

# \*S.E.E. the C.H.A.R.R.\*

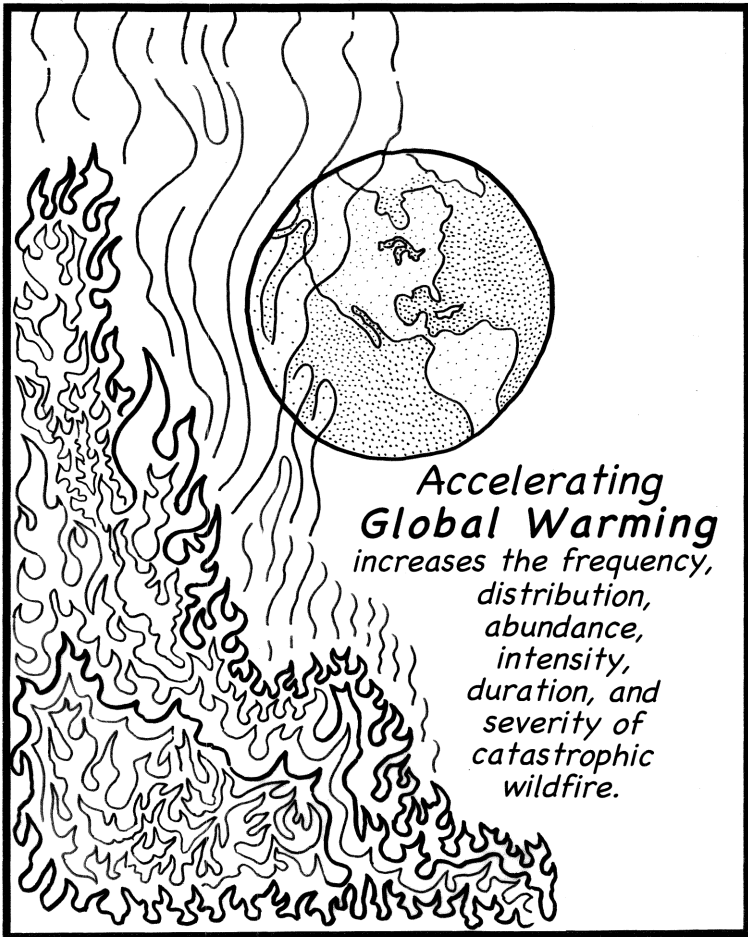


"Only you can restore habitats!"

**CHARR #1**  
Compiled by FUSEE

(Firefighters United for Safety, Ethics, and Ecology)

\*S.E.E. = Safety, Ethics, Ecology  
\*C.H.A.R.R. = Climate Habitat Adaptive Regional Response



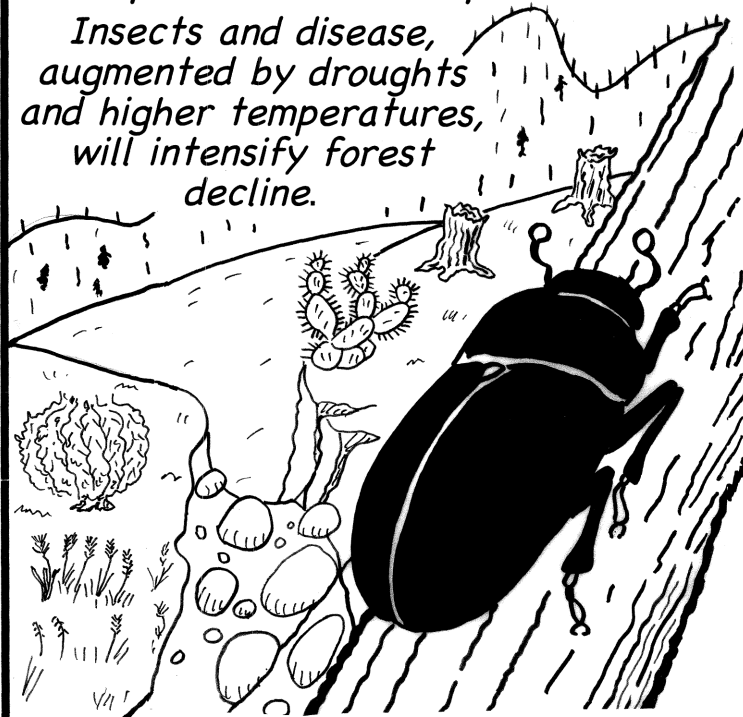
**Accelerating Global Warming**  
increases the frequency, distribution, abundance, intensity, duration, and severity of catastrophic wildfire.

