



FOLLOW-UP REVIEW • REPORT NUMBER 23-03 • JULY 2023

# GFC Forest Protection

Work is in progress to address audit findings

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### Why we did this review

This follow-up review was conducted to determine the extent to which the Georgia Forestry Commission (GFC) has addressed recommendations presented in our April 2021 performance audit (Report #20-08).

The audit examined whether GFC (1) is adequately prepared for wildfire seasons of all severity levels; (2) has allocated existing Forest Protection resources to areas with the highest need; and (3) has evaluated the effectiveness of wildfire prevention, mitigation, and suppression activities at reducing the number and size of wildfires.

### About GFC

To achieve its mission, GFC Forest Protection responds to all wildfires, assists private landowners with mitigation activities (e.g., prescribed burning), provides aerial detection of wildfires, and conducts community outreach and education to prevent wildfires. GFC also provides equipment and training to county and municipal rural fire departments, provides fire weather forecasting, and oversees burn permits.

GFC Forest Protection is organized into two zones and 10 areas. Within the areas, counties are grouped into one of 76 county-units, each with three to seven rangers who respond to wildfires and conduct prevention and mitigation activities.

## GFC Forest Protection

### Work is in progress to address audit findings

#### What we found

Since our 2021 performance audit, Georgia Forestry Commission (GFC) Forest Protection has made progress toward addressing several findings related to better distributing wildland firefighting resources, mitigating risks associated with the lack of wildfire experience, and updating local wildfire response and mitigation planning. GFC has also hired a director of special initiatives to work on addressing the audit findings and implementing recommendations. However, additional action is needed in several areas, including completing and implementing plans in progress.

#### *GFC Ranger Wildfire Experience*

At the time of the audit, 58% of GFC's rangers had been hired since Georgia's last severe wildfire season in fiscal year 2011. Exposure to wildfires increases rangers' understanding of their behavior and how to effectively suppress them. While GFC had expressed concern over this lack of exposure, there had been no formal development of additional training or opportunities for on-the-job experience.

GFC has since taken steps to provide additional training and on-the-job experience to mitigate the risks associated with a lack of wildfire experience. This includes obtaining a state wildfire response training grant from the U.S. Forest Service for a mock disaster event for new employees. In addition, GFC is beginning a rotational program to provide less experienced rangers the opportunity to gain experience in areas of the state with increased workload and wildfire risk. GFC tracks ranger qualifications through the Incident Qualification System (IQS) but does not maintain formal rosters for incident command teams (as recommended), instead relying on IQS to develop teams as needed.

#### *Comprehensive Response and Mitigation Planning*

In 2021, we had several recommendations related to reducing risk through more comprehensive planning to ensure more consistency across the county-units and assist with resource allocation. These areas—and actions taken since the original audit—are discussed below.

- **Aviation** – We recommended GFC create a plan defining what the aviation program is expected to accomplish or how its resources are to be used. In addition, there was no formal guidance on when aviation should be utilized to respond to wildfires, and we identified variation among county-units’ use of these resources. Since the audit, GFC air operations has begun a proposal to help define what resources are needed and has made progress on defining the objectives needed to ultimately determine fleet size and composition. GFC has also established formal guidance on when aviation should be utilized to respond to wildfires.
- **Staffing** – We found that opportunities exist to better align GFC personnel distribution with wildfire risk and suppression and mitigation work. In addition, staffing allocations resulted in significant variation in workload across county-units. GFC plans to develop a long-term staffing plan but has yet to do so. GFC has evaluated workload and wildfire risk when funds have become available for new county-unit offices but has not conducted a comprehensive study of the number and placement of county-unit offices. In addition, GFC is temporarily shifting resources to areas with higher workload.
- **Establishing priorities and monitoring objectives** – At the time of our review, GFC had adopted local plans for wildfire protection but none at the state level. In addition, we found Community Wildfire Protection Plans (CWPPs) lacked detailed, area-specific information on critical infrastructure, unique fuel loads, local capacity, and needed mitigation projects. GFC is in the process of creating statewide guidance to document the responsibilities of different parties and provide information on how wildfire response activities will occur. Federal funds have become available to update CWPPs, and GFC has hired a community wildfire protection coordinator to provide outreach to communities to apply for these funds. In addition, guidance and updated templates will be provided to ensure CWPPs are current and detailed.

