

Wildfire Exterminator Organization

Developing Policy to Combat the Increase of Wildfires Across the United States

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1. **Introduction and Background**

The purpose of this policy memo is to look for better solutions to combat the increase in wildfires and their severity across the country. There are many ways that wildfires pose a risk to the people and the environment within the United States. Wildfires are detrimental to air quality because of the gasses that they release into the atmosphere. While fires burn across the country “they release large amounts of carbon dioxide, black carbon, brown carbon, and ozone precursors into the atmosphere” which can pose a risk to the communities in areas where these fires occur (Soloman). Wildfires also damage a great amount of ecosystems across the country. The damaging of habitats and other important locations because of fires is causing many animal populations to decline as well as plants and other forms of life. Wildfires have also posed a great danger to homes, resulting in large costs of insurance and other expenses due to damages from the flames. The safety of these communities, ecosystems, and forms of life are a top priority for the well-being of the country, therefore the government should consider these policy modifications and creations to implement into legislation.

According to the Environmental Protection Agency, the number of wildfires across the United States has remained at a slight increase since the mid-1980s, but where the figures begin to shift more drastically is in the severity of the fires that occur. The research conducted by the EPA concluded that “multiple studies have found that climate change has already led to an increase in wildfire season length, wildfire frequency, and burned area” (EPA). The decrease in the quality of air across the country has had negative effects on the respiratory health of the populace. The Center for Disease Control and Prevention has provided the public with safety tips if they are in a place that is at high risk for wildfires, but this is not enough for many people that suffer from health issues associated with their respiratory system (CDC). These health risks can be prevented if attention is focused on ways to decrease wildfires and their severity.

This increase has also led to more ecosystems and land being damaged by wildfires. The NICC Wildland Fire Summary for 2020 showed that 10.1 million acres burned from wildfires, which is the second-highest impact since 1960 (Hoover). This land, if not handled correctly during post-fire practices, will be damaged for long periods of time. Fire damage can be detrimental to the wildlife that lives in these areas, and with the number of wildfires and their severity increasing, this threat will only grow. Increasing fires will also lead to an increase in the price of damages that the public will have to pay for when fires hit their homes. New policy must be created to protect citizens physically and financially from these fires across the country.

The purpose of this memo is to draw attention to a modification in the procedures taken after a wildfire to prevent future burns and a new policy draft to allocate more funds to firefighting. Post-fire logging tactics have been used by the U.S Forest Service for many years, but their procedures for removing dead trees put regions where this practice occurs at the risk of future fires. The procedures and methods taken by this organization must be altered to ensure that the land is refurbished and better protected from future wildfires. The policy implication is Senate Bill 451. This piece of legislation looks to allocate more of the National Budget to firefighting and the tactics that are used to identify and extinguish wildfires. Because not all fires can be prevented, more funds must be distributed to the forces and organizations that work to contain and put out fires to meet the needs of the increase in wildfires across the country.

1. **Trees Can Provide Moisture to Increasingly Dry Regions**

Investing resources into removing the fuels of wildfires can be beneficial in decreasing their duration and severity. One of the causes of the increase in wildfires over recent decades has been attributed to the dry climate because of global warming. A study from the University of Washington investigated why wildfires are more active at night than what they used to be. The study showed that because of climate change and warming temperatures across the country, there has been an increase in the dryness of night air in recent decades, resulting in the air quality becoming a catalyst for wildfires (Hickey, 2021).

With the increase in dry air across the United States, one of the solutions to a decrease in wildfire severity can be found by providing moisture to these dry areas. One method is the moisture that is held within healthy trees. A healthy tree can hold and absorb an average of 30% to 50% of its weight in water in a single day (ArborPro Tree Experts, 2018). The more moisture that a tree holds, the slower the flames will spread in the event of a wildfire. To provide more moisture within trees, it is important to ensure that the trees within these areas are healthy and living. Trees that have died carry significantly less water and can be used as fuel for forest fires. As the trees decay, they can be a catalyst for wildfires, thus their removal can provide the areas at risk of wildfires with moisture if they are replaced with new trees (Bonnicksen, 2008).

Planting healthy trees in these areas can have many benefits on the environment and can decrease the risk for wildfires. The benefits of planting healthy trees are:

1. **Healthy trees will bring moisture back to these regions.** With dry air due to climate change, the duration and the severity of wildfires are increased when they hit. Planting new trees in these regions that can absorb water will provide a natural deterrence to the spread of wildfires, and in turn can make it easier for wildfires to be controlled by firefighters because they will not spread as quickly (Bonnicksen, 2008).
2. **An increase in healthy trees can collect the greenhouse gasses** **that are produced when wildfires occur.** With the addition of healthy trees, some of these harmful gasses such as carbon can be absorbed to reduce the damages that wildfires have on the surrounding areas and the atmosphere, resulting in the betterment of air quality of these regions.
3. **Healthy trees can reverse some of the effects of erosion that are caused by wildfires.** With the mix of dry air and the effects of burns, soil can become eroded and unplantable in the future. With the introduction of healthy trees to these regions, the soil can be rotated to remain sustainable and healthy.

