

# Celebrating --with Fireworks--

Reviewing Impacts &  
Brainstorming Ideas





## A Call to Action—

- To preserve, protect and unify our natural playground for future generations
- To Care for Big Bear on an endless scale
- To Appreciate our natural environment
- To Care for our community
- To Respect our neighbors

# Fireworks shows...

- Bring tourists
- Support local economy



A night scene of a fireworks display over a lake. In the foreground, a large, dark archway stands on the shore. The sky is filled with bright, colorful fireworks, including a large, multi-colored burst in the upper left. The water reflects the lights. In the background, a town is visible with lights and another fireworks display on the right.

**But do not match  
Care for Big Bear!**

**It's a loud, sparkly celebration for some...  
...but loud terror for lots of others**

# Big Bear's Bald Eagles



- Bring tourists
- Support local economy

# But Fireworks do not support the Eagles!

July 4<sup>th</sup>, 2019

- Jackie & chick Simba roosting for the night.
- Fireworks start
- Jackie flies from nest
- Simba sits 'frozen' for whole show
  - + over 20 minutes after
- Jackie (& Shadow) gone until late July 5th.  
(Simba no protection, no food)



Presented by FriendsOfBigBearValley.org 2019-07-04 21:16:55



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July 4<sup>th</sup>, 2022

- Jackie & Shadow working on the nest during the day
- Fireworks
- Jackie and Shadow both gone for 6 days!-- not seen or heard



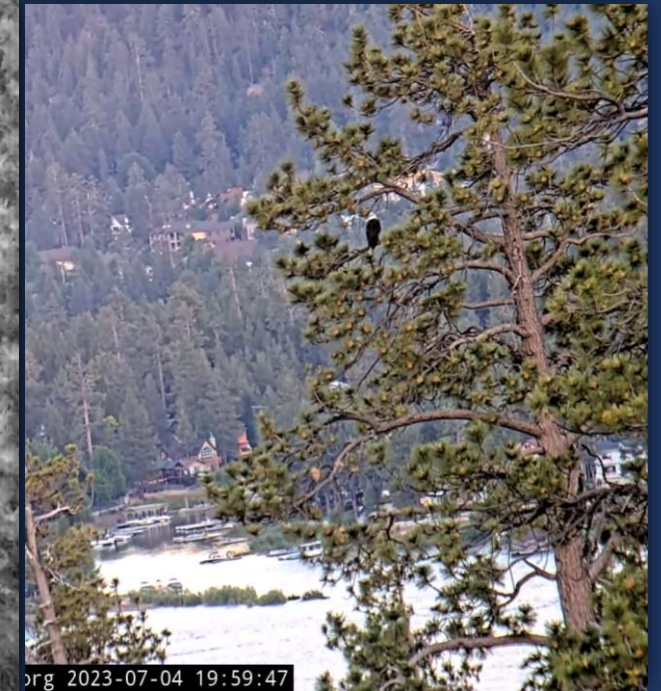
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Cali Condors

# Memorial Day Fireworks

# 2023

- Jackie & Shadow roosting in favorite roost tree
- Fireworks start
- Jackie and Shadow fly from roost within 11 seconds
- Not seen or heard until 8:21PM, July 5<sup>th</sup>.
- Eagles cannot see well in dark -- no night vision adaptations
- Flying at night pose danger of collision-related injuries.



## July 4 Fireworks

- Jackie & Shadow in favorite roost July 4 morning
- One of them in a favored perch tree in the evening
- Fireworks show
- Eagles not seen or heard on either camera, by boat captains or locals for 3 full days

# WILD BIRDS

## Research Shows:

- Take flight in mass at onset of fireworks, flying remarkably longer and higher than normal
- Can be so densely packed they are detectable with weather radar
- Documented examples:
  - Birds flew so far out to sea there was no possibility they could make the return trip
  - Many massive bird deaths reported Beebe, Arkansas. 2010—  
5,000+ dead or dying red-winged blackbirds rained down on town
  - Rome, Italy
    - Hundreds of birds died New Year's Eve





## Wild Birds

- Startle responses set off
- Sudden flight ignited
- Disoriented from shock and darkness
- Injured or die--flying into trees, buildings
- Have heart attacks and die from the shock
- Chicks prematurely jump from nest...injury, death, predation
- Some are injured by the fireworks
- Disoriented parents fail to return home...  
...chicks starve or taken by predators