### ***Data Management***

The original audit found that while GFC collects a substantial amount of data, there are opportunities to create better management information. This included additional aviation data points and increased data integrity, as well as leveraging the Southern Wildfire Risk Assessment to evaluate the effectiveness of mitigation activities and inform future mitigation planning.

GFC has not changed its internal aviation management system but does track additional data points (such as fire class days). In addition, GFC is considering whether to procure an aviation-specific data system to improve the quality of aviation data, but additional funding would be necessary. According to GFC, it will also use the updated Southern Wildfire Risk Assessment—which is expected to be updated by early 2024—and GIS tracking to evaluate the impact of mitigation work on fire risk, such as by examining changes in fuel loads over time.

***GFC’s Response:*** *GFC generally agreed with the current status as presented in the following table. GFC indicated that it recognizes the value of the audit process and the findings have helped leadership learn more about the organization and reinforce other items already known. However, GFC expressed its disagreement with recommendations related to its aviation function. Detailed responses to these and other recommendations are included in the table.*

The following table summarizes the findings and recommendations in our 2021 report and actions taken to address them. A copy of the 2021 performance audit report (#20-08) may be accessed at: [GFC Forest Protection Performance Audit Report](#).

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<b>Status: 5 Findings</b>			
<b>Substantially Addressed: 0</b>	<b>Partially Addressed: 4</b>	<b>Not Addressed: 0</b>	<b>No Recommendation: 1</b>

**Finding 1:** Historically, GFC has successfully suppressed wildfires in Georgia.  
**No Recommendations**

Original Recommendations	Action Taken
No recommendations	No recommendations

**Finding 2:** Additional information should be collected to determine whether GFC has the appropriate number and types of aviation resources.  
**Partially Addressed** – GFC has made some progress toward collecting additional information needed to determine the appropriate number and types of aviation resources.

Original Recommendations	Action Taken
2.1 GFC should formally define what the aviation program is expected to accomplish.	Fully Implemented –GFC provided a statement of its expectations of the aviation program, which will be included in the Flight Operations Manual. In this statement, GFC acknowledges that 1) the Aviation Unit is staffed and equipped to meet moderate and short-term elevated wildfire suppression needs; 2) supplemental aviation support may be necessary during periods of high to extreme wildfire potential and activity; and 3) it is not prudent or efficient for GFC to maintain the aviation resources necessary for periodic high risk scenarios when partners (e.g., state and federal agencies, other states) are available to use in these situations.
2.2 GFC should create guidance regarding when incident commanders should request aerial suppression support.	Fully Implemented – GFC has created guidance as part of the updated air operations manual. This provides criteria to consider when requesting aviation support for wildfire suppression operations. GFC management has provided the guidance to all incident commanders and emailed it to all Forest Protection staff in 2021.