It is important to ensure that forests do not become overcrowded, as this can be a catalyst of wildfires, but the introduction of a system that substitutes old, dead trees for new, healthy trees can be a large step in the deterrence of more severe forest fires that are becoming increasingly common in recent decades (Bonnicksen, 2008). If the trees are placed strategically so that they are not crowding each other as they grow, it can be an effective method for rejuvenating forests after a fire.

1. **Required Improvement for “Post-Fire Logging” Techniques**

There is a large debate over the process that the U.S. Forest Service calls “post-fire logging,” but if it were refined it could have greatly reduced the risk of high-damage wildfires. Current programs remove the dead and burnt trees from the areas in which the wildfires occurred, but there is no replacement process in these areas. A particular instance of this occurred in Big Creek, California. Dr. Chad Hansen, who is an ecologist, claimed that the removal of these dead trees resulted in a quicker spread of The Creek Fire. When the next fire occurred, research showed that there were more severe fires and burning rates in areas that practiced post-fire logging than in other areas where the logging did not take place. Because these dead trees were removed without replacement, Hansen believed that the fire was able to move quicker and with greater damage to the surrounding areas. Regarding healthy trees, Hansen said, “Not only do they soak up and retain large amounts of soil moisture like giant sponges, but they interrupt the flow of the fire across the forest floor” (Bigad Shaban, 2021).

This rapid spread of flames across the flatland could have been prevented if there were trees there. Hansen argues that if the dead trees were left there and not removed it would have created barriers that would prohibit and deter the wildfire from spreading as quickly as it did through the grassland. The dead trees should have been removed from the area where the fire occurred, but instead of leaving the land flat, new trees should have been planted in their place. The advantages of healthy trees far outweigh the argument to keep the dead trees in the areas where wildfires burn frequently.

The ability to create a project that would plant new trees in areas where wildfires have burnt would be easy to implement because of the projects that are already in place. Since the U.S. Forest Service already implements the process of post-fire logging, the only thing that would need to be added would be the planting of new trees in their place. These practices could still be carried out by the U.S Forest Service because they are already on-site removing the dead trees, but it can also be a co-sponsored practice with the Environmental Protection Agency or another sustainability-centered government organization. A co-sponsored event across multiple government agencies would be an effective way to find the funding that would be needed to plant trees across these regions, but the process of planting trees can be very inexpensive if it is done correctly.

It is said that planting trees is the most cost-effective way to combat climate change, and this is seen in this situation. The damages that wildfires can cause cost far more than what it takes to plant trees. The United States and its populace spend billions of dollars annually on combating and rebuilding from wildfires, and while the planting of trees will not completely mitigate these costs, it could decrease them by creating an environment and a climate that is not so susceptible to increasingly destructive forest fires (Lavietes, 2020). Ultimately, the removal of dead trees through post-fire logging is a relatively sustainable method of preventing wildfires from occurring again, but this process could be greatly improved if the introduction of tree planting was made possible by the organizations that conduct these practices.

 **III. How Money is Allocated to Fight Wildfires**

Another method that could work to stop the spread and severity of wildfires more effectively would be to allocate more of the annual budget to firefighters and other emergency response forces. As described by the Department of the Interior, the Wildland Fire Management Budget was allocated 952 million dollars during the 2020 fiscal year. This amount is 50 million dollars less than what the program requested, but the amount that was appropriated to the management team has been relatively consistent over recent years (DOI, 2020). This budget is granted through the Department of the Interior and the money is allocated to different aspects of this department. These include the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs, the Bureau of Land Management, and the National Park Service. All these organizations share a centralized budget that keeps them within the bounds of the Department of the Interior. Within the Wildland Fire Management department, there are also different aspects where money is allocated and distributed which are: preparedness, suppression, fuels management, facilities, burned area rehabilitation, and science (DOI, 2020). There are many different facets to which money is being spread out to combat and prevent forest fires from occurring, but the funding is not sufficient in the prevention and combating of increasingly severe wildfires. While the previous policy implication was to prevent and protect the land from increasing wildfires, this portion of the memo looks to try to combat the continuously increasing risks in the severity of wildfires across the country, as they cannot all be prevented.

1. **Fulfill a Promise: Emphasis on the Biden Administration’s Distribution of Funds to Combat Wildfires**

An implication on policy for this issue would be to allocate more of the National Budget into combating wildfires across the country. The needs of firefighters and other organizations that extinguish fires are not met with the current fiscal budget that their department receives. California alone requires the annual budget that the Wildland Fire Management receives within a fiscal year. With the increasingly devastating wildfires across the country, the budget will need to increase to accommodate the growing needs of firefighters. It is estimated that about 3 billion dollars was needed in 2018 to combat forest fires, and since this time the number and the severity of wildfires have only increased (Foresters, 2021).

With the need for a nearly 200% increase in the funds that are allocated to wildfire extinguishing, policy and budget implications must be shifted. There are many ways that these funds would be used to appropriately combat forest fires, and some of these have been highlighted in a concept plan from the Biden Administration. With the acknowledgment of a need to increase the budget for firefighting from the Office of the President, this memo looks to call these provisions to action for the betterment of combatting wildfires across the country (White House, 2021). The new Senate Bill 451 emphasizes the need for Congress to act on these promises by the Biden Administration, and some of these promises are highlighted in this memo.

