



WO Fire & Aviation Management

Greening Fire Team 5-Year Strategy



VISION: Achieve net zero environmental impact at all large fire incidents by 2030

MISSION: Integrate sustainability best management practices on incidents and within the fire community



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Executive Summary

This Strategic Plan was developed by the Greening Fire Team (GFT) to improve collaboration across the fire community and provide a disciplined approached to the program of work development process. This plan will guide the team as it continues to serve the USDA Forest Service (USFS) Fire & Aviation Management Program and interagency fire network. A complementary 5-Year Communication Plan provides further details about the outreach, education, and awareness dimension of the GFT program of work.

Since its inception in 2010, the GFT has been researching, recommending, and assisting with the integration of sustainable business practices into the fire community, specifically during fire incidents. GFT Focus Areas include: 1) Energy Conservation, 2) Water Conservation, 3) Waste Reduction, 4) Fleet and Fuel Efficiency, 5) Sustainable Acquisition, 6) Sustainability Leadership, Education, and Outreach, and 7) Business Efficiency and Return on Investment.

Sustainability is inherent to the USFS mission. As part of our conservation mission, we are required to divert 55% of our non-hazardous waste from landfills (USDA Environmental Department Reg. 5600-05). USFS fire operations require large quantities of supplies. Packaging, paper, food waste, plus damaged, destroyed, or worn-out equipment and materials all contribute to the waste stream. Much of this waste can be recycled, repurposed, or recovered, thus preventing it from reaching landfills. The scope of wildfire response efforts presents an opportunity to demonstrate our commitment to conservation through efficient federal operations.

While many successes were obtained in the infancy of the GFT, continued collaboration has proved important for success. Examples of past accomplishments include: the 2011 GFT article published in *Fire Management Today*; a plastic bottle consumption reduction initiative; the establishment of a disposable battery recycling program in R6 cache; a create visibility campaign with a GFT graphic and stickers; a delegation of authority letter highlighting the need for SusOps efforts to IMTs; a 2016 article daylighting the National Renewable Energy Laboratory's partnership; and establishment of an on-site incident recycling Blanket Purchase Agreement for the Southwest, northern California, southern California, and Northwest Geographic Area Coordination Centers.

Background

In 2008, in response to Executive Order 13514, the Forest Service developed a Strategic Framework to Address Climate Change. Of the seven goals created, Goal #5, Sustainable Operations (SusOps) targets the reduction of the environmental footprint of Forest Service operations and promotes being a leading example of a green organization. The implementation of this goal has the most potential for influence and success within the fire community, especially within the context of incident management. Although Executive Order 13514 (and 13693) have since been revoked and replaced by Executive Order 13834, the emphasis on agencies meeting statutory requirements "in a manner that increases efficiency, optimizes performance, eliminates unnecessary use of resources, and protects the environment" remains.

Furthermore, the Interagency Standards for Fire and Fire Aviation Operations (aka the "Red Book") includes the following with respect to incident management and environmental sustainability:

• "Every incident should seek opportunities to reduce unnecessary waste and limit impacts associated with management actions. This may be accomplished, for example, by promoting recycling and encouraging the use of alternative energy sources as long as such efforts do not compromise operational or safety objectives" (Source).

Then Acting USFS Deputy Chiefs Christopher French (National Forest Systems) and Patricia Hirami (State & Private Forestry) reinforced this national goal in their "Sustainable Operations in Incident Management – Preparing for the 2019 Fire Season" letter, in which they highlight sustainable business practices specific to fire operations, plus tools and resources developed by the National Greening Fire Team. The letter requests that as the fire community prepares for the upcoming fire season, managers/practitioners are to apply the information in the letter and other resources to reduce consumption of financial and natural resources at incidents.

Team Members & Partners and Ambassadors

The GFT includes some members of the fire community, including a cooperative fire program manager/fire prevention coordinator, equipment and chemicals branch chief, sustainable operations coordinators, a wilderness ranger, a fuels technician, a communication specialist, a fire management specialist, a National Environmental Policy Act Coordinator, a recreation officer, incident business specialists, and logistical support personnel.