Wisconsin -Bald Eagle, injured by fireworks  
+ treated herons, loons, other bald eagles



## WILD ANIMALS

- Animals flee their habitats
- Sometimes run and run until they die
- Often run across roadways—risking injury or death to themselves or motorists
- Adults sometimes abandon their young, leaving them vulnerable to predators
- Some, never return

JULY 4 2021

### Huntington Beach Wetlands/Wildlife Care Center

- Gray Fox hit by car, 2 fractured legs
- Peregrine Falcon, disoriented, flew into a window
- Black-crowned night heron chick, frightened from nest
- Mallard duckling separated from its family

Nearby Fireworks...Accidental Zoo, UK  
George the Emu, in panic, repeatedly ran into a fence,  
causing injuries.



# Big Bear is FULL of wildlife

Breeding season-- spring through summer

During Fireworks shows...

- How many birds flew from nests in shock or fear?
- How many got disoriented in the dark?
- How many bird chicks or tree animals fell or jumped from nests too early?
- How many chipmunks, squirrels, foxes, coyotes, rabbits, or bears abandoned their babies in fear?
- How many pups, kits, cubs, fawns ran from shelters or dens?
- How many parents and babies lost their lives as a result?
- How many fish died from shock?



# Big Bear Grizzly

Article on Fireworks Impacts

June 29, 2023

(As word spreads about their true impact, Fireworks are becoming less and less popular.)

# Fireworks

*explode like magnified gunfire in the exquisitely sensitive ears of all creatures.*



**Bees** become so disoriented they don't go back to their hives



**Birds** have panic attacks at night, causing mass deaths



**Wild animals** raising babies abandon their dens in fear



**Fish** & other animals perish after ingesting firework debris



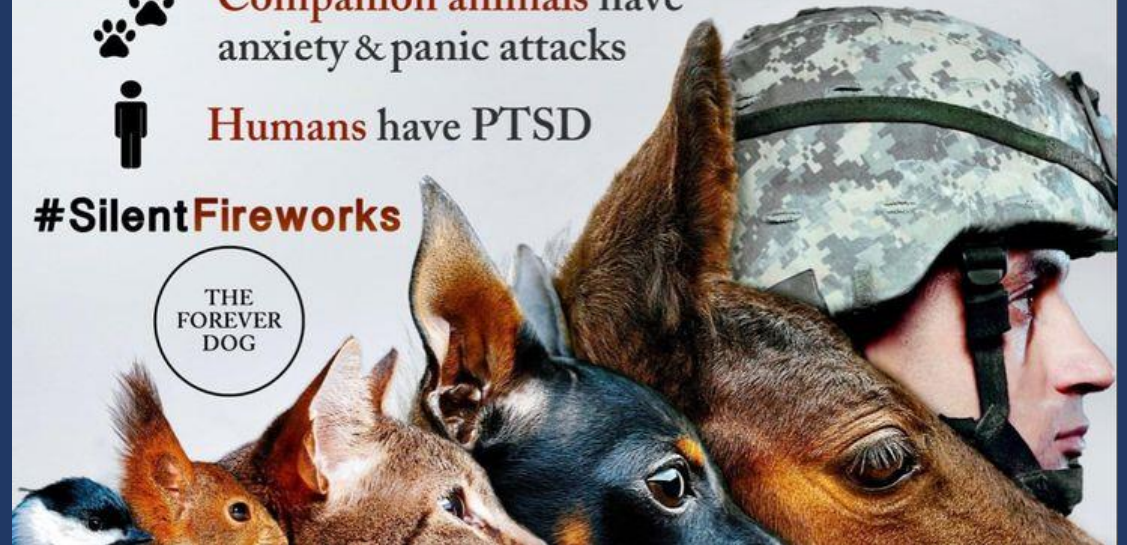
**Companion animals** have anxiety & panic attacks



