

Argument for Scientists

USFWS, PIFWO, Honolulu

Causal Chain	Causal Scenario	Wildfires & Climate Change	Threat Posed by Forest Fragmentation
ultimate effect – the end result		ultimate effect – the end result (<i>Is this use compatible? Related to the purpose of the Refuge</i>)	
<i>10-care pileup</i>	<i>garage fire</i>	<i>wildfires</i>	<i>bird decline</i>
incidental effects – other results that may have also occurred		incidental effects – other results that may have also occurred	
traffic backup	loss of equipment	loss of wildlife	invasion of weeds
ambulance called in	lost jobs	loss of ag lands	impacts to other species dependent on the finch
property damage	loss of life	loss of cultural and natural resources	change in insect / invertebrate community
personal injury	property damage- neighboring homes	erosion	change in hydrology
higher insurance rates	air pollution	recolonization of burned areas by invasive species	changes to nutrient cycling
repair shops doing well			more cats in the forest
new car purchases			
condition--any situation at the event without which the cause would not have had its effect			
15 cars stopped at the light		drought	species ecology: what does the bird need to successfully feed, breed, and shelter?
	odor of gas	presence of flammable materials due to drought, increased temperatures, water diversion	
	oil on the floor	change in succession	
	sealed windows	invasive, non-native grass: increases fuel load	

slippery hands			
population – the people, places, things, or actions that were affected by the cause		population – the people, places, things, or actions that were affected by the cause	
people in the 15 cars cars families insurance companies other drivers on the road emergency responders infrastructure around the vehicles	employees: inside: health effects employees: outside: out of work garage garage owner vehicles vehicle owners	ohia koa forests forest birds invertebrates seabirds native plants corals	forest bird plants invertebrates predators
primary cause – the one action that set all the results into motion		primary cause – the one action that set all the results into motion	
one car failed to stop	spark	anthropogenic: arson, power lines, accidents	
		lightening	fragmentation
incidental causes – any other actions that contributed to the results		incidental causes – any other actions that contributed to the results	
speeding texting brake lights out children in the backseat distracted driving brakes went out impaired driver visibility conditions low	(see conditions)	(see conditions)	weed invasion mosquitos: avian malaria climate change predation