical! Take advantage of flexibility in content and layout of the Statewide Assessment and Strategy.** The flexibility allowed for content and structure of SFAPs is intentional because the most important aspect of these documents is organizational relevance. The documents must address the needs of the State and work within the structure and capacity of each individual State forestry agency. States should seek to meet the national requirements in the way that makes the most sense for their State.

For the 2010 SFAPs:

- Some States organized their documents by considering planning units or natural zoning areas as a framework for analysis and management both on an operational or strategic basis. This included administrative, ecological, or use-based breakdowns and specially-designated areas for biodiversity conservation, recreation, etc.
 - Other States used Criteria and Indicators (C&I) as a framework for the assessment. This way of organizing information took advantage of the fact that the C&I are supported at national and regional levels, although some States found it challenging to address issues that fit under multiple criteria. States might consider this framework broadly but include their own refinements where appropriate (such as including information on trends in wildfire suppression and property protection, not included in the C&I framework).
- **Allow at least two years for the SFAP Revision.** States were given less than two-years to complete the 2010 SFAPs. Many States found this timeframe too tight; it would be ideal to complete the assessment at least one year before the SFAP is due. In the SFAP revision process, States have the benefit of knowing about and understanding the requirements long before the updated plans are due, however time will likely still be a limiting factor in this process. Recognizing this challenge from the outset is important to State success in this planning process.
 - **Consider new information along with the current SFAP.** Gathering and considering new information to inform revision of the SFAP is important to understand changes in conditions, trends, values, and drivers of change. It is also important to review progress made on the goals and strategies in the current SFAP and expected implementation resources (to implement the revised SFAP). What was accomplished? What was not, and should efforts for each of those goals/strategies continue or be dropped from the SFAP? Reflecting on the work completed since the last SFAP is the best first step when moving forward. Updates should be a continuation of ongoing work in the State and provide a chance to change course where necessary.
 - **Strategies should be broad and flexible, but include enough specificity to understand what will be accomplished.** In the SFAP, provide clear and concise management direction that addresses desired future conditions and/or goals that the strategies contribute to. It is recommended that States draft long-term strategies, which allow local variability to be addressed. States can use the “SMART” approach (Specific, Measurable, Achievable, Realistic, and Time-bound) to ensure the broad State-level strategies are grounded in explicit outcomes. The strategies and associated deadlines should

realistically represent the State's capacity for implementation. Specific operational actions can be outlined in an annual action plan that tiers from the SFAP strategies.

- **Get State Forestry leadership involved early.** From the 2010 SFAP process, we learned that States in which the State forester was supportive of the SFAP work and planning process from the beginning (and throughout) had greater success than those in which the State forester was less engaged. This success was aided by the allocation of dedicated planning resources, GIS resources, funding towards the effort, and emphasis encouraging the involvement of all State forestry leadership and staff. This buy-in may be achieved in part by highlighting successes from the previous plan.
- **Continue to work with and engage stakeholders and partners.** While limited time and funding made stakeholder and partner engagement challenging for some States, most still felt this was one of the greatest benefits of the 2010 planning process. Developing stronger stakeholder relationships and networks facilitates cross-boundary efforts that span multiple ownership types, and this collaboration is recommended for implementing the SFAP and for more integrated work on forestry goals and issues over time. "Participation by various 'publics' in the planning process can improve the quality of decisions and gain support for proposed programs. Public involvement can become a key factor in acceptance and implementation of the plan."⁶ For the 2010 SFAP, States both reengaged existing stakeholders and engaged new partners through discussions and solicitations for input regarding priorities and actions. Now that many States have worked with stakeholders throughout the plan implementation process, sustained involvement with these partners is important.

When working with stakeholders it is important to remember that:

- Clear communication between the State forestry agency and stakeholders ensures that each understands the intentions and expectations of the other. You should not assume that stakeholders understand the process or what is being asked and instead plainly explain the expectations of the interactions from the outset.
 - Each stakeholder and partner has their own mission, concerns, and reason for involvement in the process. Understanding these can aid in managing communications and expectations when interacting with different groups or individuals.
- **Data development and GIS analysis take time, skill, and a proactive approach.** Compiling and developing the assessment information takes time and spatially identifying and prioritizing forest landscapes requires a well-thought-out process. States are encouraged to build off of the information compiled for the 2010 SFAP and to start compiling and assessing spatial data as early as possible in the update process. See [Section C](#) on Geospatial Analysis for more tips and resources.