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<p>2.3 GFC should track data that would allow management to assess activity and need for aviation resources. This may include the fire class day and key qualitative data on aerial wildfire suppression.</p>	<p>Partially Implemented – GFC has begun tracking fire class days<sup>1</sup> but does not yet track qualitative data on aerial wildfire suppression, such as type of terrain in the area where drops occur and fire intensity levels.</p>
<p>2.4 GFC should track use of external aviation assets in fighting wildfires, including frequency and the response time from request to arrival on scene.</p>	<p>Fully Implemented – GFC continues to rely on the FiResponse dispatch system and SpiderTracks to track the use of external aviation assets. According to GFC, SpiderTracks provides live tracking of aviation resources, historical flight data, and other information that GFC could use to assess its aviation needs.</p>
<p>2.5 GFC should increase aviation data integrity. Consideration should be given to utilizing an aviation-specific system.</p>	<p>Partially Implemented – No changes have been made to the existing data system to increase aviation data integrity. As stated in the original audit, “the internal data system GFC created to track flights allows needed data fields (such as Areas flown or departure/arrival airport information) to be left blank or entries in the wrong data fields. We also identified inconsistencies in the data, including flights deployed to suppress a wildfire with no corresponding water drops recorded.”</p> <p>GFC has considered procuring an aviation-specific data system and has received product demonstrations and/or quotes from vendors. However, acquiring a new system will be contingent upon identifying a funding source for initial acquisition as well as ongoing support.</p> <p><b><i>GFC’s Response:</i></b> <i>GFC indicated it believes its current, “internally developed system has performed well” and will “sufficiently” meet its needs until an aviation-specific system can be purchased.</i></p>

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<sup>1</sup> Fire class days come from the National Fire Danger Rating System, which is used nationally to predict the likelihood and severity of fire occurrence in specific geographic areas. The class days range from one to five.

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<p>2.6 GFC should determine the number and type of assets necessary to meet its aviation needs.</p>	<p>Partially Implemented – As part of its discussion of expectations for the aviation program, GFC indicated that it has sufficient staff and aircraft (type and size of fleet) to meet moderate, short-term wildfire suppression needs. However, this conclusion does not appear to be based on a formal assessment of the aviation program. GFC’s aviation program staff conducted their own informal assessment of air operations and drafted a proposal for management’s consideration. As of April 2023, the proposal had not been adopted. As noted in the original report, given the cost to acquire and maintain aviation assets, “it is critical to understand aviation needs, capabilities, and potential gaps.”</p> <p><i><b>GFC’s Response:</b> GFC indicated it relies on its experience fighting wildfire in Georgia to make these determinations. This will help ensure the most prudent use of taxpayer funds.</i></p>
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**Finding 3:** Opportunities exist to better distribute wildland firefighting personnel with wildfire risk and workload.

**Partially Addressed** – GFC has made some progress toward evaluating and developing a statewide plan for placement of county-unit offices and rangers. However, GFC has yet to complete and adopt any formal plans.

**GFC’s Response:** *GFC stated that "addressing personnel distribution is a major undertaking, especially for an agency that has employees in most of the 159 counties, and one that requires a strategic process and implementation. We are committed to addressing this finding in a way that drives the efficient allocation of resources while maintaining our wildfire/disaster response times, improving our service to stakeholders, and improving our cost structure."*

Original Recommendations	Action Taken
<p>3.1 GFC should evaluate statewide goals related to response time and forested acres per ranger.</p>	<p>Not Implemented – GFC stated it continues to track and evaluate statewide goals related to response time and forested acres, which are primary determinants for placement of rangers across the state. However, these goals have not been formally assessed against other factors that could impact staff distribution, such as wildfire risk and workload.</p>
<p>3.2 GFC should study the number and placement of county-unit offices to determine the optimal number and placement of offices needed to achieve agency objectives. Additional expertise may be needed to develop the methodology and criteria necessary to conduct the study. County-unit placement decisions should be evaluated on an on-going basis in response to changing landscape and other conditions. For example, updates could coincide with updates to the Southern Wildfire Risk Assessment (SouthWRAP), which occurs every five to 10 years.<sup>2</sup></p>	<p>Partially Implemented – GFC plans to conduct a comprehensive study of the number and placement of county-unit offices, though it has not established a time frame for completion.</p> <p>When additional state funds were available to build/relocate county-unit offices, GFC used a series of metrics to assist in its decision making. For example, GFC assessed the feasibility of locating an office in the Liberty/Long/McIntosh County area in 2022. GFC considered metrics such as frequency in which fires occurred, fire locations, rates of spread, response times, and workload to develop options. GFC determined relocation was feasible, but this has not yet occurred.</p>

<sup>2</sup> A consortium of southern states is involved in the Southern Wildfire Risk Assessment. Texas A&M and the Texas Forest Service take the lead on updating the assessment.