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Surging deluges, floods, and landslides generate disturbances that provide portals for fire-prone invasive species.

Insects and disease, augmented by droughts and higher temperatures, will intensify forest decline.



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## Global Warming's coming destructive windstorms

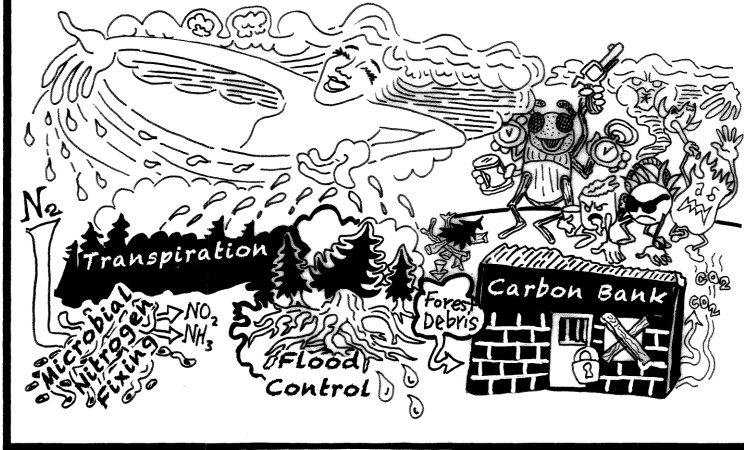


will create great landscapes of forest debris providing abundant fuel for wildfire. Then, heat-waves decrease fuel moisture. Expect more lightning storms.

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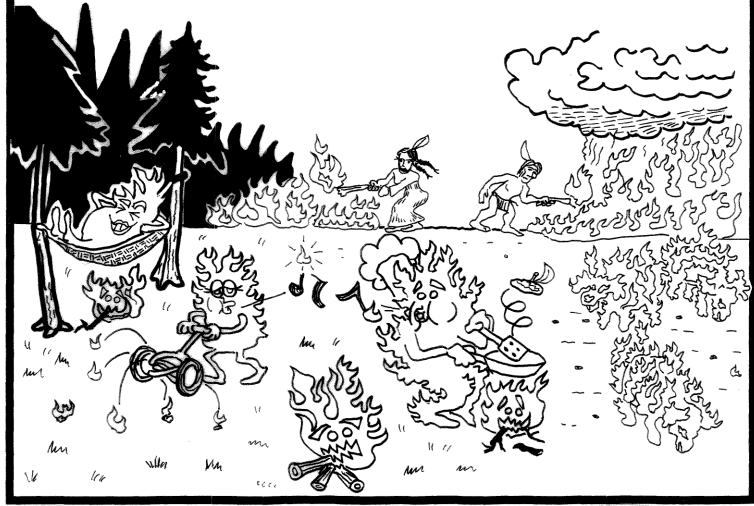
Global warming creates vicious feedback loops. Dying forests and soil microbes release stored CO<sub>2</sub>, normally sequestered for centuries. Worse, they diminish being Carbon Sinks that remove CO<sub>2</sub> from the atmosphere. Also, forests decline functioning for flood control, transpiration-moisture rainfall, and nutrient creation and recycling.