<u>Team Members & Partners</u> are most directly involved in Team Deliverables and day-to-day team operations/management. Team Members have assigned deliverables and frequently salary funding to cover part of their time. The <u>Team Members & Partners list</u> will change over the 5-year period of this Plan; the web-based roster will be updated semi-annually, at a minimum.

<u>GFT Ambassadors</u> are individuals with a desire to help advance sustainability Best Management Practices (BMPs) in incident operations. These interagency individuals act as champions for the program. They help further the GFT mission by participating in the GFT program at the Level of Involvement that suits their interests, passions, and available time/resources. Ambassadors receive, share, and act on important communications about increasing awareness and aligning actions towards sustainably conducting fire management operations. More inforamtion about the GFT Ambassador Program (i.e., Overview Brief, Action Item Matrix, webinar recordings) is available on the Ambassador Page of the GFT website.

More information about team composition and expectations is documented in the <u>Greening Fire</u> Team's Charter, signed in September 2019 by former WO FAM Director Shawna Legarza.

Vision, Mission, Values, and Priorities

The Greening Fire Team's guiding principles are multi-faceted and focus on increasing sustainable operations on incidents and within the fire community to achieve a net zero environmental impact by 2030.

Vision: Achieve net zero environmental impact at all large fire incidents by 2030.

Mission: Integrate sustainability best management practices on incidents and within the fire community.

Values: Provide sustainability leadership by seeking continual improvement, striving to share learning, serving as an example to others, and creating trust.

Priorities:

- Minimize waste hauled to landfills; develop a standard where reducing, reusing, recycling and composting are the norm.
- Reduce reliance on unsustainable energy sources & contributing to the renewable energy market.
- Implement practices and technologies that support water resource conservation.
- Increase fleet efficiency, conserve fuel, and reduce emissions through sustainable transportation, operation and travel practices.
- Increase procurement of "green" products and services for incident operations.
- Incorporate cost and manpower savings with resource efficiencies to maximize long-term return on investment.

Five Year Strategy

Greening Fire Sustainability Focus Area	Greening Fire Best Management Practice	Task
Energy Conservation	Expand use of renewable energy	Expand use of mobile photovoltaic solar/battery systems (trailer-mounted), as well as solar-powered radio repeaters, light towers, water pumps, hot water for handwashing stations, shower facilities, phone-charging stations, recharging radio and other equipment, and other solar-powered equipment on incidents
	Reduce energy consumption	Expand use of LEDs and other energy-efficient equipment on incidents (particularly in dining tents and in light towers)
Water Conservation	When vehicle washing and dust abatement are necessary, use non-potable water (if feasible)	Provide resources/guidance/training to help assess whether non- potable water sources exist in the incident area to better determine if this option is feasible
water Conservation	Reduce unnecessary vehicle washing and dust abatement where appropriate	Provide resources/guidance/training to help assess whether noxious weeds exist in the incident area to better determine whether vehicle washing is necessary
Waste Reduction	Implement standardized recycling program on incidents	Build framework for contracted recycling services at large fires (over 200 personnel) and develop guidance for non-contracted recycling at smaller Type 3 fires
		Improve Blanket Purchase Agreement by incorporating lessons learned from After Action Review
		Increase # of incidents that have active recycling operations