⁶ USDA Forest Service. 1987. Statewide Forest Resource Planning Guidebook.

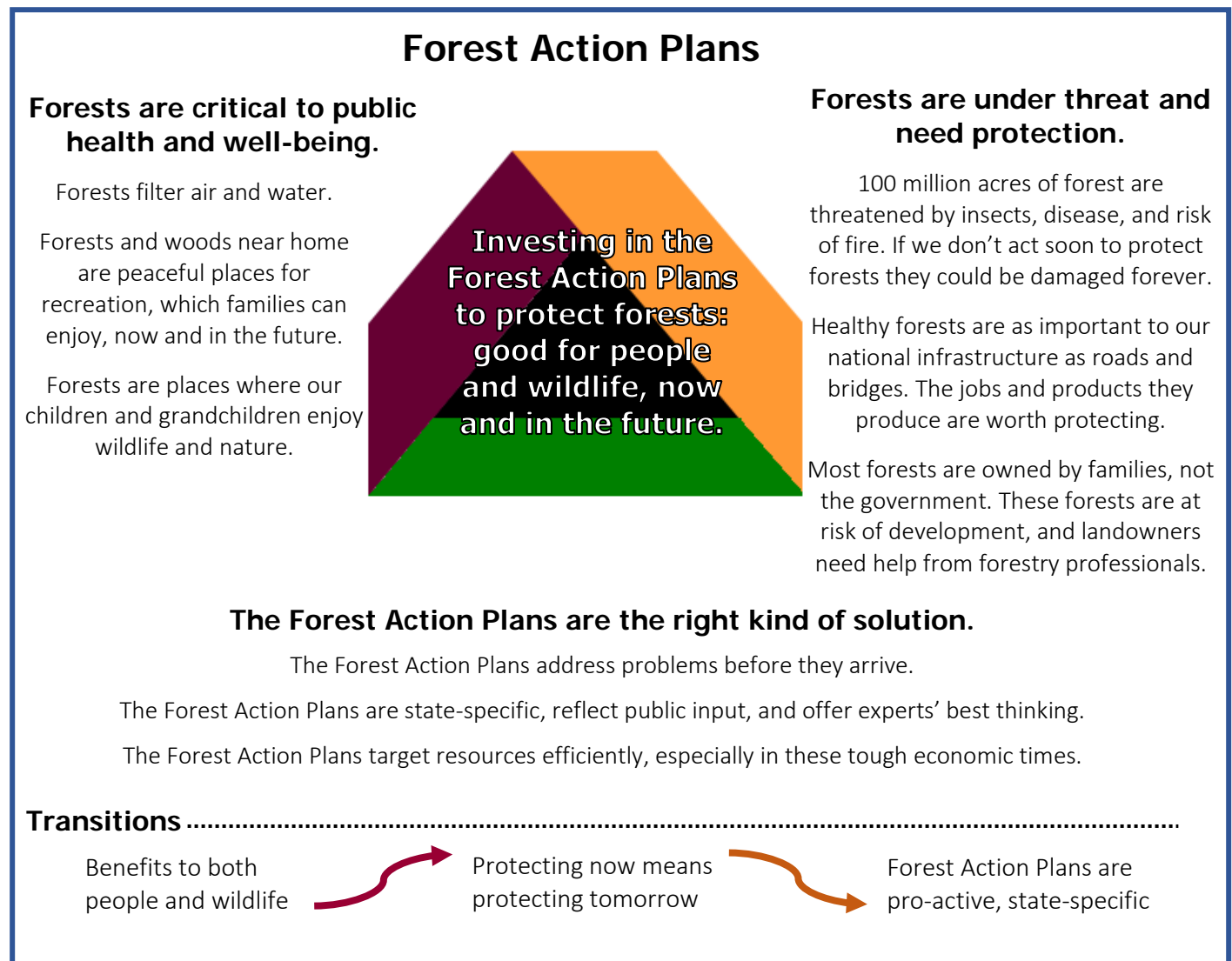
G. Communicating the State Forest Action Plan

For the 2020 SFAPs, some States have expressed interest in using various web formats to enhance interaction with and use of these resources. Examples of this include websites, social media, and the use of Esri Story Maps. This section provides general tips for communicating SFAPs. A media toolkit for State Forest Action Plans will also be available on the [NASF 10-Year Revisions website](#) and will include resources such as sample tweets, sample Facebook posts, and press release templates.