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In the past, wildfires were frequent, stochastic, widely distributed, mostly low intensity, and of less severity. Historically, wildfires burned more than 20 million acres each year. Now wildfires rarely burn more than 5 million acres per year. Native Americans understood fire's ecological role and yearly torched thousands of acres.

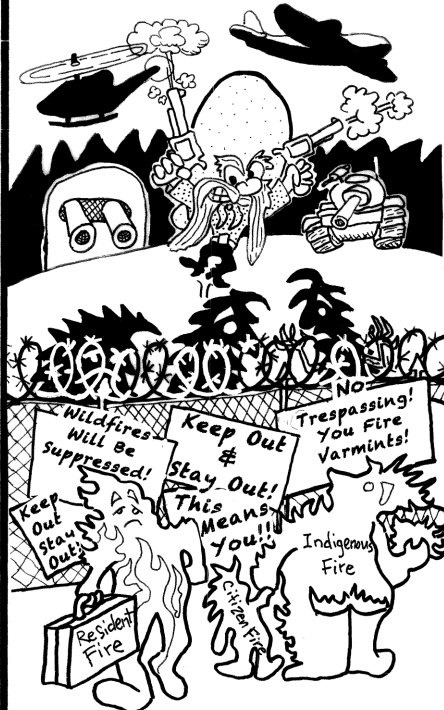


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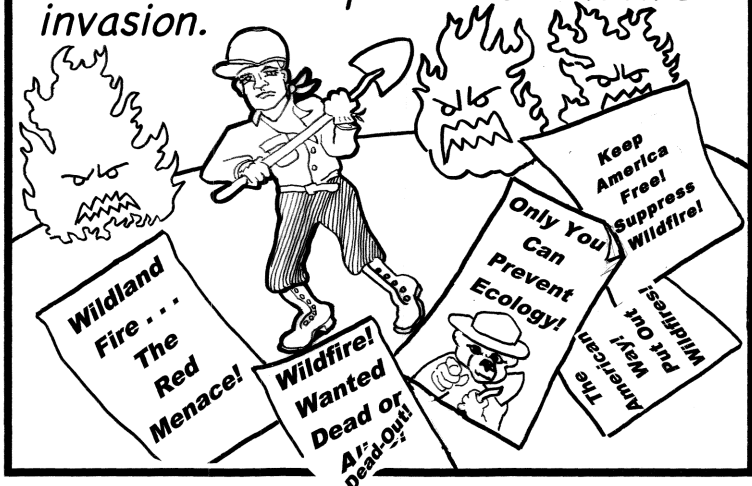
When Europeans colonized America, they brought Capitalistic concepts of commoditized property ownership,

including exclusionary dominion and adverse possession.



They viewed wildfire as trespass and wasting resources.

The Media traffics in our primal fascination and fear of fire. Devoted to sensationalism, consumerism, and authoritarianism, Media adopted the meme of wildfire as enemy. They promote the Euro-centric vision of complete dominion over the land and a militaristic response to wildfire invasion.



*This vision puts lives, communities, and ecosystems at greater risk. It promotes subsidizing fire suppression, timber extraction, road-building, and urban sprawl into wildlands. As safety, ethics and ecological denialism, it contributes to increasing wildfire severity.*



*Wildfires must be put into perspective. The problem remains the increasing percentage of severely burned areas.*



*Wildfires still provide their ecological role now and they will with Global Warming. Solutions must prioritize safety, ethics, and ecology.*

*Wildfires stimulate forest growth by generating clearings for young plants. They provide immediate nutrient release from forest debris. They project distant fertilization, through mineral-rich carbon-compound particulates in smoke.*