		Increase actual diversion of incident waste from landfills
		Develop framework to expand incident recycling BPA services nationwide
	Reduce consumption of plastic bottles for sports drinks and bottled water	Expand use of re-usable HydroFlasks, canteens, "cubies" (or similar) and encourage use of electrolyte powder (instead of purchasing bottled sports drinks) on incidents ensure fire personnel remain adequately hydrated on incidents
	Develop holistic strategy to reduce and manage food and other compostable waste	Catering contractors are already required to provide compostable utensils, plates, and cups, and collect these items and food waste in compostable bags. Implement a pilot program to ensure this (and spike camp food waste) is composted.
	Expand use of rechargeable batteries in radios	Increase purchases of rechargeable radios and battery sets (including vehicle battery recharging systems)
Fleet and Fuel Efficiency	Reduce fossil-fuel based energy consumption on incidents	Reduce unnecessary vehicle idling
Sustainable Acquisition	Increase number and percent of "green" orders/purchases on incidents	Provide resources/guidance/training to buying teams to increase knowledge of available green services on incidents and increase actual ordering of green products/services
	Increase effectiveness of Greening Fire Team through continuous improvement	Refine and obtain leadership endorsement for the GFT budget, charter, 5-year strategic plan, communication plan, individual Fiscal Year Implementation Plans, annual accomplishment report, annual face-to-face team meeting, etc
Sustainability Leadership, Education, and Outreach	Increase awareness of the Greening Fire program and tools through education and outreach	Reach a broad audience through the National Greening Fire public website, quarterly Greening Fire Team bulletin, national webinar(s), new employee orientation events, submissions to Wildland Firefighter community newsletters/articles, Greening Fire marketing materials, etc
	Increase quantity and quality of sustainability champions on incidents	Expand Greening Fire ambassador network, develop resources/training/guidance for ambassadors and future sustainable operations coordinators on incidents



	Increase leadership engagement	Engage Forest, Regional, and national line officers, fire and aviation management and incident management team leadership.
	Build interdisciplinary relationships across Forest Service program areas and promote interagency engagement	Foster partnerships and exchange knowledge of greening fire with the Sustainable Operations community and other Forest Service and interagency programs (e.g., National Wildfire Coordinating Group).
	Build local/state/industry partnerships and incorporate sustainable technology best practices	Continue collaboration with the National Renewable Energy Laboratory, NTDP, and external partners to ensure sustainability best practices and most current technologies are piloted on incidents
	Recognize key contributors to greening fire operations and results	Recognize the IMT Recyclers of the Year at the annual IMT training event, and recognize key GFT contributors by the end of the fiscal year
	Define sustainable incident management	Develop framework for what "net zero" energy, water, and waste would look like on future incidents
	Develop centralized and standardized data collection related to consumption, cost, and performance	Develop central repository to collect baseline and performance data tied to quantifying the implementation of Greening Fire best management practices (including data on contract costs)
Business Efficiency and Return on Investment	Collect feedback on effectiveness of program	Develop in-person and web-based tools (e.g., surveys, potential reporting through the LISO database, etc) to collect feedback on lessons learned/opportunities for improvement and success stories from vendors, incident personnel, and the public to maximize overall effectiveness of the program

The <u>full</u>, <u>5-Year Team Strategy</u> (including prioritization, budget needs, and accomplishment tracking) is posted on the Greening Fire Team's Pinyon/Box Collaboration Site. This file will be updated annually (at a minimum) in response to shifts in program of work, team composition, etc.

Operating Budget

The GFT was established in 2010 and has been comprised of seasonal and permanent employees from across the nation as a grassroots effort. Prior to FY18, funding for staff time to coordinate the effort was covered by the Washington Office (WO) Office of Sustainability and Climate Change and/or Nationwide Sustainable Operations Collective. Starting in FY18, the GFT came under the umbrella of Washington Office Fire & Aviation Management (WO FAM).

In FY19, 90 salary days (valued at \$40,000) and \$16,500 for travel was covered by WO FAM. In FY20, we increased our funded salary by \$21,300 (increase of 35 days) but reduced our travel funding by \$4,500. Adjustments reflect changes in our team dynamic/approach. The GFT's FY20 operating budget is \$73,300. In April 2020, WO FAM Director Shawna Legarza approved an out-year (i.e., FY21-25) Team Operating Budget of \$77,000 per year.

Conclusion

As the GFT optimistically looks towards the future, synergy is happening. The GFT will be expanding the number of team members, developing new relationships and improving connections throughout the fire community. Lastly, the GFT is committed to communicating the agency's vision for being a leader in efficient federal operations.