National Communications Tips for SFAPs

The SFAP message triangle shown in Figure 2 and communications recommendations on the next page were developed by communications specialists⁷ at the national-level for communications about the 2010 SFAPs. While these messages, including the core message in the middle of Figure 2, are broadly framed for national communications, these messages can be consulted for developing State-level SFAP communications.

Figure 2. Message triangle for 2010 State Forest Action Plans: The core message in the middle is expanded upon with 3 main messages (in bold font) and example phrases to communicate each of those messages.



⁷ These communications recommendations were developed by Fairbank, Muslin, Maulin, Metz & Associates and Public Opinion Strategies under a contract from NASF. These are based on the results of a bi-partisan telephone survey of 1,011 registered voters across the country (conducted in 2011) to assess key public perceptions and values related to forests.

National SFAP Communications Recommendations⁷:

- DO invoke the personal connections voters may have to forests, through recreation or the simple presence of wooded areas in or near their communities.
- DO assert that threats facing forests—notable wildfires, insects and diseases—make it important to do more to protect and manage the nation’s forests.
- DO NOT assume that voters recognize the important role of small and family landowners in forest management.
- DO label the assessments [and strategies collectively] as “action plans.”
- DO emphasize that they are State-specific, proactive, developed with broad input, and allow good ideas to be shared between States.
- DO appeal to the enduring values that make forests important to the public: clean air, clean water, and wildlife.
- DO emphasize the generational benefits of sound forest management—protecting forests for future generations, and allowing family-owned forests to remain in their hands.
- DO NOT make messages about the economic benefits of forests the lead—even in the current economic context.
- DO NOT use a fiscal context—like public agency budget cuts—to make the case for the [SFAPs].
- DO give State Foresters a central role in communications about forests, but...
- DO NOT assume that voters have a clear understanding or preferences about their role.
- DO also highlight the role of park rangers and the USDA Forest Service in communications with the general public.

Using Technology to Communicate SFAPs

States are encouraged to use social media such as Facebook and Twitter and other technologies including websites and Esri Story Maps to communicate their FAPs to stakeholders and the general public. These technologies can be an effective way to share and disseminate compelling information to a wide audience.

Some General Tips for Story Maps⁸

- Design Story Maps to be visually appealing and catchy, easy to understand and information rich, to guide the user while allowing for exploration, and as a multimedia, interesting experience!
- Keep the number of ArcGIS Online maps to a minimum.
- Pay attention to pop-ups. Pop-ups (legends) allow the reader to dig deeper. Disable pop-ups for layers that are irrelevant and customize the options to format the attributes desired.
- Add a variety of different media: graphics, text, photos, videos, and factoids.
- Create a catchy front page to draw viewers in to want to learn more.
- Keep the total Story Map under 15 “pages.”
- Keep it simple.
- For graphics, use image files that are transparent around the graphic for a more seamless look, e.g., PNG (Portable Network Graphic) file format.
- If the legend for a map is critical, make it a graphic.
- Use stage options.
- Use the HTML code editor to clean up the spans and add other features.

Check out the [Esri Story Maps website](#) and [ArcGIS Blogs about Story Maps](#) for additional tips and techniques.

⁸ Adapted from a presentation about [Connecticut’s Changing Landscape Story Map](#) to the NMSFA FRPC in June 2017 by Emily Hoffhine Wilson, University of Connecticut Center for Land Use Education and Research.

H. Implementation

The SFAP serves as a planning document for S&PF programs, but can also serve as a broader strategic planning document to guide all State forestry activities. The strategies outlined in the SFAP document will likely be long term, broad, flexible, and perhaps function as guidelines, but not be operational or prescriptive.

For successful implementation, and to aid in crafting the Cooperative Forestry annual grant proposal(s)/narrative(s), it will be important to tier annual actions from the strategies in the SFAP. Work to implement the long-term strategies can be prioritized and specified in more detail in an annual action plan for a given fiscal year. An annual action plan would have more detailed actions and budgetary information and be utilized to develop the annual grant proposal(s) and narrative for Federal funds (as well as for funds from other sources). Under this approach, individual staff units (by program area or other unit of organization within the State forestry agency) obtain overall long-term direction from the SFAP, but can develop operational annual work plans tiered from the annual action plan.