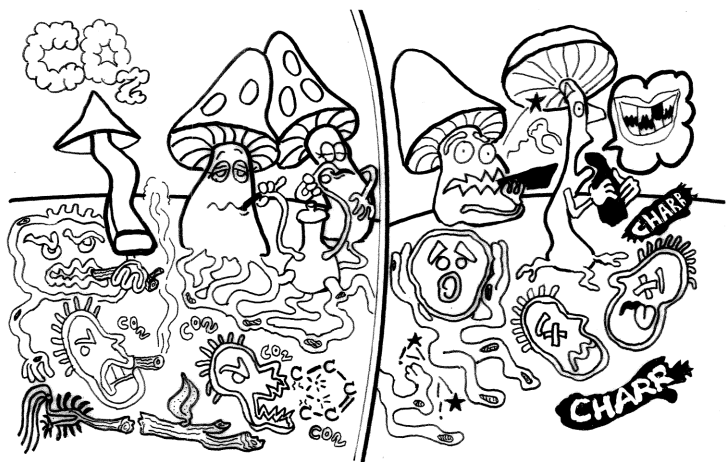


*Wildfires enhance many ecosystem functions and services that humans depend on. Wildfires can augment wildlife and habitats. They increase species diversity and patchiness. They maintain seral clines, such as pines, and they replace stands of over-mature climax species with younger more productive species.*



**Only You Can Restore Habitats!**

Over time, wildfires can decrease CO<sub>2</sub> emissions compared to relentless microbial decomposition. Wildfires hold vast amounts of carbon on site through heat and pyrolysis that renders woody materials resistant to CO<sub>2</sub> emission by microbe rot.



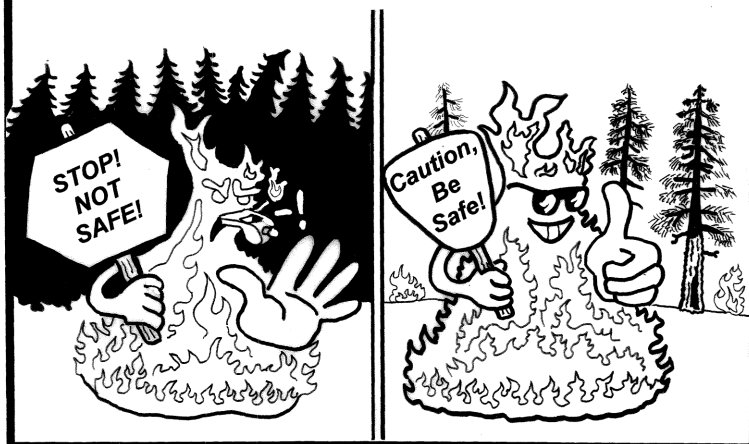
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Solutions to increasing wildfire severity should focus on priorities that improve safety, ethics, and ecology. Safety must be the first priority for firefighters, communities, and ecosystems.



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Safety for wildland firefighters means never putting them in harm's way when low fuel moisture and advancing winds signal danger. Safety also means using proven methods to make communities more fire-permeable and ecosystems more fire-hardy.



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Prescribed fire makes communities and ecosystems safe. A creative and experienced burning boss can craft a safe fire-permeable landscape near communities and reduce fuel abundance and distribution. Remote lightning-ignited fires can safely restore fire-hardy ecosystems when properly managed and augmented.



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Because local conditions, resources, constituents, and insurance policies vary, appropriately safe responses must be regional dependent.

Safe fire suppression may only be appropriate near communities and critical habitats that are not yet fire-permeable. Otherwise, fire managers should safely monitor, shepherd, and augment wildfire.



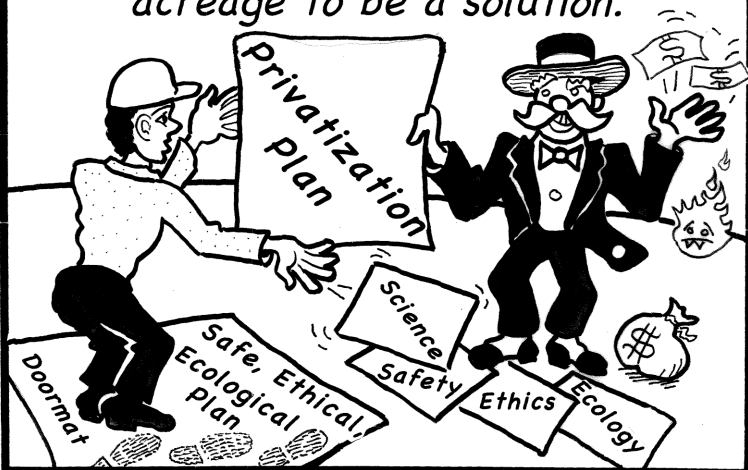
Ethics reform also answers wildfire severity.