Goals - Year 1

FY20 - October 1, 2019 to September 30, 2020

Action Plan

TASK	TASK DESCRIPTION
Organize and Host Annual FY20 Team Face-to-Face GFT Strategy Meeting	Complete Meetings Management package and obtain approval, build agenda and pre-work, facilitate discussions, compile notes, and generate action items to feed Annual GFT Program of Work update.
Plan FY21 Team Face-to- Face GFT Strategy Meeting	Prepare for next face-to-face GFT meeting. Complete Meetings Management package and obtain approval, plus build agenda and pre-work.
Develop FY20 GFT Program of Work/Implementation Strategy	Update FY20 GFT program of work/implementation strategy.
Develop FY20 GFT Communication Plan	Update FY20 GFT communication implementation plan.
Finalize 5-Year GFT Strategy	 Finalize current draft of 5-year strategy, including FY20-21 implementation strategy and 5-year overview for final publication. Establish update frequency and process.
Define Key Performance Indicators (KPI)	Design a process for capturing costs and benefits with each new Team Deliverable introduced.
Develop and Submit FY20- 25 GFT Budget	Identify funds required for GFT and NREL continued support through FY25. Utilize WO FAM Project Request template to request funds.
Develop Annual Accomplishment Report	1) Identify Accomplishment Report sub-group to track accomplishments throughout the year (connection to KPIs) 2) Develop Accomplishment Report template 3) Develop and finalize Report 4) Distribute Report

Recognition for Those Who Further GFT Mission	1) Institute a process to submit names of local champions (e.g., via the Bulletin) 2) Year-end recognition via non-monetary and monetary awards 3) Develop certificate to distribute to IMTs with highest diversion rates and distribute GFT stickers as appropriate
Identify Funding/Grant Opportunities	Maintain web-based list of internal and external funding opportunities relevant to National GFT objectives.
Create and Distribute Greening Fire Team Highlights Bulletin	Conduct spot interviews Identify feature topics
Develop New Employee/Apprenticeship Program Orientation GFT "Soundbites" (National and Regional)	 Determine FY20 New Employee Orientation (NEO) dates, locations, and POCs Create slides/brochure/postcard with QR codes for distribution; include link to these items in the Incident Support Guide Update brochure annually
Continue to Improve the National GFT Website	Build out and maintain public-facing National GFT website
Continue National GFT Branding	1) Update 1-page "What is the GFT?" 2) Design a GFT flyer/poster for distribution at fire camp

Build Outreach Materials for Target Audiences Increase Scope of Written Communications to Target Wildland Fire Fighter Community	1) Reach out to Buying Team community through AQM monthly training 2) Reach out to READ community through NFS Lead READ 1) Contribute "Two More Chains" article for publication targeting "boots on the ground" firefighters 2) Contribute "Fire Management Today" 10-year update article
Create and Disseminate DOE NREL Incident Support Guide	1) Refine Incident Support Guide Outline and Draft 2) Present Near Final Draft to GFT 3) Discuss Guide/Solicit Final Feedback @ FY20 GFT Meeting 4) Vet Document Internally and Externally 5) Complete Final Document 6) Integrate into FY20 Fire Season Letter 7) Integrate into Annual GFT National Webinar 8) Targeted Support Guide Webinar Presentation 9) Trial Guide at FY20 Incidents
Execute New 5-Year Interagency Agreement (IA) with DOE NREL	 GFT reviews/proposes changes for current IA scope of work NREL estimates FY20 scope and cost for GFT support Coordinate with WO Engineering, Technology, and Geospatial Services on current IA scope of work; determine if effort will remain joint or if GFT will request WO FAM funds and coordinate an IA with NREL independently Extend IA beyond current expiration date (June 2020)
Maintain GFT Ambassador Network. Define Needs and Roles of Ambassadors.	 Update Ambassador PDL Define Ambassador "Levels of Involvement" Develop Ambassador outreach packet (briefing paper, slides for future presentation, LOI checklist, etc). Develop Survey123 form and "User Guide" to capture accomplishments and/or lessons learned from Ambassador network.
Recruit Greening Fire Team Ambassadors to Present Program at High- Priority Fire Meetings & Relay Updates to Regional FAM Leadership (Goal: 1 Ambassador per Region)	 Review current RSA SusOps Coordinator and GFT Ambassador contact lists to identify potential candidates to fill gaps (i.e., Region 1, 2, 4, and 6). Organize targeted outreach to engage individuals and define their role/collect their ideas. Develop a tracking template (Excel) to create a log of Ambassador-led outreach.