An annual Statewide action plan is not a Farm Bill requirement, but aids in the development of funding requests (the Annual Grant Proposal and Narrative, State budget process, etc.) and in bringing the strategies down to an operational level for individual State staff units. In the SFAP, the State may want to outline the protocol for how they plan to implement the strategies from year to year. In this way, regardless of how the State decides to translate the long-term SFAP into the annual grant proposals, (addressing funding needs for core funding and competitive projects) a written plan is in place.

Appendix I.

Forest Legacy Program Requirements in the State Forest Action Plan

All required Forest Legacy Program (FLP) components must be integrated into or attached as an appendix to the State Forest Action Plan (SFAP). For States integrating the FLP requirements into the SFAP, it is strongly recommended to provide a table such as the one below to identify where each of the required FLP components can be found in the SFAP.

- **For more details on the FLP requirements:** refer to the State Forest Action Plan section of the [Forest Legacy Program Implementation Guidelines](#) (May 2017).
- **For more information on the State Forest Action Plan requirements:** refer to the [National Association of State Foresters, State Forest Action Plans Revisions Web page](#).

At a minimum, the State Forest Action Plan must address the following as they relate to the purpose of the Forest Legacy Program:

Forest Legacy Program Requirement	Forest Sustain. Criteria ⁹	SFAP Location Assessment/Strategy Page(s)
a. Forest resources and benefits including:		
• Aesthetic and scenic values	C6	
• Fish and wildlife habitat	C1	
• Public recreation opportunities	C6	
• Soil productivity	C4	
• Forest products and timber management opportunities	C6	
• Watershed values including water-quality protection	C4	
b. The present and future threat—as defined by the State—of conversion of forest areas to nonforest uses	C1	
c. Historic or traditional uses of forest areas, and trends and projected future uses of forest resources	C1, C6	
d. Current ownership patterns and size of tracts, and trends and projected future ownership patterns	C6	
e. Cultural resources that can be effectively protected	C6	
f. Outstanding geological features	C4	
g. Threatened and endangered species	C1	
h. Other ecological values	C1, C3, C5	
i. Mineral resource potential	C6	
j. Protected land in the State, to the extent practical, including Federal, State, municipal, and private conservation organization lands	C6	
k. Issues identified by the State Forest Stewardship Coordinating Committee (SFSCC) and through the public-involvement process	C6	

⁹ This column is provided for States using the Criteria of forest sustainability as a framework for the SFAP assessment, to help guide where the each FLP assessment requirement might fit best in the SFAP assessment. Delete this column when completing the table to submit with the SFAP. See [page 11](#) and [Appendix II](#) for more information about the forest sustainability Criteria and Indicators.

Using the above information, the State Forest Action Plan shall include the following:

Forest Legacy Program Requirement	SFAP Location Assessment/Strategy Page(s)
a. Identification of applicable eligibility criteria (see pages 19-20 of the <i>Forest Legacy Program Implementation Guidelines</i>)	
b. Identification of specific Forest Legacy Areas (FLAs) for designation: <ul style="list-style-type: none"> • Location of each geographic area on a map and a written description of the proposed FLA boundary • Summary of the analysis used to identify the FLA and its consistency with the eligibility criteria • Identification of important environmental values and how they will be protected and conserved • The conservation goals or objectives in each FLA • List of public benefits that will be derived from establishing each FLA • Identification of the governmental entity or entities that may hold lands or interests in lands (State grant option) or may be assigned management responsibilities for the lands and interests in lands enrolled in the FLP (Federal option) • Documentation of the public involvement process and analysis of the issues raised 	
c. Specific goals and objectives to be accomplished by the FLP	
d. Process to be used by the State lead agency to evaluate and prioritize projects to be considered for inclusion in the FLP	

Appendix II.

NMSFA and NA S&PF Base Indicators (and Metrics) of Forest Sustainability¹⁰

The [Montreal Process criteria](#) listed below provide broad categories or goals for sustainable forest management and are used at national and international levels. The NMSFA and NA S&PF indicators and metrics were developed for use in NA-wide and State-level forest assessments to measure the criteria.