Media must reframe their reporting away from sensationalism. Instead, media should focus on analyzing agency response.



Ethical lapses make taxpayer money the most abundant wildfire fuel. The more money we spend on fire suppression, the bigger fires become. The media should do what they do best: follow the money.

Ethical abuses in decision-making and execution of road-building and timber-extraction, often subsidized by taxpayers, leave our wildlands more prone to severe fire. Less than optimal solutions may indicate cronyism and agency capture. Some logging and mechanically thinning projects absorb too many resources and money and cannot treat enough acreage to be a solution.



Media unethically equates prescribed fires' inconvenient smoke with mega-fires' persistent smoke. They also ignore the greater health risk from vehicle traffic's chronic fumes. Media rarely report how prescribed fires diminish mega-fires or when burning-out operations cause rapid increase of burned acres. Instead, they focus on potential for accidental "escaped fires" while not relating how controlled burns' accident rate record remains better than other construction activities.



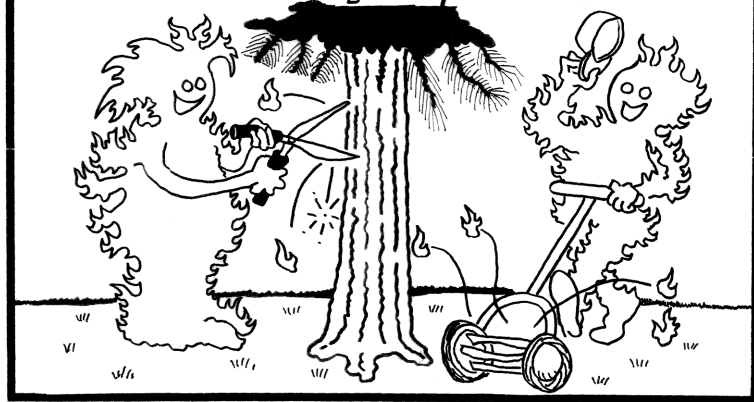


Media has been slow to acknowledge how the "Fire-Industrial Complex" influences government scientists, land management decisions, and public and private ethics. The government's blank check of unlimited wildfire protection incentivizes urban sprawl into wildlands and distorts the insurance market.



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Ecological solutions to the problem of increased wildfire severity remain the best way to enhance ethics and safety. Healthy, safe, and fire-hardy ecosystems display abundant plant and wildlife diversity, sustainable nutrient cycling, and ecological services such as flood control, clean water, and carbon sinks for CO<sub>2</sub> sequestration.



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Ecologically savvy techniques can hold carbon on site. While carbon can leave a site by timber harvest or wildfire combustion, microbes discharge most CO<sub>2</sub>. Land managers can initiate controlled burns during inversions, rain, or high humidity to maximize pyrolysis and carbonization of woody materials to make them unavailable to microbial decomposition. Controlled burns can maintain fire-permeable sites that favor low intensity wildfires.



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Ecological management favors resilience, diversity, and improves soil and plant carbon sequestration. Managers can reseed with fire-hardy plant species or even augment air-dropped fire retardant with nutrients or fungal spores that favor carbon sequestration.



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*Fire managers should develop an elite corps of ecologically shrewd Fire Rangers.*



*Fire Rangers could achieve fire-permeable ecosystems by augmenting, monitoring and shepherding natural ignitions and controlled burns.*