**Humans** have PTSD

**#SilentFireworks**

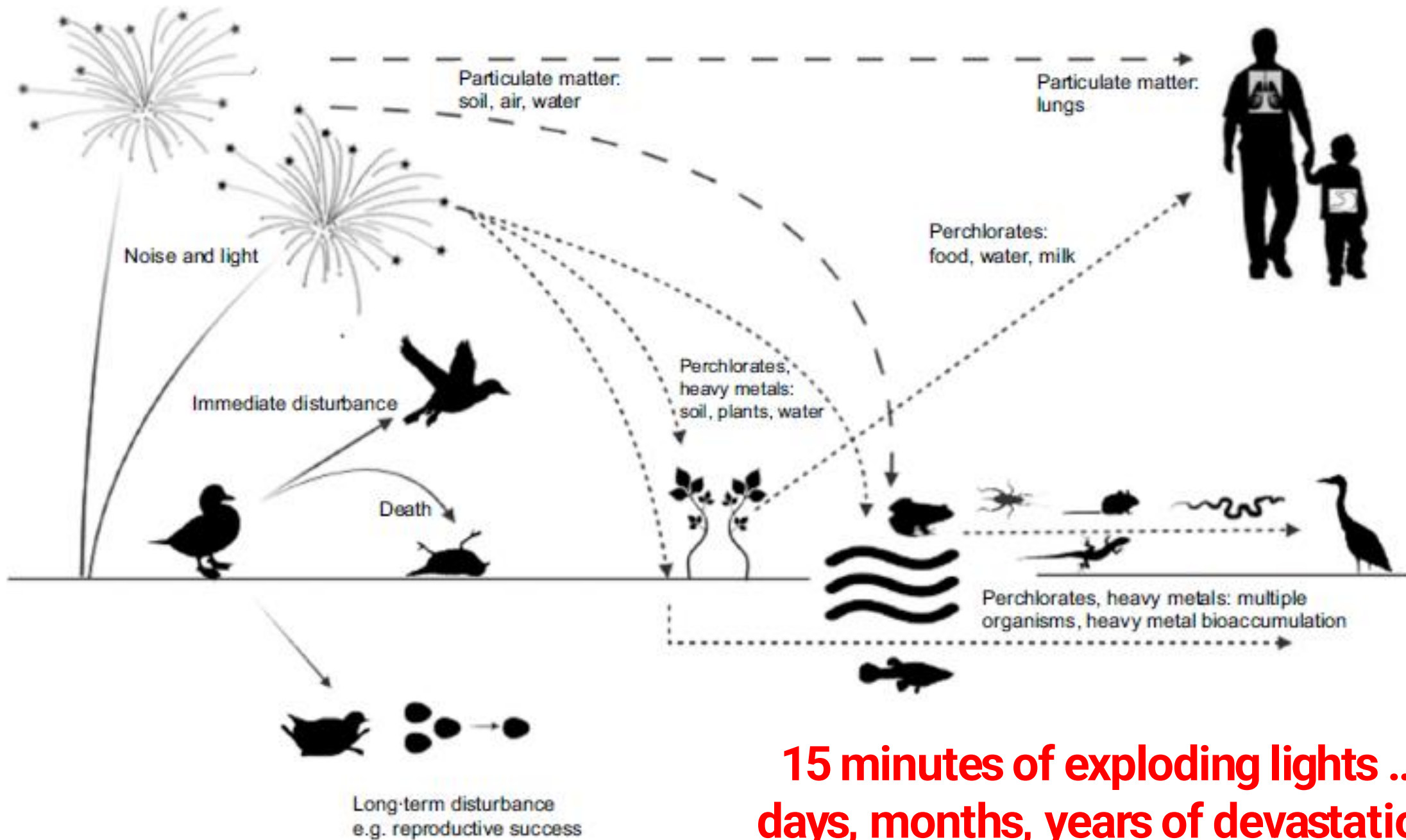
THE  
FOREVER  
DOG



Our beautiful lake and forest...