Local Unit Fire Camp Sustainability Plans	Work with Ambassadors to develop Fire Sustainability Plans on their home units.
Develop and Distribute Annual "Preparation for Fire Season" Letter with Accompanying Webinar	 Draft letter. Include link to Incident Support Guide and national webinar plus stats on program. Vet draft letter with Team Finalize letter, prepare Cover Brief, and route through WO for dual-Deputy Chief (NFS and S&PF) signature Promote webinar Conduct webinar
WO FAM Leadership Briefings	1) Schedule quarterly update briefings with WO FAM Director and Deputy Director. 2) Develop Briefing Papers for Each Meeting
Continue to Identify Outreach and Education Opportunities to Introduce the GFT and Provide Updates	 Identify key meetings and networks that would benefit from Greening Fire Team updates/products. Develop a strategy for strengthening the distribution of information (two-way) with these entities.
Engage with Regional Sustainable Operations Coordinators	 Relay updates via monthly RSA SusOps Coordinator Calls and PDL, as information is available Targeted outreach to fire-prone Regions not currently represented on the GFT (e.g., Region 4)
Enhance Interagency Partner Networks	Leverage networks of the Department of Energy National Renewable Energy Laboratory and other state/federal agencies that comprise the National Wildfire Coordinating Group (i.e., Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, International Association of Fire Chiefs, etc) to advance greening fire goals.
Grow Industry Partnerships	 Establish relationships with State Recycling Coalitions (GFT) Discuss opportunities to build skill sets to increase field of qualified incident recycling vendors (GFT) Explore informal and formal partnerships with companies that share wildland fire/safety & wellness/sustainability goals (NREL)
Identify GFT Research Needs & Map Path to Obtain Required Information	 Conduct mid-year and year-end program reviews to identify/maintain list of research needs Submit FY20 NTDP Proposal for a study reviewing current/emerging technologies and assessing their applications to GFT

Develop Web-Based Sustainability Survey to Administer at Fire Camp	1) Develop and vet survey questions 2) Transfer survey questions to web-based collection format (e.g., Survey 123) 3) Develop a strategy to communicate survey results (e.g., via a dashboard or ArcGIS story map)
Capture Lessons Learned from Field	Determine how and where to track lessons learned from the GFT program, NREL incident support guide, and BPA. Ensure link/reference to lessons learned are provided in the Incident Support Guide as well.
Develop Strategy and Guide for Non-Contracted Incident Recycling Efforts (Target: Smaller/Type 3 Fires)	1) Identify key players and resources2) Develop a recycling template/guide3) Trial template/guide and monitor results
On-site Incident Recycling BPA Implementation and Evolution	See BPA Task Sheet
Research Food Waste and Solutions for Reducing It	Generate a map that links the "find a composter" information with past fire data to determine if commercial compost facilities are generally within 100 miles of fires Research whether "admin lunches" with smaller portions will be possible in FY20
Hose-to-Habitat Fire Hose Recycling	Collaborate with National Partnership Office to determine next steps planned with this non-profit. Assist with assessment of viability of expansion of this partnership.
Connect with Legislative Affairs Specialists	Schedule time with Legislative Affairs community; provide overview of GFT program and summary of success stories/review

Goals - Year 2

FY21 - October 1, 2020 to September 30, 2021

Action Plan

TASK	TASK DESCRIPTION
Create and Disseminate DOE NREL Incident Support Guide	1) Create web-based complement to hard copy Guide 2) Trial Guide at FY21 Incidents
On-site Incident Recycling BPA Implementation and Evolution	1) Formal After Action Review (Part I - GFT Members, plus Program Leads and Contracting Officers; Part II - All from Part I, plus BPA Vendors) 2) FY20 Summary Report documenting accomplishments and lessons learned/areas for improvement 3) Establish plan and timeline for expansion to other GACCs 4) Update EERA Spec Sheet and Vendor List as BPA Complement 5) Conduct review of operations (via on-site survey) 6) Review opportunity to expand BPA scope to include compost/food waste collection
Define Needs of GFT Ambassador Network and Oversee Roll-Out	1) Update Ambassador "levels of involvement" definitions, as needed 2) Outreach to current Ambassadors to determine if some desire a more active role