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<p>3.3 Based on revisions to goals and number of offices, GFC should create a statewide staffing plan that allocates rangers according to individual county-unit needs.</p>	<p>Partially Implemented – While GFC has established a framework for a statewide staffing plan for rangers, the plan has not yet been developed. GFC anticipates having a completed plan in fiscal year 2024.</p> <p>However, GFC has utilized the framework to review risk, workload, and response times when assessing recent opportunities for building or relocating county-unit offices (including Liberty/Long/McIntosh counties discussed above).</p>
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**Finding 4:** Opportunities exist for GFC to mitigate the risks associated with the lack of wildfire experience among its forest protection staff.

**Partially Addressed** – GFC has made significant progress on mitigating the risks associated with the lack of wildfire experience among its forest protection staff but has not adopted any formal plans to ensure this continues.

Original Recommendations	Action Taken
<p>4.1 GFC should create a formal plan with specific action to address the risks associated with rangers’ lack of experience with large wildfires. Actions should include formally tracking ranger experience and using the information to develop succession plans for field management positions and Incident Management Team (IMT) positions (as discussed below).</p>	<p>Partially Implemented – While it has not created a formal plan, including succession plans, GFC has taken several actions to address risks associated with rangers’ lack of experience with large wildfires. Specifically, GFC has</p> <ul style="list-style-type: none"> <li>• Obtained federal grant funding for wildfire scenario training, which is expected to occur in the fall of 2023;</li> <li>• Created a program to rotate less experienced staff to areas with higher fire risk and workload so those rangers may benefit from this additional on-the-job training;</li> <li>• Established a program under which retired GFC employees rotate throughout the state to provide additional training to newly hired rangers; and</li> <li>• Taken steps to start new hires on the same date, which staff indicated makes it easier to track where they are in the training process.</li> </ul>



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<p>4.2 GFC should determine what types of IMTs it needs, create formal lists of rangers who meet the necessary qualifications including primary, alternate, and others qualified, and identify future gaps in personnel qualified for IMT positions.</p>	<p>Fully Implemented – GFC has determined it can staff Type III IMT teams for moderately complex wildfire operations with existing personnel. GFC maintains a list of each ranger’s IMT qualifications, which it uses to quickly put together IMTs based on wildfire activity and the geographic location of wildfire(s).</p> <p>GFC has been unable to retain enough staff with the needed qualifications for a Type II team, which is intended for highly complex wildfire operations (though these occur less frequently than Type III wildfires). However, GFC continues to have staff participate in national Type II teams, which can be activated in Georgia when necessary (e.g., an extended, multi-day wildfire incident).</p>
<p>4.3 GFC should create a standard policy on when formal after-action reviews (AARs) will occur, dependent upon wildfire size, complexity, or both. In addition, GFC should provide a template to guide the creation of after-action reviews.</p>	<p>Partially Implemented – GFC stated it is in the process of creating a standard policy on AARs, which it plans to incorporate in the forthcoming Wildfire Preparedness and Response Plan Standard Operating Procedures (to be completed in fiscal year 2024). As noted in response to the original audit, GFC uses the National Wildfire Coordinating Group’s templates for AARs.</p>
<p>4.4 The General Assembly should consider periodically funding a large wildfire exercise to be conducted by GFC. While costs could vary, they may be lowered if GFC partnered with the federal National Incident Management Organization.</p>	<p>Fully Implemented – The General Assembly has not allocated funds for wildfire exercises. However, GFC acquired federal grant funds to conduct a large wildfire exercise that will occur in the fall of 2023.</p>

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**Finding 5:** GFC has adopted local plans for wildfire response and mitigation; however, there are broad gaps in guidance at both the state and local level.