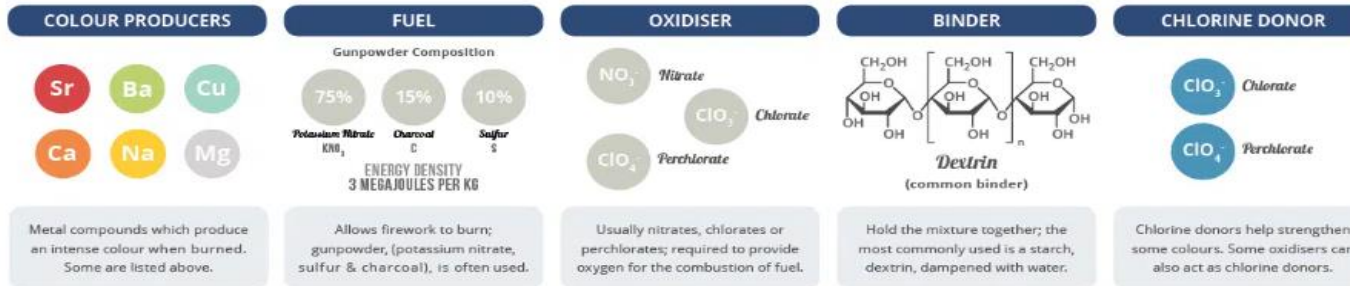


Filling it with: Debris... Chemicals... Pollutants...



**15 minutes of exploding lights ...  
days, months, years of devastation**

# THE CHEMISTRY OF FIREWORK COLOURS



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- Propel a cocktail of chemicals , many are harmful to both people and the environment
- The vivid colors are metallic compounds, barium or aluminum--negative impacts on animal and human health
- Oxidizers needed for an explosion--many contain perchlorates
- Perchlorates dissolve in water--contaminating LAKES, rivers and drinking water
- Release fine cloud of smoke and particulate matter--affecting local air quality
- Particulates settle into lake, ground and groundwater

## LONGLASTING TOXIN IMPACTS

- Long after the show, firework toxins invade the body through contaminated water or soil
- Toxic fallout directly contaminates water sources
- They pose a direct health risk to humans
- Affect fish and other aquatic life, and eventually move up the food chain



- **Perchlorate – Thyroid problems.**
- **Strontium – Birth defects, damaged bone marrow, anemia, blood clotting issues.**
- **Aluminum-Barium-Cadium-Dioxins-Rubidium-Are all radioactive and known carcinogens.**

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These chemicals are associated with:

- Alzheimer's
- Dementia,
- Bipolar Disorder
- Depression
- Anxiety
- Heart Disease,
- Kidney Disease
- Multiple Sclerosis,
- Rheumatoid Arthritis
- Gastrointestinal Disorders
- Chronic Fatigue





# What happens to our lake?

- How toxic does it become?
- How many fish are frightened to death?
- How many fish die from the pollutants?
- How do the contaminated fish impact the animals who eat them?
- How do the contaminated fish impact the fishermen and their families?
- How long does the lake water stay toxic?
- Is it dangerous to swim after fireworks?



# Domestic Animals

**Will do anything to get away from the terrifying sounds of fireworks, including injuring themselves.**



Injured trying to escape its kennel at the shelter



- July 5<sup>th</sup> is the busiest day of the year for animal shelters across the country.
- 30% of all missing pet reports occur around the 4<sup>th</sup> of July.
- Only 14% of those pets make it back home and worse, 30-60% of those left behind are euthanized.
- Many offer free microchipping leading up to July 4<sup>th</sup>, so these loving pets can be reunited with their family.
- Many dogs and cats are so traumatized they never recover and are fearful of ALL loud sounds the rest of their lives



**UK – 5-year-old horse panics and literally ran itself to death during fireworks celebration**



Impacts to humans...

toxic overload...

emotional overload...

plus...



# PTSD

## War Experiences or Traumatic Memories

- From exposure to extreme traumatic experience
- Involves a threat of death, serious injury, or sexual violence
- MANY People–
  - war veterans
  - refugees
  - gun violence victims
  - rape/physical assault victims
  - survivors car/train/plane accidents
  - survivors of natural disasters like earthquakes or tornadoes



- The loud sounds and light flashes
- Reminiscent of:
  - combat
  - gunfire
  - thunderstorm
  - car crash
- Can trigger:
  - panic attack
  - flashbacks
  - a sensory experience that old trauma is happening now
  - nightmares, insomnia
  - worsening PTSD
- Combat veterans may suddenly drop to the ground

# FIRE DANGERS


- Many forms of fireworks fires
- Most common is wildfire
- Many combustible materials + high levels of heat + unpredictable sparks

## US Stats--2018

- 59% of firework fires 2014-2018 were brush, grass, or forest fires
- 19,500 reported fireworks fires
- 46 civilian injuries, 5 deaths, \$105M in property damage.