Grow Industry Partnerships	 Establish relationships with State Recycling Coalitions Discuss opportunities to build skill sets to increase field of qualified incident recycling vendors Explore informal and formal partnerships with companies that share wildland fire/safety & wellness/sustainability goals.
Define Key Performance Indicators	Continue process for capturing costs and benefits with each new Team Deliverable introduced
Web-Based Sustainability Survey to Administer at Fire Camp	1) Develop a strategy to communicate survey results (e.g., via a dashboard or ArcGIS story map)
Develop Strategy and Guide for Non-Contracted Incident Recycling Efforts (Target: Smaller/Type 3 Fires)	1) Refine recycling template/guide 2) Trial template/guide and monitor results
WO FAM Leadership Briefings	1) Schedule quarterly update briefings with WO FAM Director Shawna Legarza and WO FAM Deputy Director-Operations Frank Hahnenberg. 2) Develop Briefing Papers for Each Meeting
Develop and Distribute Annual "Preparation for Fire Season" Letter with Accompanying Webinar	1) Draft letter 2) Vet draft letter with Team 3) Finalize letter, prepare Cover Brief, and route through WO for dual-Deputy Chief (NFS and S&PF) signature 4) Promote webinar 5) Conduct webinar
Greening Fire Team Highlights Bulletin (Updates/Successes/Latest Products)	
Annual Team Face-to-Face Strategy Meeting	

Annual Accomplishment Report	1) Identify Accomplishment Report sub-group to track accomplishments throughout the year (connection to KPIs) 2) Develop and finalize Report 3) Distribute Report
Continue Recognition for Those Who Further GFT Mission	1) Continue process to submit names of local champions (e.g., via the Bulletin) 2) Year-end recognition via non-monetary and monetary awards
Recruit Greening Fire Team Ambassadors to Present Program at High- Priority Fire Meetings & Relay Updates to Regional FAM Leadership (Goal: 1 Ambassador per Region)	1) Continue to use tracking template (Excel) to log instances of Ambassador- led outreach.
New Employee/Apprenticeship Program Orientation GFT "Soundbites" (National and Regional)	Determine FY21 New Employee Orientation dates, locations, and POCs Update brochure for distribution
Continue to Improve the National GFT Web Presence	1) Build out and maintain public-facing National GFT website and USFS Region 3's FireNet On-site Incident Recycling BPA site
Continue to Identify Outreach and Education Opportunities to Introduce the GFT and Provide Updates	 Update list of key meetings and networks that would benefit from Greening Fire Team updates/products. Implement strategy for strengthening the distribution of information (twoway) with these entities.

Engage with Regional Sustainable Operations Coordinators	 Relay updates via monthly RSA SusOps Coordinator Calls and PDL, as information is available Targeted outreach to fire-prone Regions not currently represented on the GFT (e.g., Region 4)
Enhance Interagency Partner Networks	Leverage networks of the Department of Energy National Renewable Energy Laboratory and other state/federal agencies that comprise the National Wildfire Coordinating Group (i.e., Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, International Association of Fire Chiefs, etc) to advance greening fire goals.
Identify GFT Research Needs & Map Path to Obtain Required Information	1) Conduct mid-year and year-end program reviews to identify/maintain list of research needs 2) Submit FY21 NTDP Proposal for a study reviewing current/emerging technologies and assessing their applications to GFT
Hose-to-Habitat Fire Hose Recycling	Collaborate with National Partnership Office to determine next steps planned with this non-profit. Assist with assessment of viability of expansion of this partnership.
Identify Funding/Grant Opportunities	Maintain web-based list of internal and external funding opportunities relevant to National GFT objectives
Develop a Holistic Strategy to Reduce Food Waste	Document BPA vendor feedback about compost opportunities Revisit opportunities available via modifications to the Mobile Food Services Contract
Develop and Implement Training for Sustainability Coordinator Technical Specialist to Aid with Start-Up	Via IAA with NREL, develop and offer web-based training on the Incident Support Guide Include in Base Manager Training & Qualifications, plus Task Books