**Partially Addressed** –GFC has made progress toward updating local plans and establishing state plans, though they have yet to be completed or adopted.

**GFC’s Response:** *According to GFC, “a sizeable portion of the recommendations will be better addressed after we move to address the distribution issue identified in Finding 3. It is our goal to equip our staff to be in better positions to address CWPPs and other regional mitigation goals.”*

Original Recommendations	Action Taken
<p>5.1 GFC should create a statewide wildfire management plan to document responsibilities of different parties, prioritize projects across the state, and establish strategies to achieve better fire outcomes. Specifically, such a plan would include:</p> <ul style="list-style-type: none"> <li>A. A statewide list of mitigation projects, which could be documented at an area, zone, or statewide level so that the organization is aware of and prioritizes the most impactful mitigation projects.</li> <li>B. Formal guidance regarding when aviation assets should be requested to provide overwatch and/or suppress a wildfire. This could be part of a broader aviation strategic plan that identifies the mission, goals, and needs of a wildland firefighting aviation program, as discussed in the original report on page 8.</li> <li>C. Consistent definitions in the statewide and local plans for terms such as priority level.</li> </ul>	<p>Partially Implemented – GFC is in the process of creating a statewide Wildfire Preparedness and Response Plan Standard Operating Procedures. It is expected to be completed in fiscal year 2024.</p> <p>According to GFC, the plan is intended to document the responsibilities of different parties and provide information on how wildfire response activities will occur. In addition, the plan will include after-action review guidance and a glossary of terms to establish consistent definitions.</p> <p>GFC stated mitigation project lists will be incorporated into updated local Community Wildfire Protection Plans (CWPPs), as recommended. However, mitigation projects will not be tracked or prioritized in the statewide plan, which would ensure GFC is aware of and prioritizes the most impactful projects across the state. In addition, aviation guidance will not be included in the plan because it has been incorporated into the flight operations manual (as previously discussed), which serves as statewide aviation guidance.</p>
<p>5.2 GFC should monitor progress toward completing objectives outlined in statewide and local plans and evaluate the effectiveness of its mitigation and prevention activities at reducing risk. One method to evaluate this effectiveness is using quantitative risk assessments, such as when the SouthWRAP is updated, to identify any risk reductions resulting from such activities.</p>	<p>Partially Implemented – GFC is working with partners to update the SouthWRAP. This is led by the Texas State Forest Service and Texas A&amp;M and is expected to be available in calendar year 2024. GFC plans to use the SouthWRAP data to assess trends in the composition of area fuel loads, which would allow GFC to assess the effectiveness of activities such as prescribed burns.</p>

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<p>5.3 GFC should require CWPPs or other local planning documents to include detailed response guidance, which could include assets that could be at risk, areas that could need aviation support, areas with unique fuel loads or topography concerns, and wildfire suppression tactics that should or should not be used based on the county’s unique features.</p>	<p>Not Implemented – While GFC management indicated that plans should “include specific, local information” as recommended, no action has been taken to ensure detailed response guidance is incorporated into CWPPs as they are updated.</p>
<p>5.4 GFC should require CWPPs or other local planning documents to include a detailed, prioritized list of proposed mitigation projects, including responsibility and funding source. Progress should be tracked on each when CWPPs are updated, which should occur every five years per GFC.</p>	<p>Fully Implemented – GFC used federal funds (through the U.S. Forest Service’s Community Wildfire Defense Grant Program) to hire a community wildfire defense coordinator. This position will provide county governments with guidance and updated templates on CWPPs and support local communities applying for federal funds to update plans. According to GFC, the guidance will state the need for counties to include more detailed lists of mitigation projects in their CWPPs. Projects included in CWPPs may also qualify for funding under the Forest Service’s grant program.</p>

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