There are many ways that the Biden Administration looks to better allocate the funds in the National Budget to accommodate the needs of fighting wildfires. These propositions were encapsulated in Senate Bill 451 which contains budget implications such as:

1. **Increasing the salaries of firefighters.** Biden claims that he wants to make a “commitment that firefighters will not make less than $15 an hour each year” (White House, 2021). This wage increase will properly incentivize the men and women that will need to regularly combat increasing wildfires. As the work becomes more dangerous and severe with increasingly devastating wildfires, it is justified that firefighters will need to be properly compensated for the work that they complete.
2. **Funds can be put into other technologies and methods of fighting wildfires.** If funds were allocated to produce a potential military emergency task force, then there would be a quicker response time to contain these fires. The funds that would be obtained through a renovated National Budget would then be allocated into training and producing task forces that would be able to appropriately respond quickly to wildfires, regardless of where they might appear across the United States. Aside from task forces, there are other methods of extinguishing fires that could be improved upon. “Aviation assets are critical in the management of wildfires to slow or decrease the intensity of the fire and enable safe operations for firefighters on the ground” (White House, 2021). Improving the technologies and methods that planes use to extinguish firefighters is a necessary asset to putting out increasingly devastating forest fires. If these methods were improved, firefighters would be well equipped to combat increasingly powerful and devastating wildfires.
3. **Invest in the improvement of technology to help the populace from smoke in more residential areas.** With the increasingly poor air quality across the United States, being able to understand what regions have air quality that is unsafe could play a large role in protecting members of the populace that are at high risk for respiratory issues. If funds could be implemented into these forms of technology, more lives could be saved in the face of wildfires across the country (White House, 2021).

Ultimately, if the National Budget could allocate more annual funds to combating wildfires, firefighters would be better equipped to meet the challenges of fires. Senate Bill 451 contains the changes that need to be made so that wildfires can be handled accordingly when they occur. Ensuring that this bill is passed through Congress is essential to the lives of Americans in these high-risk areas.

 **IV. Conclusion: The Need for a Change in Policies Concerning Wildfires**

Wildfires are becoming a growing issue within the United States. There must be more action taken to prevent the increase in forest fires and combat them when they occur. The concept of post-fire logging is an effective, yet controversial method of preventing future fires. However, if the process was improved so that new, healthy trees were planted when the dead, burnt trees were removed, some of these concerns would be avoided. Moisture from the new trees would prevent the rapid spread of fires, healthy trees would absorb much of the carbon dioxide and other gasses that are produced from fires, and erosion would decrease because of the rotation of soil. Healthy trees are one of the keys to preventing future fires, thus the procedures in the post-fire logging practice must be updated to supply these trees to areas that dead trees are removed.

While this policy implication looked at a cost-effective method to prevent forest fires, the other method looked at allocating more money to combatting the fires that are already occurring throughout the country. The White House has looked at ways in which the National Budget can allocate more funds into fighting fires, and they have been highlighted in Senate Bill 451. If the budget can allocate these funds successfully, the funds could be used to improve forces that combat fires and technologies that look to protect at-risk members of the populace that deal with respiratory issues. Action must be taken to combat fires because of the health impacts that they have on the nation. Respiratory issues in the wake of the COVID-19 pandemic have become increasingly severe, and the increase in wildfires in recent years has only made this situation worse. If the action was taken to mitigate the environmental impacts that are increasing the severity of wildfires, many of these health risks could be alleviated as air quality would ultimately improve.

This memo calls on the U.S Forest Service to modify and adapt their post-fire logging techniques to better accommodate the environment that they are working in. Not only is this method cost-effective, but it also decreases the chances of a return of wildfires in this area. This insinuates that the annual cost of combating fires will go down if practices such as this are incorporated into the procedures after a wildfire occurs.

This memo also calls on the passing of Senate Bill 451. This bill emphasizes the promises made by the Biden Administration about the allocation of funds to organizations and technologies that try to extinguish wildfires. The bill looks to change the amount that is given to the Department of the Interior to combat wildfires as the cost for this practice continues to grow. While there is an emphasis in this memo to try to prevent future wildfires from occurring, it is understood that this policy will not prevent all wildfires. Thus, this bill is being introduced to ensure that there are enough resources for combating fires, as the current amount in these funds is insufficient for the needs of the country.

There must be a greater emphasis on the prevention and the combating of wildfires within the United States. This is a growing issue that needs to be addressed to protect the lives of many people that live in high-risk communities. In the wake of the COVID-19 pandemic, there have been growing respiratory issues with members of the high-risk community that are becoming infected. Smoke and other greenhouse gasses from wildfires are only making the situation worse for people with respiratory illnesses during this difficult time. There are also many threats to the wildlife and ecosystems within areas where these fires burn. With these threats, there are also damages to homes and communities that are within these high-risk areas, making costs and insurance more expensive. These policies look to protect the American people that are currently suffering and advocate for a safer and more sustainable environment for Americans in the future.

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