Criterion 1. Conservation of Biological Diversity

1. Area of total land, forest land, and reserved forest land

- 1.1 Forest and total land area
- 1.2 Forest density
- 1.3 Forest land and population
- 1.4 Reserved forest land
- 1.5 Urban forest

2. Forest type, size class, age class, and successional stage

- 2.1 Forest cover type groups
- 2.2 Size class
- 2.3 Age group
- Successional stage (*text document; no data/graphs*)

3. Extent of forest land conversion, fragmentation, and parcelization

- 3.1 Fragmentation (*text report with links; no data/graphs*)
- 3.2 Forest land developed
- 3.3 Net change in forest land
- 3.4 Additions to and conversions from forest land
- 3.5 Forest parcel sizes

4. Status of forest/woodland communities and associated species of concern

- 4.1 Forest and woodland communities
- 4.2 Forest-associated and all species
- 4.3 Forest-associated species of concern by taxonomic group
- 4.4 Bird populations

Criterion 2. Maintenance of Productive Capacity of Forest Ecosystems

5. Area of timberland

- 5.1 Amount of timberland

6. Annual removal of merchantable wood volume compared with net growth

- 6.1 Net growth and removals
- 6.2 Type of removals

Criterion 3. Maintenance of Forest Ecosystem Health and Vitality

7. Area of forest land affected by potentially damaging agents

- 7.1 Tree mortality and damage type
- 7.2 Wildfire

¹⁰ No priority is implied in the numeric listing of the criteria, indicators, and metrics.

- 7.3 Drought
- 7.4 Insects, diseases, plants, and animals

Criterion 4. Conservation and Maintenance of Soil and Water Resources

8. Soil quality on forest land

- 8.1 Soil pH
- 8.2 Total soil carbon
- 8.3 Estimated bare soil
- 8.4 Bulk density
- 8.5 Calcium-aluminum ratio

9. Area of forest land adjacent to surface water, and forest land by watershed

- 9.1 Forested riparian area
- 9.2 Forest land by watershed

10. Water quality in forested areas

- 10.1 Water quality in forested areas (*text report with links, no data/graphs*)
- 10.2 Stream miles impaired by percentage of watershed forested

Criterion 5. Maintenance of Forest Contribution to Global Carbon Cycles

11. Forest ecosystem biomass and forest carbon pools

- 11.1 Forest ecosystem biomass
- 11.2 Forest carbon pools
- 11.3 Forest carbon by forest type
- 11.4 Change in forest carbon

Criterion 6. Maintenance and Enhancement of Long-Term Multiple Socioeconomic Benefits to Meet the Needs of Societies

12. Wood and wood products production, consumption, and trade

- 12.1 Value of wood-related products
- 12.2 Production of roundwood
- 12.3 Production and consumption of roundwood equivalent
- 12.4 Recovered paper
- 12.5 Bioenergy (*text report with links; no data/graphs*)
Trade or wood flow (*text document; no data/graphs*)
Nontimber forest products (*text document; no data/graphs*)

13. Outdoor recreational participation and facilities

- 13.1 Participation in outdoor recreation
- 13.2 Federal land open to recreation
- 13.3 Recreational facilities on State land
- 13.4 Trails
- 13.5 Campgrounds
- 13.6 Recreational facilities in national forests

14. Investments in forest health, management, research, and wood processing

- 14.1 USDA Forest Service Northeastern Area State and Private Forestry funding
- 14.2 State forestry agency funding
- 14.3 Funding for forestry research at universities
- 14.4 USDA Forest Service Research funding

14.5 Capital expenditures by manufacturers of wood-related products

15. Forest ownership, land use, and specially designated areas

15.1 Forest land ownership

15.2 State lands

15.3 Protected land

15.4 Private land with public conservation easements

15.5 Forest land in tax reduction programs

15.6 Forest certification

16. Employment and wages in forest-related sectors

16.1 Wood-related products manufacturing employees

16.2 State forestry employees

16.3 USDA Forest Service employees

16.4 Wood-related products manufacturing payroll and wages

16.5 State forestry salaries

Criterion 7. Legal, Institutional, and Economic Framework for Forest Conservation and Sustainable Management

17. Forest management standards/guidelines

17.1 Types of forest management standards/guidelines

17.2 Voluntary and mandatory standards/guidelines

17.3 Monitoring of standards/guidelines

18. Forest-related planning, assessment, policy, and law

18.1 State forest planning

18.2 Nonindustrial private forest planning

18.3 National forest planning

18.4 State forest assessments

18.5 Forest laws and policies

18.6 State forest advisory committees

Appendix III. Acknowledgements

Sherri Wormstead and Rachel Neuenfeldt, with USDA Forest Service NA S&PF, collaborated closely with the NMSFA FRPC Leadership Team to develop this guide. We greatly appreciate review and input from that Team, the NMSFA Committee Chairs, USDA Forest Service NA S&PF program specialists, and others listed alphabetically below.

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