## CalFire Stats—2012-2021

- 8427 fires; 72 injuries; 4 deaths; \$43M property loss; 18,767 acres burned



**Reported to the Office of the State Fire Marshal**

1/1/2012 - 12/31/2021

Fireworks Reported as the Heat Source of the Ignition

Report Date: 6/8/2022

Page 1 of 1

Year	Fireworks Fires	Property Loss	Content Loss	Fire Service Injuries	Fire Service Fatalities	Civilian Injuries	Civilian Fatalities	Acres Burned
2012	584	\$2,213,934	\$1,805,586	1	0	1	0	2,903
2013	565	\$1,556,883	\$473,072	1	0	3	0	305
2014	528	\$1,599,376	\$393,499	1	0	5	1	8,658
2015	561	\$5,931,945	\$1,168,544	0	0	23	0	411
2016	663	\$1,661,670	\$696,433	3	0	0	0	422
2017	907	\$3,364,417	\$1,046,472	7	0	2	0	568
2018	780	\$2,624,044	\$1,649,531	4	0	3	1	1,084
2019	877	\$2,541,424	\$703,211	1	0	2	1	743
2020	2,046	\$8,069,210	\$2,174,300	2	0	9	1	3,201
2021	916	\$3,293,844	\$1,319,804	2	0	2	0	472
<b>Total:</b>	<b>8,427</b>	<b>\$32,856,747</b>	<b>\$11,430,452</b>	<b>22</b>	<b>0</b>	<b>50</b>	<b>4</b>	<b>18,767</b>

Incidents when mutual or automatic aid was given to a neighboring fire department are not included in counts. Structure Fires with Fireworks reported as the Heat Source of the Ignition = All reported incidents that include the National Fire Incident Reporting System (NFIRS) Incident Type code 111; Building Fire and NFIRS Heat Source Code 50; Explosives, Fireworks, other and 54; Fireworks, includes sparklers, paper caps, party poppers, and firecrackers. Wildland Fires with Fireworks reported as the Heat Source of the Ignition = All reported incidents that include the National Fire Incident Reporting System (NFIRS) Incident Type codes 140-143; Natural Vegetation Fires, 170-173; Cultivated Vegetation Crop Fires, and 561; Unauthorized Burning and NFIRS Heat Source Code 50; Explosives, Fireworks, other and 54; Fireworks, includes sparklers, paper caps, party poppers, and firecrackers. The statistics come from the Office of the State Fire Marshal's (OSFM) California Incident Data and Statistics (CalStats) database. Property and contents loss figures, if included herein, are estimates only. These emergency incident statistics, including injury and death counts, are based only upon information submitted to the OSFM by participating California fire departments. Please note that apparent variations in incident counts and associated losses shown in this report may be solely due to fluctuations in the amount of data submitted to the OSFM. And while the incoming data is validated according to logical data rules, individual data elements are not always verified for accuracy.



Is 30 minutes of lights worth all the devastating impacts?

Our Big Bear  
creativity and ingenuity  
can do much better!



# ALTERNATIVE CELEBRATIONS



Truly show how much we  
“Care for Big Bear”

- Big Bear Green Festival
  - Games, activities for kids
  - Local vendors/discounts
  - Village/Moonridge wine tasting
  - Outdoor activities
  - Scavenger hunt to visit shops – with July 4th prizes
- Only in Big Bear Festival
  - Focus on ‘unique to this valley’
  - Vendors -- how they are unique
  - Habitats and species found nowhere else in world
  - Brings people only to Big Bear
- July 4<sup>th</sup> Parade, including bikes
- Music and/or Arts Festival



# Nighttime Celebrations



- Light up the village
- Bands or acoustical music downtown
- Ice cream social
- Drone light show
- Parade of boats – with prizes for the most festive, best decorations, most creative lights/designs etc.
  - \*with the parade of boats, there will be more viewing opportunities around the lake\*
- Music by the lake to go with a drone show or parade of boats.
- Combine a few – village lights, boats lights, best lights competitions



# Big Bear -- a Leader of the Crowds!



Jackie, Shadow and future chicks  
will eternally thank you for stopping loud fireworks  
(including on Labor Day, 2023)

Cities all over the  
world are stopping  
loud fireworks!

Examples in the US:  
Salt Lake City, UT  
Boulder, CO  
Lake Tahoe, CA  
LaJolla, CA  
Ocean Beach, CA  
Imperial Beach, CA  
Flagstaff, AZ  
Galveston, TX